

EXHIBIT 9



DEPARTMENT OF
FINANCE

EDMUND G. BROWN JR., GOVERNOR

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Transmitted via e-mail

January 24, 2011

Mr. Samuel P. Schuchat, Executive Officer
California State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

Dear Mr. Schuchat:

**Final Report—Audit of California State Coastal Conservancy's Propositions 12, 13, 40,
and 50 Bond Funds**

The Department of Finance, Office of State Audits and Evaluations, has completed its audit of the California State Coastal Conservancy's (Conservancy) Propositions 12, 13, 40, and 50 bond funds for the period ending June 30, 2008.

The Conservancy's response to the report observations and our evaluation of the response are incorporated into this final report. As requested in the draft report and based on our evaluation of the Conservancy's response, the Conservancy is required to submit a detailed corrective action plan addressing Finding 1. This corrective action plan should be submitted within 60 days from the date of this transmittal.

Please mail your corrective action plan to:

Department of Finance
Office of State Audits and Evaluations
300 Capitol Mall, Suite 801
Sacramento, CA 95814

In accordance with Finance's policy of increased transparency, this report will be placed on our website. Additionally, pursuant to Executive Order S-20-09, please post this report in its entirety to the Reporting Government Transparency website at <http://www.transparency.ca.gov/> within five working days of this transmittal.

We appreciate the assistance and cooperation of the Conservancy. If you have any questions regarding this report, please contact Diana Antony, Manager, or Beliz Chappuie, Supervisor, at (916) 322-2985.

Sincerely,

Original signed by:

David Botelho, CPA
Chief, Office of State Audits and Evaluations

Enclosure

cc: On following page

cc: Mr. Neal Fishman, Deputy Executive Officer, California State Coastal Conservancy
Ms. Nadine Hitchcock, Deputy Executive Officer, California State Coastal Conservancy
Ms. Regine Serrano, Chief of Administrative Services, California State Coastal Conservancy
Mr. Patrick Kemp, Assistant Secretary, Natural Resources Agency
Mr. Bryan Cash, Deputy Assistant Secretary, Natural Resources Agency
Ms. Julie Alvis, Deputy Assistant Secretary, Natural Resources Agency

AN AUDIT OF BOND FUNDS

California State Coastal Conservancy Propositions 12, 13, 40, and 50



Source: California State Coastal Conservancy Website

Prepared By:
Office of State Audits and Evaluations
Department of Finance

093760047

March 2010

MEMBERS OF THE TEAM

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Supervisor

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Mary Halterman

Final reports are available on our website at <http://www.dof.ca.gov>

You can contact our office at:

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EXECUTIVE SUMMARY

In accordance with the Department of Finance's (Finance) bond oversight responsibilities, we audited the California State Coastal Conservancy's (Conservancy) funding under Propositions 12, 13, 40, and 50 as of June 30, 2008. The audit objectives were to determine whether bond funds were awarded and expended in compliance with applicable legal requirements and established criteria, and to determine if the Conservancy had adequate project monitoring processes in place. We identified the following control and accountability issues requiring corrective action.

- Since 2001 the Conservancy issued approximately \$13 million in bond-funded loans without clear authority or adequate controls. Additionally, approximately \$2.9 million in loan repayments have been received and deposited in the Conservancy Fund, which is used for general operations and support funding.
- The Conservancy did not establish formal program guidelines; project awarding criteria; and grant applications to document its project merit review process. Also, the Conservancy website included limited or incomplete information about ongoing programs and efforts, regional priorities, and funding opportunities. Subsequent to our audit, the Conservancy made efforts to address some of these issues.
- The Conservancy's fiscal oversight and monitoring of bond funds needs improvement. Specifically, project scopes and budgets lack detail, match contributions are not enforced, grantees are paid for non-budgeted items, and project monitoring is inconsistent and inadequately documented.
- Bond project status is incomplete and does not fully comply with bond reporting requirements. To address this observation, the Conservancy is developing the Coastal Conservancy Project Management Database to track its projects.

The recommendations in this report are intended to assist management in improving operations and accountability for bond funds.

BACKGROUND, SCOPE, AND METHODOLOGY

BACKGROUND

Between March 2000 and November 2002, California voters passed the following four bond measures totaling \$10.1 billion:

- Proposition 12—The Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000
- Proposition 13—The Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act
- Proposition 40—The California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002
- Proposition 50—The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002

These propositions authorized the sale of bonds to finance a variety of resource programs. Administered by a number of state departments, agencies, boards, and conservancies, the proceeds from these bonds support a broad range of programs that protect, preserve, and improve California's water and air quality, open space, public parks, wildlife habitats, and historical and cultural resources. Bond proceeds are expended directly by the administering departments on various capital outlay projects, and are also disbursed to federal, state, local, and nonprofit entities in the form of grants, contracts, and loans.

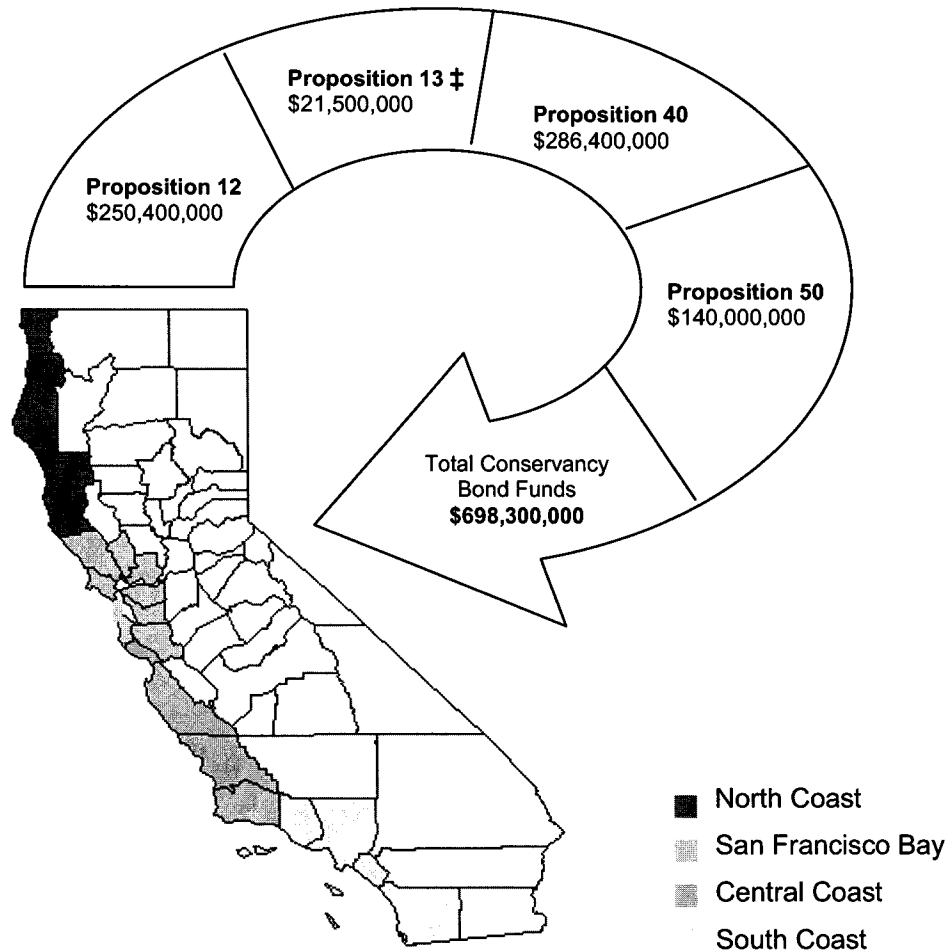
California State Coastal Conservancy

The California State Coastal Conservancy (Conservancy) was established in 1976 through Division 21 of the Public Resources Code. The Conservancy's mission is to act with others to preserve, protect, and restore the resources of the California coast, ocean, and the San Francisco Bay Area. Their vision is of a beautiful, restored, and accessible coastline, ocean and San Francisco Bay Area. The Conservancy Board's seven members are appointed by the Governor and California Legislature. The Legislative Oversight Committee meets with the board and participates in its activities. The committee is made up of three members of the Senate and three members of the Assembly.

The Conservancy staff of 77 consists of executive management, program and project managers, legal, and administrative staff. There are four regional program managers directing a staff of 34 project managers, who are responsible for initiating and developing the projects, selecting the grantee and then managing the projects.

In total, the Conservancy administers over \$698.3 million in allocated bond funds over four primary state regions as shown in Figure 1.

Figure 1. Propositions 12, 13, 40, and 50 Funds Allocated to the Conservancy as of June 30, 2008



Source: Propositions 12, 13, 40, and 50 Bond Acts.

Notes:

‡ A specific allocation amount of Proposition 13 Bond funds for the Conservancy was not identified. The Conservancy received Proposition 13 funding through the Department of Water Resources' allocation.

Bond Funded Projects

The Conservancy awarded bond funds to various types of projects as defined in the bond act and Conservancy's enabling legislation. These projects are grouped in the four program areas defined in the Conservancy's strategic plan:

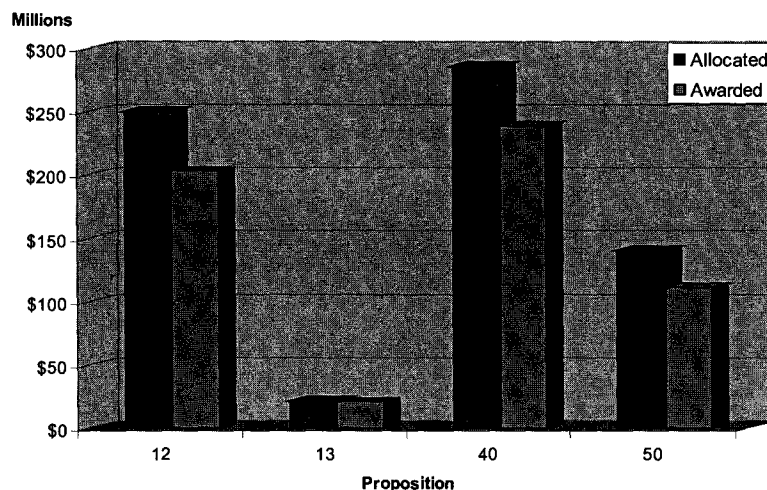
1. Public accessways (to and along the shore)—construction of new facilities, repairs to existing facilities, acquisition of land or offers to dedicate real property, development of the coastal trail, and waterfront development and repair.

2. Resource conservation—land acquisitions, natural resource restoration and enhancement, land use conflict resolution, and watershed restoration.
3. San Francisco Bay area conservation—construction of public accessways, natural resource restoration and protection, acquisition of open space and agricultural conservation easements.
4. Ocean program—protection of ocean and coastal resources.

These main program areas are further subdivided into nine sub-programs that correspond to chapters in the enabling legislation and the Ocean Program (see Appendix A).

The Conservancy has awarded \$567 million (81 percent) of the \$698.3 million allocated from Proposition 12, 13, 40, and 50 as shown in Figure 3.

Figure 3. Bond Funds Allocated* and Awarded as of June 30, 2008



Source: Bond acts and the Conservancy's accounting records.

Notes: *Amounts include statewide costs.

SCOPE

The audit was conducted to determine whether Proposition 12, 13, 40, and 50 bond funds were awarded and expended in compliance with applicable legal requirements and established criteria, and to determine if the Conservancy has adequate project monitoring processes in place. Proposition 84 funds were not included in this audit; however, several programs audited will be receiving Proposition 84 funding. Therefore, because we tested the controls and processes in place for awarding and monitoring under the current programs, the observations and recommendations may be applicable to Proposition 84 programs.

Our review did not include an assessment of the bond authorization, issuance, and sale processes, or an examination of the efficiency or effectiveness of program operations. Further, no assessment was performed on the reasonableness of the land acquisition costs or the conservation value of acquired land or projects completed.

METHODOLOGY

To determine whether bond funds were awarded and expended in compliance with applicable legal requirements and established criteria, and whether the Conservancy had adequate monitoring processes, we performed the following procedures:

- Reviewed applicable bond acts and Conservancy's grant management policies, procedures, including the strategic plan and other legal provisions and regulations.
- Interviewed key personnel responsible for administering bond funds to obtain an understanding of how the Conservancy oversees various project stages: pre-award, award, interim monitoring, closeout, and post-close monitoring.
- Examined a sample of project files to determine if the projects stayed within scope and cost. The sample of projects was selected from two sub-programs; System of Public Accessways and Coastal Resource Enhancement, which represent 52 percent of total bond awards (see Appendix B for list of projects tested).
- Performed nine separate Conservancy grant audits (See Appendix C for list and link to audit reports).
- Identified and assessed the project tracking methods to determine its adequacy for monitoring projects.
- Reviewed a sample of expenditures to verify accuracy of recorded and reported financial information.
- Reviewed the reasonableness of Conservancy's administrative expenditures charged to bond funds.

Multiple discussions were held with the Conservancy throughout our audit fieldwork to discuss and provide specific project review details. Recommendations were developed based on interviews with Conservancy management and key staff directly responsible for administering bond funds and review of documentation made available to us. This audit was conducted during the period December 2008 through April 2009.

Except as noted, this audit was conducted in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States. In connection with this audit, there are certain disclosures required by *Government Auditing Standards*. Finance is not independent of the audited entity, as both are part of the State of California's Executive Branch. As required by various statutes within the California Government Code, Finance performs certain management and accounting functions. These activities impair independence. However, sufficient safeguards exist for readers of this report to rely on the information contained herein.

The audit identified the following observations requiring corrective action. As noted in the Scope section of this report, although this audit did not include Proposition 84 funding, several programs audited received Proposition 84 funds. Consequently, the following observations and recommendations may also pertain to Proposition 84 programs.

Observation 1: Lack of Accountability Over Bond-Funded Loans

The Conservancy issues bond-funded loans without clear authority or adequate controls. Specifically, the Conservancy's funding agreements include repayment clauses specifying amounts due by a certain date(s); however, the Conservancy classifies these as "grants with repayments" instead of loans. Because loan authority is vested in the legislature (or other rule making body) the Conservancy should cite or obtain legislative authority. In accordance with generally accepted budgetary and accounting principles, we interpret these as loans. The following control weaknesses were noted:

Loan Receivables are Not Recorded

Since 2001 the Conservancy issued approximately \$13 million in bond-funded loans without properly recording the outstanding receivables. Although short-term receivables are recorded in the Conservancy Fund (Fund 0565) when the first payment is due, that date in some cases can be as long as 10 years. During that time, the amounts due are manually tracked by contract managers and not recorded in the Conservancy's accounting system.

Based on Conservancy grant audits performed by Finance in March 2010¹, loan repayment terms were inconsistently and inadequately enforced. In two cases, the loan repayments for a \$300,000 loan and a \$2,000,000 loan were late by over three years and three months, respectively.

The State Administrative Manual (SAM) section 7622 establishes Account No. 2100, Loans and Advances Receivable, as the summary account of long-term loans and advances receivable. The loan accounting entries will depend on the legal authority for the loan, the type of funds involved, and whether the loan will cross fiscal years.

Loan Repayments Recorded as Revenues in Conservancy Fund

Loan repayments are recorded as revenues in Fund 0565 instead of the bond fund of origin. According to the Conservancy, approximately \$2.9 million in loan repayments have been received and deposited in Fund 0565. The Conservancy uses Fund 0565 for general operations and support funding.

The Conservancy claims Public Resources Code section 31011 requires it to remit all "funds received" to Fund 565 and establish separate accounts within the fund. However, Government Code section 16303 requires moneys subsequently returned to be credited to the originating appropriation and fund.

¹ See Appendix C for list and link to separately issued grant audit reports.

Therefore, bond loan repayments should be deposited into the bond fund of origin. Additionally, the Conservancy never established separate accounts in Fund 0565 precluding effective identification of bond funds. Because the Conservancy uses Fund 0565 for support-type costs, bond funds are at risk of misuse. For example, during Finance's March 2006 Conservancy bond audit, bond funds were directly charged over \$37,000 in ineligible supports costs, including over \$10,000 for yoga classes. The Conservancy subsequently repaid the bond funds and moved the costs to Fund 0565.

Proper internal accountability is required to ensure bond funds are separately tracked for future use, reappropriation, or other disposition by the Legislature. Generally accepted budgetary and accounting principles require loan repayments to be deposited into the same fund from which the original loans were made. Without proper recording of loan receivables and repayments, the bond funds are at risk of misappropriation and misuse.

Recommendations:

- A. Cite or obtain legislative authority and develop and implement a loan program accordingly.
- B. Identify and document all outstanding bond loan receivables. Record bond loans as receivables in the Conservancy's accounting system in accordance with SAM section 7622. Maintain supporting documentation for these amounts.
- C. Record bond loan repayments in the bond fund of origin. Discontinue depositing bond loan repayments in Fund 0565. Transfer prior bond loan repayments from Fund 0565 to the bond fund of origin. Maintain supporting documentation for these amounts.
- D. Provide a detailed Corrective Action Plan addressing the findings and recommendations within 60 days from the date of this report. The corrective action plan should include milestones and target dates to correct all deficiencies.

Observation 2: Project Awarding Process Needs Improvement

As of June 30, 2008, the Conservancy awarded \$567 million in bond funds without established formal program guidelines, specific project awarding criteria, project application forms, or website announcements in place.

The Conservancy does not utilize program specific guidelines and criteria to award bond funds as required by the bond act, the Public Resources Code Division 21, and the Conservancy's enabling legislation. Instead, the Conservancy uses its Strategic Plan as its basis to fund all projects while considering applicable local plans; however, the Strategic Plan is broad and reflects only general requirements applicable to all projects.

General Criteria Used by the Conservancy

- *Promotion of the Conservancy's statutory programs and purposes*
- *Consistency with purposes of the funding source*
- *Public support*
- *Location (must benefit coastal, ocean resources, or the San Francisco Bay region)*
- *Need (desired project or result will not occur without Conservancy participation)*
- *Greater-than-local interest*

Source: Strategic Plan

Additionally, the Conservancy does not have a formal awarding process or a grant applications process to document its project merit review. Without bond-specific program criteria and application review documentation, the merit for selected projects is not transparent.

In awarding projects, the Conservancy works with the Conservancy's partners—public agencies and nongovernmental organizations—to identify potential projects. However, information on the Conservancy website about ongoing programs and efforts, regional priorities, and funding opportunities is limited. Agendas for upcoming Board meetings do not list projects under evaluation and therefore may limit external opportunities for involvement. Additionally, with 34 Conservancy program staff and 4 regional managers performing project reviews, establishing a formalized awarding process is critical to ensure project consistency.

Public Resources Code, Division 21, sections 31205, 31254, and 31303 require "The Conservancy to request the commission, local public agencies, nonprofit organizations, and other public and private groups to assist in the development of *criteria and guidelines for the submission, evaluation, and determination of priority of projects* (coastal restoration, coastal resource enhancement, and urban waterfront restoration). After considering comments received from such sources and ensuring that adequate opportunity for public review and comment has been provided, the *conservancy shall adopt guidelines and criteria for the administration of the coastal program authorized under this chapter.*"

Water Code section 79505.6 (a) (1) states, by March 15, 2004, each state agency disbursing grants or loans pursuant to this division shall develop project solicitation and evaluation guidelines.

Government Code section 13402 states that state agency heads are responsible for the establishment and maintenance of a system or systems of internal accounting and administrative control within their agencies. This responsibility includes documenting the system, communicating system requirements to employees, and assuring that the system is functioning as prescribed and is modified, as appropriate, for changes in conditions.

The Conservancy Strategic Plan states, "The administration, Legislature, academia, interest groups, and the general public need to be informed of programmatic, strategic, and project planning and development, upcoming opportunities for participation, and of the outcomes of these projects and other decisions."

Subsequent to this audit, the Conservancy recently made several efforts to address some of these issues, including grant applications and project selection criteria posted to its website.

Recommendations:

- A. Develop program specific guidelines and criteria outlining the submission, evaluation, and project priority process and determinations.
- B. Publish the above guidelines and funding opportunities on the Conservancy website.
- C. Document merit review activities clearly indicating how projects meet the program's established awarding criteria.
- D. Provide related staff training.

Observation 3: Project Matching Funds May Not be Maximized

The Conservancy does not enforce or monitor grantees' required match contributions. For 12 projects reviewed, grant budgets and work plans indicated total available match contributions of over \$7.3 million. For example, grant agreements for two of the projects reviewed, California State University at Monterey Bay and City of Pacifica, specifically stated, "Conservancy funds shall not be disbursed until matching funds are committed"; however, the Conservancy never verified the match contribution.

Additionally, although staff project recommendations indicate match contributions, the final grant agreements and work plans do not consistently include the match requirement language. Most state departments require grantees to report match contributions via the reimbursement request forms. This allows the department to monitor and confirm grantee's match contributions. The Conservancy Request for Disbursement form does not require match reporting.

Public Resources Code section 5096.651 requires priority be given to projects with a match contribution. In addition, the Conservancy's 2007 Strategic Plan (see text box above) identified the match need and assumed Conservancy funds would be matched by at least 2 to 1.

Matching Funds Priority

"The Conservancy's recently completed Five-Year Capital Infrastructure Plan for fiscal years 2008-09 to 2012-13 identified a need for approximately two times the dollar amount assumed to be available to the Conservancy. Additionally, like this strategic plan, it also assumes the Conservancy's funds will be matched by at least 2-1."

Source: Conservancy Strategic Plan

Recommendation: Monitor and verify match contributions prior to disbursement. Include a match reporting section in the reimbursement request form and require submission of match documentation.

Observation 4: Project Fiscal Oversight Needs Improvement

The Conservancy lacks adequate project fiscal oversight. Based on a review of 12 projects, the following control weaknesses were noted:

- *Detailed work plans and budgets are not consistently received or documented prior to project commencement.* The Conservancy awards projects based on estimated scope and costs with the condition that detailed work plans and budgets will be submitted and approved prior to commencing project work. However, based on a review of 12 projects, 3 of 12 detailed work plans and 5 of 12 expenditure budgets were missing. Without clearly defined scopes and budgets, the Conservancy's ability to monitor projects and ensure successful completion is at risk.

State Contracting Manual defines scope as, "The work, service, or product to be performed, rendered, or provided. Clear and concise language must be used to describe the scope."

- *Grantee reimbursements are not consistent with grant budgets.* Based on an audit performed by Finance in 2010 of Sonoma Land Trust, Sears Point Grant, the grantee was reimbursed for \$58,862 in overhead costs.

Overhead was not a grant approved budget line item. In addition, the grantee billed and was reimbursed for *budgeted* salary rates instead of *actual* salary cost. Half-way through the contract term, the total markup was \$22,775 over actual costs. (See Appendix C for link to grant audit report.)

Grant agreements require grantees to submit a Request for Disbursement form with supporting documentation. However, the Conservancy allows grantees to use their own invoices, which do not always reflect budgeted items. Consequently, the claimed costs are not consistent with the approved budgets.

- *The Conservancy lacks formal monitoring procedures leading to inconsistent reviews and limited documentation.* Project managers are responsible for performing site visits of restoration, enhancement, and public access projects to ensure projects stay within scope and cost; however, there is no guidance defining required site visit intervals, areas to review, or documentation required.

During the review of the Malibu Lagoon Restoration project, documentation was limited and the project manager was unable to provide adequate justification for the project's eight amendments that modified the scope and increased total funding from \$300,000 to \$925,259. Additionally, although the file included a detailed budget for the initial award, the subsequent amendments included only lump sum amounts providing little to no justification for the 208 percent funding increase. The project manager was not in charge during the amendment approvals.

- *Post-close monitoring is not performed.* Once a project is closed, the post-monitoring requirement is intended to ensure the project is adequately maintained as specified in the grant agreement. Two of four closed projects reviewed lacked a project monitoring plan. The Conservancy acknowledged post monitoring is not being performed or documented on a consistent basis. The Conservancy relies on grantees, other state agencies, or non-profits in the area to alert them about project issues. Although Conservancy grant agreements include early termination for failure to perform and notification in the case of a change in ownership, these are defensive measures. The Conservancy should be proactive. Other state agencies require long-term management plans with periodic condition reports, including site photos.
- *Project status is inaccurate and incomplete.* A comparison of accounting records with reported project status² indicated a difference of over \$172 million in project awards. Public Resources Code section 5096.686 and Water Code section 79575 require annual project and expenditure summary reports. According to the Conservancy, the website has not been updated due to limited staffing resources; however, they are in the process of developing the Coastal Project Management Database to track its projects.

Recommendations:

- A. Develop a standard application with workplan/budget templates including directions on how to complete it. Define the level of detail needed for different project types to ensure consistency among the program staff.
- B. Standardize reimbursement forms to match the approved grant budgets. Include template in program guidelines along with clear definition of eligible costs.

² Project status is posted on Natural Resource Agency's "Proposition 40/50 Awards Website".

- C. Develop and implement monitoring procedures outlining site visit intervals, areas to review, and project documentation required.
- D. Require grantees to submit a maintenance and operation plan at project close-out and require periodic project condition reports.
- E. At year-end, reconcile project database information to accounting records to ensure all bond projects are accurately recorded. Complete the Coastal Project Management Database and update the website accordingly.
- F. Provide related staff training.

California State Coastal Conservancy's Sub-Programs

Public Resources Code section	Program Name	Program Purpose
31119(a)	Coastal Education	To undertake educational projects for pupils in kindergarten to grade 12, relating to the preservation, protection, enhancement, and maintenance of coastal resources.
31150-31156	Preservation of Agricultural Lands	For the purpose of acquiring fee title, development rights, easements, or other interests in land and undertaking improvements to and development of lands located in the coastal zone in order to prevent loss of agricultural land to other uses and to assemble agricultural lands into parcels of adequate size permitting continued agricultural production. All feasible action will be taken to return to private use or ownership all lands acquired, with appropriate use restrictions.
31160-31165	San Francisco Bay Area Conservancy Program	<p>The Conservancy may undertake projects and award grants to the nine counties of the San Francisco Bay Area that will help achieve the following goals:</p> <ul style="list-style-type: none"> • To improve public access to, within, and around the bay, coast, ridgetops, and urban open spaces, without having a significant adverse impact on agricultural operations and environmentally sensitive areas and wildlife through completion and operation of regional bay, coast, water, and ridge trail systems, and local trails connecting to population centers and public facilities, and through preservation of related facilities. • To protect, restore, and enhance watersheds, scenic areas, natural habitats, connecting corridors, and other open-space resources of regional importance. • To assist in the implementation of the policies and programs of the California Coastal Act of 1976, the San Francisco Bay Plan, and other adopted plans. • To promote, assist, and enhance projects that provide open space and natural areas that are accessible for recreational and educational purposes.
31200-32215	Coastal Restoration Projects	For the purpose of restoration of areas of the coastal zone that, because of scattered ownerships, poor lot layout, inadequate park and open space, incompatible land uses, or other conditions, are adversely affecting the coastal environment or impeding orderly development. Grants shall be utilized to assemble parcels of land within designated coastal restoration areas, for the redesign of those areas, and installation of public improvements required for those areas.
31220	Integrated Coastal and Marine Resource Protection	To improve and protect coastal and marine water quality and habitats, the Conservancy may undertake coastal watershed, coastal and marine habitat water quality, sediment management, and living marine resources protection and restoration projects. In consultation with the State Water Resources Control Board, the Conservancy will develop projects consistent with Public Resources Code section 30915, which provides approval for projects that restore and protect the water quality and environment of coastal waters, estuaries, bays, and near shore waters.
31251-31270	Coastal Resource Enhancement Projects	For the purpose of enhancement of coastal resources that, because of indiscriminate dredging or filling, improper location of improvements, natural or human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Assembly of parcels of land is used to improve resource management, relocation of improperly located or designed improvements, and for other corrective measures to enhance the natural and scenic character of the areas.
31300-31316	Urban Waterfront Restoration	To promote the restoration of the state's vital urban waterfronts by developing environmentally sound areas through the creation of parks, open space, visitor serving facilities, and housing for all income levels will promote tourism, public access, and private sector development.
31350-31356	Reservation of Significant Coastal Resource Areas	The Conservancy is vested with the authority to acquire, hold, protect, and use interests in key coastal resource lands to assure coastal resource sites shall be reserved for public.
31400-31410	System of Public Accessways	To implement a system of public accessways by acquiring land or any interest therein, or to develop, operate, or manage lands for public access purposes to and along the coast.
35500-35650	California Ocean Protection Act	To ensure that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations.

APPENDIX B

List of Projects Reviewed at State Coastal Conservancy

#	Grantee Name	Project Name	Amount	Program	Public Resources Code
1	California State University Monterey Bay Foundation	Santa Barbara Channel Marine Mapping Project	\$400,000	Integrated Coastal and Marine Resource Protection	Division 26 Chapter 1
2	Cambria Community Services District	East West Ranch Coastal Trail Improvements	\$345,000	System of Public Accessways	Division 21 Chapter 9
3	City of Malibu	Malibu Civic Center Stormwater Improvement Project	\$1,000,000	Resource Enhancement	Division 21 Chapter 6
4	City of Pacifica	San Pedro Creek Watershed: Capistrano Bridge Fish Passage Improvements	\$545,000	Resource Enhancement	Division 21 Chapter 6
5	County of Humboldt	Humboldt Fish Passage Improvement Program	\$594,272	Resource Enhancement	Division 21 Chapter 6
6	County of Santa Barbara	Isla Vista Beach Accessway Improvements (stair reconstruction)	\$250,000	System of Public Accessways	Division 21 Chapter 9
7	Gold Ridge Resource Conservation District	Salmon Creek Ranch Implementation	\$610,000	Resource Enhancement	Division 21 Chapter 6
8	Mendocino Land Trust	Mendocino Coastal Trail Program, Phase 1	\$200,000	System of Public Accessways	Division 21 Chapter 5
9	Peninsula Open Space Trust	Pillar Point Bluff Coastal Trail	\$433,550	System of Public Accessways	Division 21 Chapter 9
10	Resource Conservation District of the Santa Monica Mountains	Malibu Lagoon Restoration	\$4,316,800	Resource Enhancement	Division 21 Chapter 6
11	Smith River Alliance, Inc.	Mill Creek Implementation Phase I	\$1,000,000	Resource Enhancement	Division 21 Chapter 5.5
12	Sonoma Land Trust	Estero Americano Nature Preserve Enhancement	\$45,965	Resource Enhancement	Division 21 Chapter 5.5
		Total	\$9,740,587		

APPENDIX C

List of State Coastal Conservancy Grant Audits*

#	Grantee Name	Project Name	Amount
1	City of Pacifica	San Pedro Creek Watershed: Capistrano Bridge Fish Passage Improvements	\$545,000
2	City of San Clemente	San Clemente Pedestrian Beach Trail	\$500,000
3	Sonoma Land Trust	Cedars Area Conservation Plan	\$23,000
4	Sonoma Land Trust	Roche Ranch Acquisition	\$3,000,000
5	Sonoma Land Trust	Sears Point Restoration Projects Enhancement and Restoration Plans	\$1,000,000
6	Sonoma Land Trust	Sonoma Bay Lands Trail Facilities and Site Management	\$567,138
7	Monterey Peninsula Regional Park District	Palo Corona Ranch Acquisition	\$12,220,000
8	Santa Clara County Open Space Authority	Blair Ranch Acquisition	\$4,340,000
9	City of Pacifica	Mahoney Property Acquisition	\$1,100,000
		Total	\$23,295,138

* All final grant audit reports posted at http://www.dof.ca.gov/osae/prior_bond_audits/.



October 7, 2010

Mr. David Botelho, CPA
Chief, Office of State Audits and Evaluations
915 L Street
Sacramento, CA 95814-3706

RE: An Audit of State Bond Fund – California State Coastal Conservancy Propositions 12, 13, 40,
and 50

Dear Mr. Botelho:

This is the California State Coastal Conservancy's ("Conservancy's") official response to the above referenced audit report. We found few surprises in the document, having had numerous conversations with your staff during the audit process. We appreciated their openness and professionalism. While we have disagreements about some of the report's conclusions and recommendations, in several areas we are in general agreement and have either begun or completed corrective actions. We respond below to the report as it is organized, with brief overall comments on the four major issues described in the Executive Summary, and with longer discussions for specific issues and recommendations.

Executive Summary Observations

Observation 1: The Conservancy has made loans without proper authority and has deposited returned funds into the Coastal Conservancy Fund instead of the bond fund of origin.

Response to Observation 1: There is specific unambiguous language in Division 21 of the Public Resources Code authorizing the Conservancy to seek repayments of grants (Public Resources Code section 31118). The same legislative bill through which that statute enacted was enacted also amended section 31101 to require that funds received by the Conservancy be deposited in the State Coastal Conservancy Fund (Fund 0565).

Observation 2: The Conservancy does not have formal program guidelines; project awarding criteria; and grant applications. The Conservancy's website has limited or incomplete information about ongoing efforts, regional priorities, and funding opportunities.

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510-286-1015 Fax: 510-286-0470



Response to Observation 2: The Conservancy has had project selection guidelines for many years and periodically updates them. In response to the audit, the Conservancy has recently standardized its grant application among its regions. The Conservancy website has been updated to include the standardized grant application, more information about funding opportunities, and additional information about ongoing efforts will be added. In addition, the Conservancy has a Strategic Plan (Plan) that has been posted on its website and guides the development and funding of projects according to the Plans' goals.

Observation 3: Fiscal oversight and monitoring of bond funds needs improvement. Project scopes and budget lack detail, match contributions are not enforced, grantees are paid for non-budgeted items, and project monitoring is inconsistent and inadequately documented.

Response to Observation 3: We disagree that there is an endemic problem with the detailing of project scopes and budgets or paying for non-budgeted items. The audit is vague about the nature of this assertion and any problems that have arisen.

Non-budgeted items: The Conservancy does not pay invoices unless they are consistent with a work program and budget in the corresponding grant-agreement file. This issue identified in this audit appears to arise from a particular project in which a negotiated overhead rate was authorized but was not sufficiently documented in the agreement. This was a rare occurrence and in no way resulted in inappropriate use of funds.

Matching funds: The auditors misunderstood the nature of matching funds. For most projects the Conservancy did not require specific matching amounts, only that the project had sufficient resources for completion. Thus, there were no specific matching requirements to be enforced.

Project monitoring: We are improving post-project monitoring. The Conservancy has developed standardized post-project monitoring requirements that can be tracked and recorded in the Conservancy's project database and will begin staff training to implement its post project monitoring program this fall.

Observation 4: Bond project status is incomplete and does not fully comply with bond reporting requirements.

Response to Observation 4: We have developed a process for project managers to document project status when processing invoices. We are working to complete all required bond reporting.

Detailed Observations and Responses

Observation 1: Lack of Accountability Over Bond-Funded Loans: The Conservancy issues loans without clear authority or adequate controls. The Conservancy classifies its loans as "grants with repayments." These are actually loans made with unclear authority.

Mr. David Botelho, CPA
October 7, 2010

Detailed Response: Chapter 1551, Statutes of 1984, in adding Public Resources Code section 31118 to the Conservancy's enabling legislation, clearly authorizes the Conservancy to "seek repayments of funds granted pursuant to this division on terms and conditions as it deems appropriate to carry out the provisions of this division." Conservancy staff worked directly with the author of the bill on this and other provisions it contained. The purpose of this section of law is to authorize the Conservancy to make its grants repayable when warranted. This practice, as carried out by the Conservancy over the years since is clearly authorized, and no additional authorization is needed.

Loan Receivables are Not Recorded: Repayable grants should be considered loans and should be recorded within the Conservancy's accounting system. Loans are currently tracked by contract managers not the accounting department. This has led to some loan repayments becoming overdue.

Detailed response: The payback provisions in some grants do not make them loans requiring that they be recorded as loans receivable. Many of the repayment provisions are conditional. Repayments may be required in some cases if property is sold, or if expected matching funds come through or if there is revenue of some kind associated with the project for which the grant was originally made. There are very few of these repayable grants to begin with. While the current system using the contract manager and project manager to enforce the payback provisions has worked in general, in some cases, for various reasons, public agencies and nonprofit organizations have not been able to repay portions of grants. In order to ensure centralization of the grant-repayment function, we will direct our contracts unit to bill grantees in accordance with the repayment schedule in the grant agreement. Copies of the billing will be provided to the contract manager and to the accounting unit, and follow up will be made if payment is not received within a timely manner.

Loan Repayments Recorded as Revenues in Conservancy Fund: Instead of putting repaid funds into the bond fund of origin the Conservancy has deposited these funds in the Coastal Conservancy Fund. This fund is used for general operations and support. The Conservancy claims that Section 31011 of the Public Resources Code requires it to place repaid funds into the Coastal Conservancy Fund, but Government Code Section 16303 requires that returned funds be credited to the originating appropriation and fund. Because the Conservancy and the Controller have not established separate accounts within the Coastal Conservancy Fund, it is hard to identify what money in that fund should be identified as bond funds. This has led to the improper use of bond funds, most notably \$37,000 of support costs, including \$10,000 for yoga classes identified in a 2006 audit. These funds had to be returned and other funds used instead.

Detailed response: The Conservancy does not "claim" that Section 31011 of the Public Resources Code requires that it place repaid funds into the Coastal Conservancy Fund. The statute says: "Unless otherwise provided in this division, any funds received by the conservancy pursuant to this division shall be deposited in the State Coastal Conservancy Fund." This section of the Public Resources Code was enacted after the enactment of Government Code Section 16303 and is more specific. Thus, if the two statutes were to conflict, section 31011 would normally prevail.

We strongly disagree that bond funds were misused in that repaid funds were not identified as bond funds. First we disagree that repayments into the Coastal Conservancy Fund should always or perhaps ever be classified as bond funds. But in the unlikely event we are incorrect on this point and repaid funds are classified as bond funds, each of the bond funds that are the subject of this audit allows for their use for state administrative expenses. Additionally, repayments placed in the Coastal Conservancy Fund are subject to appropriation by the Legislature. They cannot be used for administration or any other purpose without the approval of the Governor and Legislature. The practice of putting repayments into the Coastal Conservancy Fund is well known by the Legislature and the Department of Finance and is part of the Conservancy's Long Term Financial Strategy that is updated and discussed by the Conservancy on a yearly basis in a public meeting. Whether repaid funds were returned to a bond appropriation or fund, or to the State Coastal Conservancy Fund, their use for administration was legal and anticipated in the language of the bond acts that generated this money.

The above is true even for the subsidized yoga classes from 2005/06. Rather than dispute that issue at the time it was raised in a previous audit, we decided to switch this expenditure to a non-bond support appropriation. But expenditures for these classes were nothing out of order. They were part of the Conservancy wellness program authorized pursuant to Executive Order W-119-95, which provides in part that core wellness programs, including exercise programs, shall be developed, and that every state department shall dedicate resources to Work Site Health Promotion. Of the \$8,360 which paid for these classes, \$3,822 was paid by staff contributions, leaving \$4,538 as the state's contribution for the \$2005/06 fiscal year. It is well documented that exercise provides health benefits, and the cost of yoga to the state is considerably less than other state-recommended options such as subsidies to health club memberships. We consider it inappropriate that the audit brought up this finding from 2006 to justify the position on deposits into the Coastal Conservancy Fund.

Recommendations:

- A. Cite or obtain legislative authority and develop and implement a loan program accordingly.

Response: We have cited what we consider to be unequivocal statutory authority to seek repayments of grant funds.

- B. Identify and document all outstanding bond loan receivables. Record bond loans as receivables in the Conservancy's accounting system in accordance with SAM section 7622. Maintain supporting documentation for these amounts.

Response: We have identified all outstanding bond loan receivables. We believe that we are in compliance with the Conservancy's enabling legislation and applicable Government Codes and SAM sections.

- C. Record bond loan repayments in the bond fund of origin. Discontinue depositing bond loan repayments in Fund 0565. Transfer prior bond loan repayments from Fund 0565 to the bond fund of origin. Maintain supporting documentation.

Response: We will continue to follow the law.

- D. Provide a corrective action plan.

Response: We will comply with this requirement as detailed above.

Observation 2: Project Awarding Process Needs Improvement: The Conservancy has authorized hundreds of millions of dollars without program guidelines, specific awarding criteria, project application forms, or website announcements in place. The Conservancy does not have a formal awarding process or a grant applications process to document its project merit review. The merit of projects is not transparent. The Conservancy's website does not have sufficient information to tell potential grantees of its priorities and funding opportunities. Projects under development are not included in project agendas. With the high number of Conservancy program staff and managers consistency cannot be ensured without more process for awarding grants. The Conservancy has not followed statutes and its own plans in developing program guidelines.

Detailed response: The Coastal Conservancy has a very successful track record, having funded well over 1,200 projects since its inception. The Conservancy's substantial record of success includes such accomplishments as: helping to protect more than 150,000 acres of wetlands, wildlife habitat, farmland, recreational lands and scenic open space; helping to build over 400 access ways and 100's of miles of trails such as the California Coastal Trail, the San Francisco Bay and Ridge Trails; assisting to complete over 100 urban waterfronts to reclaim properties for recreational use and economic development; and leading the planning and restoration for many complex stakeholder processes including the nationally significant San Francisco Bay Salt Pond Restoration project.

The Conservancy has formally adopted project selection criteria, and a formal, transparent awarding process that follows statute. The Conservancy marries these formal criteria and processes with hands-on involvement with prospective and awarded grantees to encourage innovation and excellence to the extent practicable within each project. The audit suggests problems where they do not exist and are unlikely to arise, and it fails to acknowledge the effectiveness of the processes in place. We assert that this is clearly a case of "if it ain't broke, don't fix it."

The Conservancy long ago formally adopted "Project Selection Criteria" in accordance with the requirements of Division 21, the Conservancy's enabling legislation, and has modified the criteria from time to time, most recently June 4, 2009. The Conservancy uses its project selection criteria, provisions of Division 21, bond-act criteria, Strategic Plan criteria, the occasional Budget Act criteria, and significant public input from stakeholder groups to identify important projects and make funding recommendations.

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Conservancy staff is entrepreneurial and geographically arrayed. As directed in Division 21 of the Public Resources Code, the Conservancy works with local and state government officials and nonprofit organizations to develop projects that meet state and regional goals. It generally does not institute grant rounds but instead has an open grant process. Applications can be and are made, and these are considered at any time. There are several advantages to a rolling application process. For example, prospective grantees do not have to prematurely submit an application before a project is adequately developed, and Conservancy staff can provide needed guidance to improve projects before the application is submitted. We believe that this process improves the quality of the applications received and ultimately of the projects that are funded.

These procedures are an efficient process for awarding grants that meets statewide and regional needs. Awards are made at open public hearings. The staff reports are detailed, including the rationale for the project and its priority, how it meets the requirements of the Conservancy's enabling legislation and funding sources, and how it meets both strategic plan goals and project selection guidelines. The public is invited to speak on each project and the Conservancy's board, by public vote, may modify or reject any proposal. This is a very transparent process.

With respect to the form of grant applications, based on discussions with the auditors, we have created a uniform grant application that is posted on our website. There is now more information available to the public concerning priorities and how to apply for funding.

The Conservancy has followed applicable statutes in the development of project selection criteria, the development of a strategic plan and five-year infrastructure plan, and in its compliance with bond act requirements. Proposition 50 requires new guidelines to be developed unless guidelines already exist that are sufficient. Conservancy guidelines predate the passage of this bond act. The bond act's sponsors were aware of the existence of the Conservancy's guidelines and placed the language in the measure in part so that the Conservancy did not have to develop new ones.

Recommendations:

- A. Develop program specific guidelines and criteria outlining the submission, evaluation, and project priority process and determination.

Response: We have updated the Conservancy's website with information helpful to potential grantees and have standardized our grant application. Given existing project selection criteria, the detailed language authorizing each program contained in Division 21 of the Public Resources Code, the specific language contained in various bond acts, and our strategic and infrastructure plans, we do not believe additional work in this area is warranted or an efficient use of scarce dollars or staff resources.

- B. Publish the above guidelines and funding opportunities on the Conservancy website.

Response: The website has been and will continue to be upgraded with new information.

- C. Document merit review activities clearly indicating how projects meet the program's established awarding criteria.

Response: This is already done in great detail in our staff reports.

- D. Provide related staff training.

Response: Conservancy staff is provided periodic training in-house in both formal and informal settings.

Observation 3: Project Matching Funds May Not be Maximized: In some cases it appears that the Conservancy has required matching funds but either grant contracts and work programs and budgets do not include this requirement, and/or requests for reimbursements do not include a way to track matching funds.

Detailed Response: In general Coastal Conservancy grants require that all funds needed to complete a project are in hand before Conservancy funds may be used. The amount of Conservancy funds in proportion to the overall cost of a project is negotiated prior to the project being brought for final approval by the Conservancy's board.

The Conservancy always seeks to ensure that any project it funds has multiple funding sources. The Conservancy funds a greater portion when applicants have limited funds available for high priority projects, but on balance, our project funds are well leveraged. Between 1987 and 2009, Conservancy funds were matched with non-state funding by nearly 2-1. We will continue to leverage funding to the extent practicable.

The staff reports and resolutions brought to the Conservancy describe the various funding sources that will be used to complete a project, but usually do not require a specific match either in cash or in-kind services. The requirement is that the project be completed, and that Conservancy funds do not surpass a specified amount. The audit mistakenly interprets various sections of staff reports which describe expected sources of funding, as required matching funds. They are not requirements unless specific, mandatory language is included in the resolution approving the Conservancy's grant. As a result of the audit we have adopted more standard "matching fund" language for our staff reports to clarify.

Recommendation: Monitor and verify match contributions prior to disbursement. Include a match reporting section in the reimbursement request form and require submission of match documentation.

Response: Conservancy staff works with grantees before projects begin to ensure that funding is available to complete the project and that the cost estimates for each project are accurate. Our chief goal

is to ensure that the project is completed as described. We are less concerned whether or not a grantee provides a set amount of funds as opposed to in-kind services to get the job done, or whether the grantee changes funding sources during the project. Since we generally do not have set matching fund requirements, there is no value added in requiring documentation other than that detailing that the project has been completed as contracted. This is done through an end audit of each project.

Observation 4: Project Fiscal Oversight Needs Improvement: The Conservancy lacks adequate project fiscal oversight. Based on a review of 12 projects, the following control weaknesses were noted:

The Conservancy does not agree with this finding. The Conservancy received audit reports for only seven of the nine projects listed in Appendix C. Of the \$17,855,138 audited in those seven reports, the auditors questioned only \$78,645 in expenditures. Upon review, those expenditures were found to be appropriate. The specific contract did not reference an agreed upon rate schedule, and the file lacked complete documentation, but we do not agree that this constituted a lack of adequate fiscal oversight. Nonetheless we have ensured that these corrections have been made since we take our fiscal responsibilities very seriously and we are proud that the vast majority of our project audits have found no problems at all.

Detailed Responses

- Detailed work plans and budgets are not consistently received or documented prior to project commencement.

Response: Invoices are not paid without detailed work plans and budgets being part of a contract file. Initial review of invoices is conducted by our contract staff, who do not forward them to our project and accounting staff if work plans and budgets are missing.

- Grantee reimbursements are not consistent with grant budgets.

Response: This issue concerns overhead payments made to the Sonoma Land Trust that the auditors claim were not authorized by the contract. However, as we explained to the auditors in a memo, there was an agreement negotiated between our North Coast Program Manager and the Executive Director of the Land Trust that authorized 15% overhead for all contract items. It is worthwhile to note that this agreement was reached within the context of a larger negotiation, initiated by the Conservancy, regarding the billing rates of the Sonoma Land Trust. This negotiation resulted in a substantial rate reduction, nearly 50% for their Executive Officer and other staff. These negotiated rates were also memorialized in an email, but not transferred to a formal agreement or placed in the contract file. We disagree that overhead payments were not authorized.

- The Conservancy lacks formal monitoring procedures, leading to inconsistent reviews and limited documentation.

Response: We have now established a project-monitoring process that will be documented in our project database. As for the Malibu Lagoon Restoration project, amendments do not lack documentation. These amendments were authorized by the Conservancy's board. The grant agreement amount was increased to fund subsequent phases of a complex project, not to cover cost overruns, and there is a detailed work program for each amendment.

- Post-close monitoring is not performed.

Response: Post-close monitoring has been accomplished informally during visits of the project managers to their geographic areas. Most of the conservation easement acquisitions that we have funded already have monitoring requirements. We are now implementing a formal monitoring system for other projects.

- Project status is inaccurate and incomplete.

Response: As noted, we are behind in entering data into the bond database. This is due to lack of staff resources in part due to required furloughs. Additional resources have been assigned to this task.

Recommendations:

- A. Develop a standard application with workplan/budget templates including directions on how to complete it. Define the level of detail needed for different project types to ensure consistency among the program staff.

Response: We have developed a standard grant application that is now in use. We have templates for workplans and budgets and use them where it makes sense. The Conservancy funds many types of projects, and these templates do not work for all projects.

- B. Standardize reimbursement forms to match the approved grant budgets. Include templates in program guidelines along with clear definition of eligible costs.

Response: We have a standard reimbursement form that has been used for years, and we have now made use of that form mandatory for all projects. We have guidelines related to overhead and indirect costs.

- C. Develop and implement monitoring procedures outlining site visit intervals, areas to review, and project documentation required.

Mr. David Botelho, CPA
October 7, 2010

Response: We have developed procedures to accomplish this. We are in the process of training staff and implementing these procedures.

- D. Require grantees to submit a maintenance and operation plan at project close-out and require periodic project condition reports.

Response: Maintenance and operation requirements are included as conditions of grants or as contract terms when warranted. They are not apposite to all types of projects or needed in all cases. The periodic condition of projects will be monitored through the new process.

- E. At year-end, reconcile project database information to accounting records to ensure all bond projects are accurately recorded. Complete the Coastal Project Management Database and update the website accordingly.

Response: This is in process.

Thank you for the opportunity to respond to the audit of Conservancy administered State bond funds.

Sincerely,

Original signed by:

Samuel Schuchat
Executive Officer
California Coastal Conservancy

EVALUATION OF RESPONSE

The Conservancy's response to the draft audit report has been reviewed and incorporated into the final report. In evaluating the response, we provide the following comments:

Observation 1

The Conservancy states that grants with repayment provisions are not considered loans and therefore should not be recorded as a receivable. However, irrespective of the type of financial instrument, loan or grant, the transaction should be recorded as a long-term receivable due and payable to the state within the originating fund. Proper accountability is necessary to ensure bond funds are separately tracked for future use and reappropriation.

In addition, based on subsequent consultation with bond counsel at the State Treasurer's Office (STO) and pursuant to the attached September 11, 2008 memorandum, there could be additional reporting requirements and potential tax implications. We strongly recommend the Conservancy consult with the STO and Finance's Fiscal Systems and Consulting Unit (FSCU) to determine specific recording and reporting requirements.

Please provide us a Corrective Action Plan within 60 days of this report including the final resolution based on consultation with the STO and FSCU.

Observation 2

In response to this finding, the Conservancy created a grant application form and posted it on their website. However, we continue to recommend program-specific guidelines and program-specific criteria for the submission, evaluation, and awarding of grants.

Observation 3

The Conservancy has taken steps to address this observation by clarifying definitions and adopting more standard "matching fund" language for its staff reports. In those instances where match is required, the Conservancy should implement procedures to verify and document matching contributions.

Observation 4

Although the Conservancy does not agree with this finding, it has taken corrective actions. In addition, at the time the draft report was issued, two grant audits were still in progress. To date, all grant audits listed in Appendix C have been completed and issued.

M E M O R A N D U M

Date: September 11, 2008

To: General Obligation Bond Program Administrators

From: Geoff Palmertree, Manager
Interim Finance Section
Public Finance Division
State Treasurer's Office

Subject: Returned Grant Funds

Departments that administer grant¹ programs funded by general obligation bonds occasionally have grant funds returned by the grantee. This memo is intended to answer frequently asked questions concerning departments' obligations in such situations.

Should the department notify the State Treasurer's Office (STO)? Yes. The Tax Compliance Certificate executed by each department requires the department to immediately notify the STO when grant funds are returned to the department. Returned grant funds are considered unspent bond proceeds, which must be tracked in order for the State to comply with federal tax law requirements.

What information should the department provide to the STO? The following information should be provided to the STO:

- Date the original grant was made
- Amount of the original grant
- The name of the bond act and the number of the bond fund from which the grant was made
- Date and amount of grant funds returned
- Plan for re-granting the funds

What should the department do with the returned grant funds? The returned grant funds should be placed in the bond fund from which the original grant was made and re-granted as soon as possible. If the returned funds can be re-granted and disbursed within 60 days, the STO will not need to track interest earnings on the funds. If the returned funds are not re-granted and disbursed within 60 days, the STO will engage the State's arbitrage rebate consultant to perform the necessary calculations until the funds are re-granted and disbursed. Please notify the STO of the date on which the funds are re-granted and disbursed.

¹ A grant is a transfer of money for a specific purpose, without any obligation or condition to directly or indirectly repay any amount. However, a condition requiring a grant to be returned if the grantee does not meet the requirement of the grant (e.g., a change in use of the project, or if the project is completed under budget) does not prevent the transfer from being a grant.

Immediately notify the STO if for any reason the department will be unable to re-grant the returned funds.

Should the department establish a written policy regarding re-granting of returned grants? Yes. The STO recommends that the department establish a formal written policy providing that all returned grants will be the first dollars disbursed for other eligible grants so long as the necessary appropriation is in place.

What if the returned grant includes some sort of penalty or is otherwise in excess of the original grant amount? Any returned amount in excess of the original grant is not considered bond proceeds and does not need to be tracked for federal tax law purposes. However, a variety of State laws could apply and govern the use of moneys derived from or associated with bond proceeds. These laws could include the bond act itself, laws applicable to a particular program or recipient, and other laws and regulations. The STO recommends that the department consult their legal counsel or the Attorney General's Office in such situations.

What are the record retention requirements for the returned grants? Records relating to a general obligation bond funded grant program, including those related to a returned grant and the subsequent re-granting of the funds, must be retained for 35 years from the date of the original grant. See the July 2, 2008 memo from the STO regarding records retention for additional information.

We hope the above information is helpful. If you have any questions that are not addressed by this memo, please contact Melinda Chan at mchan@treasurer.ca.gov or (916) 653-3445.

COASTAL CONSERVANCY

Staff Recommendation
December 8, 2005

**BALLONA WETLANDS
ENHANCEMENT PLANNING**

File No. 04-088
Project Manager: Mary Small

RECOMMENDED ACTION: Authorization to disburse up to \$200,000 to the Santa Monica Bay Restoration Foundation for planning, data collection, and other activities associated with the restoration of the Ballona Wetlands and to implement the Santa Monica Bay Plan, adopted by the Conservancy on August 2, 2001. The project area is in Los Angeles County.

LOCATION: West of Lincoln Boulevard and south of the Marina del Rey along the Ballona Creek Channel in Los Angeles County. A portion of the project is in the City of Los Angeles and a portion is in unincorporated Los Angeles County (Exhibits 1 & 2).

PROGRAM CATEGORY: Coastal Resource Enhancement and Public Access

EXHIBITS

Exhibit 1: Project Location Map

Exhibit 2: Project Area and Watershed Map

Exhibit 3: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 and 31400 et seq. of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed two hundred thousand dollars (\$200,000) to Santa Monica Bay Restoration Foundation for planning, technical review, data collection and public outreach to support the restoration of the Ballona Wetlands, approved by the Conservancy on December 2, 2004. This authorization is subject to the condition that prior to disbursement of funds, the Conservancy’s Executive Officer shall approve the work plan, budget and the contractor for this work.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project authorization is consistent with Public Resources Code Sections 31251-31270, regarding the Conservancy's mandate to protect and enhance coastal resources.
 2. The proposed project authorization is consistent with Public Resources Code Sections 31400-31409, regarding the Conservancy's mandate to assist in the development of a system of public accessways to and along the coast.
 3. The proposed project is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.
 4. The project serves greater than local need.
 5. The Santa Monica Bay Restoration Foundation is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code and which purposes are consistent with Division 21 of the Public Resources Code."
-

PROJECT SUMMARY:

This authorization would provide funding to advance the efforts of the Santa Monica Bay Restoration Foundation (Foundation) to improve the health of the Santa Monica Bay by helping to restore the former Ballona Wetlands and to implement the Santa Monica Bay Plan. If approved, the Foundation would engage in restoration planning activities, including technical review, collecting data and public outreach. This work would be closely coordinated with and would complement the Conservancy's authorization of December 2, 2004 and other state efforts to restore the 600-acres of the historic Ballona Wetlands owned by the California Department of Fish and Game (DFG) and the State Lands Commission (SLC).

The Santa Monica Bay Restoration Foundation is a non-profit organization that was created in 1991 to implement the priorities of the Santa Monica Bay Restoration Plan and to support the work of the Santa Monica Bay Restoration Commission. The Foundation has a number of ongoing initiatives including research, public education, and planning. Restoration of the Ballona Wetlands is a priority activity in Santa Monica Bay Restoration Plan. For the past several years, the Santa Monica Bay Restoration Commission has been actively involved in developing and implementing a watershed management plan for the Ballona Creek Watershed. One of the top priorities of that plan is the restoration of the Ballona Wetlands.

The Ballona Creek watershed is approximately 130 square miles and is the largest watershed draining to Santa Monica Bay. It includes much of the City of Los Angeles as well as the cities of West Hollywood, Beverly Hills and Culver City. Approximately 80% of the watershed is urbanized and it is home to more than 1.5 million people. The Ballona Wetlands are located at the mouth of that watershed and offer one of the largest opportunities to restore coastal wetlands in southern California. The site provides habitat for threatened and endangered species, including the Belding's savannah sparrow and the California brown pelican.

Site Description:

It is estimated that the historic wetland complex at the mouth of Ballona Creek once occupied 2000-acres. Much of that area has been developed. However the State of California now owns

600-acres of the former wetland complex. The Department of Fish and Game owns 540 acres, and that land was purchased with funds provided from the Conservancy to the Wildlife Conservation Board. The State Lands Commission owns 60-acres, including a newly created freshwater marsh and adjacent vacant land..

The project area has been substantially altered during the last century, significantly reducing the quantity and quality of the wetlands. Major human activities that have affected the ecological function of this site include past oil field development, channelization of Ballona Creek, and the construction of the Marina del Rey lagoon, which involved deposition of dredge material onto project area. In addition, several major roadways cross the site and it is surrounded by residential and commercial development.

Despite the degradation of site resources resulting from prior development, significant wetland habitat remains within the Ballona Wetlands. Plant species within the project site include wetland indicators such as pickleweed, marsh heather, saltgrass, arrowgrass and glasswort, and a variety of upland and exotic species including brome, iceplant, oxalis, and ryegrass. Bird surveys indicate that the site is used seasonally by a variety of migratory shorebirds, as well as by typical shoreline residents (gulls, terns, and ducks) and typical upland birds including small raptors. Bird species of special interest observed in the project area include nesting pairs of Belding's Savannah sparrow and foraging use by California least terns.

Project History:

There have been more than twenty years of intense conflict about land use at this site. Several development proposals and regulatory approvals have resulted in litigation, some of which continues today. In 2001, the Trust for Public Land entered into a purchase agreement with Playa Capital Company, the former landowner. Through this purchase agreement, the Department of Fish and Game ultimately took title to 540 acres of the property during the past year. The Conservancy provided \$10 million for that acquisition.

The Conservancy has long supported enhancement and public access at the Ballona Wetlands. The first Conservancy project at this site was a 1986 grant to the National Audubon Society for environmental education facility associated with a proposed site restoration. That project was never implemented due to the ongoing conflicts about development at the site. Beginning in the late 1980s, the Conservancy provided funding for planning and implementation of enhancements to the nearby Ballona Lagoon and holds easements for resource enhancement over much of the land bordering the Lagoon.

More recently, the Conservancy has provided funding to the Friends of Ballona Wetlands for dune restoration and invasive plant removal on the southwestern portion of the project area. Last year, the Conservancy approved two grants for projects in the Ballona Creek Watershed that helped implement the Santa Monica Bay Restoration Plan. One of these grants was awarded to the Ballona Wetlands Foundation to develop the Ballona Outdoor Learning and Discovery (BOLD) project. It is a condition of the grant that the BOLD project be developed to be consistent with the larger restoration project.

In December 2004, the Conservancy authorized funds for development of restoration alternatives, feasibility analysis of these alternatives and development of preliminary cost estimates. A consultant team has been hired to develop a conceptual restoration plan. The project is currently collecting data and analyzing existing conditions. Restoration planning for the site will take a minimum of three years. Staff anticipates returning to the Conservancy for authorization to complete this analysis once a preferred alternative has been selected.

PROJECT FINANCING:

Proposition 12, Coastal Conservancy	<u>\$200,000</u>
Total Project Cost	\$200,000

The Conservancy funding would be derived from an appropriation of funds specifically designated for the restoration or acquisition of the Ballona Wetlands in the 2000 park bond, Proposition 12. Public Resources Code Section 5096.352(f) provides that \$25 million is available to the Conservancy for this purpose.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project would be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Public Resources Code Sections 31251-31270, Coastal Resource Enhancement Projects. The project would enhance the natural and scenic character of resources within the coastal zone. As discussed below, consistent with Section 31252, the project is consistent with the policies and objectives of Division 20 of the Public Resources Code.

This project would be undertaken pursuant to Chapter 9 of the Conservancy's enabling legislation, Public Resources Code Sections 31251-31270, Coastal Access. If approved, the planning studies would include analysis of opportunities to enhance the California Coastal Trail and create new public access opportunities at this site.

**CONSISTENCY WITH CONSERVANCY'S
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 5 Objective A** of the Conservancy's Strategic Plan, the proposed project would help the Conservancy to restore and enhance up to 600 acres of coastal wetland and adjacent habitat. When implemented, this project will complete 60% of the total acreage target for Southern California.

Consistent with **Goal 1 Objective C** of the Conservancy's Strategic Plan, the proposed project area could provide a new segment of the Coastal Trail. As discussed above, the project is located at the intersection of the California Coastal Trail and the Ballona Creek Trail, and may offer a significant opportunity for the development of improved connections between these trails.

**CONSISTENCY WITH CONSERVANCY'S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** There is broad public support for developing a restoration plan for this site. The project is supported by the Department of Fish and Game and the State Lands Commission. Letters of support are attached as Exhibit 4.
4. **Location:** The proposed project would be located within the coastal zone of Los Angeles County.
5. **Need:** Conservancy funds are needed to provide resources for the Foundation to provide planning assistance.
6. **Greater-than-local interest:** The proposed project will help advance the largest coastal wetland restoration project in Los Angeles County. The site provides habitat for threatened and endangered species, including the Belding's savannah sparrow and the California brown pelican. The site also provides valuable and scenic open space and public access opportunities in the heart of congested Los Angeles County.

Additional Criteria

7. **Urgency:** More than 98% of the coastal wetlands in the Southern California bight have been destroyed or degraded. This project offers an opportunity to restore and enhance 600 acres of habitat.
8. **Resolution of more than one issue:** Restoration of the Ballona Wetlands will address a number of goals, including: enhancement of wetland and adjacent habitat, creation of compatible public access opportunities, and improvement of coastal water quality.
9. **Readiness:** Restoration planning for the Ballona Wetlands is already underway. If approved, the Foundation will begin work immediately.
10. **Realization of prior Conservancy goals:** "See "Project History" above.
11. **Cooperation:** This authorization will provide resources to improve coordination with the Santa Monica Bay Restoration Commission. The Santa Monica Bay Restoration Commission includes representatives from local government, state government and many stakeholder organizations.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

In the late 1980s, the California Coastal Commission certified two separate Land Use Plans that covered this project area. No Local Coastal Program was ever completed for the Ballona Wetlands area and the two Land Use Plans are now out of date. However the proposed project is consistent with the policies of the Coastal Act. The project goals are consistent with the Coastal Act goals as stated in Section 30001.5, the project will protect, enhance and restore the natural resources of the site and expand public recreational opportunities consistent with conservation of those resources. Specifically, Section 30231 states that coastal wetlands shall be maintained and restored. The project is consistent with Section 30240(a), in that it will help ensure that environmentally sensitive habitat areas are protected against significant disruption of habitat values. As stated in Section 30251, the project will protect the scenic resources and open space of the project site.

**CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/
STATE WATER QUALITY CONTROL PLAN:**

A Watershed Management Plan for the Ballona Creek Watershed was completed by an interagency/stakeholder task force this year. The purpose of the plan is to identify opportunities to improve water quality and restore habitat. The restoration of the Ballona Wetlands is specifically identified as a priority activity in the watershed.

COMPLIANCE WITH CEQA:

Under 14 California Code of Regulations (CCR) Section 15262, feasibility and planning activities are categorically exempt from California Environmental Quality Act (CEQA) review. Similarly, 14 CCR Section 15306 exempts basic data collection, research, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Upon approval, staff will file a Notice of Exemption for the project.

*Received at
Calif Coastal Conservancy
public meeting of 1/19/2012.
M
Elmer Eger
General*

**California Coastal Conservancy Public Meeting 1/19/2012
Comments Item 5.**

The project must be denied because its primary premise is a fallacy.

This body is not entitled to provide over Six Million dollars to promote a project promoting a primary premise that is not supported by fact but only creative narrative.

The people expect more. We demand supportive facts.

The factually unsupported premise which is not supported by evidence in this Staff Report as stated on page 3 proposes to "restore" an "ecosystem" "by reconnecting the site to the ocean and creek.

Reconnection of the site to the ocean is a demonstrable fallacy.

The truth as supported by factual government surveys is presented by the United States Geological Survey and the State of California Director of Public Works in a map prepared prior to the construction of Marina del Rey, a Federal Project.

The USGS and the State present proof that the ocean did not connect to the site. This is demonstrable fact.

The USGS Beverly Hills Quadrangle Map produced in 1954 demonstrates no connection of the site to the ocean whatsoever, only a creek to ocean connection.

This is simple to determine by looking at the map before you and you may view the original copy, which is here. ATTACHMENT 1

Either Staff is wrong in its narrative unsupported by fact, or the U.S. Geological Survey and State of California Director of Public Works are wrong.

The Staff Report contains no facts to support its contention that the site was connected to the ocean.

The Federal map does provide clear evidence Staff is wrong.

The Staff Report contention is only supported narrative, which under the CEQA Public Resource Code is not to be considered as legal evidence.

The Government Map was clearly based on factual surveys of the land.

The Staff Report premise is FALSE. The site was never connected to the ocean. Only the Lagoon was connected prior to the installation of tide gates when the creek was channelized. The Lagoon is still subject to tidal flows.

Please request Staff to respond with facts that demonstrate the State and Federal Government were wrong or deny the permit in absence of this necessary evidence.

The completion of Marina del Rey Harbor allowed for more salt water to into the marshlands that at any prior point in historical times, yet this fact is ignored by Staff.

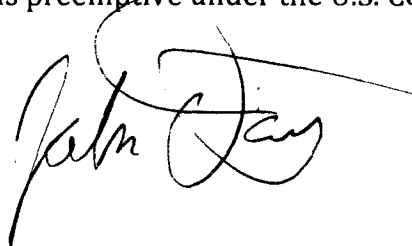
U.S. Public Law 780 Governs the land. ATTACHMENT 2

U.S. House of Representatives Document 389 on page 4 states that some materials will from the harbor construction will be placed to replenish the local beaches. Page 6 describes widening and improving beaches. Page 10 states, "The project is an integral part of the general plan for development of the shoreline of Santa Monica Bay. The General Plan of Improvement is shown as the last page. It ~~to~~ demonstrates no connection of the ocean to the site. ATTACHMENT 3

Staff ignores the federal interest entirely and the fact that dredge spoils were placed on local beaches, not only on lowlands.

Staff failed to conduct a through investigation backed by fact and has ignored the federal interest in the land which is preemptive under the U.S. Constitution Supremacy Clause.

John Davis
PO 10152
Marina del rey Ca. 90295

A handwritten signature in black ink, appearing to read "John Davis", with a large, sweeping flourish extending from the end of the name.

ATTACHMENT 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CALIFORNIA
DIRECTOR OF PUBLIC WORKS

T

118°30'
34°07'30"

1:62,500 FEET (S)

IVAN MEYER

10°11'00"
10°11'00"



OP

-2f

LOS ANGELES COUNTY
BOARD OF SUPERVISORS

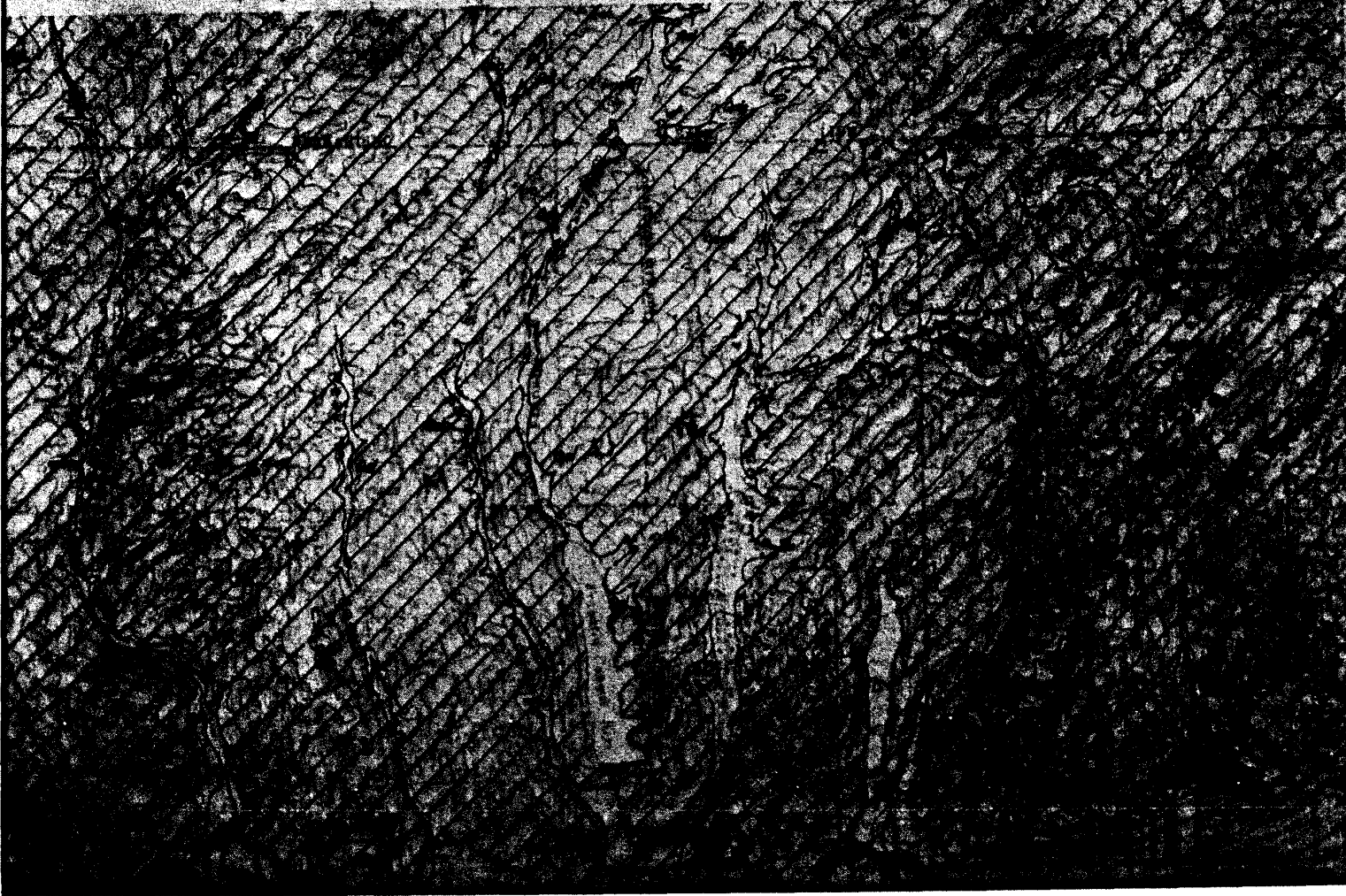
60-26

BEVERLY HILLS QUADRANGLE
CALIFORNIA LOS ANGELES CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
S.W. 1/4 SANTA MONICA 17' QUADRANGLE

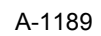
1:25,000 SCALE

118° 22' 30"

34° 07' 30"



4-10-60
118° 22' 30"



ATTACHMENT 2

Interest on judgments.

SEC. 57. The last sentence of subsection (b) of section 2516 of Title 28, United States Code, is amended by inserting immediately after the word "allowed" where it appears in such sentence the words "for any period", so that such subsection will read as follows:

"(b) Interest on judgments against the United States affirmed by the Supreme Court after review on petition of the United States shall be paid at the rate of four percent per annum from the date of the filing of the transcript of the judgment in the Treasury Department to the date of the mandate of affirmance. Such interest shall not be allowed for any period after the term of the Supreme Court at which the judgment was affirmed."

Fees.

SEC. 58. Subsection (a) of section 2520 of Title 28, United States Code, is amended by striking out where it appears in such subsection the words "and the hearing of any case before the court, a judge, or a commissioner", so that such subsection will read as follows:

"(a) The Court of Claims shall by rules impose a fee not exceeding \$10, for the filing of any petition."

SEC. 59. (a) Chapter 165 of Title 28, United States Code, is amended by adding at the end thereof a new section to be designated as section 2521 entitled "Subpoenas" and to read as follows:

"§ 2521. Subpoenas

"Subpoenas requiring the attendance of parties or witnesses and subpoenas requiring the production of books, papers, documents or tangible things by any party or witness having custody or control thereof, may be issued for purposes of discovery or for use of the things produced as evidence in accordance with the rules and orders of the court. Such subpoenas shall be issued and served and compliance therewith shall be compelled as provided in the rules and orders of the court."

(b) The analysis to chapter 165 of Title 28, United States Code, immediately preceding section 2501 of such title, is amended by adding at the end thereof a new item 2521 to read as follows:

"2521. Subpoenas."

Approved September 3, 1954.

Public Law 780

CHAPTER 1264

AN ACT

September 3, 1954
[H. R. 9859]

Authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

River and Harbor
Act of 1954.

TITLE I—RIVERS AND HARBORS

59 Stat. 10.

SEC. 101. That the following works of improvement of rivers and harbors and other waterways for navigation, flood control, and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers, in accordance with the plans and subject to the conditions recommended by the Chief of Engineers in the respective reports hereinafter designated: *Provided*, That the provisions of section 1 of the River and Harbor Act approved March 2, 1945 (Public, Numbered 14, Seventy-ninth Congress, first session), shall govern with respect to projects authorized in this title; and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto, shall apply as if herein set forth in full:

Wisconsin.

Cornucopia Harbor, Wisconsin: House Document Numbered 434, Eighty-third Congress, at an estimated cost of \$220,000;

Sheboygan Harbor, Wisconsin: House Document Numbered 554, Eighty-second Congress, at an estimated cost of \$217,200;

Michigan.

Holland Harbor, Michigan: House Document Numbered 282, Eighty-third Congress, at an estimated cost of \$574,400: *Provided*, That local interests will contribute 25 per centum of the cost of dredging Section B, but not to exceed \$45,500, in addition to the local co-operation required by the project document;

Crooked and Indian Rivers, Michigan: House Document Numbered 142, Eighty-second Congress, at an estimated cost of \$225,000;

Saginaw River, Michigan: In accordance with the report of the Chief of Engineers, dated June 7, 1954, at an estimated cost of \$4,496,800;

Ohio.

Toledo Harbor, Ohio: House Document Numbered 620, Eighty-first Congress, at an estimated cost of \$512,000;

Ashtabula Harbor, Ohio: House Document Numbered 486, Eighty-third Congress, at an estimated cost of \$4,900,000;

Pennsylvania.

Erie Harbor, Pennsylvania: House Document Numbered 345, Eighty-third Congress, at an estimated cost of \$174,000;

New York.

Black Rock Channel and Tonawanda Harbor, New York: House Document Numbered 423, Eighty-third Congress, at an estimated cost of \$270,000;

Little River at Cayuga Island, Niagara Falls, New York: House Document Numbered 246, Eighty-third Congress, at an estimated cost of \$36,900;

Oswego Harbor, New York: House Document Numbered 487, Eighty-first Congress, at an estimated cost of \$2,459,000;

California.

Los Angeles and Long Beach Harbors, California: House Document Numbered 161, Eighty-third Congress, at an estimated cost of \$896,500: *Provided*, That the Secretary of the Army is hereby authorized to reimburse local interests for such work as they may have done upon this project prior to July 1, 1953, at actual cost to local interests insofar as the same shall be approved by the Chief of Engineers and found to have been done in accordance with the project hereby adopted: *Provided further*, That such reimbursement shall be subject to appropriations applicable thereto or funds available therefor and shall not take precedence over other pending projects of higher priority for harbor improvement: *And provided further*, That such payments shall not exceed the sum of \$500,000;

Playa del Rey Inlet and Harbor, Venice, California: House Document Numbered 389, Eighty-third Congress: *Provided*, That Federal participation in the provision of entrance jetties, entrance channel, interior channel and central basin recommended in the project report and presently estimated to cost \$7,738,000 shall not exceed 50 per centum of the cost thereof;

Port Hueneme, California: House Document Numbered 362, Eighty-third Congress, at an estimated cost of \$5,437,000;

Richmond Harbor, California: House Document Numbered 395, Eighty-third Congress, at an estimated cost of \$2,086,000;

Oregon.

Rogue River, Harbor at Gold Beach, Oregon: Senate Document Numbered 83, Eighty-third Congress, at an estimated cost of \$3,758,700;

Umpqua Harbor and River, Scholfield River at Reedsport, Oregon: Senate Document Numbered 133, Eighty-first Congress, at an estimated cost of \$41,000;

Tillamook Bay and Bar, Oregon: Senate Document Numbered 128, Eighty-third Congress, at an estimated cost of \$1,500,000;

ATTACHMENT 3

PLAYA DEL REY INLET AND BASIN, VENICE, CALIF.

LETTER

FROM

THE SECRETARY OF THE ARMY

TRANSMITTING

A LETTER FROM THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY, DATED AUGUST 8, 1952, SUBMITTING A REPORT TOGETHER WITH ACCOMPANYING PAPERS AND AN ILLUSTRATION, ON A PRELIMINARY EXAMINATION AND SURVEY OF HARBOR AT PLAYA DEL REY, CALIF., AND A REVIEW OF REPORTS ON PLAYA DEL REY INLET AND BASIN, VENICE, CALIF., AS AUTHORIZED BY THE RIVER AND HARBOR ACT APPROVED ON AUGUST 26, 1937, AND REQUESTED BY A RESOLUTION OF THE COMMITTEE ON COMMERCE, UNITED STATES SENATE, ADOPTED ON JUNE 2, 1936

MAY 13, 1954.—Referred to the Committee on Public Works and ordered to be printed, with one illustration

DEPARTMENT OF THE ARMY,
Washington 25, D. C., May 11, 1954.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

DEAR MR. SPEAKER: I am transmitting herewith a report dated August 8, 1952, from the Chief of Engineers, Department of the Army, together with accompanying papers and an illustration, on a preliminary examination and survey of Harbor at Playa del Rey, Calif., and a review of reports on Playa del Rey Inlet and Basin, Venice, Calif., with a view to determining whether any improvement of the locality is warranted at the present time, authorized by the River and Harbor Act approved on August 26, 1937, and requested by a resolution of the Committee on Commerce, United States Senate, adopted on June 2, 1936.

47022-54-1

Department of
Beaches and Harbors

MAY 14 1954

	Mr.	Act
Director		
Chief of Engineers		
Deputy Director		
Executive Assistant		
Admin. Services		
Project Management		
Public Works Office		
Community Services		
Planning		

REVIEW BY STATE DIVISION OF WATER RESOURCES OF PROPOSED
REPORT OF THE CHIEF OF ENGINEERS, UNITED STATES ARMY, ON
PLAYA DEL REY INLET AND BASIN, VENICE, CALIF.

INTRODUCTION

In accordance with the provisions of section 1 of Public Law 14, 79th Congress, the proposed report of the Chief of Engineers, United States Army, on Playa del Rey Inlet and Basin, Venice, Calif., together with the reports of the Board of Engineers for Rivers and Harbors and of the district and division engineers, was transmitted by the Chief of Engineers on March 31, 1952, to Mr. Frank B. Durkee, director of public works, the official designated by Gov. Earl Warren as his representative in such matters. The report was received and referred to the State engineer on April 7, 1952, for review and report thereon. Thereafter, the reports were transmitted by the State engineer to Seth Gordon, director, department of fish and game; Rufus W. Putnam, executive officer of the State lands commission; Newton B. Drury, chief, division of beaches and parks of the department of natural resources; and G. T. McCoy, State highway engineer.

Authority for report

The report was prepared pursuant to a resolution adopted June 2, 1936, which reads as follows:

Resolved by the Committee on Commerce of the United States Senate, That the Board of Engineers for Rivers and Harbors, created under section 3 of the River and Harbor Act approved June 13, 1902, be, and is hereby requested to review the reports on Playa Del Rey Inlet and Basin, Venice, California, printed in House Document No. 1880, 64th Congress, 2d session, with a view to determining whether any improvement of the locality is warranted at the present time.

Further authorization was contained in Public Law 392, 75th Congress, approved August 26, 1937, which reads in part as follows:

SEC. 4. The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following named localities, * * * harbor at Playa Del Rey, California * * *

A review of reports on Playa del Rey Inlet and Basin, Venice, Calif., and preliminary examination of the harbor at Playa del Rey, Calif., dated May 26, 1939, was submitted by the district engineer in accordance with the foregoing authorizations. The district engineer's report was reviewed by the Board of Engineers for Rivers and Harbors, and a report of survey scope was authorized by the Chief of Engineers on April 6, 1944, to determine the advisability and cost of improvement and the local cooperation required.

Recommendations of the Chief of Engineers

The following is quoted from the proposed report of the Chief of Engineers now under review:

After full consideration of the reports secured from the district and division engineers, and after affording local interests full opportunity to be heard, the Board recommends provision of a harbor at Playa del Rey, Calif., to consist of 2 entrance jetties each about 2,300 feet long; an entrance channel 20 feet deep, 600 feet wide, and 1,925 feet long; an interior channel 20 feet deep, 600 feet wide, and 5,600 feet long; a central basin 10 feet deep; and 2 side basins 20 feet deep and 10 side basins 10 feet deep, separated by mole-type piers; the dredged material to be utilized for construction of the piers and for deposition on adjacent lowlands and beaches; all generally in accordance with the plan of the district engineer and the comments herein, and with such modifications thereof as in the discretion

abandoned due to low production and salt-water intrusion, leaving 111 wells on low production.

Local interests consider that the proposed harbor at Playa del Rey would be an integral unit of an adopted general plan for development of the Santa Monica Bay shoreline. This plan includes widening and improving beaches, providing adequate bath houses, parking areas, picnic facilities, special recreation centers, bathing and wading beaches, fishing piers, youth organization camps, tourist parks with cabin and trailer accommodations, and a bird refuge.

Cost of proposed works

In the report of the district engineer, the total first cost of the project is given as \$25,603,000, with a Federal first cost of \$9,098,000 and non-Federal first cost of \$16,505,000. The total annual carrying charges would be \$919,920, and the annual benefits would be \$1,529,000. The benefit-cost ratio of the proposed harbor project would be 1.7 to 1.

The Board of Engineers for Rivers and Harbors, in reviewing the report of the district engineer, reevaluated the costs and benefits estimated by the district engineer. In considering both the evaluated and intangible benefits, the Board stated in its report that the Federal interest in the proposed improvement would be served by Federal participation to the extent of providing and maintaining the entrance jetties, entrance channel, interior channel, and central basin shown on the maps accompanying the district engineer's report, all at an estimated first cost of \$6,151,000 for construction exclusive of aids to navigation, and \$25,000 annually for maintenance, with local interests providing and maintaining all other works including dredging of the side basins at an estimated first cost of \$19,427,000.

The Board of Engineers for Rivers and Harbors also reduced the benefits allocated by the district engineer to sport fishing vessels from \$280,000 to \$47,000, making the total annual benefits \$1,296,000. Subsequent to the submission of the report by the district engineer, the United States Coast Guard submitted a revised estimate of \$42,000 for first cost of aids to navigation, an increase of \$17,000, making a total first cost of the project of \$25,620,000. The total annual carrying charges are estimated by the Board to be \$933,025, of which \$277,555 is Federal, and \$655,470 is non-Federal, giving a benefit-cost ratio of 1.4. The recommendation of the Board of Engineers for Rivers and Harbors as to Federal participation is concurred in by the Chief of Engineers.

Local contributions

At its meeting on April 25, 1946, the City Council of Los Angeles adopted a report declaring that the public interest and welfare of the city of Los Angeles and vicinity require the provision of additional small craft facilities by means of construction of a small craft harbor at Playa del Rey, assisting the Federal Government in such undertaking by assuming those obligations required under Federal law in connection with the project.

By resolution adopted September 28, 1948, and June 7, 1949, the Board of Supervisors of the County of Los Angeles declared that the public interest and welfare of the county of Los Angeles and its citizens require that provision be made for additional small craft facilities by means of construction of a small craft harbor at Playa del

B-80

Department of Natural Resources

Newton S. Drury, chief, Division of Beaches and Parks of the Department of Natural Resources, on June 18, 1952, stated that the thoughts expressed in the comments previously submitted to the district engineer on January 6, 1949 still reflect the reaction of the division to the project.

The comments, submitted by Gen. Warren T. Hannum, director of natural resources, on January 6, 1949, are as follows:

(a) It is found that plan of development as proposed in the district engineer's report would provide a greatly needed harbor for light craft vessels, and as a harbor refuge for such craft cruising along the coast.

(b) That the proposed harbor development is in general in conformity with the county master plan as approved by the State Park Commission.

(c) That there is no State cooperation proposed in the plan, the city of Los Angeles having expressed its desire and willingness to meet the requirements of local cooperation as set forth by the district engineer.

(d) That the incidental benefits to the State park system, due to the deposit of sand on the beaches both upcoast and downcoast from the proposed entrance jetties would be very great.

It is recommended therefore, that the report be approved with a favorable comment indicating the advantages to the State park system from the deposit of sand on the Santa Monica beaches.

CONCLUSIONS

The following conclusions are submitted with respect to improvements recommended by the Chief of Engineers in his proposed report on Playa del Rey Inlet and Basin, Venice, Calif., giving consideration to (a) need for the project (b) engineering feasibility and effectiveness of the proposed works, and (c) economic justification for the project:

1. The improvements will provide a desirable addition to small-craft facilities along the southern California coast. The project is an integral part of the general plan for development of the shoreline of Santa Monica Bay.

2. Local interest in and approval of the project have been demonstrated by resolution of the city council of the city of Los Angeles, and by resolution of the Board of Supervisors of the County of Los Angeles, giving assurance that the county will assume those non-Federal contributions and obligations in connection with the project which are required by Federal law.

3. The improvements appear to be of sound and adequate design and feasible of construction and operation.

4. Construction of the proposed harbor will introduce ocean water inland a distance of more than 1 mile, and increase the rate of saline contamination of ground waters of the west coast basin. Except in this respect, the proposed works will not conflict with any beneficial consumptive use, present or future, of water for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

RECOMMENDATIONS

It is recommended that the plan of improvement for the small-craft harbor at Playa del Rey Inlet and Basin, Venice, Calif., as recommended by the Chief of Engineers, be authorized for construction, and that Federal funds be appropriated for the purpose.

SACRAMENTO, CALIF., June 26, 1952.

A. D. EDMONSTON,
State Engineer.

B-84

abandoned due to low production and salt-water intrusion, leaving 111 wells on low production.

Local interests consider that the proposed harbor at Playa del Rey would be an integral unit of an adopted general plan for development of the Santa Monica Bay shoreline. This plan includes widening and improving beaches, providing adequate bath houses, parking areas, picnic facilities, special recreation centers, bathing and wading beaches, fishing piers, youth organization camps, tourist parks with cabin and trailer accommodations, and a bird refuge.

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The Board of Engineers for Rivers and Harbors, in reviewing the report of the district engineer, reevaluated the costs and benefits estimated by the district engineer. In considering both the evaluated and intangible benefits, the Board stated in its report that the Federal interest in the proposed improvement would be served by Federal participation to the extent of providing and maintaining the entrance jetties, entrance channel, interior channel, and central basin shown on the maps accompanying the district engineer's report, all at an estimated first cost of \$6,151,000 for construction exclusive of aids to navigation, and \$25,000 annually for maintenance, with local interests providing and maintaining all other works including dredging of the side basins at an estimated first cost of \$19,427,000.

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At its meeting on April 25, 1946, the City Council of Los Angeles adopted a report declaring that the public interest and welfare of the city of Los Angeles and vicinity require the provision of additional small craft facilities by means of construction of a small craft harbor at Playa del Rey, assisting the Federal Government in such undertaking by assuming those obligations required under Federal law in connection with the project.

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The comments, submitted by Gen. Warren T. Hannum, director of natural resources, on January 6, 1949, are as follows:

(a) It is found that plan of development as proposed in the district engineer's report would provide a greatly needed harbor for light craft vessels, and as a harbor refuge for such craft cruising along the coast.

(b) That the proposed harbor development is in general in conformity with the county master plan as approved by the State Park Commission.

(c) That there is no State cooperation proposed in the plan, the city of Los Angeles having expressed its desire and willingness to meet the requirements of local cooperation as set forth by the district engineer.

(d) That the incidental benefits to the State park system, due to the deposit of sand on the beaches both upcoast and downcoast from the proposed entrance jetties would be very great.

It is recommended therefore, that the report be approved with a favorable comment indicating the advantages to the State park system from the deposit of sand on the Santa Monica beaches.

CONCLUSIONS

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3. The improvements appear to be of sound and adequate design and feasible of construction and operation.

4. Construction of the proposed harbor will introduce ocean water inland a distance of more than 1 mile, and increase the rate of saline contamination of ground waters of the west coast basin. Except in this respect, the proposed works will not conflict with any beneficial consumptive use, present or future, of water for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

RECOMMENDATIONS

It is recommended that the plan of improvement for the small-craft harbor at Playa del Rey Inlet and Basin, Venice, Calif., as recommended by the Chief of Engineers, be authorized for construction, and that Federal funds be appropriated for the purpose.

SACRAMENTO, CALIF., June 26, 1952.

A. D. EDMONSTON,
State Engineer.

B-84



California Coastal Conservancy

March 28, 2012

Att: All Governing Board Members and Alternates

Re: PUBLIC COMMENT 3/29/12:

Request to Hold Emergency Meeting to Rescind Approval Action on File No. 04-088

Douglas Bosco
Marisa Moret
Ann Nothoff
John Laird
Ana J. Matosantos
Mary Shallenberger
Susan Hancsh
Karen Finn
Bryan Cash
Noreen Evens
Joe Simitan
Anthony Cannella
Bill Mornning
Luis Alejo
Das Williams

CC

John Chang State Controller
California Department of Finance Director Ana Matosantos
U.S. Army Corp of Engineers Att: Commander Mark Toy
U.S. Senator Barbara Boxer
U.S. Congress Person Maxine Waters

Honorable Chair Bosco, Distinguished Commissioners,

Attachments will be submitted to the Governing Board on March 29, 2012.

I hereby request this public body instruct its Staff to schedule an emergency meeting in accordance with the Bagley Keene Act section 11125.5(b) to rescind its approval of File No. 04-088 on January 19, 2012 for the following reasons;

1. NON-COMPLIANCE DEPARTMENT OF FINANCE ATTACHMENT 1
Final Report—Audit of California State Coastal Conservancy's Propositions 12, 13, 40, 50 Bond Funds

The Department of Finance, Office of State Audits and Evaluations, has completed its audit of the California State Coastal Conservancy's (Conservancy) Propositions 12, 13, 40, and 50 bond funds for the period ending June 30, 2008.

Staff Project Manager Mary Small **failed to require Potential Grantee**, the Santa Monica Bay Restoration Foundation, **to fill out a Grant Application Form** on the Conservancy Website.

Background:

2. FALSEFICATION OF PUBLIC RECORDS ATTACHMENT 2

Staff falsified a Form SCC 08-08, Work Transmittal.

The Form was initialized by;

Executive Director - Sam Schuchat

Project Manager - Mary Small

Legal - Elena Eger

Staff filled out the form as follows:

Will this project receive federal or other outside funding? Yes ___ No X

The January 19, 2012 **Staff Report** contradicts on page 6 :

“The SMRBF in-kind funds would come from U.S. EPA funding provided to the SMRBF for its staff and from a U.S. EPA Wetland Program Development Grant received for work at Ballona”

3. INCOMPLETE PUBLIC RECORDS ATTACHMENT 2

Staff failed to complete Form SCC 08-08, Work Transmittal.

The Form was initialized by;

Executive Director - Sam Schuchat

Project Manager - Mary Small

Legal - Elena Eger

Is the Grantee a Nonprofit Organization Yes ___ No ___ - NOT CHECKED

If nonprofit: Is the status file complete and current Yes ___ No ___ - NOT CHECKED

GRANT / CONTRACT AMMENDMENTS REVIEW - BLANK

MAIL OUT APPROVALS - BLANK

APPLICATION - BLANK

GRANT TRANSMITTAL - BLANK

REVIEW OF AGREEMENT - BLANK

4. DISCRIMINATION ATTACHMENT 3

Staff Project Manager Mary Small has improperly lobbied private individuals, private businesses, State and Federal Officials and entities prior to the release of the Staff Report, thusly, discriminating against all others by failing to provide the same comment opportunity prior to the issuance of the Staff Report.

Further Discrimination has taken place because only one Potential Grantee has been selected by Staff Project Manager Mary Small, excluding all others that may have chosen to apply.

authorization of this Board, represented to the Army Corp of Engineers on June 28, 2010 that:

Coastal Conservancy is supplying most of the funding toward the in-kind local sponsor efforts.

The Governing Board has not authorized Mary Small to represent the Coastal Conservancy at a meeting of the Army Corp of Engineers and the Local Sponsor (Santa Monica Bay Restoration Authority). The Conservancy is neither a partner nor is there any MOU to with the SMRBA, which is under contract to the USACE. Minutes of other such meetings provide evidence that Mary Small also discussed;

A. Changing the scoping of an Environmental Protection Act process began by the USACE in 2005.

B. Using only the Conservancy's Alternatives.

C. Attempting to gain in kind credits from the USACE.

D. Further documents provided by the USACE provide evidence that the local sponsor, never provided any funding to the USACE whatsoever nor did it provide any in-kind credit.

E. Resumes provided to the Coastal Conservancy by potential contractors for this Project include studies finished and paid for by federal funding stated in the resume(s) as part of the Lower Ballona Creek Feasibility Studies of the Joint EIR/EIS (2005) initiated by the USACE.

7. VIOLATIONS OF CALIFORNIA CONTRACT CODE ATTACHMENT 6

Staff Project Manager Mary Small failed to comply with the California Contract Code Notification and Conflict requirements, Sections 10140-10141 and 10515-10518.

Staff Project Manager Mary Small conducted a Request for Services for Contractors in 2009, and again in 2010 in regard to a Project not noticed to the Public or Governing Board until 2012, both in non-compliance with California Contract Code.

Staff Project Manager Mary Small purports to have initiated another Request for Services in February 2012 with responses due on the 29th of that month outside in non-compliance with the California Contract Code.

8. VIOLATIONS OF BAGLEY KEENE ATTACHMENT 6

Staff failed to obtain permission from the Governing Board to hire contractors to complete studies.

9. QUID PRO QUO INFERED ATTACHMENT 7

Sincerely,

A handwritten signature in cursive script, appearing to read "John Davis". The signature is written in black ink and is positioned to the right of the typed name.

John Davis
PO 10152
Marina del Rey Ca. 90295

RE: Public Records Request from John Davis

From: Philip Wyels <PWyels@waterboards.ca.gov> (Add as Preferred Sender)
Date: Tue, Feb 21, 2012 2:26 pm
To: <jd@johnanthonydavis.com>

Mr. Davis, I apologize for the delay in responding to your request. I have been unable to locate any records within the possession of the State Water Resources Control Board that are responsive to your requests. The attached two documents may be of interest to you, however, in that they indicate that the Santa Monica Bay Restoration Project's relationship with the Santa Monica Bay Restoration Foundation (Foundation) pre-dated the conversion of the Santa Monica Bay Restoration Project to the Santa Monica Bay Restoration Commission (Commission). Also, as I explained to you by telephone, the Commission staff is currently undertaking a number of steps to more clearly distinguish the Commission from the Foundation. Unfortunately, some of those steps are taking some time. I will let you know when I receive a timetable for those steps from Commission staff.

Sincerely,
Phil

Philip G. Wyels
Assistant Chief Counsel
State Board Water Quality Unit
State Water Resources Control Board

1001 I Street
P.O. Box 95812-0100
Sacramento, CA 95814

(916) 341-5178 (phone)
(916) 341-5199 (fax)
pwyels@waterboards.ca.gov>>>

From: <jd@johnanthonydavis.com>
To: Philip Wyels <pwyels@waterboards.ca.gov>
CC: Michael Lauffer <MLauffer@waterboards.ca.gov>
Date: 2/21/2012 10:00 AM
Subject: RE: Public Records Request from John Davis

California State Water Board
Att: Phil Wyels
Re: Status Request Public Record Request

Council Wyels,

The California Public Records Act requires that Agencies subject to the Act reply to request for records within 10 days after a request is made.

The State Water Resources Board has not complied with the law in this respect in regard to the request for records made on 2/7/12.

From: Elena Eger
To: "jd@johnanthonydavis.com"
Cc: "Shelley Luce"; "svalor@santamonica-bay.org"; "Mary Small"; "Dick Wayman"; "Nadine Peterson"; "Samuel Schuchat"
Subject: Davis call to Eger of 2-6-12
Date: Tuesday, February 07, 2012 1:00:00 PM
Attachments: SWRCB memo2011aug re accusations.pdf
SWRCB Ltr to Davis re PRAs.pdf

Dear Mr. Davis:

Pursuant to our phone conversation of yesterday, February 6, 2012, in which you provided a warning to me that the Conservancy should be informed that the Santa Monica Bay Foundation allegedly is appropriating public resources for private gain, attached please find the State Water Resources Control Board's (SWRCB) August 15, 2011 legal memo addressing your contentions and a September 13, 2011 letter to you regarding the same.

As analyzed in the SWRCB memo, especially in #3, pp. 4-5 of that memo, your contentions that the Foundation is improperly utilizing public resources for private use, namely in your assertions yesterday when you identified as improper the fact that the Foundation uses the same mailing address as the SWRCB's Los Angeles office, are specifically addressed. Frances McChesney, Esq., Office of the Chief Counsel for the SWRCB concludes in that memo that the Foundation is not improperly appropriating public resources for its private use.

The Conservancy intends to proceed with its grant to the Foundation approved as Item #5 at its January 19, 2012 meeting.

Sincerely,

Elena Eger
Senior Staff Counsel
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax

Form 990

Return of Organization Exempt From Income Tax

OMB No. 1545-0047

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except black lung benefit trust or private foundation)

2006

Open to Public Inspection

Department of the Treasury
Internal Revenue Service

The organization may have to use a copy of this return to satisfy state reporting requirements

A For the 2006 calendar year, or tax year beginning

Jul 01, 2006, and ending

Jun 30, 2007

B Check if applicable

Address change

Name change

Initial return

Final return

Amended return

Application pending

Please use IRS label or print or type See Specific Instructions

C Name of organization, number and street, city, town, state, and ZIP code

Santa Monica Bay Restoration
Foundation
320 West 4th Street Suite 200
LOS ANGELES CA 90013

D Employer identification number

33-0420271

E Telephone number

213-576-6642

F Acctg. method: ☒ Cash ☐ Accrual

Other (specify)

Section 501(c)(3) organizations and 4947(a)(1) nonexempt charitable trusts must attach a completed Schedule A (Form 990 or 990-EZ).

G Website: WWW.SANTAMONICABAY.ORG

J Organization type (check only one) ☒ 501(c)(3) (insert no.) 4947(a)(1) Or 527K Check here ☐ if the organization is not a 509(a)(3) supporting organization and its gross receipts are normally not more than \$25,000. A return is not required, but if the organization chooses to file a return, be sure to file a complete return

H and I are not applicable to section 527 organizations

H(a) Is this a group return for affiliates? ☐ Yes ☒ NoH(b) If "Yes," enter number of affiliates ☐ Yes ☒ NoH(c) Are all affiliates included? (If "No," attach a list. See instructions.) ☐ Yes ☒ NoH(d) Is this a separate return filed by an organization covered by a group ruling? ☐ Yes ☒ No

I Group Exemption Number

L Gross receipts. Add lines 6b, 8b, 9b, and 10b to line 12 979,681.

M Check ☐ if the organization is not required to attach Sch. B (Form 990, 990-EZ, or 990-PF)

Part I Revenue, Expenses, and Changes in Net Assets or Fund Balances (See the instructions)

1	Contributions, gifts, grants, and similar amounts received				
a	Contributions to donor advised funds	1a			
b	Direct public support (not included on line 1a)	1b	342,406.		
c	Indirect public support (not included on line 1a)	1c			
d	Government contributions (grants) (not included on line 1a)	1d	576,050.		
e	Total (add lines 1a through 1d) (cash \$ 918,456. noncash \$)	1e		918,456.	
2	Program service revenue including government fees and contracts (from Part VII, line 93)	2		18,485.	
3	Membership dues and assessments	3			
4	Interest on savings and temporary cash investments	4		41,773.	
5	Dividends and interest from securities	5		967.	
6a	Gross rents	6a			
b	Less: rental expenses	6b			
c	Net rental income or (loss). Subtract line 6b from line 6a	6c			
7	Other investment income (describe)	7			
8a	Gross amount from sales of assets other than inventory	8a			
b	Less: cost or other basis & sales expenses	8b			
c	Gain or (loss) (attach schedule)	8c			
d	Net gain or (loss). Combine line 8c, columns (A) and (B)	8d			
9	Special events and activities (attach schedule). If any amount is from gaming, check here <input type="checkbox"/>	9			
a	Gross revenue (not including \$ of contributions reported on line 1b)	9a			
b	Less: direct expenses other than fundraising expenses	9b			
c	Net income or (loss) from special events. Subtract line 9b from line 9a	9c			
10a	Gross sales of inventory, less returns and allowances	10a			
b	Less: cost of goods sold	10b			
c	Gross profit or (loss) from sales of inventory (attach schedule). Subtract line 10b from line 10a	10c			
11	Other revenue (from Part VII, line 103)	11			
12	Total revenue. Add lines 1e, 2, 3, 4, 5, 6c, 7, 8d, 9c, 10c, and 11	12		979,681.	
13	Program services (from line 44, column (B))	13		757,878.	
14	Management and general (from line 44, column (C))	14		102,224.	
15	Fundraising (from line 44, column (D))	15		7,373.	
16	Payments to affiliates (attach schedule)	16			
17	Total expenses. Add lines 16 and 44, column (A)	17		867,475.	
18	Excess or (deficit) for the year. Subtract line 17 from line 12	18		112,206.	
19	Net assets or fund balances at beginning of year (from line 73, column (A))	19		872,326.	
20	Other changes in net assets or fund balances (attach explanation)	20			
21	Net assets or fund balances at end of year. Combine lines 18, 19, and 20	21		984,532.	

For Privacy Act and Paperwork Reduction Act Notice, see the separate instructions.

Form 990 (2006) 7

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US990SS1 Rev 1

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ATTACHMENTS 2

GRANT TRANSMITTAL

Grant No. _____

(for receivable grants)

INTENT TO APPLY

Grant Program Name: _____ Date: _____
 Granting Agency: _____ Project Manager: _____
 Project Name: _____ SCC Program: _____
 Project Number: _____ Grant Amount: _____

SCC required Matching Funds: (if other than in-kind services, please use reverse side of this form to reserve SCC funds)

In - Kind: \$ _____ (Copy from reverse side)
 Support: \$ _____ Fund No.: _____ FY: _____
 Capital Outlay: \$ _____ Fund No.: _____ FY: _____
 TOTAL: \$ _____

Funding Mechanism: Will or will not hit SCC account? _____ Electronic Transfer? _____
 Paid in Arrears? _____ Cash Advance? _____

(A) For Federal Grant

Support (Staff, travel, equipment): \$ _____ 3760 - 001 - 0890 FY: _____
 Capital Outlay: \$ _____ 3760 - 301 - 0890 FY: _____
 Other (Specify) : \$ _____ 3760 - _____ FY: _____
 TOTAL: \$ _____

(B) For State Reimbursable Grant (Please use reverse side of this form to reserve up-front SCC funds)

Support (Staff, travel, equipment): \$ _____ 3760 - 001 - 0565 - F90 FY: _____
 Capital Outlay: \$ _____ 3760 - 301 - _____ - F90 FY: _____
 Other (Specify) : \$ _____ 3760 - _____ - _____ - F90 FY: _____
 TOTAL: \$ _____

Authorization:

Program Manager: _____ Date: _____
 Accounting Officer: _____ Date: _____
 Grants Manager: _____ Date: _____

APPLICATION

(Provide copy of Application to Grants Manager)

Legal * _____ Date: _____
 *Please inform Grants Manager if signature are missing in the "INTENT TO APPLY" SECTION
 EO/DEO: _____ Date: _____
 Date Applied: _____ Expected Date of Grant Award: _____

REVIEW OF AGREEMENT (for receipt of funds)

Board Authorization To Spend The Grant:

Project Manager: _____ Date: _____
 Program Manager: _____ Date: _____
 Legal: _____ Date: _____
 EO/DEO: _____ Date: _____
 Grants Manager: _____ Date: _____ Inform Acct. Date: _____
 Amendment #: _____ Legal Reviewed by: _____ Date: _____

From: Mary Small
To: sluce@santamonica.gov.org; "Barbara Romero"
Subject: FW: hard copy in the mail tomorrow
Date: Friday, January 06, 2012 4:04:00 PM

-----Original Message-----

From: Ruth Galanter [mailto:ruth.galanter@verizon.net]
Sent: Friday, January 06, 2012 3:57 PM
To: Mary Small
Subject: Re: hard copy in the mail tomorrow

I am planning to attend the meeting, and I'm trying to get some more support letters and maybe attendees. You have no idea how much pleasure I would get from foiling your opponents. I can either stand up during the hearing, or if you want, I can instead meet you and the board between the tour and the meeting (since you must be going to feed them someplace) and just chat informally.

Your choice. I'm free at about 11:30 and have a meeting at 3 pm. In between I am at your service.

On Jan 6, 2012, at 3:50 PM, Mary Small wrote:

> Thanks that's a very generous offer. If you have time to attend the
> meeting, that would be great. It starts at 1pm at Baldwin Hills Scenic
> Overlook and this is the first substantive item on the agenda. I will have
> pretty limited time to present, but could acknowledge you and if you were
> willing to speak in public comment on the item that would fantastic.
> Mary

>
> -----Original Message-----
> From: Ruth Galanter [mailto:ruth.galanter@verizon.net]
> Sent: Friday, January 06, 2012 9:52 AM
> To: Mary Small
> Subject: Re: hard copy in the mail tomorrow

>
> I'm available after about 11:30, and you might want to use me as part of a
> board briefing in light of my nearly two decades dealing with the issue.
> That of course is up to you, and I promise not to get huffy if you'd rather
> not.

>
> On Jan 6, 2012, at 9:10 AM, Mary Small wrote:

>
>> Thank you very much, your letter is perfect and I appreciate your quick
>> response. It would be great to have a few supporters at the meeting, I am
>> sure the opponents will attend.

>>
>> We are also going to take the Coastal Conservancy board on a quick tour of
>> the site the morning before the meeting from 10-12. I know you are very
>> busy but it would be great if you wanted to join us for either the tour or
>> to attend the meeting.
>> Mary

>>
>> -----Original Message-----
>> From: Ruth Galanter [mailto:ruth.galanter@verizon.net]
>> Sent: Thursday, January 05, 2012 9:13 PM
>> To: Small Mary
>> Subject: hard copy in the mail tomorrow
>>

From: [Mary Small](#)
To: ["Shelley Luce"](#)
Subject: FW: Letter for Coastal Conservancy Board
Date: Tuesday, December 13, 2011 1:21:00 PM

Do you know Ruth?

From: Joan Cardellino [mailto:jcard@scc.ca.gov]
Sent: Tuesday, December 13, 2011 11:57 AM
To: 'Mary Small'
Subject: RE: Letter for Coastal Conservancy Board

It might be worth calling Ruth Galanter to see if she'd speak in support of the project. She has some good credentials. She might know of other supporters to ask too.

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, December 13, 2011 10:38 AM
To: 'Shelley Luce'
Cc: 'Joan Cardellino (Joan Cardellino)'
Subject: RE: Letter for Coastal Conservancy Board

Hi Shelley-

Do you have time to talk about our Jan meeting? I know you have a board meeting this week, so we could also do this via email – or next week, but before next Fri I'd like to work through some ideas:

- 1) Tour – we'll probably do a tour the morning of the meeting, I think maybe the tour we did with Colonel Toy – view from Cabora Rd and then walk out to boyscout platform
- 2) Press – do you think we could use this meeting as an opportunity to get either local papers and/or try for LA Times to cover the project? I am worried that once the agenda is out Marcia will use as opportunity to get bad press. Our agenda will be mailed out Jan 6th
- 3) Public support – who could we have come to support the project at the meeting or with letters? Geraldine is critical (at least her letter) but how about MRCA?, Joe Geever?, Ballona Creek Renaissance?, Friends?, Miguel Luna?, Audubon? HtB? Baykeeper?

Thanks,
Mary

From: Shelley Luce [mailto:sluce@santamonicaabay.org]
Sent: Monday, December 12, 2011 3:22 PM
To: Mary Small
Subject: FW: Letter for Coastal Conservancy Board

Hi Mary, Geraldine thought her letter went out already. Have you received? I also invited her to tour the wetlands with us after the meeting.

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission*

From: Mary Small
To: "Miguel Luna"
Cc: "Shelley Luce"
Subject: FW: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:29:00 PM
Attachments: SCC_Ballona_Tech_Support_Ltr.docx

Hi Miguel

Happy New year! Hope you are well.

Is there any chance you would be willing to send a letter of support to the Coastal Conservancy for authorization of funding to continue design of the restoration project? I don't know if Shelley contacted you, but it would be great to get community groups weighing in who support ecological restoration. Our meeting will be in LA, so I expect there will be some opposition.

Please let me know if you have any questions or need more info.

Thanks,

Mary

From: Mary Small
To: "Shelley Luce"
Subject: RE: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:27:00 PM

Thanks!

I will talk to Sam about Boxer and Feinstein. Can LA Co DPW send a letter or do you think that is covered by the Supervisors?

Mary

From: Shelley Luce [mailto:sluce@santamonicabay.org]
Sent: Tuesday, January 03, 2012 1:25 PM
To: Mary Small; Diana Hurlbert
Subject: RE: draft support letter for SCC board meeting

Hi Mary,

We are working on:

Knabe

MRT

Friends of BW

So Cal Edison

So Cal Gas

LMU

Waxman

Lieu

Butler

Rosendahl

And Anyone else you want to add to that list. Figured Feinstein and Boxer will be more important later, and that you and Sam are the best ones to approach them.

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444*

www.santamonicabay.org

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 1:06 PM
To: Shelley Luce; Diana Hurlbert
Subject: FW: draft support letter for SCC board meeting

Hi

I belatedly just sent this request to DFG and SLC. The only support letter I have is from MRCA, though I know the port is working on one too. Can you let me know who you are working on

Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444

www.santamonicabay.org

From: Knatz, Geraldine [mailto:knatz@portla.org]
Sent: Sunday, December 11, 2011 1:00 PM
To: Shelley Luce; Zordilla, Eunice
Cc: Tankersley, Eileen
Subject: Re: Letter for Coastal Conservancy Board

The letter was drafted the day after you asked me. Not sure what happened. Eunice- can you check.

Geraldine Knatz
Executive Director
Port of Los Angeles

From: Shelley Luce [mailto:sluce@santamonicabay.org]
Sent: Friday, December 09, 2011 04:26 PM
To: Knatz, Geraldine
Cc: Tankersley, Eileen
Subject: Letter for Coastal Conservancy Board

Dear Geraldine,

When we spoke a month or so ago, I asked if you would provide a letter to Sam Schuchat and his Board regarding your interest in the Ballona Wetlands restoration project. The January meeting of the Conservancy Board will be in Los Angeles and Sam will ask the Board to approve a large sum for continuing the planning and permitting of the restoration project, so your support of the project and interest in providing mitigation funding is important. Do you still intend to provide a letter and can I help with drafting? Also, we will give the Board members a tour of the wetland and briefing on the restoration plan before or after the Board meeting. As soon as we have a date I will send you an invitation and hope that you could come along.

Thank you Geraldine,
Shelley

Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444

www.santamonicabay.org

Mark Gold, D.Env. | President

Heal the Bay | 1444 9th Street | Santa Monica CA 90401

Tel: 310 451 1500 X123 | Fax: 310 496 1902 | mgold@healthebay.org

DONATE NOW to protect what you love: make an Aquadoption, shop at our online store or dedicate a Heal the Bay membership or donation.

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From: Mary Small [<mailto:msmall@scc.ca.gov>]

Sent: Tuesday, January 03, 2012 2:16 PM

To: Mark Gold

Subject: support letter for SCC board meeting?

Hello Mark,

Happy New Year. I am emailing to see if Heal the Bay would be willing to send a letter of support to the Coastal Conservancy for the recommendation that we authorize \$6.5M for the design and engineering of the proposed restoration project? My draft staff report is attached along with a sample letter. I know you have talked to Shelley about the project, but I would be happy to give you an update at any time. Of course I understand if you are not prepared to take a position on this project at this point, but our meeting will be in Culver City, so I expect there will be some opposition.

Please let me know if you have any questions or need more info.

Thanks,

Mary

Subject: Re: [REPLY] Fw: Coastal Conservancy funding to complete Ballona Wetlands restoration planning

Shelley,

Please accept my apologies for this late response. Cathi and I were away on a 2 1/2 week driving trip to the Seattle area for a holiday visit with our kids and grandkids. Then after returning late last Thursday, we've been focused on moving Cathi's 93-year-old mom in with us. I'm just now beginning to turn more of my attention to a backlog of BCR and other matters.

Unfortunately I have an important 3pm meeting at Culver City Hall on the afternoon of the 1pm SCC board meeting at the Scenic Overlook. If I were able to speak on the restoration planning agenda item before about 2:40pm, it could work. Otherwise (or in addition) I might be able to get Bobbi Gold or another knowledgeable BCR board member to represent us.

As for a BCR support letter, I'm pretty sure that would not be a problem. This is on my list of things to bounce off the board prior to our next board meeting.

Here's to a great new year, despite the challenges ahead!
Jim

Jim Lamm, President

Ballona Creek Renaissance (BCR)...Connecting Creek and Community from the Hills to the Bay
310-839-6896, 310-367-0336 (c), <http://facebook.com/ballonacreekrenaissance>, www.ballonacreek.org

From: Shelley Luce <sluce@santamonicabay.org>

To: Jim Lamm <jim.lamm@sbcglobal.net>

Sent: Fri, January 6, 2012 5:32:52 PM

Subject: Coastal Conservancy funding to complete Ballona Wetlands restoration planning

Hello Jim,

I hope you had a lovely Christmas and a happy new year! I did enjoy a nice break.

You may have heard that the Board of the Coastal Conservancy will meet in LA on Jan. 19 and will consider a request from their staff to authorize funding to complete the Ballona Wetlands restoration planning. The request is for about \$6.3M and most will go to consultants for additional engineering (through final design), to create a public access master plan, and to do extensive hydraulic modeling as required by Army Corp permitting (the major expense). About \$240k will come to SMBRF to fund Diana's position as well as monitoring on the site for the next three years. I don't know if there will be active opposition to this but I am preparing for that nonetheless. Also I see this as a good opportunity to let the SCC board members see the great support that exists in our community for restoration at Ballona.

Please let me know if you are able to support by letter or by attending the meeting. It was posted today on SCC website <http://scc.ca.gov/2012/01/06/coastal-conservancy-public-meeting-january-19-2012/>

I am attaching the staff report for the item and a couple of example support letters as well. Thank you Jim!
shelley

Shelley Luce, D.Env.

Executive Director

Santa Monica Bay Restoration Commission

Pereira Annex MS:8160

From: Mary Small
To: "Shelley Luce"; "Diana Hurlbert"
Subject: FW: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:05:00 PM
Attachments: SCC Ballona Tech Support Ltr.docx

Hi

I belatedly just sent this request to DFG and SLC. The only support letter I have is from MRCA, though I know the port is working on one too. Can you let me know who you are working on getting letters from and if there is anyone else I should follow-up with?

Thanks

Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 1:04 PM
To: 'Griggs, Pamela@SLC'; 'Terri Stewart'; 'dlawhead@dfg.ca.gov'; 'Rick Mayfield (rmayfield@dfg.ca.gov)'
Subject: draft support letter for SCC board meeting

Hi

Sorry I didn't send this to you earlier, I meant to send it before the holidays, but forgot. I was wondering if your agencies would send a support letter to Coastal Conservancy for the requested authorization for funds for engineering and final design for Ballona. Our meeting will be in LA so I expect there will be some opposition and it is a huge funding request since we decided to do the EIR and permitting for the whole project.

If you could attend the site tour of Ballona and the meeting (both on Jan 19th) that would be great too.

Please let me know if you have any questions or need more info.

Thanks

Mary

From: [Mary Small](#)
To: "Mark Gold"
Cc: sluce@santamonica.gov
Subject: RE: support letter for SCC board meeting?
Date: Friday, January 06, 2012 4:23:00 PM

I was just talking to Shelley and we were wondering if you could send a staff person to the meeting even if you don't want to sign a letter? Maybe Meredith or someone on her staff could come to talk about the need to open the site to public access and restore nature in the city?

This authorization doesn't commit to any one project, we still will be going through CEQA and NEPA.

Thanks
Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 3:00 PM
To: 'Mark Gold'
Subject: RE: support letter for SCC board meeting?

Thanks, the meeting is the 19th so that's the deadline. Yes, I totally understand.

I was just sending Sarah an email about possible dates I'll be in LA when I'd like to stop in and talk about OPC, so maybe I'll see you then.

Happy new year (and MLPA implementation)
Mary

From: Mark Gold [mailto:mgold@healthebay.org]
Sent: Tuesday, January 03, 2012 2:39 PM
To: Mary Small
Subject: RE: support letter for SCC board meeting?

Mary – Happy new year to you too. We will definitely take a look at this and think it through. It is a great project and needs to happen. The political baggage that goes with it is no picnic as you know.

When is the deadline?

Mark Gold, D.Env. | President
Heal the Bay | 1444 9th Street | Santa Monica CA 90401
Tel: 310 451 1500 X123 | Fax: 310 496 1902 | mgold@healthebay.org

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From: Mary Small
To: "Dick Wayman"
Subject: FW: Ballona Wetlands presentation materials at SCC meeting
Date: Friday, January 20, 2012 4:03:00 PM

From: Shelley Luce [mailto:sluce@santamonibay.org]
Sent: Friday, January 20, 2012 3:12 PM
To: Mary Small; Karina Johnston; Diana Hurlbert
Subject: RE: Ballona Wetlands presentation materials at SCC meeting

Yes Mary - Karina or Diana can you please?

Also wanted to make sure you saw/heard the NPR coverage:

<http://www.sccr.org/news/2012/01/20/30859/coastal-conservancy-releases-65-million-ballona-wetlands-restoration-plans>

The MDR patch did a pretty good job covering - except Lisa F's comments which are confusing to me, but I will call her about it - and LATimes is going to run something this weekend, I am told. Fingers crossed.

<http://venice.patch.com/articles/coastal-conservancy-approves-6-5-million-for-ballona-wetlands-restoration-plans>

Thank you Diana and Karina for helping get this press coverage - the advance work we did made a HUGE difference! Please stay on top of me in the future to make sure we have the same success next time. great job.
shelley

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-216-9827
www.santamonibay.org*

From: Mary Small [msmall@scc.ca.gov]
Sent: Friday, January 20, 2012 2:52 PM
To: Karina Johnston; Diana Hurlbert
Cc: Shelley Luce
Subject: Fwd: Ballona Wetlands presentation materials at SCC meeting

Could one of you email this to him?
Thanks

sent from my phone

Begin forwarded message:

From: Rex Frankel <rexfrankel@yahoo.com>
Date: January 20, 2012 12:46:45 PST
To: Mary Small <msmall@scc.ca.gov>
Subject: Re: Ballona Wetlands presentation materials at SCC meeting
Reply-To: Rex Frankel <rexfrankel@yahoo.com>

Mary,
thank you for the presentation materials. However, on the Baseline monitoring report page,
<http://santamonibay.org/smbay/ProgramsProjects/HabitatRestorationProject/BaselineAssessmentReport/tabid/203/Default.aspx>

the Chapter 4--Vegetation report does not come up when you click on it. I assume this is where Dr. Luce's conclusion comes from.

If you can, please email that chapter to me.

Thank you, Rex Frankel

From: Mary Small <msmall@scc.ca.gov>
To: 'Rex Frankel' <rexfrankel@yahoo.com>
Sent: Friday, January 20, 2012 12:09 PM
Subject: RE: Ballona Wetlands presentation materials at SCC meeting

Hello Rex
Attached is our slide presentation.

Yes, Dr. Luce was referring to the findings of the baseline assessment. I just went to the project website and clicked on the image of the report cover and was able to download the documents, but if there are specific chapters that you are unable to download, please let us know and we'll get them to you.

Mary

From: Rex Frankel [mailto:rexfrankel@yahoo.com]

From: [Mary Small](#)
To: ["Joe Geever"](#)
Cc: ["Shelley Luce"](#); ["Diana Hurlbert"](#)
Subject: Coastal Conservancy Jan 19th Meeting
Date: Thursday, December 15, 2011 11:25:00 AM
Attachments: [Ballona Wetlands Engineering and Technical Studies.docx](#)

Hi Joe

Nice to talk to you this morning, and thanks for agreeing to come to the Coastal Conservancy meeting in Jan. It will be on Jan 19th at the Baldwin Hills Scenic Overlook starting around noon. Ballona funding (draft staff report attached) will be the first major item on the agenda. We are planning to take the Board on a tour of Ballona that morning. The tour and meeting are open to the public and details will be posted on our website by the 6th of Jan.

As I mentioned, we (Shelley and I) would be happy to provide additional information to you &/or your chapters at any point. Since we are finally getting ready to initiate the public environmental review, now would be a good time to get you engaged.

Thanks,
Mary

~~~~~

Mary Small  
Deputy Executive Officer, Coastal Conservancy  
1330 Broadway #1300 Oakland, CA 94612  
510-286-4181

**From:** Mary Small  
**To:** "Shelley Luce"  
**Cc:** "Joan Cardellino (Joan Cardellino)"; "Diana Hurlbert"  
**Subject:** RE: Letter for Coastal Conservancy Board  
**Date:** Tuesday, December 13, 2011 1:11:00 PM

---

Thanks

Sorry, the plan is to have the tour from roughly 9-11:30 and then start the meeting at noon or 12:30 – something like that. We're afraid that if we do the tour after the meeting none of the board members will come.

I'll call Barbara today to get her ideas and see if they will help with the tour, come to the mtg or send a letter

Mary

---

**From:** Shelley Luce [mailto:sluce@santamonicabay.org]  
**Sent:** Tuesday, December 13, 2011 1:08 PM  
**To:** Mary Small  
**Cc:** 'Joan Cardellino (Joan Cardellino)'; Diana Hurlbert  
**Subject:** RE: Letter for Coastal Conservancy Board

Mary, here are some thoughts from me and Diana:

- 1) Tour – we'll do the tour anytime that works for your members but it seems tight to finish it by 9:15 in order to get them all to Baldwin Hills Overlook for a 10 am meeting. I know we have the Toy meeting the day before so right after the board meeting makes most sense. Could you convince your members to stick around for it?
- 2) Press – this is troubling. It'll be hard for us to get good press on a \$7M expenditure... we can spin this if we get the right people. What if we did a brief presentation on the Monitoring Report before hand? We'll have beautiful hard copies, it's over 400 pages and very impressive and did not cost a lot for the amount of work and info. I think it makes SCC and SMBRC look great. Could we make this the press focus, i.e. with Molly Peterson at least? I'll give her a call for starters.
- 3) Support – I will talk with Geever, Jim Lamm, Miguel, Lisa Fimiana, Baykeeper, HTB, Nate from Rosendahl's office, Napolitano from Knabe's and Karly from MRT's. I can't say who will show up or do a letter but I will make the asks. I'll also ask Pestrella. Can you talk to MRCA Mary? Also what about the Corps – Rick Liefeld's support would be very meaningful, or Toy's if we can get it. Maybe a letter from Toy with Rick or someone else attending the meeting?

We'll draft a support letter asap and run it by you.

Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160*

**From:** [Shelley Luce](#)  
**To:** [Mary Small](#)  
**Subject:** RE: board presentation  
**Date:** Wednesday, January 11, 2012 6:55:23 PM

---

Hi Mary,

I think the presentation looks good. I think we should include some comparative data to show the need for restoration – e.g. the seed bank data, the exotic veg data and some of the animal data (birds and herps). I saw what karina sent you and it doesn't help us – we need numbers like “99% invasive plants” and “lowest seed bank of any so cal wetland”. we also need her graphs that show huge percent exotic veg. versus tiny percent native veg, etc. along with those photos of invasive plants that you already included.

I also think we should mention the TMDL –or not the TMDL itself, but we can list the impairments listed on the 303d list, note that TMDL implementation would be consistent with the restoration and that we can work with partners on my governing board and other agencies and leverage resources that would go into implementing the TMDL.

I can help with slides – why don't you send me one or two in your formatting and I will make some with the graphs imentioned and see if you like them. Or rather, since you have to finish by tomorrow and I am out of the office all day, we will ask karina to insert some graphs. Okay with you?

Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonibay.org](http://www.santamonibay.org)

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**From:** Mary Small [mailto:[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)]  
**Sent:** Wednesday, January 11, 2012 2:49 PM  
**To:** Shelley Luce  
**Subject:**

Hi Shelley

Attached is a draft powerpoint, I want to keep it as simple as we can. There are several extra slides at the end, I just want one picture I can leave up when I walk through the actual requested action, maybe just the bird with its head in the water?

There are two slides about the baseline monitoring program – I think we only need one of them, do you prefer lots of words or just a picture.

I am sending in .pdf because the actual powerpoint is too big. If you want me to ftp the powerpoin so you can edit directly, let me know. I have to finish this by tomorrow night.

**From:** [Shelley Luce](#)  
**To:** [Karina Johnston](#)  
**Cc:** [msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)  
**Subject:** graphs needed for SCC board presentaiton  
**Date:** Thursday, January 12, 2012 7:57:56 AM

---

Hi Karina,

Thank you for the bullets you prepped for Mary, they are helpful. The photos are also perfect. What we still need for the presentation are graphics or numbers that will really make our case. Mary needs to complete the presentation today so can you and your team help us prep the following ASAP?

- one map of existing conditions that shows the site today: an aerial photo with transparent overlay of BASIC habitat types - how much is wetland, how much is upland/vacant lot style. goal is to illustrate how little of the site can be said to be functioning habitat.

- one simple graph showing predominance of invasive species - the one in the BWER draft TMDL is fine, can you please send that to mary? we need to say "x percent of the site is covered with 99% invasive vegetation" or whatever the actual numbers are. rather than "dominate by invasives" which could mean only 55% covered.

- some species diversity numbers/charts that show how extremely depaupurate poor Ballona is. not just "reduced relative to other wetlands" but "lowest seed bank abundance and diversity of any wetland in southern california" - but i need you to give me the right language so i am not mis-stating anything. please give me those #s or charts or language for seed bank, veg, mammals, birds, fish and herps separately and we'll decide which ones to mention in our presentation.

- any other features of the site or results from your surveys that really illustrate to non-scientists how desperate is the need to restore ecological function and habitat at the site.

I am sorry to ask you for all this today, I hope you or one of your team has time. I think you have all this info readily accessible - f there is something i've requested that is a big pain check with me and we'll decide if it's really needed. please call my cell or email, i will be out of the office all day but checking my phone compulsively. also please suggest other stuff if you think of it - you know these data better than we do! thank you KJ talk to you later today.  
shelley

*Shelley Luce, D.Env.  
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## **ATTACHMENT 5**

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DEPARTMENT OF DEFENSE Department of the Army; Corps of Engineers  
Notice of Intent To Prepare an Environmental Impact Statement/  
Environmental Impact Report for the Ballona Creek Ecosystem Restoration  
Feasibility Study, Los Angeles County, CA AGENCY: Department of the  
Army, U.S. Army Corps of Engineers, DoD. ACTION: Notice of intent. --

=====

SUMMARY: The Los Angeles District intends to prepare an Environmental  
Impact Statement/Environmental Impact Report (EIS/EIR) to support a  
cost-shared ecosystem restoration feasibility study with the Santa  
Monica Bay Restoration Commission. The proposed project study areas has  
been degraded by encroachment of non-native plants, placement of fill  
from Marina Del Rey, interruption of the hydrologic regime, trash  
accumulation, and varied attempts at bank protection along the creek  
using rock and concrete. Direct benefits of the proposed project  
include improved habitat and water quality, reductions in waste and  
trash, and aesthetics. The watershed is an important resource for both  
recreational uses and for fish, and wildlife and further degradation  
could jeopardize remaining. The purpose of the feasibility study is to  
evaluate alternatives for channel modification, habitat restoration  
(coastal and freshwater wetlands and riparian), recreation, and related  
purposes along the lower reach of the Ballona Creek. DATES: A public  
scoping meeting will be held on September 29, 2005 at 6 p.m.

ADDRESSES: U.S. Army Corps of Engineers, Los Angeles District, CESPL-  
PD, P.O. Box 532711, Los Angeles, CA 90053 and Santa Monica Bay  
Restoration Commission, 320 West 4th Street, Los Angeles, CA 90013.  
FOR FURTHER INFORMATION CONTACT: Shannon Dellaquila, Project  
Environmental Manager, at (213) 452-3850 or Malisa Martin, Project  
Study Manager at (213) 452-3828. SUPPLEMENTARY INFORMATION: 1.

Authorization This study was prepared as an interim response to  
the following authorities provided by Congress under Section 216 of  
the Flood Control Act of 1970, which states: The Secretary of the  
Army, acting through the Chief of Engineers, is authorized to review  
the operation of projects the construction of which has been completed  
and which were constructed by the Corps of Engineers in the interest  
of navigation, flood control, water supply, and related purposes, when  
found advisable due the significantly changed physical or economic  
conditions, and to report thereon to Congress with recommendations on  
the advisability of modifying the structures or their operation, and  
for improving the quality of the environment in the overall public  
interest; supplemented by House Resolution on Public Works and  
Transportation dated September 28, 1994 which states: The  
Secretary of the Army is requested to review the report of the Chief  
of Engineers on Playa del Rey Inlet and Basin, Venice, California,  
published as House Document 389, Eighty-third Congress, Second  
Session, and other pertinent reports, to determine whether  
modifications of the recommendations contained therein are advisable  
at present time, in the interest of navigation, hurricane and storm  
damage reduction, environmental restoration, and other purposes at  
Marina del Rey Harbor, Los Angeles, California, with consideration  
given to disposal of contaminated sediments from the entrance channel  
required under the existing operation and maintenance program at  
Marina del Rey. 2. Background The Ballona Creek Ecosystem



degradation issues, which has led to uncoordinated and sometimes redundant and unsuccessful improvement measures. 4. Proposed Action and Alternative The Los Angeles District will investigate and evaluate all reasonable alternatives to address the problems and need stated above. In addition to a without project (No Action) Alternative, both structural and non-structural environmental measures will be investigated. An assessment of the feasibility of removing impervious surfaces from the Ballona Channel will also be evaluated. Proposed restoration measures include: re-grading and removal of fill, remove invasive and non-native plant species, reintroduction of a water source and installation of native plants to restore previously filled coastal wetlands. Other measures to be evaluated include features to improve or restore tidal regime in Oxford Basin, the Grand and Venice canals, and Ballona and Del Rey Lagoons; the potential for in stream wetland development in Centinela, Sepulveda and Ballona Creek; sediment loading in the upper watershed; and related recreation and educational opportunities. 5. Scoping Process The scoping process is on-going, and has involved preliminary coordination with Federal, State, and local agencies and the general public. A public scoping meeting is scheduled for Thursday September 29th from 6-8 p.m. at the Rotunda Room of the Veteran's Memorial Building, 4117 Overland Avenue, Culver City, CA. This information is being published in the local news media, and a notice is being mailed to all parties on the study mailing list to ensure that public will have an opportunity to express opinions and raise any issues relating to the scope of the Feasibility Study and the Environmental Impact Study/Environmental Impact Report. The public as well as Federal, state, and local agencies are encouraged to participate by submitting data, information, and comments identifying relevant environmental and socioeconomic issues to be addressed in the study. Useful information includes other environmental studies, published and unpublished data, alternatives that could be addressed in the analysis, and, potential mitigation measures associated with the proposed action. All comments will be considered in the project development. Concerns may be submitted in writing to the Santa Monica Bay Restoration Commission, or to the Los Angeles District (see ADDRESSES). Comments, suggestions, and request to be placed on the mailing list for announcements should be spl01.usace.army.mil. Availability of the Draft EIS/EIR The Draft EIS/EIR is scheduled to be published and circulated in December 2007, and a public hearing to receive comments on the Draft EIS/EIR will be held after it is published. Dated: September 13, 2005. Alex C. Dornstauder, Colonel, U.S. Army, District Engineer. [FR Doc. 05-18651 Filed 9-19-05; 8:45 am] BILLING CODE 3710-KF-M

Hi Mr. Mayfield, attached is the congressional and corp docs we discussed.

The document states an joint EIS/EIR process was begun in 2005 per the request of Congress.

The Santa Monica Bay Restoration Commission is noted as the lead agency for CEQA in the joint EIR/EIS.

It also states that at least one scoping hearing has already occurred.

My question is does DFG plan on beginning another EIR process for the same area that is already been started by the SMRBC and Corp. If so, how can there be two lead agencies.

To me, logic indicates the SMRBC should be lead.

Thanks,

John Davis  
PO 10152  
Marina del Rey Ca. 90045

Ballona Ecosystem Restoration Planning Management Meeting  
June 28, 2010  
3:00-5:00pm

Attendees:

|                       |                                            |                           |
|-----------------------|--------------------------------------------|---------------------------|
| Josephine Axt, USACE  | Ed Demesa, USACE                           | Julian Serafin, USACE     |
| Rene Vermeeren, USACE | Ben Nakayama, USACE                        | Rhiannon Kucharski, USACE |
| Diana Hurlbert, SMBRC | Sean Bergquist, SMBRC                      | Kathy Anderson, USACE     |
| Larry Smith, USACE    | Mary Small, Coastal Conservancy (by phone) |                           |

- I. Mary Small: Coastal Conservancy is supplying most of the funding toward the in-kind local sponsor efforts.
- II. Ed Demesa: Corps Process Overview
  - a. We are coming up to our first major milestone (F3)
    - i. Baseline and future without project conditions; preliminary alternatives analysis
      1. Describes problems and opportunities, planning objectives
      2. This product will be the basis for future steps
    - ii. Next milestone (F4A/F4)
      1. Formulation, evaluation and comparison of alternatives
      2. F4A: SPD requirement, Alternative Formulation Briefing
    - iii. (F5) Public Draft Feasibility Report
      1. Headquarters Policy and Public Review
  - b. Josephine Axt: New Review Guidance (Estimated at \$500,000; IEPR is federally funded)
    - i. Agency Technical Review (ATR) - Requires coordination with the planning center of expertise, and coordinates a team of reviewers from another Corps Division
    - ii. Model certifications required
    - iii. Independent External Peer Review (IEPR)
    - iv. Note for budget: call out what IEPR is estimated to cost, and that it does not have to be cost shared
    - v. Diana Hurlbert: Under each discipline, there are costs for responding to comments. Are those related to ATR?
      1. Josephine Axt: Yes. There is a formal comment and response system that must be used for ATRs (DrChecks)
  - c. Kathy Anderson: Partnership
    - i. Communication
      1. Sean Bergquist: Communication has been much better since Rhiannon has taken over as Lead Planner.
      2. Mary Small: Rhiannon has been great in communication.
    - ii. Cost share
      1. Sean Bergquist: Our cost share component is 100% in-kind. It is anticipated that most of that work is and will continue to be in the wetlands.
        - a. We are finished our F3 equivalent (2006)
        - b. We are also finished our alternatives development and analysis (2008)
          - i. We want to make sure that all of the products feed in to the Corps process and products.
        - c. The Corps and us on not on the same timeline.

- a. Definition: Ballona Creek from the Pacific Ocean to Cochran, Del Rey Lagoon; and Centinela and Sepulveda Channels from Ballona Creek to where they go underground.
    2. Grand canal is out.
    3. Sean Bergquist: We have always planned on the daylighted part of Ballona Creek up to Cochran.
    4. Coordination needs to go through Diana Hurlbert and Rhiannon Kucharski.
  - ii. Costs
    1. Ed Demesa: For in-kind credit, it is important to let the PDT know what work the sponsor is doing, even if it will not be submitted for in-kind credit.
    2. Sean Bergquist: Historical analysis of the watershed is in the works. We are also working with UCLA to do a watershed budget.
    3. Sean Bergquist: When things have to be redone, how does the cost share work?
      - a. Hydraulic study
        - i. Rene Vermeeren: Our H&H models are in DRAFT form and have not yet had the first ATR. They are not ready for use on alternatives.
    4. SMBRC Governing Board will have to sign the PMP and FCSEA amendments.
    5. In construction phase, can the cost of the land/property be used toward sponsor in-kind credit?
      - a. Kathy Anderson: Yes, as long as the constructed project uses those lands. The state paid \$140 million in 2005 for the property that makes up areas A, B and C.
  - iii. In-kind submittals
    1. Mary Small: Is there really much more additional work that needs to be done to review the submittals? How much is left to be done by the Army Corps depends on the in-kind submittals?
      - a. Diana and Rhiannon can work together with each PDT member to work through these. Set up meetings ASAP.
      - b. Kathy Anderson: The whole PDT needs to sit down and go through the PMP, in-kind and costs step-by with SMBRC.
    2. Mary Small: I am worried about the water quality report in terms of the data being what is needed per the Corps and less worried about the write-up
      - a. Confirm with James Chieh that the data is what is needed.
  - c. Kathy Anderson: Sponsor financial capability?
    - i. Even in light of cost increases, the sponsor has enough money to fund all of their study activities and even begin phase I construction (Area B).
    - ii. Corps needs to get details of sponsor plans for "phase I" in Area B and determine if this must be added as a future without project condition or not.
- IV. Action items are noted in RED.

Ballona Coordination Meeting Minutes  
June 2, 2010  
10am

Attendees:

|                                 |                           |                          |
|---------------------------------|---------------------------|--------------------------|
| Mary Small, Coastal Conservancy | Diana Hurlbert, SMBRC     | Heather Schlosser, USACE |
| Julian Serafin, USACE           | Rhiannon Kucharski, USACE |                          |
| Ben Nakayama, USACE             | Robert Browning, USACE    | Robert Grimes, USACE     |

- I. In kind submittals
  - a. For In-kind submittals, Mary, Sean and Diana tried to break down the submittals per the PMP, but had a hard time. Please see in-kind spreadsheet submitted last week.
  - b. SMBRC and Coastal Conservancy will submit the In Kind Submittal sheets that correspond with each document from the website, along with reference to the document or file they correspond to and a link to that document on the web.
- II. PMP updates
  - a. Mary Small is concerned that the revised PMP does not reflect the products they have completed, and very concerned about the cost increases.
  - b. Mary Small: Have all the PMP sections looked at the same project area? Parts still refer to Ballona Lagoon, Grand Canal, Venice Canals and Oxford Basin, which are no longer in the study area.
    - i. All sections should include: Del Rey Lagoon; Areas A, B and C; Ballona Creek from the Ocean to Cochran; and Centinela and Sepulveda Channels from where they daylight to Ballona Creek.
  - c. Mary and Diana requested that the Corps add geographic location to the PMP amendment chapter. The scopes of work are confusing because they do not make the study area clear.
  - d. Mary: Why have the F3 economics costs gone up?
    - i. Ben Nakayama: Economics had to re-run their model due to the revised flood plain hence their cost increase. The potential flooded parcels went from 6000 to 600.
    - ii. Sponsor wants to understand why the economics costs for F3 doubled. The model was originally run at a larger scope (6000 parcels) and is now being re-run at a smaller scope (600 parcels). That should not cost double. There should be economies of scale.
    - iii. Ben Nakayama: The model had to be completely re-run for the new parcels. This along with added review costs are the reasons behind the cost increase.
  - e. Review Guidance has led to approximately \$505k in cost increases. \$260k of that is for Independent External Peer Review (IEPR), which is NOT cost shared. The other levels of review such as Agency Technical Review (ATR) and model certification ARE cost shared.
    - i. Rhiannon will send another copy of the review guidance.
  - f. The Coastal Conservancy is worried that there will be no political appetite to support a feasibility study at this cost level.

Ballona Telecon Minutes  
March 29, 2010

Attendees:

|                                 |                        |                      |
|---------------------------------|------------------------|----------------------|
| Rhiannon Kucharski, USACE       | Kathy Anderson, USACE  | Larry Smith, USACE   |
| John Killeen, USACE             | James Chieh, USACE     | Frank Wu, USACE      |
| Julian Serafin, USACE           | Michael Hallisy, USACE | Patrick Singh, USACE |
| Mary Small, Coastal Conservancy |                        | Sean Berquist, SMBRC |

- I. Introductions
- II. PMP update
  - a. DRAFT SOW Amendment Chapter distributed
  - b. Cost estimates
    - i. Frank Wu: Coastal Engineering F3 Baseline Conditions
      - 1. Need to incorporate PWA information in to the appendix
  - c. SMBRC Board will have to buy off on the updated PMP and cost estimates
    - i. At this Thursday's meeting they are asking the Board to generally support the study
    - ii. Cost increase approval will have to come through the Coastal Conservancy's Board
  - d. FCSA amendment would come after the PMP update is complete
    - i. Have to work with Corps Legal Counsel and SMBRC Legal/Board
  - e. Study Area
    - i. For F4, the Corps suggests focused study area of A,B & C plus the Creek up to the I-405, and the Centinela Channel and Sepulveda Wash
      - 1. H&H and Survey and Mapping Sections believe this focused area is best due to cost considerations
      - 2. Per Frank Wu: Coastal Engineering work has focused on A, B, & C
    - ii. Sponsors feel that we need to keep Ballona Creek up to Cochran Boulevard. Otherwise, the map is okay.
  - f. Rhiannon and Kathy will set up a meeting between the sponsors and Survey and Mapping (Alan Nichols).<sup>1</sup>
  - g. URS and the Corps are in negotiations for the Plan Formulation and Environmental Appendix
- III. Corps work Audit
  - a. Environmental Resources Branch (ERB )
    - i. Review of sponsor work
    - ii. Fish survey of creek and channels
    - iii. Work with SAC on HEP evaluation
      - 1. Including scope of work to score A, B & C and the creek between the marsh areas
      - 2. Mary can re-start the Conservancy agreement with the SAC to possibly fund them.
        - a. Larry will send Mary the scope of work he has written.
  - b. Cultural Resources
    - 1. Write-up from PWA, which summarizes a library record search
      - a. Corps and Conservancy both feel that the write-up is inadequate

---

<sup>1</sup> Action Items marked in GREEN

1. Sponsor needs to keep records of the in-kind and the values in case of an audit.
- ii. Mary Small: What is the best way to do that?
- iii. Kathy Anderson: We can have a separate meeting to go through the in-kind line by line with Kathy, Rhiannon, Sean and Mary.
- iv. Mary Small: Is it what we spend on the product that gets credited or is it what the federal government would have spent to do the same thing?
  1. It is up to the PDT to QA/QC the products and agree to the accounting both in amount and content.
  2. Coastal Conservancy would feel more comfortable if the in-kind is credited at the value they spent on the product.

V. Coordination

- a. Corps requests going forward
  - i. Each PDT member needs to coordinate with their equivalent on the sponsor's contractor team(s)
    1. Rhiannon will send a PDT list to Sean and Mary so that coordination contacts can be filled in next to the corresponding PDT member(s).
- b. Sponsor requests
  - i. Tie up the in-kind process and update more often
- c. Our coordination meetings from now on will be the last Wednesday of every month at 10am.

VI. Other Discussion

- a. Bike tour with Congresswoman Harman April 9<sup>th</sup>.
  - i. Kathy will forward info to Mary and Sean.

**TIME/ACTIVITY**

**TRANSP/REMARKS**

**THURSDAY – 26 MAY (Continued)**

Agenda:

- Introductions
- Project Overview – SMBRC/CC
  - o Project goals and regional importance
  - o Planning Process (Science Advisory Committee and Public Meetings)
  - o Proposed Project
  - o Schedule
- Partnership with Corps: Discussion (All)
  - o 408 Permit – Outstanding Questions
  - o Status of Feasibility Study
  - o Discussion of Future Coordination

|      |                                                                                                                                                                                                                                        |                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 1100 | Depart for Ballona Creek<br>PAX: See above                                                                                                                                                                                             | Govt Vehicle<br>Driver: Phil Serpa |
| 1110 | Ballona Creek Site Visit <ul style="list-style-type: none"><li>- Overview of the Site</li><li>- Ballona Channel</li><li>- Muted Tidal Wetland</li></ul><br>SMBRC/CC and LAPW Participants:<br>Dr. Luce, Mary Small and Mark Prestrella |                                    |
| 1210 | Depart for Ballona Creek for SPL<br>PAX: See above<br><br>Note: Lunch enroute                                                                                                                                                          | Govt Vehicle<br>Driver: Phil Serpa |
| 1330 | Arrive SPL                                                                                                                                                                                                                             |                                    |



## Outline for the presentation

(Mary)

### Background

- 600 acres owned by the state, DFG and State Lands
- Designated State Ecological Reserve
- Purchased for the purpose of wetland restoration

### Project Partners, introduce Shelley

(Shelley)

### Need For Restoration, Site Mgt

- Currently no open public access, very restricted
- Site management issues: homeless encampments, trespass, trash, eyesore

### Need for restoration, biology

- Very degraded ecological resources – key findings of baseline assessment
- Regional significance – wetland loss around SM Bay and throughout So CA

### Proposed project

- Description of grand vision
- Ecological benefits
- Sustainability – adaption to SLR, restoration of ecological processes
- Public access components

### Planning process to date 2 slides(?)

- Public and Science Based Process
- Evaluation of broadest possible range of alternatives
- Refinement and assessment of preferred alternative –ideas we rejected, scaling down due to cost considerations, planning for phased implementation

(Mary)

### Recommended action:

- 1) Authorization for a grant of \$250 K to SMBRC to fund their ongoing work to advance this restoration project, including continuation of data collection, agency coordination and technical review and oversight.
- 2) Authorization of \$6.25 million to be contracted by SCC through competitive environmental services contracts for specific technical studies that are needed to complete the environmental review and permitting.

### Description of the technical work (what will be done and why so expensive)

This authorization would provide funds for several specific scopes of work to support environmental impact review and permitting of the restoration project.

- Soils and Geotechnical assessment – Some soil sampling has been completed onsite, however the main cost for implementation of the project will be soil management. To

Some individuals think that this site is providing important habitat as is. This is a case of shifting baselines, the site does provide some habitat, but is severely degraded. Example - data pt from Karina's work?: To restore estuarine wetlands at Ballona, the land needs to be reconnected to the ocean.

- Can project be done with volunteers and without bulldozers?

The project that we are recommending is enormous in scale. It involves uncovering the wetlands that were buried with the construction of the marina and that have been cut off from the ocean for almost 90 years. We will work to continue working with youth groups and volunteers to implement portions of this restoration.

- Money would be better spend buying small parcels in the neighborhood

Some neighbors to the project have advocated that the restoration of the wetlands is a poor investment and the bond money should be spent to acquire small parcels (each 3-5 acres) rather than to restore the ecological reserve.

Funds are limited to Ballona, consequences if not approved, who will pay for construction?

#### Conclusion:

Even though this is a major investment and a controversial project, your staff recommends that you approve it. The ecological restoration of the Ballona wetlands is a rare opportunity to bring back coastal wetlands and to develop an urban natural area that will enhance the lives of millions of Californians. To really restore this site we have to implement a big vision and in order to do that we

Questions I will need to be prepared to answer:

Consequences if not approved

Who will pay for construction?

Why not grant all funds to SMBRC?

**From:** [Shelley Luce](#)  
**To:** [Mary Small](#)  
**Cc:** [Diana Hurlbert](#)  
**Subject:** RE: timelines...  
**Date:** Monday, January 30, 2012 4:44:09 PM

---

Let's meet downtown at 11 am at Bottega Louie, it's on the corner of 7<sup>th</sup> and Grand. We can eat or just have coffee for as long as we want there, and then head over. Sound good?

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonicabay.org](http://www.santamonicabay.org)

---

**From:** Mary Small [mailto:[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)]  
**Sent:** Monday, January 30, 2012 4:30 PM  
**To:** Shelley Luce  
**Cc:** Diana Hurlbert  
**Subject:** Re: timelines...

Great, let's meet before maybe 11?  
Downtown would be easy for me but I could also fly to LAX and meet at LMU, if we do that maybe we could meet a little earlier?

Sam can't make it, this rescheduled time didn't work for him.  
Mary

sent from my phone

On Jan 27, 2012, at 12:38, Shelley Luce <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)> wrote:

I have kept the whole day open. You can Sam can tell us what works for you - meet earlier downtown or at LMU, anytime after 9:30 is good for me. We can reserve a conf room at water board offices or meet at a coffee shop if we do it downtown.

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-216-9827  
[www.santamonicabay.org](http://www.santamonicabay.org)*

---

**From:** Diana Hurlbert  
**Sent:** Friday, January 27, 2012 10:07 AM  
**To:** Mary Small; Shelley Luce  
**Subject:** RE: timelines...

things that we were discussing and I didn't think that was part of our plan. I do think we can continue discussion of relevant things with SAC members as we write the draft EIR, and reconvene if necessary. Is that what you were thinking?

Talk to you Monday!  
Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonibay.org](http://www.santamonibay.org)

**From:** [Mary Small](#)  
**To:** ["Mary Small"](#); ["Shelley Luce"](#)  
**Cc:** ["Diana Hurlbert"](#)  
**Subject:** RE: draft agmt SMBRF 2  
**Date:** Monday, February 13, 2012 9:28:00 AM

---

Hi

Can you let me know if this looks basically ok so I can send it to Mr. Davis?

Thanks

Mary

---

**From:** Mary Small [mailto:[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)]  
**Sent:** Tuesday, February 07, 2012 2:28 PM  
**To:** 'Shelley Luce'  
**Cc:** 'Diana Hurlbert'  
**Subject:** draft agmt SMBRF 2

Hi Shelley

Attached is a draft of the grant agmt to the SMBRF for the \$240K. We'll need to develop a work plan and budget separately.

Can you take a quick review and let me know if it looks ok? Elena has asked me to produce this draft quickly as it seems the best way to respond to our most recent PRA from Mr. Davis.

Thanks

Mary



## **REQUEST FOR SERVICES**

### **Ballona Wetlands Ecological Reserve Environmental Analysis and Permit Assistance**

May 11, 2009

**Contract Type:** Environmental Professional Services

**Scope:**

Perform environmental analysis and assist in applying for permits for habitat enhancement and public access improvements at the Ballona Wetlands Ecological Reserve in Los Angeles.

**Submittal Deadline: June 1, 2009**

Proposals should be submitted electronically in adobe acrobat format and must be received at the Conservancy by June 1, 2009.

**Contact:** Mary Small, California Coastal Conservancy, [msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)

## **REQUEST FOR SERVICES**

### **Ballona Wetlands Ecological Reserve Civil and Geotechnical Engineering and Permit Assistance**

February 8, 2010

**Contract Type:** Civil Engineering and Geotechnical Professional Services

**Scope:** Provide engineering and geotechnical evaluations, design and related services for the proposed wetland restoration design of the Ballona Wetlands Ecological Reserve in Los Angeles. Technical studies, evaluations, and designs will be of sufficient detail to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers.

**Submittal Deadline: February 29, 2012**

Proposals should be submitted electronically in adobe acrobat format and must be received at the Conservancy by February 29, 2012.

**Contact:** Mary Small, California Coastal Conservancy, [msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)

Reserve in Los Angeles County. Services are needed to complete engineering and geotechnical evaluations, hydrology, technical studies, design and related services to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers. One contract will be for Civil and Geotechnical Engineering and a second contract will be for Hydrology and Engineering Design Analysis.

~~~~~

Mary Small
Deputy Executive Officer, Coastal Conservancy
1330 Broadway #1300 Oakland, CA 94612
510-286-4181

California Coastal Conservancy

Re: Public Records Request

Please provide any statute which exempts the California Coastal Conservancy from the California Contract Code as it relates to the Agency entering into contracts of any type.

Thank you,

John Davis

----- Original Message -----

Subject: RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012

From: "Elena Eger" <eeeger@scc.ca.gov>

Date: Tue, March 27, 2012 5:27 pm

To: <jd@johnanthonydavis.com>

Cc: "Mary Small" <msmall@scc.ca.gov>, <sschuchat@scc.ca.gov>

Dear Mr. Davis:

Your request below does not constitute a request for a record pursuant to the Public Records Act. Rather, your request is for an analysis of statutory law. I am ethically prohibited from providing counsel to anyone other than my client. Assuming that you are not a lawyer, I am also ethically bound to suggest to you that you obtain your own counsel to advise you on such matters. You may utilize the California State Bar website for referrals to counsel at www.calbar.ca.gov.

Sincerely,

Elena Eger

Senior Staff Counsel

Dear Mr. Davis:

This correspondence contains the Coastal Conservancy's (Conservancy) response to your March 21, 2012 Public Records Act request, below.

The Conservancy does not possess any responsive records to either of your numbered requests. However, we direct you to Government Code Sections 4525 *et seq.* and 14 California Code of Regulations Sections 13870 *et seq.* for our contracting process.

Sincerely,

Elena Eger

Senior Staff Counsel

California Coastal Conservancy

1330 Broadway, Ste. 1300

Oakland, CA 94612

510-286-4089 tele/voicemail

510-286-0470 fax

From: jd@johnanthonydavis.com [mailto:jd@johnanthonydavis.com]

Sent: Wednesday, March 21, 2012 2:11 PM

To: "Samuel Schuchat"; "John Laird"; "Dick Wayman"; "Nadine Peterson"; carmenp@scc.ca.gov; king@resources.ca.gov

Cc: John Chang

Subject: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012

California Coastal Conservancy

Att: Executive Director Sam Schuchat

California Coastal Conservancy

March 21, 2012

2. Please provide any and all public records that demonstrate compliance with California Public Contract Code Section 10515-10518 in regard to the California Coastal Conservancy approval on January 19, 2012 of File No. 04-088 which approved money to be disbursed for engineering, hydrologic analyses, geotechnical assessments, and public design.

No such records have been requested or received by me to date.

See Attached Approval for File No. 04-088

Thank you,

John Davis
PO 10152
Marina del Rey Ca. 90295

PUBLIC CONTRACT CODE SECTION 10140-10141

10140. Public notice of a project shall be given by publication once a week for at least two consecutive weeks or once a week for more than two consecutive weeks if the longer period of advertising is deemed necessary by the department, as follows: (a) In a newspaper of general circulation published in the county in which the project is located, or if located in more than one county, in such a newspaper in a county in which a major portion of the work is to be done. (b) In a trade paper of general circulation published in San Francisco for projects located in County Group No. 1, as defined in Section 187 of the Streets and Highways Code, or in Los Angeles for projects located in County Group No. 2, as defined in said Section 187, devoted primarily to the dissemination of contract and building news among contracting and building materials supply firms. The department may publish the notice to bidders for a project in additional trade papers or newspapers of general circulation that it deems advisable. 10141. The notice shall state the time and place for the receiving and opening of sealed bids, describing in general terms the work to be done and that the bids will be required for the entire project and for the performance of separate designated parts of the entire project, when the department determines that segregation is advisable.

The prohibition of this subdivision shall not apply to a contract requiring the person's services as an expert witness in a civil case or to a contract for the continuation of an attorney's services on a matter he or she was involved with prior to leaving the university. (c) This section does not prohibit the rehire or reappointment of University of California employees after retirement, consistent with university administrative policies, nor does it apply to inventors and authors of intellectual property licensed under technology transfer agreements. 10518. (a) Except as otherwise provided in subdivision (b), each contractor who enters into a contract with a University of California campus for ten thousand dollars (\$10,000) or more shall be assigned an identification number by the chancellor of that university campus. Each contractor who has been assigned a number shall list it on each contract the contractor enters into with the university campus, regardless of the amount of the contract. In the case of a corporation or firm, the chancellor's assigned number shall be used exclusively on each contract with that particular chancellor's campus. The assigned number shall remain unchanged regardless of future name changes. (b) If the identification numbers cannot be tracked centrally by the Regents of the University of California, then the regents, and not the chancellors, shall assign the identification numbers.

From: Mary Small
To: "Barbara Romero"
Cc: "Melissa Guerrero"; "Diana Huribert"; "Shelley Luce"
Subject: SCC mtg in Jan
Date: Monday, December 19, 2011 3:30:00 PM
Attachments: Ballona Wetlands Engineering and Technical Studies.docx

Hi Barbara,

Thanks for agreeing to support the recommendation for funding for engineering work at Ballona. Attached is the draft staff report, the project will be heard at our Jan 19th meeting at the Baldwin Hills Scenic Overlook. As you can see it's a pretty big authorization, so we'd love your support. I think we may take the Board on a tour of Ballona that morning and then the meeting will start around 12:30. It would be great to have MRCA join us for either the tour or the meeting.

Thanks also for the message about the early action plan grant. When you have time submit any final billing or just a letter stating that the work is all done and I'll close it out.

Hope you are doing well and have a great holiday.

Mary

ATTACHMENT 8

The Information Practices Act (Civil Code section 1798 et seq.) generally prohibits agencies from disclosing an individual's personal information to the public.

Thank you,

John Davis
PO 10152
Marina del Rey Ca. 90295

.....
From: jd@johnanthonydavis.com [<mailto:jd@johnanthonydavis.com>]
Sent: Thursday, February 16, 2012 1:29 PM
To: Elena Eger
Cc: 'Mary Small'; 'Sam Schuchat'; 'Dick Wayman'; 'Shelley Luce'; svalor@santamonicabay.org
Subject: Reply from John Davis RE: Davis' Requests for Information

California Coastal Conservancy
Att: E.Eger
Re: Reply

Dear E. Eger,

The request for public records submitted on 2/14/2012 remains outstanding.

The Commission still needs to reply to this request within 10 days of the submission date. I do expect a reply by 2/24/2012 as the Public Records Act requires under law.

I also would take issue with your recent email stating that I made a DEMAND of the Commission. This is far from true.

In fact my email stated the INTENDED PURPOSE of the email and made no demands as you stated to me in your email to me.

Prior to that, you inferred in another email that I made statements and or asserted things that I clearly did not.

I corrected you once already in writing, and find I must do so yet again.

Your accuracy in characterizing my telephonic conversations or written documents should not be clouded by your misconceptions as I do not find it to be professional in your role as a State Attorney.

Regards,

John Davis
PO 10152
Marina del Rey Ca. 90295

From: "Elena Eger" <eeger@scc.ca.gov>
Date: Tue, February 14, 2012 12:32 pm
To: <jd@johnanthonydavis.com>
Cc: "'Mary Small'" <msmall@scc.ca.gov>, <svalor@santamonicabay.org>,
"'Shelley Luce'" <sluce@santamonicabay.org>, "'Dick Wayman'"
<dwayman@scc.ca.gov>

Mr. Davis:

This is in partial response to your PRA, below and your request of yesterday at 5:15 p.m. in which you demand that we not share your communications with "any private business" and in which you characterize such communications as "private".

While we will provide you with your requests to the extent possible and in compliance with the PRA, we must clarify to you that communications between you, as a member of the public, and the Conservancy, a public agency, are not considered under the PRA and thus not by the Conservancy to be "private communications", subject to any privilege or exception under the Act. Indeed, we will continue to share communications to you or from you with our other Ballona project partners, irrespective of whether the partner is a public or private organization, when we, at our sole discretion, determine that dissemination to be useful for our project purposes.

I would also like to clarify for you for your future purposes that my title is not "council" but "counsel", that is, I am a lawyer, not a member of a council.

Sincerely,

Elena Eger
Senior Staff Counsel
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax

From: jd@johnanthonydavis.com [mailto:jd@johnanthonydavis.com]

Sent: Tuesday, February 14, 2012 10:49 AM

To: Elena Eger

Subject: PUBLIC RECORDS REQUEST FROM JOHN DAVIS

California Coastal Conservancy
Att: Council E. Eger
Re: Public Records Request

This is a public records request made pursuant to the California Public Records Act. Each numbered item is a separate and distinct request for public records. This letter is only intended to for the California Coastal Conservancy and NOT FOR ANY PRIVATE BUSINESS, unless requested by such a business via the California Public Records Act.

1. Provide any and all emails to and received by the California Coastal Conservancy

As I stated in my email of yesterday to you, we intend to comply with your records request to us of 2/14. We are working on compiling the records that you have requested. Please clarify whether you wish to receive the emails pertaining to correspondence among Mr. Valor, Ms. Luce and Conservancy staff with respect to the Item #5 on the 1-19-12 agenda only.

Please clarify that you are referring to the Conservancy when you make reference to the "Commission" in your message below.

As to your other allegations contained in your email below, I remind you that, as I said yesterday, we will make no further comment, which, of course, does not mean that we agree or disagree with your interpretations. Again, unless you are requesting a record from us under the Public Records Act, we do not intend to make further explanatory comments to you.

Sincerely,

Elena Eger
Senior Staff Counsel
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax

----- Original Message -----

Subject: Davis' Requests for Information

From: "Elena Eger" <eeeger@scc.ca.gov>

Date: Wed, February 15, 2012 6:45 pm

To: <jd@johnanthonydavis.com>

Cc: "Mary Small" <msmall@scc.ca.gov>, "Sam Schuchat" <sschuchat@scc.ca.gov>, "Dick Wayman" <dwayman@scc.ca.gov>, "Shelley Luce" <sluce@santamonicabay.org>, <svalor@santamonicabay.org>

Dear Mr. Davis:

In response to your inquiry below, I am providing you with the link to our website's contents of Item 5, Ballona Restoration Project, approved at the Conservancy's 1-19-12 public meeting unanimously. All my references are to the contents in this link. http://scc.ca.gov/webmaster/ftp/pdf/sccbb/2012/1201/20120119Board05_Ballona_Wetlands.pdf.

I believe in your message below you are referencing Exhibit 4. This record reads at the bottom of the page in the key: "Existing habitat units based on field survey conducted by the California Department of Fish and Game, October – December 2000. Map created by GreenInfo Network October 20, 2011." The Conservancy's logo is next to this statement.

With respect to the remainder of your email to us, below, except for our response to your last statement regarding the Conservancy's

our restoration partner on this project. We direct you to the Conservancy's website at www.scc.ca.gov, Ballona restoration for identification of our project partners on this project.

With respect to whether DFG provided the Conservancy with permission to put our logo on this proposed restoration design, please note that the Conservancy is a project partner with DFG and that within this partnership, the Conservancy acts as the lead in restoration planning with the full agreement of the other project partners, including the DFG.

Sincerely,

Elena Eger
Senior Staff Counsel
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax

From: jd@johnanthonydavis.com [mailto:jd@johnanthonydavis.com]

Sent: Monday, February 13, 2012 5:15 PM

To: 'Elena Eger'

Cc: 'Nadine Peterson'; 'Sam Schuchat'; 'Dick Wayman'; Mary Small

Subject: RE: Davis call to Eger of 2-6-12

California Coastal Conservancy
Att: Elena Eger Legal Council
CC Mary Small Project Manager
Re: Item 5 January 19th 2012 Meeting

Hello Council Eger,

Mary Small directed me to you to answer a question about the hearing noted above.

The attached map was presented as a projection.

It bears the seal of the State Coastal Conservancy. The small text below the legend is hard to read but it does reference the California Dpt. of Fish and Game in 2011. The text is not clear. It appears to say Ballona Wetlands units.....summary conducted the California Dpt of Fish and GameMap created byOctober 20, 2011.

Could you provide the correct reading of this text?

For what purpose did Fish and Game produce this map?

Did Fish and Game provide specific permission for the Conservancy to place its seal (logo) on this

From: [Mary Small](#)
To: ["Elena Eger"](#)
Cc: ["Scott Valor"](#)
Subject: FW: State Water Board Legal's Memo to our Governing Board
Date: Monday, February 06, 2012 4:47:02 PM
Attachments: [SWRCB memo2011aug re accusations.pdf](#)
[SWRCB Ltr to Davis re PRAs.pdf](#)

Hi Elena

Scott Valor emailed this to you but he had the wrong address.

Mary

From: Scott Valor [<mailto:svalor@santamonicabay.org>]
Sent: Monday, February 06, 2012 3:42 PM
To: msmall@scc.ca.gov; eeeger@scc.ca.gov
Subject: State Water Board Legal's Memo to our Governing Board

Mary & Elena--

The attached memo to our Governing Board may help with some background. It was not only given to our Governing Board, it is posted on our website, and was forwarded to John Davis and Patricia McPherson, among others. It addresses virtually all of the accusations made against the Foundation and Commission.

Attached also is a direct letter to John Davis from SWRCB legal noting how Foundation staff and contractors legally serve the SMBRC. For example, I am a contractor to the Foundation, but I am authorized to act on behalf of the Commission. He refuses to acknowledge that, which will never change. However, the documents speak for themselves.

One reason he may be contacting you (again) is that SWRCB legal told him that any future PRA queries to the Commission must be directed to me. He simply won't do that so he seeks ways around it. It would be entirely appropriate for you to re-direct any queries relevant to the SMBRC to me.

Call me if/when questions arise.

/s

Scott Valor
Director of Government Affairs
Santa Monica Bay Restoration Commission
310-922-2376

visit us at www.smbrc.ca.gov

Natural Resources – Goal 7

State Lands Commission owns approximately 60 acres, including the Freshwater Marsh and the Expanded Wetlands parcel. The State Coastal Conservancy (SCC) is taking the lead in funding for planning and restoring the property. Together, the three agencies are working with stakeholders, scientific experts and other agencies to develop a plan for restoration of this extraordinary resource. Their goals are to:

- Restore and enhance salt-water influenced wetland habitats to benefit endangered and threatened species, migratory shorebirds, waterfowl, seabirds, and coastal fish and aquatic species. Restoration of seasonal ponds, riparian and freshwater wetlands, and upland habitats will be considered where beneficial to other project goals or biological and habitat diversity;
- Provide for wildlife-dependent public access and recreation opportunities compatible with the habitats, fish, and wildlife conservation;
- Identify and implement a cost-effective, ecologically beneficial, and sustainable (low maintenance) habitat restoration alternative.

Milestone 7.1c: Secure funding source (approximately \$50 million, total project cost \$100–200 million) sufficient to complete first phase implementation of preferred alternative by 2010.

Implementation Lead: Coastal Conservancy

Implementation Partners: State Parks, SCWRP, NMFS

Role of the SMBRC: Participate



On Fri, Sep 28, 2012 at 2:52 PM, John Tommy Rosas

Bay watershed ecosystem and their preservation and restoration is a high priority of the Bay Restoration Commission. Wetlands are areas of transition between land and water, where soils, plants, and animals are adapted to periods of inundation and saturation. Wetlands are one of the most productive ecosystems in nature, providing essential habitat for a variety of species, including birds, fish, reptiles, invertebrates, and mammals. Wetlands act as natural filters which are able to absorb and remove pollutants from the water. They are also valuable in providing flood protection, groundwater recharge, recreational use, and aesthetic

channelization of Ballona Creek have all reduced what was once a 2,200-acre coastal estuary to less than 200 degraded acres today. Poor tidal exchange, polluted runoff, and invasive plants and animals also impact the wetlands.

In 2004, the State of California took title to 600 acres of the former Ballona Wetlands in Los Angeles. The property is now owned by two state agencies, the Department of Fish and Game (DFG) and the State Lands Commission (CSLC). DFG took title to approximately 540 acres of the former wetlands. DFG also holds title to a section of Ballona Creek. The



Source: ESA PWA

PSOMAS WORK PLAN

BALLONA WETLANDS RESTORATION

Prepared for

**California State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, California 94612**

Prepared by:

**PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
Project Number 1CCC0101.00**

June 22, 2012

555 South Flower Street
Suite 4400
Los Angeles, CA 90071

Tel 213.223.1400
Fax 213.223.1444
www.Psomas.com

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SECTION I

INTRODUCTION

Project Understanding

Psomas has unmatched technical engineering knowledge of the Ballona Wetlands that spans 25 years. No other firm has been involved or has more engineering knowledge of the wetlands and its surroundings than Psomas. We have extensive knowledge of the infrastructure of the surrounding community as well as The Gas Company facilities throughout the area as a result of our extensive previous work in the community surrounding the Ballona Wetlands. This extensive historical knowledge, has provided us with unique insight and understanding of the opportunities for the restoration plan and the Conservancy's goals for this project.

The State Coastal Conservancy through the PMT team has developed a conceptual plan to restore the Ballona Wetlands ecosystem. It will comprise diverse habitat ranging from sub-tidal through various marshland conditions to upland habitat. The objective of this restoration program is to reintroduce and revive critical wetland habitat and provide a remarkable natural open space for the public benefit. The Ballona Wetlands Restoration Project will enhance the coastal environment for reintroduction of target animal and plant species that left the area because of human development and related loss of the coastal wetland.

The existing Ballona Wetlands have suffered from more than a century of human neglect and abuse that has resulted in a highly degraded habitat area. Much of the area was used for disposal of dredging spoils from construction of Marina Del Rey and the Ballona Creek flood control channel. The Ballona Creek flood control channel was constructed to provide flooding protection for development of lands upstream from the original wetlands; however, the channel also severed the historic natural connection between the freshwater creek and the ocean. As a result, many of the historic ecological functions of the wetlands were lost and no longer support the wide variety of native species that once inhabited the area.

The PMT and their consultant team have studied several alternatives that would allow the reconstruction of a coastal wetland environment and reintroduction of the native species common to these wetlands. While a number of alternatives have been analyzed, a preferred alternative has been developed that involves the removal of segments of the Ballona Creek levees and the reconstruction of a portion of the Ballona Creek channel on an alignment that more closely represents a natural meandering water course. Implementation of this plan will require a technical analysis and review and approval by the County of Los Angeles and U.S. Army Corps of Engineers (USACE) with a Section 408 permit.

More specifically, the preferred project proposes to implement restoration of areas on the north and south sides of the existing Ballona Creek on lands adjacent to Marina Del Rey within Los Angeles County (County) Area A and City of Los Angeles Area B, as well as some restoration in Area C in the City of Los Angeles. This work will generally include:

- Build in flexibility of delivery to address availability of funding. Staged or phased delivery through master planning the construction sequencing.
- The removal of the north and south Ballona Creek levees to allow tidal and stormwater interaction within the Ballona Wetlands Ecological Reserve area.

- Construction of new perimeter levees along the perimeter and strategic alignments within the restoration area to provide the flood protection of existing developed areas when the existing levees are removed.
- Grading to create a restored condition allowing multiple habitat regimes from sub-tidal to upland conditions.
- Execute the proposed construction through a master planned and phased program designed to reduce the environmental impacts as much as possible, balancing earthwork within the Reserve area.
- Assist the PMT in coordinating with and addressing the concerns of the many governmental agencies and other interested parties.

Project Objectives

Consistent with the Conservancy's stated goals, our project team's approach will be driven by the following three primary objectives and secondary objectives for the Civil/Geotechnical team:

Primary Objectives:

- Working with the PMT and Hydrology consultant team, obtain Section 408 approval from the USACE for the levee removal and its supporting analysis.
- Analyze impacts and mitigations for incorporation into the environmental analysis.
- Prepare plans and supporting documents for the grading and infrastructure at the appropriate level for the restoration project.

Secondary Objectives:

- Assist the PMT in obtaining approvals in the most efficient and effective manner. The process to obtain a 408 approval is by design not clearly defined to allow for the many existing conditions in USACE facilities.
- Assist the PMT in addressing the issues and concerns of the community and interested parties. Many groups and agencies are interested in this restoration. They each view it in different terms. Our goal is to provide information and support that is appropriately tailored for public presentation of our technical information in a non-technical manner.
- Ensure that the proposed design elements are sensitive to the environmental goals of the project. The overarching goal of restoring a natural wetland system must be the primary focus in our design.

SECTION II

MANAGEMENT

To meet the objectives of the project as described in Section I, Psomas developed an approach and work plan that identifies the design elements and sequences the work in an efficient and logical manner to allow the Conservancy to realize the restoration potential of this unique site.

Each project team member brings their particular strengths and capabilities that, when combined, cover all aspects of work required to meet the project objectives. The sections of work are identified in the work plan for each of the disciplines responsible for a technical aspect of the project. This section outlines the tasks that each team member will perform and sequencing of performance.

Sequence 1 – Project Initiation

Our first step will be to organize and coordinate our efforts with the project team. This includes preparation of this, more detailed schedule and work plan, developed in conjunction with other project team members and the PMT. The work plan identifies our primary sequences of work with specific tasks with sub-tasks. The schedule will identify Psomas activities and work items being provided by other project team members. Our primary objectives in the project initiation phase are two-fold: understanding the specifics of the work to be delivered and planning that work. We must gain a full understanding of the process we will pursue, the constraints we may encounter, and the steps to address these constraints in order to continue our progress. This understanding extends to the entire Psomas team. An initial full-day workshop start-up meeting will be held with the County agencies as the applicant for the 408 permit. This meeting is intended to provide an orientation for the County staff, and to outline rough expectations that will be refined more fully as the project progresses. A series of meetings and a coordination effort will then be undertaken to refine the procedures and technical criteria to be utilized. Our deliverable will be the final version of this work plan.

Sequence 2 – Data Gathering

During this stage we will gather existing data including topographic survey, record documents for easements, previous geotechnical analyses, utilities, and other constraints that may influence the final design. While the technical sections define specific tasks in more detail, a brief description of the tasks are described below.

- **Topographic Survey** – The currently available topographic survey is over 10 years old, having been compiled over a period of years from 1998 to 2000. It is also on a different datum than required by the USACE. Through aerial photographic compilation methods, we will prepare an updated topographic survey of existing conditions at 40-scale for areas A, B and C. Prior to undertaking the topographic survey, we will meet with the USACE and the County to discuss the project survey datum. Unless specifically required by an agency, we would use the latest datum adjustment developed for the area by Los Angeles County.
- **Boundary and Easements** – One of the requirements for any restoration project is the understanding of the legal encumbrances of the property. Using the existing ALTA survey

provided in AutoCAD format by the Coastal Conservancy, we will compile an exhibit showing existing easements, rights of way, lease areas, etc. on the property and their planned disposition. For example, whether an easement is to remain or be vacated, or a new one provided. The boundary will be translated as needed to correspond to the coordinate base used for the new aerial topography, which will be established based on USACE and County requirements.

- **Utility Mapping** –Utility records already obtained from our previous work on the site (as well as work by another consultant, PWA) will be reviewed, additional records search will be conducted as required, and the known utility lines within and adjacent to Areas A, B, and C will be plotted. Utility type, location, and size will be identified as available.
- **Aerial Photography** – Along with the topographic survey, a 40-scale color orthographic presentation quality aerial photograph will be prepared that overlays the topographic survey.
- **Previous Geotechnical Analyses** – Group Delta, will review previous analysis, both historical and recently conducted. All available data will be compiled to help determine the need and location for additional field exploration and site analysis related to soils, seismic, and liquefaction conditions, as well as settlement, structural, and grading requirements.
- **Locations of Geotechnical Test** – Locations for the additional geotechnical investigation bore holes and test pits that may be required will be identified. A construction stake will be placed at each of the test locations. Approximately 60 locations will be initially required. These locations will be referenced as a data layer on the topographic survey.
- **Geotechnical Field Exploration** – Upon receiving approval for field exploration, subsurface exploration for a number of borings will be performed ranging from 25 to 70 feet deep along the proposed levees and at appropriate locations of expected improvements. Site clean-up will occur to leave the boring trenching locations in a similar condition as prior to the start of work, with any excess materials removed and disposed of per applicable regulation.
- **Geotechnical Analysis** – Geotechnical, environmental, and chemical analysis of the sample materials obtained during the field exploration will be conducted.
- **Habitat Surveys** – If habitat survey information is available, Psomas can work with the appropriate consultant to prepare a data layer that is aligned on the topographic survey.

- **Specific Design Survey** – Field-surveyed information will be gathered including channel cross sections, top of the levees for end protection implementation, and at existing storm drain culverts and pipes in and adjacent to the property along Culver Boulevard, Jefferson Blvd, Lincoln Boulevard, Fiji Way, and the existing Ballona Creek levees.
- **Constraints Map** – Using the information and data compiled above, a constraints map will be created for use by all team members. This “Base” map is intended to identify all existing conditions to provide the foundation for future design analysis. An overall map as well as stand-alone map for all three areas will be prepared.

The data gathering components described above have been developed under the assumption that we will have to develop a substantially complete design (at least 70% documents) in order to satisfy Los Angeles County and the USACE requirements. If these agency requirements can be met with a 30% design level of effort, then the topographic survey and related data can be used when the final design documents are prepared.

Due to delays that will occur due to avoidance of sensitive habitats such as nesting seasons, and time to obtain approvals for geotechnical field investigations, the Data Gathering Sequence will overlap with the Preliminary 30% Design Sequence. Final deliverables will include a fully completed design and rectified aerial survey, a fully reviewed constraints map and report, and all geotechnical field exploration.

Sequence 3 – EIR/EIS Support

A great deal of work has already been completed for the EIR/EIS including evaluation of road and levee alignments, investigation of utilities relocation impacts, grading quantities expected, phasing and staging of construction, etc. Psomas will provide additional support as needed to refine or clarify issues identified in the EIR/EIS analysis that relate to the roads, grading, and infrastructure elements of the work. The extent of additional studies and support is not defined at this time and will only be clarified as the EIR/EIS impacts and mitigation measures are refined. These studies will draw upon the already extensive amount of work and analysis that has previously been prepared by the EIR/EIS team. This EIR/EIS Support phase does not have a distinct schedule and may occur throughout the process.

Sequence 4 – Design Services

The design services discussed below are structured to provide various levels of design that may be required for the EIR/EIS and to meet the USACE Section 408 permit requirements as well as requirements from other reviewing agencies. These levels of design can be considered as 30% or preliminary design, 70% design documentation and 100% full construction documents. The level of effort required to obtain the 408 permit is not clear at this time for several reasons as listed below. As the project progresses, the actual requirements to be provided will be more clearly defined.

- The USACE requirements for the 408 approval as described in their own Clarification Guidance Memo are not clearly defined, by design, to allow for the many conditions that exist with USACE Facilities.
- The USACE Western Region has issued few major 408 permits within the memory of their current staff. It is therefore more difficult to determine the level of work that will be required for approval.
- The 408 permit requires approval from USACE Headquarters in Washington D.C. This adds another layer of review and process to the permit.
- Los Angeles County is the public agency responsible for ongoing operation and maintenance of the Ballona Creek flood control channel and levees and will be the applicant for the 408 permit.
- The Department of Fish and Game has a major interest as the landowner and steward of the natural resources on the site that could shape or adjust the construction and sequencing through the process.
- There are many interested parties and stakeholders who will have input into our work which will require adjustments throughout the process.

To address these uncertainties, we have organized the design portion of our work plan into three submittal efforts. This includes a sequenced design process roughly corresponding to 30%, 70%, and 100% complete drawings and supporting documentation. Performing work in these three design stages is intended to provide the project team with a framework for a logical progression through the approval process without the need to commit to more work effort than may be required to meet the project objectives. By providing sufficient scope and budget for design and approval work through 100% documents, the Conservancy can budget for and implement a full documentation of the design should that level of effort be required to meet the Section 408 permit requirements or other project related approvals that may be needed to meet the project objectives.

30% Preliminary Design (Eight Months – by December 2012)

Psomas will manage and be responsible for all services provided by our team. We have listed the disciplines by the team member.

Civil and Survey – Psomas (See Sections III and V)

Geotechnical – Group Delta (See Section IV)

Structural – JCE (See Section VI)

The application to the USACE will initially be submitted with a Preliminary Design Report in the July / August time frame, with the first formal submittal at approximately the 30% design level in the December time frame. This submittal is considered the formal Preliminary submittal. Coordination and review will have occurred up to this formal submittal to gain USACE concurrence with our proposed methodology and proposed construction. The goal of this Preliminary submittal is to provide a total package of our analysis to obtain written USACE concurrence of our proposed construction, and the specific technical requirements for 408 approval.

70% Design Documents (Six Months – January to June 2013)

We anticipate that County and USACE comments to the 30% submittal will help define the direction and responses for our 70% submittal. This 70% level of design effort would involve preparing detailed design calculations and analysis to address the USACE comments. The specific tasks defined for this sequence is outlined in Sections III through VI.

Our intent is that the formal 70% application package to the USACE will provide all the analysis and detail necessary to gain approval for a 408 permit. Coordination and review with the USACE will occur prior to the 70% submittal to clarify and fully understand the intent of all of their 30% comments so that the 70% application package is complete and understandable. This 70% submittal therefore should be considered the formal “Technical” submittal. We expect that the USACE will conduct a detailed technical plan checking process of all of the information provided.

100% Construction Documents (Six Months – June to December 2013)

As in any technical review, additional comments and questions from the USACE are expected. This 100% construction documents phase is expected to include the work efforts necessary to answer their questions and incorporate their comments up to the time a formal 408 permit approval is issued.

Work effort during this 100% stage will include coordination, processing, and updates to address plan check comments to the 70% design documents through the various public agencies for design and permit approval for the construction work. The 70% construction cost estimate will be updated when the plans are at an approval stage. We anticipate that approvals and clearance letters will be required from all appropriate agencies:

SECTION III

SURVEY

The Survey Work Plan is organized into four tasks corresponding to the four primary areas of effort. These tasks are:

- The initial survey establishment.
- The preliminary survey and collection of physical and legal/informational data.
- The production efforts.
- The support related to easements documentation.

The first three areas are in direct support, and a prerequisite of, the design effort. The last area will be provided toward the end of the process after design is approved to the level that easements can be granted to appropriate agencies. These tasks are intended to all be completed during the overall Data Gathering efforts.

I. Initial Survey Establishment Work:

This initial stage of the Survey Work Plan is intended as the detailed planning stage to define the efforts necessary for the rest of the project. There can be some scheduling overlap with the next stages, but this will be limited to field information that will not be adjusted if the datum or coordinate system adjusts. The first priority is to define the horizontal coordinate system and vertical datum to be used for all aspects of the project design. Coordination with the County of Los Angeles and the U.S. Army Corps of Engineers is necessary to obtain concurrence for the selected datum. The limits of topographic work and determination of available data from other sources will also be considered and determined. Coordination with the team will be undertaken to determine the parameters of the field survey data to be collected to satisfy the design team needs. Review of the available legal and ALTA information, record utility and infrastructure, and other available and pertinent documentation.

A. Scope:

1. Meeting with County of Los Angeles
2. Coordination with team and agencies
3. Review available records and information

B. Deliverables in Report Format only:

1. Establish Vertical Datum
2. Establish Horizontal Coordinate System
3. Establish Limits of Aerial Topography and Sections for the Channel
4. Establish locations for specific field collection of data
5. Establish process for integration of all data into base information

II. Preliminary Survey and Collection of Data:

In coordination with access availability due to nesting season constraints, field survey will be conducted to collect the aerial and field determined data necessary for design. The field work will commence immediately upon receiving an access permit from DFG. Some of the field work will ultimately be in or adjacent to

nesting areas. That portion of the field data collection will be postponed until clearance for access is given by project ornithologist after approximately July 31, 2012. This remaining field survey effort in or adjacent to the nesting areas should be conducted and completed within a few weeks of the ornithologist's clearance date and is intended to complete the field data collection efforts without overlap into the next year's breeding season. However, if additional field survey collection is needed in support of progressing design beyond this time frame, and potential into the breeding season for next year, clearance from the project ornithologist will again be obtained. Aerial targets will be located, some of which will double as benchmarks for each project area. We will arrange for the collection of ortho-photographic data by aerial flight for the production of a topographic survey file. Field collection of the cross sections for the Ballona Channel and other upstream channels will be conducted. This will include collection of data for the location and orientation of structures within and adjacent to the Channel. Full sectional data will be collected from the end of the Ballona levees to the west to the start of the fully concrete lined portion of the channel east of Lincoln Boulevard. Channel flow line will be collected east of this point to verify horizontal and vertical alignment with design sections created from as-built plans to the limits identified on "Figure 1 – Initial Input on Survey and Geotech Plan". Cross sections for the tidal channels within Area B will be collected and integrated with sectional information provided separately. Detailed topographic transects will be collected initially in Area A and Area C north of Culver Boulevard followed by the other areas as clearance is given for access. Collection of field survey will also be conducted to determine the bridge underside and cross sectional configuration of the three bridge crossings adjacent to the area – Lincoln Boulevard, Culver Boulevard, and the Pacific Avenue extension. Office survey will be conducted to compile and integrate the data collected. All field collected data will be incorporated into the overall topographic electronic file. Input of the available legal and ALTA information, record utility and infrastructure, and other available and pertinent documentation will be incorporated into the base files for use by the design team. After completion of the dredging operation currently planned for the mouth of the Marina Channel opening, we will incorporate the as-built information into the base files.

A. Sub-Tasks:

1. Set Aerial Targets.
2. Run horizontal and vertical closures for datum integration.
3. Collect existing cross sectional data (500' spacing plus upstream and downstream of bridges) through project limits.
4. Verify as-built channel data upstream and downstream of channel.
5. Collect existing topographic transect data.
6. Collect existing bridge cross sectional data.
7. Collect aerial ortho-photo data.
8. Collect existing structures data.
9. Collect existing public and private utilities record data.
10. Collect record easements and boundary data.
11. Collect habitat areas data.
12. Collect geotechnical testing locations and elevations.
13. Collect Gas Company facilities information.
14. Translate/ rotate Lidar data into our horizontal and vertical datum using project control information provided with Lidar data.
15. Review horizontal and vertical datum with USACE.
16. Collect specific tidal data through Lidar and/ or other appropriate methodology USACE information.
17. Sections generated through field data collection will commence at the end of the Marina del Rey levee to the west, to the bridge at State Route 90.

18. Cross sections for the Ballona channel east of State Route 90, Centinela channel and Sawtelle channel will be created from as-built data and will be verified with a single point at the flow line at each location.
19. At a high tide event and a low tide event, collect tidal elevation readings of water surface elevations on the north and south side of the southerly bank of the Ballona in Area B adjacent to the Los Angeles County tidal gage. Compare and integrate our benchmark with county gage data to verify datum.

B. Deliverables in Report Format:

1. Description of found data
2. Draft utilities cadd file
3. Draft boundary, easements, and constraints cadd file

III. Base Data Production:

After and during the collection of field data, production of the base survey data will be conducted. This will also include setting of field monumentation at various levels of survivability. Design and construction benchmarks will be set with relatively permanent monumentation for future use. While temporary wooden stakes or paint marks will be provided for guidance and control of the geotechnical investigation and miscellaneous data collection needs. The survey data to be provided to the team will include a commercially available area wide photograph at a pixel size of 18" that is sufficient for presentation graphics, an ortho-rectified aerial flight generated photograph of the limits of the aerial topography with a pixel size of 4" or less site specific presentation material, a digital terrain model electronic file, a variety of cadd details and sections describing the specific survey data necessary for design, and hardcopy plots of the data provided. Exhibits are attached for the limits of the aerial topo, verification of upstream cross sections, transects, and geotechnical investigation.

A. Sub-tasks:

1. Produce topographic data.
2. Produce photographic data.
3. Produce survey control.
4. Produce detailed design survey.
5. Produce exhibits detailing survey provided.
6. Produce constraints map.

B. Deliverables in Electronic and/or Report Format:

1. Aerial Photo of the area.
2. Aerial Photo of the project limits.
3. DTM file (autocadd).
4. DEM file (ArcGIS).
5. List and coordinates of Benchmarks/Survey Control.
6. Cadd files and hardcopy of channel cross sections.
7. Cadd files and hardcopy of detailed design survey areas.
8. Cadd file and hardcopy of final utilities.

9. Cadd file and hardcopy of constraints exhibit
10. Cadd file and hardcopy of geotechnical investigation locations.
11. Final report of survey results.
12. After integration of dredge information – update:
 - a. DTM.
 - b. Channel Cross Sections.

IV. Easements Support:

Once the design has been approved by both L.A. County and the USACE to a level the Project Management Team feels comfortable with, we will prepare legal descriptions and exhibits to identify the appropriate areas necessary for maintenance responsibilities, storm drain structures, and relocated facilities as necessary.

A. Sub-Tasks:

1. Identify and create easements areas.
2. Coordination with team and agencies in review and finalization of easements areas.

B. Deliverables:

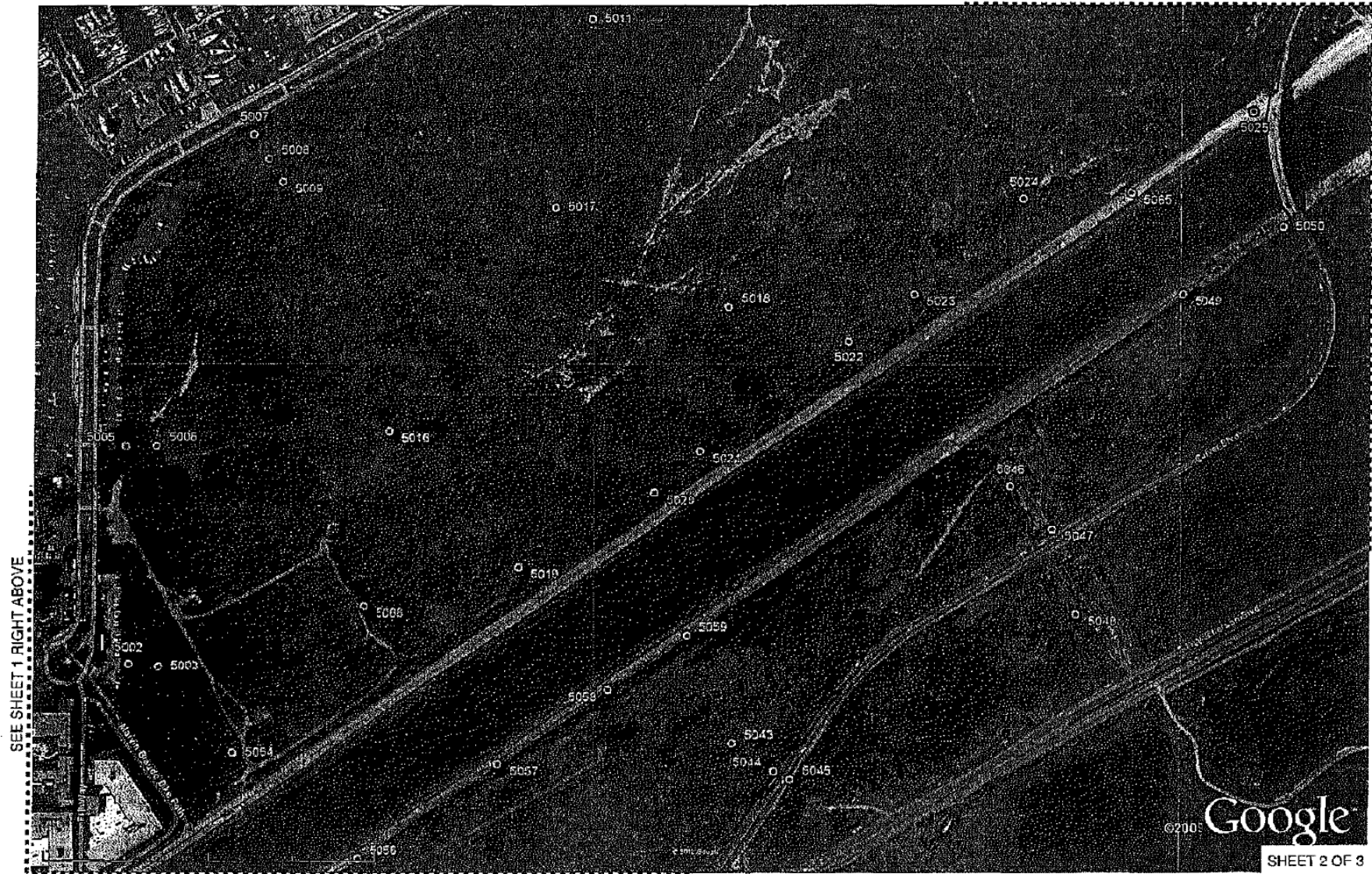
1. Legal Descriptions and Exhibits.
2. Plan check revisions.



PSOMAS PROJECT NO 1CCC010100 T100

PROPOSED SOIL BORING LOCATIONS EXHIBIT

SEE SHEET 3 LEFT BELOW

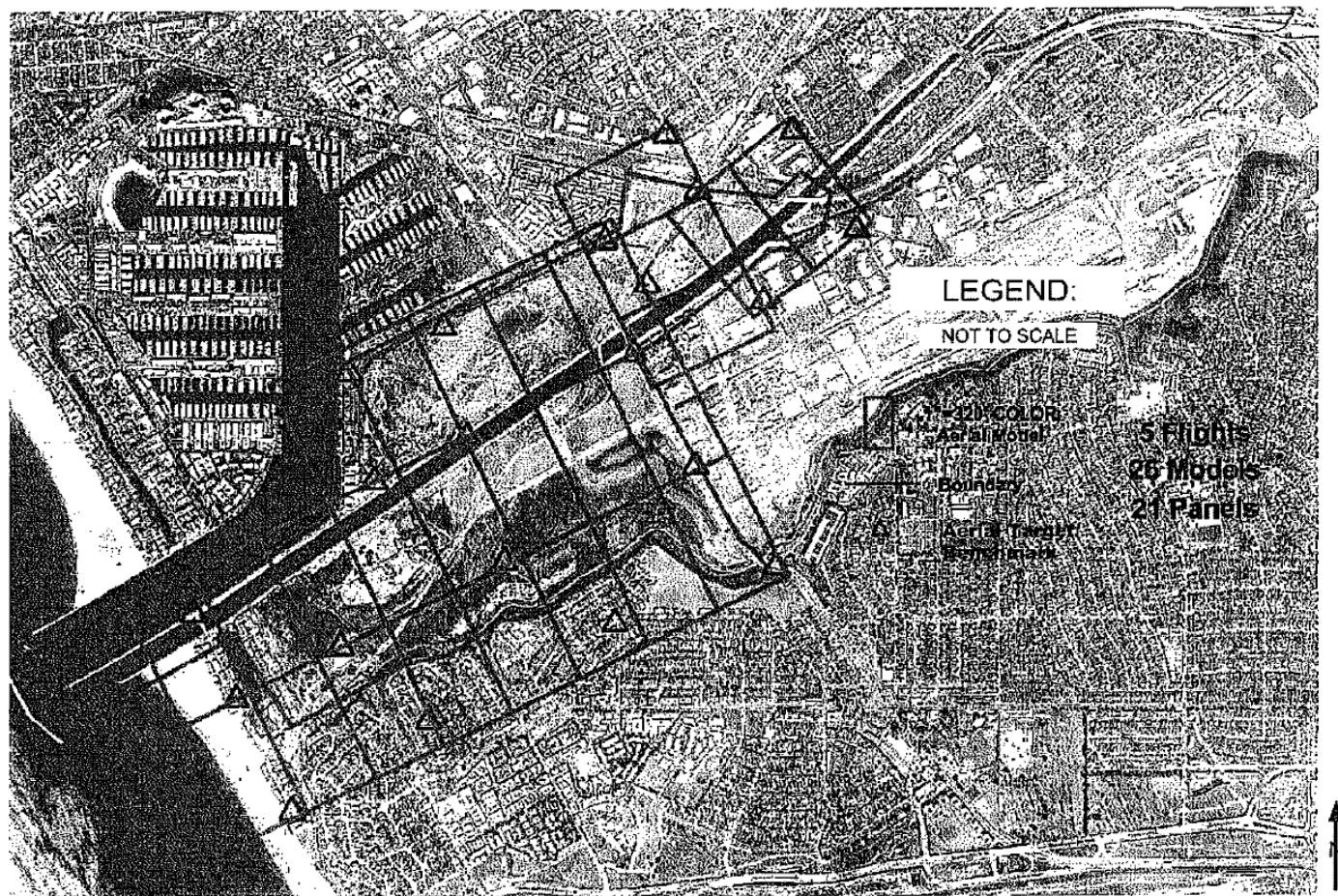


SEE SHEET 1 RIGHT ABOVE

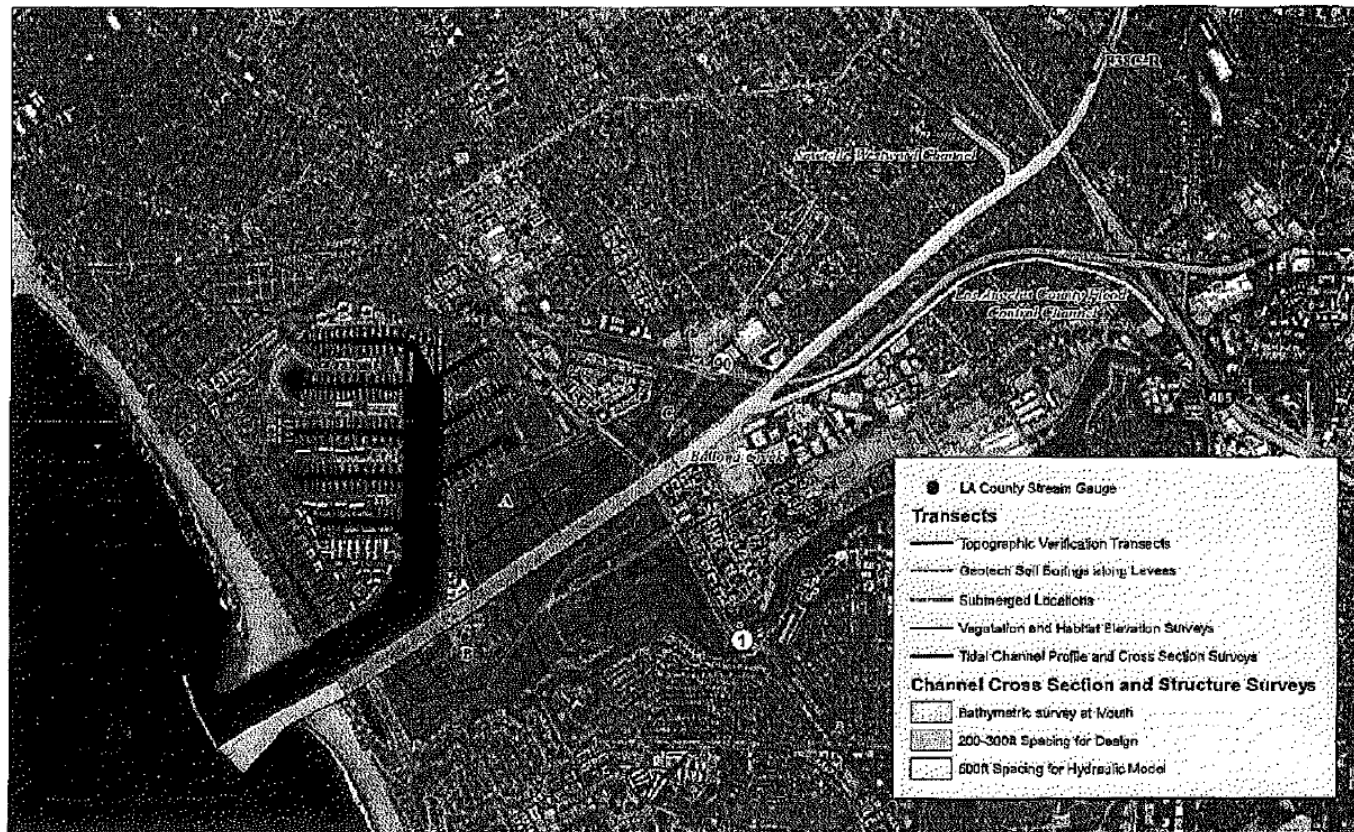
PSOMAS PROJECT NO 1CCC010100 T100

PROPOSED SOIL BORING LOCATIONS EXHIBIT





LIMITS OF AERIAL TOPOGRAPHY



Ballona Wetlands Restoration
Figure 1
 Initial Input on Survey and Geotech Plan

SECTION IV

GEOTECHNICAL

**WORK PLAN FOR GEOTECHNICAL INVESTIGATION
BALLONA WETLAND RESTORATION
AREAS A, B, AND C
LOS ANGELES, CALIFORNIA**

Prepared for:

**CALIFORNIA DEPARTMENT OF FISH AND GAME
2390 C Las Posas Road #402
Camarillo, CA 93012**

Prepared by:

**GROUP DELTA CONSULTANTS, INC.
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Torrance, California 90501
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Fax (310) 320-2118**

GROUP



**DELTA
CONSULTANTS**

**GDC Project No. LA962
May 4, 2012**

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Figure 7	Coast Buckwheat Habitat Map
Figure 8	Breeding Survey of Belding's savannah sparrow
Figure 9	Southern California Gas Wells

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Appendix A	List of Plant Species
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1.0 INTRODUCTION

Group Delta Consultants, Inc. (GDC) has prepared this work plan for a Geotechnical Investigation for the Ballona Wetland Restoration Project, located in Los Angeles, California.

1.1. Purpose

The purpose of this work plan is to outline and define the procedures for obtaining the necessary access and work permits, performing the field exploration, sample recovery, site cleanup, laboratory testing, geotechnical analyses, and report delivery for the project. A discussion of measures that will be taken to identify and avoid disturbance of the natural habitat, including any mitigation measures, if necessary, is also provided.

1.2. Site Description

The Ballona Wetlands project area consists of over 600 acres and is located in the northwest corner of the Los Angeles Basin, just south of Marina Del Rey. The area is subdivided into 3 portions: Area A, B, and C, as shown in Figure 1. The Ballona Creek Channel runs in an east-west direction through the site. Major streets including Lincoln Boulevard, Culver Boulevard, and Jefferson Boulevard intersect within the project area as well.

Area A is currently fenced off and is undeveloped, and historically in the past had been used as a dumping ground for dredge material. To a lesser extent, dredged material has also been placed in Areas B and C. Area B contains unfilled wetlands with abandoned agricultural fields and freshwater marsh. Area C is mostly undeveloped except for a few sports fields.

1.3. Project Description

The Ballona Wetlands restoration includes the reintroduction and revival of critical wetland habitat, including target animal and plant species, and the creation of a natural open space for the public benefit. The restoration plan will include the following (shown in Figure 1):

Ballona Creek Channel Restoration

- Removal (breaches) of the existing north and south levees in 4 locations, and the lowering and realignment of the channel for the creation of a natural meandering channel.

Area A

- Mass grading, soil excavation and removal, and hauling of previously placed dredged materials.



- Construction of flood protection levees along the north perimeter of the site using the excavated soils.
- Realignment and restoration of the Fiji Channel wetland area

Area B

- Construction of flood protection levees along the north side of Culver Boulevard, and the west portion of the area
- Full restoration of wetlands between the new levees and the realigned Ballona Channel, and managed restoration of the wetlands area located south of the new levees (construction of buried culverts).
- Fill placement in a stockpile area bordered by Culver Boulevard, Jefferson Boulevard, and Lincoln Boulevard.

Area C

- Fill placement in stockpile areas in locations on the north and south sides of Culver Boulevard.

Other Areas

- Construction of a pedestrian and bicycle bridge spanning the Ballona Creek Channel near Culver Boulevard, and an at-grade bicycle roadway along the new levee in Area B.

The implementation of the restoration plan will require a technical analysis and review, and approval by the U.S. Army Corps of Engineers (USACE) along with a Section 408 permit.

2.



**WORK PLAN FOR GEOTECHNICAL INVESTIGATION
BALLONA WETLAND RESTORATION
AREAS A, B, AND C
LOS ANGELES, CALIFORNIA**

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- Mass grading, soil excavation and removal, and hauling of previously placed dredged materials.



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- Realignment and restoration of the Fiji Channel wetland area

Area B

- Construction of flood protection levees along the north side of Culver Boulevard, and the west portion of the area
- Full restoration of wetlands between the new levees and the realigned Ballona Channel, and managed restoration of the wetlands area located south of the new levees (construction of buried culverts).
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- Fill placement in stockpile areas in locations on the north and south sides of Culver Boulevard.

Other Areas

- Construction of a pedestrian and bicycle bridge spanning the Ballona Creek Channel near Culver Boulevard, and an at-grade bicycle roadway along the new levee in Area B.

The implementation of the restoration plan will require a technical analysis and review, and approval by the U.S. Army Corps of Engineers (USACE) along with a Section 408 permit.

2.0 SCOPE OF WORK

2.1. General

The following subsections outline our scope of work planned for the Geotechnical Investigation of the project. The investigation will collect soil data to be used for the analyses of the various components of the restoration. Our scope of work in this phase of the project includes pre-exploration activities, field work (i.e. drilling and sampling of soil), laboratory testing, geotechnical analyses, and report preparation.

The site investigation activities will be focused in the areas containing the main features of the restoration project, including the proposed perimeter levees, borrow area, stockpile areas, and portions of the existing Ballona Channel to be breached and those portions that will remain. The field work will include the drilling and sampling of soil from approximately 65 small diameter borings (4 to 8 inches) that will range in depths from 20 to 70 feet. Depending on results of the analyses, additional borings may be considered.



2.2. Pre-Exploration Activities

2.2.1. Access and Permits

Prior to any drilling and sampling activities, permit approval for access and performing the subsurface investigation from the following agencies will be required for all explorations at the site:

- California Department of Fish and Game (CDFG) – Access for survey and to conduct geotechnical investigation permit
- California Coastal Commission (CCC) – exemption letter
- Regional Water Quality Control Board – 401 certification
- United States Army Corps of Engineers (USACE) – nationwide permit, including a Pre-Construction Notification (PCN) and Essential Fish Habitat (EFH) assessment
- Sempra Energy (Southern California Gas Company) – utilities and gas well clearance
- County of Los Angeles Flood Control – Access to conduct investigation permit
- City of Los Angeles – Jefferson and Culver Boulevards right of way permit

GDC has performed a site reconnaissance for selecting the exploratory boring locations and to identify entrance and access routes for review and approval by the appropriate agencies. GDC will contact Underground Service Alert (DigAlert) to perform utility clearance of any other public utilities.

2.2.2. Site Habitat Avoidance Plan

Existing Habitat

Dredged materials from the excavations of Ballona Creek and construction/expansion of Marina Del Rey have historically been placed at the site. As such, much of the site's habitat has been altered relative to the site's native historic habitat. The deposition of the dredged material has altered original elevation contours and has resulted in the development of a variety of plant community types.

Previous investigations have identified plant species present within the project area. A list is included in Appendix A of this document (WRA 2010). Several maps have been prepared showing potential jurisdictional wetland areas for different agencies (United States Army Corps of Engineers, California Coastal Commission, and California Department of Fish and Game), as well as locations of special status plant species in the project area (WRA 2011). These maps were used as guidelines in our selection of



exploration locations and are presented in Figures 3 to 9. Each map shows the proposed boring locations.

Based on previous studies of the site, it is understood that pickleweed salt marsh and salt pan/mudflat areas are to be avoided to the greatest extent possible as exploration sites and in planning access routes to the individual exploration sites. Likewise the coastal scrub is to be carefully traveled on only if necessary. Below is a list of plant species of concern that were previously identified by a prior study (Weston 2009) of Area A:

- Saltpan/mudflats: no vascular plants occur in the salt flats
- Pickleweed salt marsh: *Salicornia virginica*, *Frankenia salina*, *Jaumea carnosa*, *Distichlis spicata*, *Suaeda californica*
- Transition zone: *Atriplex lentiformis breweri* (generally at pickleweed saltmarsh margin, may occur upland as well)
- Riparian scrub: *Baccharis salicifolia*, *Salix lasiolepis*, *Salix leavigata*
- *Baccharis scrub*: *Baccharis pilularis*
- Coastal scrub: *Artemesia californica*, *Marrubium vulgare*, *Isomeris aborea*, *Malosma (Rhus) laurina*, *Sambucas mexicana*, *Cucurbita foetidissima*, *Rhus integrifolia*

A 2011 study also documented breeding areas of the Belding's savannah sparrow within the Ballona Wetlands which are to be avoided during the months of May to July. Site exploration in these areas (Figures 8 and 9) may not be performed during the breeding season.

Habitat Avoidance and Monitoring Measures

Prior to drilling and in support of obtaining the necessary drilling permits, a site reconnaissance and document review were conducted of the vegetation and animal habitats present within the project site, to determine optimal access routes to the exploration locations with minimal disturbance to the natural habitat. The exploration locations will be verified for sufficient space to accommodate the drilling equipment and operation. Plant groups and individual plants of concern will be identified and documented during reconnaissance by a field biologist. An on-site biologist will continually oversee the progress of the sampling program to avoid unnecessary damage to native vegetation. A cultural resource representative will also be present during the sampling program.

Among the criteria for choosing soil sampling/exploration locations is proximity to sensitive vegetation as well as potential to cause disturbance of habitats. Prior to any sampling activities, the exploration locations will be carefully planned and verified to avoid sensitive vegetation to the greatest extent possible. Access routes to and from



each location were mapped for review and approval by the governing agencies. The routes were selected to maximize the usage of the existing access entrances and pathways, and minimize disturbance to the native habitat. Potential exploration sites that cannot be accessed without substantial native plant disturbance will be eliminated, and alternative sites will be chosen. Figure 2A shows a proposed location plan of exploration. The proposed entrance and access routes to the locations are further discussed in Section 2.3.

Figures 3 to 9 show the proposed exploration locations overlain on existing habitat areas. As noted, areas such as the breeding grounds of the Belding's savannah sparrow, primarily in the western portion of Area B, will not commence until after July and will be completed prior to the next May. Areas A and C show less coverage of sensitive habitat and are planned to be drilled first.

During the field exploration, drill rigs and associated support trucks will follow along a single path to minimize any impact to sensitive habitat. Prior to mobilizing, the drill equipment operators will be made familiar with plant species of concern, and the vehicles will be escorted along the pre-scouted route to the exploration locations by the field biologist.

After the field exploration activities are completed, a field team will follow the routes used by the drilling equipment to access the sampling locations to confirm that no sensitive habitat was adversely impacted. Any areas where vehicle traffic resulted in depressions in the soil will be re-graded by hand with shovels. Any tire or tread tracks will be raked to minimize track depressions. Special attention will be given to the salt flat areas and any disruption will be repaired to the satisfaction of the governing agencies. Should any damage to plants occur, it will be recorded in a field logbook and photographed, and a reasonable level of remediation will be performed to restore the site to its original condition.

2.3. Field Exploration

2.3.1. Overview

Approximately 65 boring explorations are proposed (Figure 2A), with drilling depths expected to range from about 20 to 70 feet for each exploration. The proposed borings will supplement previous borings performed at the site (Figure 2B). The borings are generally planned in the following areas of the restoration:

- New Perimeter levees
- Borrow / cut area
- Stockpile areas
- Existing Ballona Channel levees
- Near existing gas wells



The borings will characterize the subsurface conditions in these areas and provide data to complete a range of analyses needed, such as static and seismic stability (temporary and long-term), settlement, deformations, liquefaction, seepage, soil suitability, and seismic hazard. The location, spacing, and depths of the proposed borings were selected based on the analyses necessary for the area of the restoration and recommended criteria from the USACE. For example, for the perimeter levees, the USACE (EM1110-2-569, Design Guidance for Levee Underseepage) recommends:

"An extensive subsurface geotechnical investigation along the levee systems should be conducted and supplemented with geophysical investigation techniques as appropriate. A minimum target level of subsurface explorations should be a series of explorations approximately every 1,000 feet, consisting of an exploration at the riverside toe, at the landside toe, and a deep exploration at the levee crest."

The borings were also positioned to provide information for other features of the restoration, including rock protection areas, pedestrian bridge crossing Ballona Channel, and culverts in Area B. Shallow borings are planned primarily for locations such as the borrow area where the suitability of the excavated material for embankment construction will be analyzed. Deeper borings are planned in areas such as the new perimeter levees, where static and seismic stability will be analyzed.

The explorations will be performed under the technical supervision of GDC's field engineer/geologist. The field engineer/geologist will maintain detailed logs of the drilling activities and soils and groundwater levels encountered. Air monitoring will be performed during the investigation. If evidence of potentially hazardous materials is detected, the exploration will be stopped and project management will immediately be notified for direction.

2.3.2. Access Routes

Entrance to the site and routes to each of the proposed explorations were selected to minimize the distance traveled within the site and to avoid various sensitive areas of the existing habitats. Figures 2 through 9 show the proposed entrance and access routes overlain on various maps of jurisdiction areas, sensitive habitat, and existing wells at the site. These proposed routes may continue to be adjusted based on field conditions and consultation from various habitat experts.

The figures illustrate the intention of the routes to minimize disturbance to the habitat. The following exceptions are noted:

- USACE jurisdictional area (Figure 3) – The proposed route between A-CPT010 and A-CPT012 in Area A and the proposed route to access B-CPT029, B-RW030, and B-CPT031 in Area B traverses through a wetland area. B-RW030 and B-CPT031 are also located within a non-wetland waters area.



- CCC jurisdictional area (Figure 4) – In addition to having the same affected areas described for USACE jurisdictional areas, proposed exploration HSA051 is located within a wetland area in Area B. Also, within Area C, the proposed route between C-CPT060 and C-HSA061 may require traversing through a wetland area.
- CDFG jurisdictional area (Figure 5) – Explorations B-RW027, B-RW028, B-RW032, B-RW033, B-CPT034, and B-CPT042 are located within the CDFG jurisdictional area. Also, within Area C, the proposed route between C-CPT060 and C-HSA061 may require traversing through the CDFG jurisdictional area.
- Special status plant species (Figure 6) – B-RW027, B-RW028, B-CPT029, B-CPT052, B-RW053, B-CPT054, C-CPT060, and C-HSA06 are located near special status plant species
- Belding's savannah sparrow breeding areas (Figure 8) – The breeding areas are largely within Area B and are particularly dense within the west portion. A-HSA064 in Area A, and B-HSA051 in Area B are also noted to be near breeding locations.

It is also noted that fence removal is proposed in two areas along the existing Ballona Channel. The fence will be repaired after the borings are finished.

- B-RW027 and B-RW028 in Area B. – Access to these locations will be made directly from the existing pathway on the south levee.
- A-RW025 and A-RW026 in Area A – Access to these locations are proposed to be made from Area A onto the bike path on the north levee. If access cannot be made from this location, we propose the explorations be reached by driving the drill rig along the bike path, with access from Pacific Avenue (located west of project site).

2.3.3. Schedule

Borings that do not impact the site habitat will be performed as soon as all the necessary permitting approvals are granted. It is understood that it may take up to two months to receive all the permit approvals. The duration of the boring program is expected to be approximately 2-3 weeks. Borings planned near sensitive areas such as the Belding's savannah sparrow breeding grounds (primarily located in the west portion of Area B) will not begin until after July 2012 and are expected to be completed within approximately 1-2 weeks.

A subsequent phase of exploration will be required if there are changes in the project such as changes in the location of levees or if the results from the current exploration necessitate further testing. It is anticipated any additional exploration occur after the 408 submittal and would be performed in early 2013.



2.3.4. Drill Equipment

The site investigation will be performed by means of truck-mounted rotary wash and hollow stem drilling rigs, and cone penetration testing (CPT) trucks. One to two support trucks (pick up trucks) will accompany each drill rig. The drilling method used in a given area will depend on the information needed for the analyses. Below is a description of the drilling methods (outlined in detail in USACE Engineering Manual 1110-1-1804):

Rotary Wash

The rotary wash method uses typical drilling techniques to advance the hole by removing the soil cuttings with water or bentonite based drill mud. Samples are typically taken at discrete depth intervals of 5 feet. This method is applicable for any type of soil and the standard penetration test (SPT) blow counts obtained in rotary wash borings are not affected by hydrostatic pressure, since water and drilling mud is continuously circulating through this method to stabilize the drill hole and remove cuttings. The diameter of the hole is typically 4 inches. The rotary wash borings will be used in areas such as the levees. The dimensions of a typical rig are about 32 feet (working height) × 32 feet (length) × 8.5 feet (width).

Hollow Stem Auger

Hollow stem augers can be drilled relatively quickly and does not use drilling mud. They will be used in areas where the proposed borings will be shallow and generally above the groundwater table. Samples are typically taken at discrete depth intervals of 5 feet. The diameter of the hole is typically 8 inches. The hollow stem auger borings will be used in locations such as the borrow and stockpile areas. The dimensions of a typical rig are about 27.5 feet (working height) × 25 feet (length) × 8.5 feet (width).

Cone Penetration Test

The CPT involves hydraulically pushing a 3.6-cm (1.4-in.) diameter probe into the earth while performing two measurements, cone resistance and sleeve friction resistance. The probe is normally pushed from a special heavy duty truck but can also be performed from a trailer or drilling rig. As the probe is advanced, electronic instruments measure and record both the tip resistance and the frictional resistance on the sleeve. The tip and frictional resistance are then analyzed, using available correlations, to estimate soil classification, density, strength, and compressibility of the subsurface materials. Unlike soil borings, in which drive samples are typically taken at discrete intervals, the CPT provides a continuous record of soil properties with depth. Hence, the CPT can define the subsurface soil profile with much higher resolution than a soil boring, often detecting thin layers that are easily missed with conventional drilling and sampling. The CPT is a fast method and is ideal for sands, silts, clays, and soft soils. Because there are no soil cuttings, the CPT is ideal for environmentally sensitive areas. CPT explorations will be used throughout the site to characterize the subsurface conditions and collect data for



use in liquefaction analyses, and levee design. The dimensions of a typical CPT rig are about 15 feet (height) \times 35 feet (length) \times 9.5 feet (width).

2.3.5. Soil Sampling

Soil samples will be obtained for field classification and laboratory testing. Both discrete and composite samples will be taken for geotechnical, chemical, and agronomy testing. The samples will be sealed, labeled, and packaged for transport to the geotechnical, environmental and/or chemical laboratories where they will be tested. During sampling, project archeologist and cultural resource representatives will also be onsite to observe the soils samples taken from the ground.

Geotechnical Sampling

Both relatively undisturbed modified California ring samples and Standard Penetration Test (SPT) drive samples will be taken in the borings at depth intervals of no greater than 5 feet. In addition, representative bulk samples will be taken within the upper 5 feet of select subsurface exploration locations by a shovel and placed into polyethylene bags. The locations of all sampling will be indicated on the boring logs. All samples will be sealed to prevent moisture loss and returned to our laboratory for additional visual examination and laboratory testing.

The SPT sampling will be performed in accordance with ASTM D1586, using a standard 2-inch outside diameter, 1.375-inch inside diameter, split-spoon sampler. The modified California ring sampler will be performed in accordance with ASTM D3550 utilizing a 3-inch O.D. split-barrel sampler lined with 1-inch high brass rings. Both sample types will be driven into the soil using a 140-pound hammer falling a distance of 30 inches. The number of blows required to drive the sampler 18 inches into the soil will be recorded on the boring logs. The hammer of system of each rig will be calibrated and the energy transfer ratio will be provided (ASTM D4633). For preliminary calculations an energy transfer ratio of 75 % will be used.

Chemistry Sampling

In addition to samples obtained for geotechnical testing, GDC will obtain discrete and composite samples for chemical testing, as directed by the project environmental consultant. Environmental samples will be obtained and handled under appropriate protocol and chain of custody.

Agronomy Sampling

Agronomy soil sampling will be performed within the borrow area of Area A. at the following depths: surface, old marsh surface (which will consist of buried organic matter/stems/roots, and one foot below the design depth.



2.3.6. Completion of Borings

Upon completion, all borings will be backfilled with tamped cuttings and/or bentonite/cement slurry. CPTs will be grouted. Drill mud will be placed in approved drums and stored onsite at an approved designated location until testing and disposal can be performed. Drum testing and disposal will be performed by an appointed representative obtained by GDC. Any waste or excess material created during physical investigations of the site will be disposed of by GDC or an appointed representative obtained by GDC. Clean up of the site, including spills and damage, will be performed such that the site is left in a state similar to that prior to the start of work.

As indicated in the site habitat avoidance plan (Section 2.2.2), after all of the sampling activities are completed, a field team will follow the routes used by the drilling equipment to access the sampling locations to confirm that no sensitive habitat was adversely impacted. Any areas where vehicle traffic resulted in depressions in the soil will be re-graded by hand with shovels. Any tire or tread tracks will be raked to minimize track depressions. Special attention will be given to the salt flat areas and any disruption will be repaired to the satisfaction of the governing agencies. Should any damage to plants occur, it will be recorded in a field logbook and photographed, and a reasonable level of remediation will be performed to restore the site to its original condition.

2.4. Laboratory Testing

Laboratory testing will be conducted on the soil samples collected in the field. The purpose of laboratory testing is to determine geotechnical, chemical, and agronomy properties of the encountered soils. Lab testing will be assigned based on the encountered soils and will be conducted according to ASTM standards. Additional testing may be performed on selected samples as necessary.

Geotechnical Testing

GDC presently anticipates the following geotechnical laboratory tests to be performed on representative samples in accordance with current and applicable ASTM standards:

- Moisture Content & Dry Unit Weight
- Testing for shear strength (Direct Shear, Triaxial, Vane, etc.)
- Consolidation
- -200 Sieve Wash
- Expansion Index
- Atterberg Limits
- Grain Size
- Compaction
- Corrosivity (sulfate, chloride, pH, resistivity)
- R-value



Samples that are known to have contaminants will be sent to a certified and approved laboratory that specializes in geotechnical testing of contaminated samples.

Chemistry Testing

In addition to the sampling performed for geotechnical purposes, sampling is planned for environmental testing. Samples designated for chemical testing for contaminants will be taken to an approved chemical or environmental laboratory. Samples for environmental testing will be taken under appropriate protocol and chain of custody. The scope of environmental sampling and evaluation of the chemical test results will be performed by the project environmental consultant.

Agronomy Testing

The testing will be performed as directed and will include pH, salinity, sodium and the five soluble and exchangeable major nutrients, sulfate, boron, USDA texture, organic matter content, micronutrients, and neutralization/ acid generation potential (N/AGP).

2.5. Geotechnical Analyses and Report

To evaluate the geotechnical issues associated with the proposed restoration, GDC will perform the following engineering analyses using the data acquired from the investigation:

- Document review of previous documents, reports, and maps.
- Data evaluation/compilation and analysis of the geotechnical field and laboratory data produced from previous and the current investigation
- Drafting of all boring logs and CPT soundings, including representative cross-sections through the site
- Seismic evaluation including seismic hazard analyses of the major faults impacting the site and deformation analyses of the levee slopes during an earthquake event
- Soil suitability / disposal analysis of the soils to be excavated from Area A to assess its suitability for use in the construction of the proposed levees, including any transportation issues and disposal options
- Levee analyses including stability, seepage, settlement, liquefaction, and deformation for the construction of the perimeter levees in Areas A and B, the effect of the soil excavation near existing and new levees, and the breaches and realignment of the existing Ballona Channel levees
- Ground improvement evaluation for the new levee construction, stockpile areas, and proposed pedestrian / bicycle bridge spanning the Ballona Channel west of Culver Boulevard.



-
- Stockpile analyses including stability and the effect of settlement from the surcharge of the stockpile on nearby existing roadways (i.e., Culver Boulevard and Jefferson Boulevard), the Ballona Channel, and buried utilities.
 - Pedestrian / bicycle bridge analyses, including recommendations for the foundations, and associated grading.
 - Mitigation measures for ground improvement (i.e., stone columns, deep dynamic compaction, deep soil mixing), drainage systems, monitoring programs, and excavation and/or replacement of unsuitable materials.
 - Additional analyses, if necessary, based on review comments.

Findings and recommendations from the analyses will be summarized in memorandums and reports in support of the 408 permit approval.



3.0 REFERENCES

Cooper Ecological Monitoring, Inc., "2010 Survey for Belding's Savannah Sparrow", November 2, 2010 (revised January 3, 2011).

Department of the Army, U.S. Army Corps of Engineers, "Engineering and Design, Design and Construction of Levees", EM1110-2-1913, April 30, 2000.

Department of the Army, U.S. Army Corps of Engineers, "Engineering and Design, Geotechnical Investigations", EM1110-1-1804, January 1, 2001.

Department of the Army, U.S. Army Corps of Engineers, "Engineering and Design, Design Guidance for Levee Underseepage", EM1110-2-569, May 1, 2005.

Diaz Yourman and Associates, "Geotechnical Investigation, Ballona Creek Wetlands", June 2, 2010.

State of California – Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Playa Del Rey Map 120.

Weston Solutions, "Ballona Wetland Preserve – Area A, Preliminary Geotechnical Investigation and Beneficial Use Assessment, Final Report", April 2009.

WRA Environmental Consultants, "Coast Buckwheat (*Eriogonum parviflorum*) Habitat Map within the Study Area", July 2010.

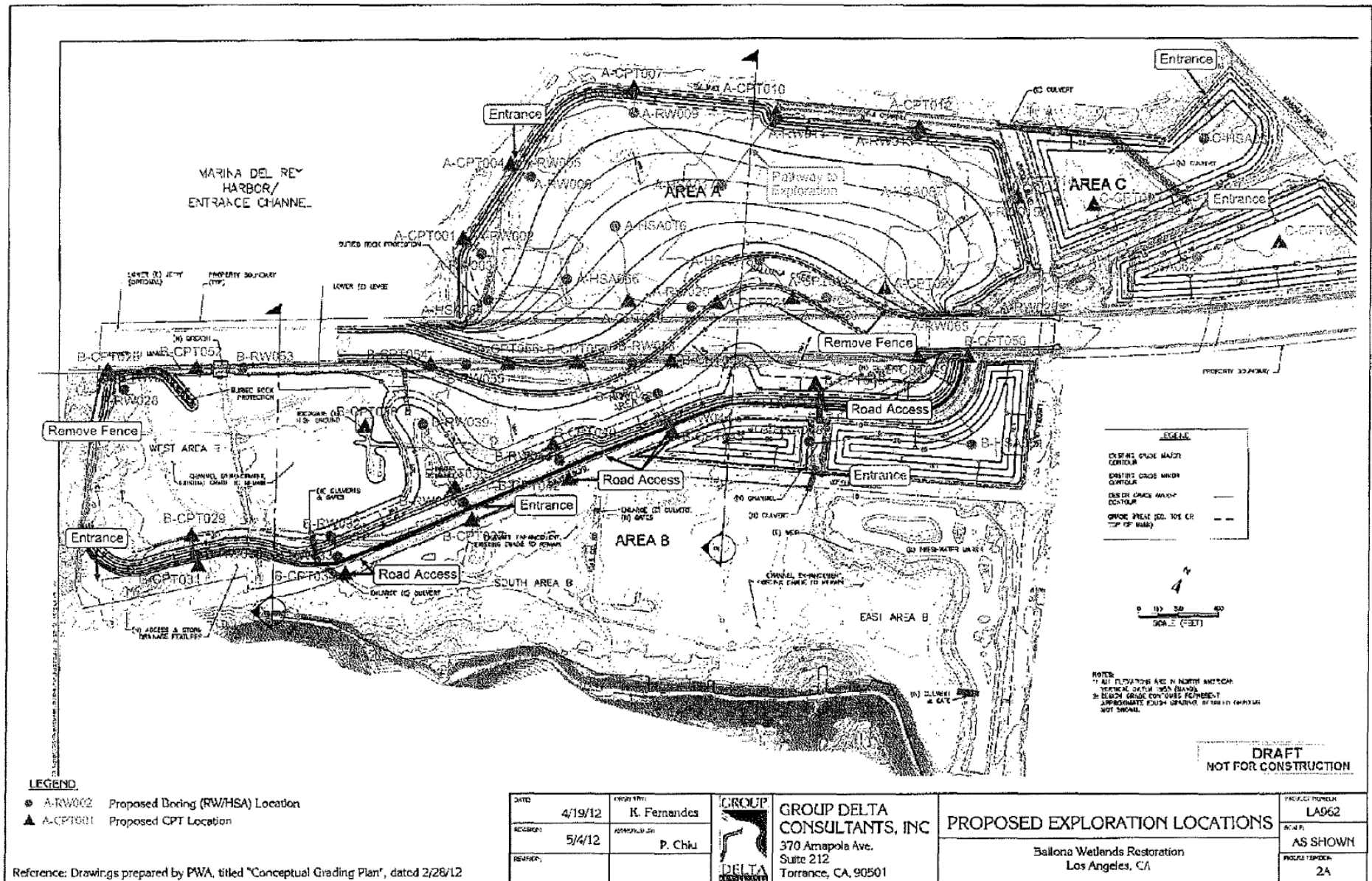
WRA Environmental Consultants, "Special Status Plant Species Known Occurrences within the Study Area", April 2011.

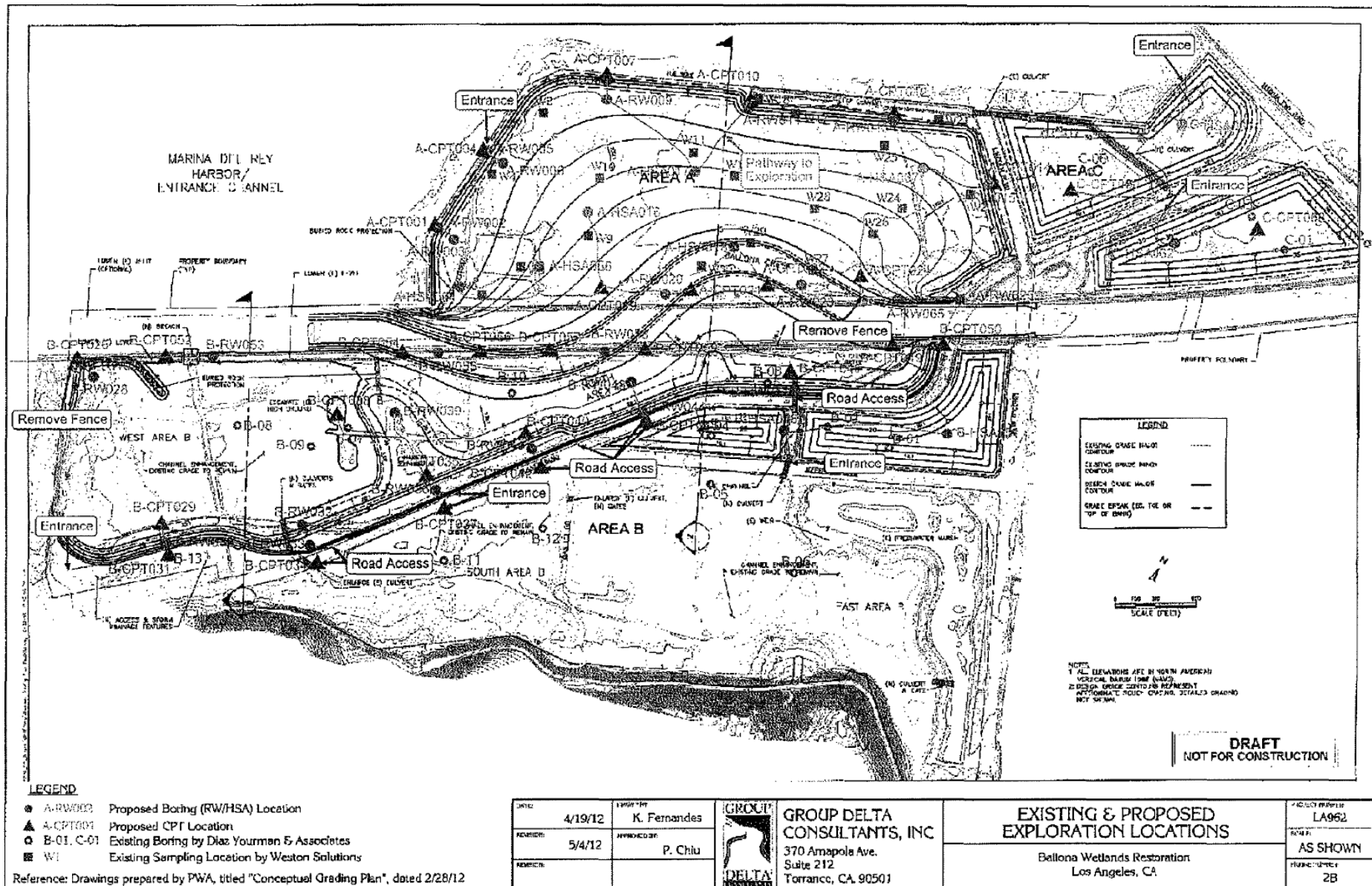
WRA Environmental Consultants, "Ballona Creek Wetlands Ecological Reserve, Preliminary Delineation of Wetlands and Non-Wetland Waters", August 2011.



FIGURES









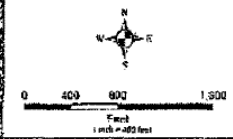
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Ballona Creek Wetlands
 Ecological Reserve

 Marina Del Rey,
 California

**Appendix A.
 Delineation of
 United States Army
 Corps of Engineers
 Jurisdictional
 Areas**

Legend
 [Pattern] Wetland Area (R14.0 acres)
 [Pattern] Sample Point
 [Pattern] Inter-Channel Wetlands (43.0 acres)
 [Pattern] Vernal Pools (183.2 acres)
 [Pattern] Upland Area (568.7 acres)



Use Date: August 2011
 Date By: [illegible]
 Date Checked: [illegible]
 Date Approved: [illegible]

LEGEND
 ● A-KW002 Proposed Boring (RW/HSA) Location
 ▲ A-CPT001 Proposed CPT Location

DATE:	4/19/12	DRAWN BY:	K. Fernandes
APPROVED:	5/4/12	APPROVED BY:	P. Chiu
REVISION:			

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**PROPOSED BORING LOCATIONS
 USACE JURISDICTION**
 Ballona Wetlands Restoration
 Los Angeles, CA

PROJECT NUMBER	LA962
SCALE	AS SHOWN
TOTAL PAGES	3



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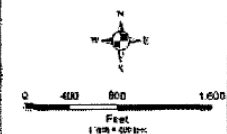
Balona Creek Wetlands
Ecological Reserve

Marina Del Rey,
California

**Appendix B.
Delineation of
California Coastal
Commission
Jurisdictional
Areas**

Legend

- Project Area (495.9 acres)
- Sample Point
- Potential Non-Wetland Waters (65.5 acres)
- Potential Wetland (196.5 acres)
- Upland Area (326.4 acres)



Map Scale: August 2011
Map Date: December 2010
Base Map: County of LA
Aerial Photo: 1:25,000 (1991) Aerial Photo: 1:25,000 (1991)

LEGEND

- A-RW002 Proposed Boring (RW/HSA) Location
- A-CPT001 Proposed CPT Location

DATE	4/19/12	REVIEWER	K. Fernandes
DATE	5/4/12	APPROVAL	P. Chiu
REVISION			

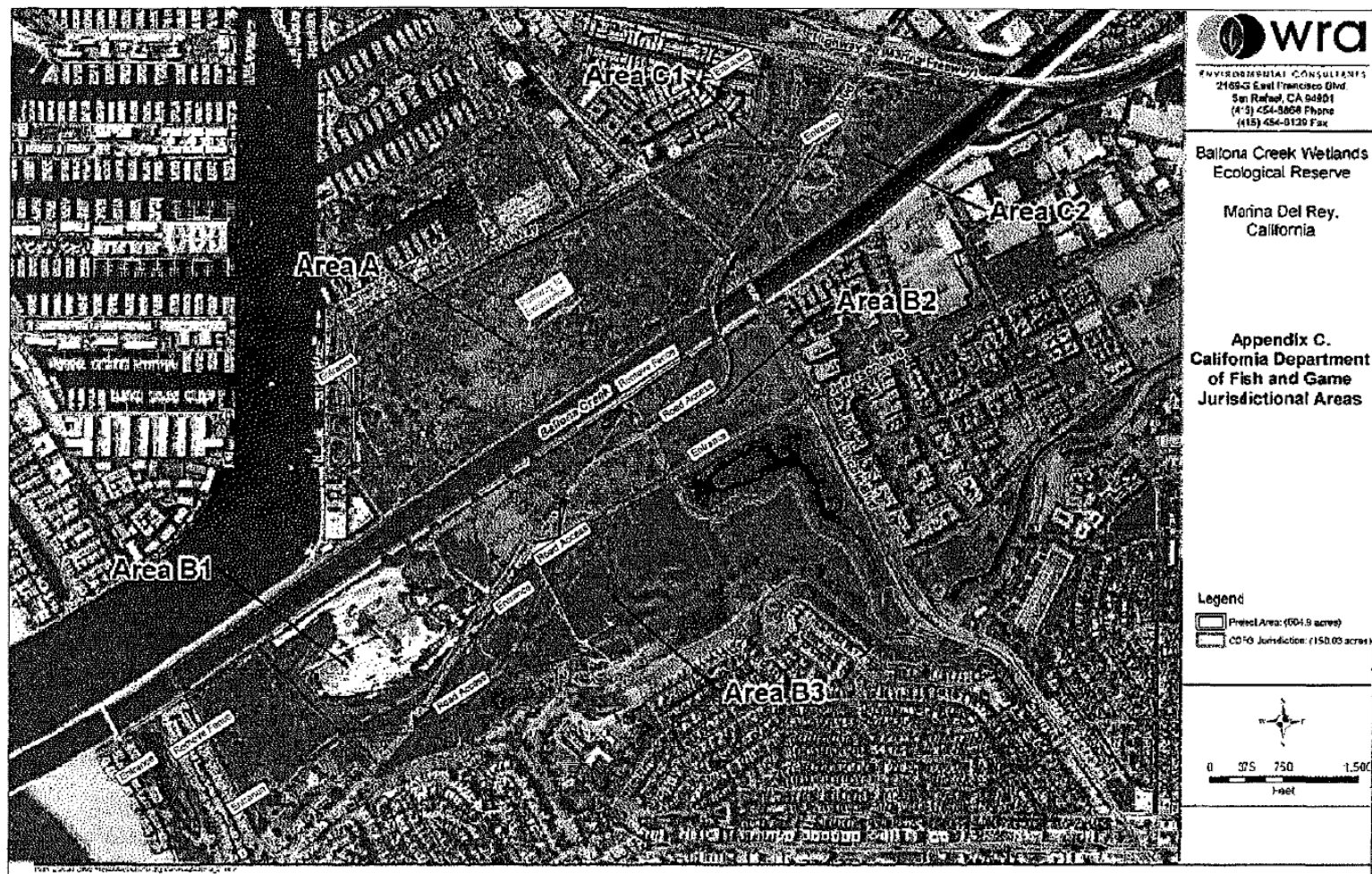


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**PROPOSED BORING LOCATIONS
CCC JURISDICTION**

Balona Wetlands Restoration
Los Angeles, CA

PROJECT NUMBER	LA962
SCALE	AS SHOWN
DATE	4/19/12



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Ballona Creek Wetlands
 Ecological Reserve

Marina Del Rey,
 California

Appendix C.
 California Department
 of Fish and Game
 Jurisdictional Areas

Legend

Project Area: (604.9 acres)
 CDFG Jurisdiction: (150.00 acres)



LEGEND

- A-RW002 Proposed Boring (RW/HSA) Location
- ▲ A-CPT001 Proposed CPT Location

DATE: 4/19/12	DESIGNED BY: K. Fernandes	 GROUP DELTA CONSULTANTS, INC. 370 Arapela Ave. Suite 212 Torrance, CA 90501	PROPOSED BORING LOCATIONS CDFG JURISDICTION Ballona Wetlands Restoration Los Angeles, CA	PROJECT NUMBER: LA962
REVISION: 5/4/12	APPROVED BY: P. Chiu			SCALE: AS SHOWN
DESIGNED BY:				PROJECT NUMBER: 5



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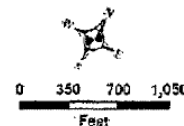
Ballona Wetlands
Los Angeles County, CA

Figure 3

Special Status Plant
Species Known
Occurrences within
the Study Area

Legend

- Camissonia lewisii* (x=2,200)
- Chaenactis glaberrima*
var. *occidentalis* (x350)
- Camissonia lewisii* (x=07)
- Erythronium insulare*
subsp. *stultitense* (x20)
- Suaeda torreyana* (x85)
- Study Area



Map Date: April 2011
Map By: David Chiu
Data: 2010-2011 Los Angeles County
Topographic - 1:50,000 NAD 83 UTM Zone 10N
Map of Santa Monica Bay

LEGEND

- A-RW002 Proposed Boring (RW/HSA) Location
- A-CPT001 Proposed CPT Location

DATE:	4/19/12	DRAWN BY:	K. Fernandes
REVISION:	5/4/12	APPROVED BY:	P. Chiu
REVISION:			

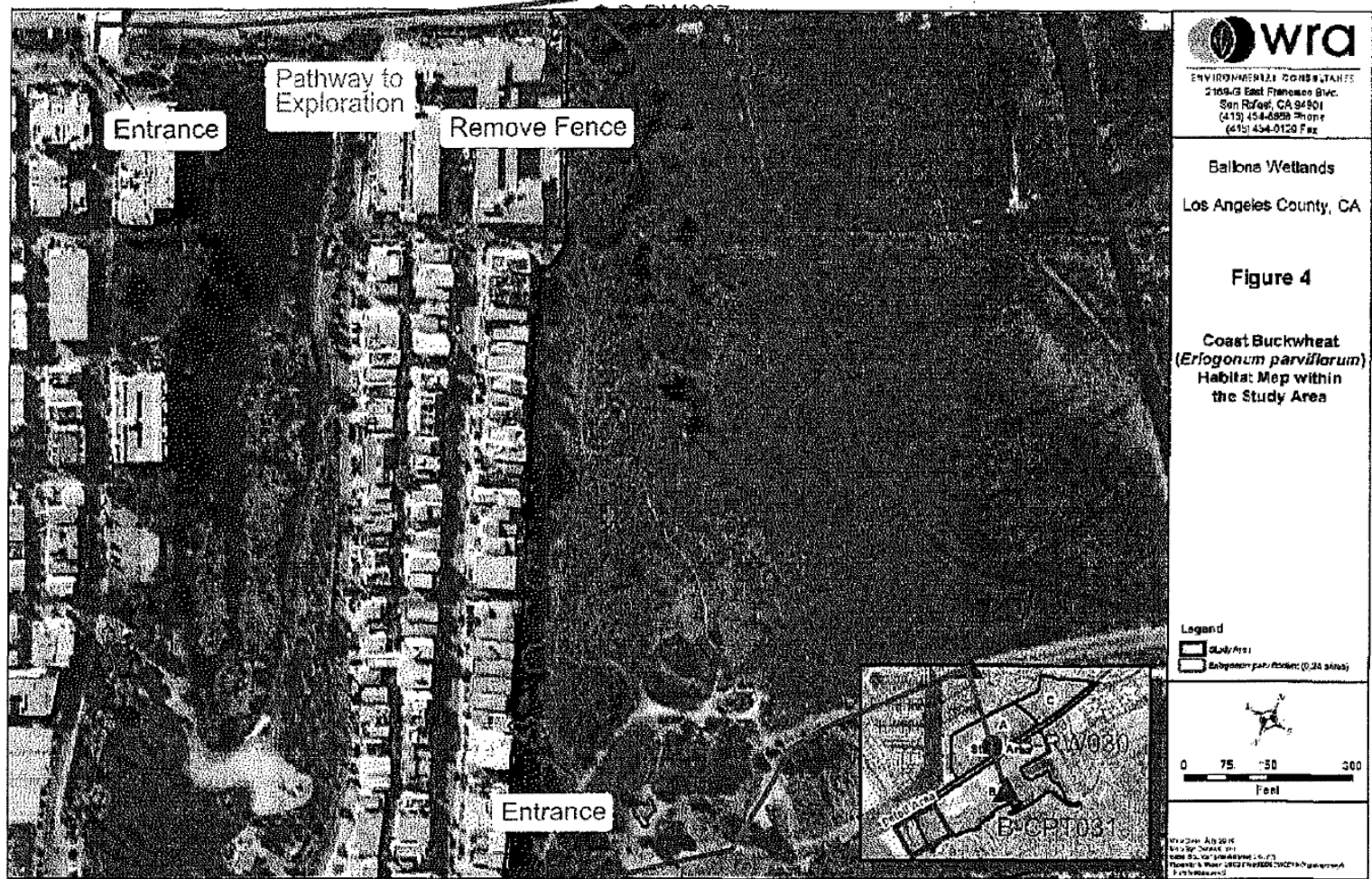


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PROPOSED BORING LOCATIONS
SPECIAL STATUS PLANT SPECIES

Ballona Wetlands Restoration
Los Angeles, CA

PROJECT NUMBER:	LA962
SCALE:	AS SHOWN
FIGURE NUMBER:	6



LEGEND

- A-RW002 Proposed Boring (RW/ISA) Location
- ▲ A-CPT001 Proposed CPT Location

DATE	4/19/12	DRAWN BY	K. Fernandes
REVISION	5/4/12	APPROVED BY	P. Chiu
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PROPOSED BORING LOCATIONS COAST BUCKWHEAT HABITAT

Ballona Wetlands Restoration
Los Angeles, CA

PROJECT NUMBER	LA962
SCALE	AS SHOWN
PAGE NUMBER	7



LEGEND

- A-RW002 Proposed Boring (RW/HSA) Location
- ▲ A-CPT001 Proposed CPT Location
- Belding Habitats South of Culver
- Belding's Savannah Sparrow

DATE	4/19/12	APPROVED BY	K. Fernandes
REVISION	5/4/12	APPROVED BY	P. Chiu
REVISION		APPROVED BY	

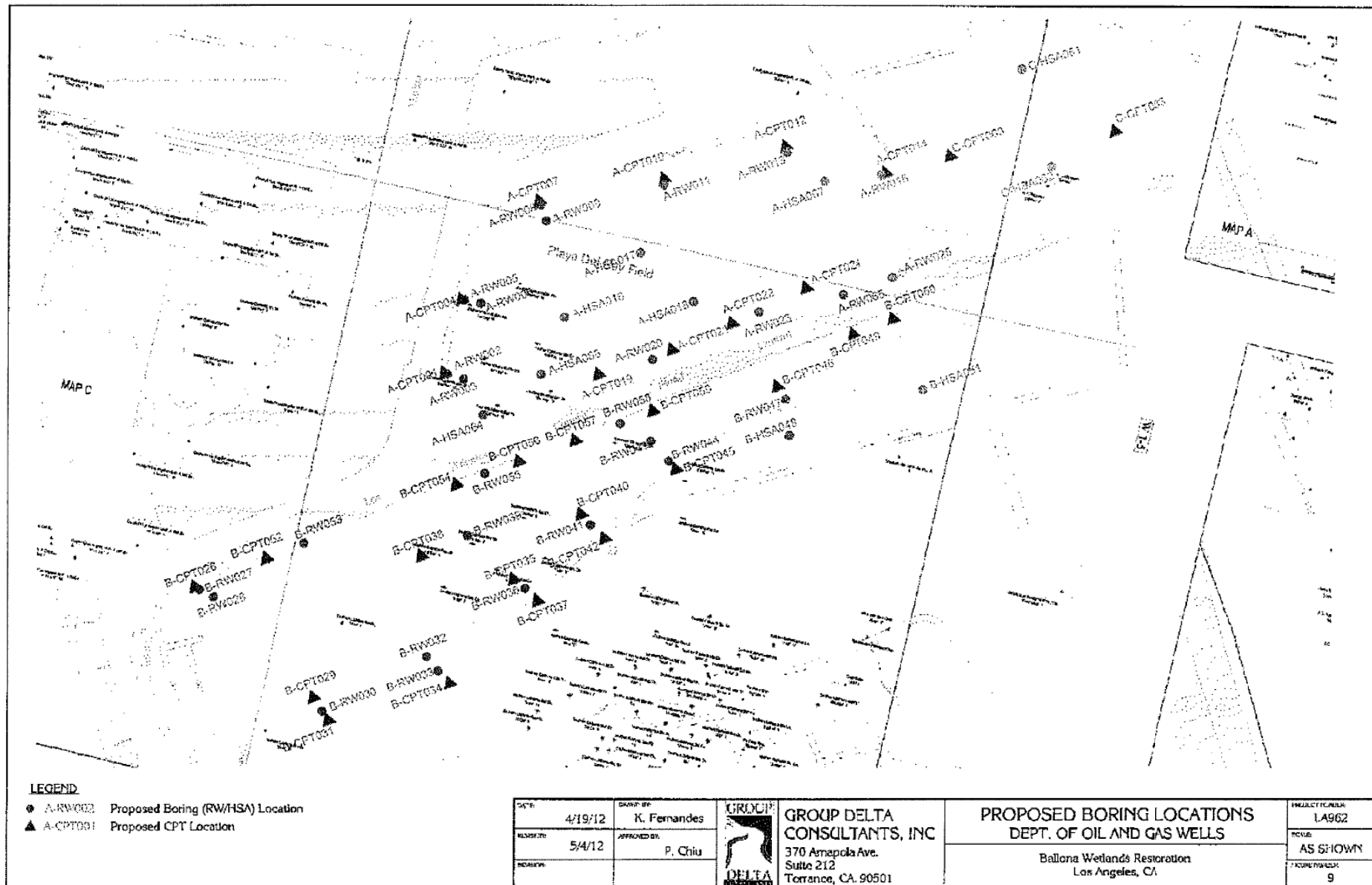


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PROPOSED BORING LOCATIONS BELDING HABITAT

Ballona Wetlands Restoration
Los Angeles, CA

PROJECT NUMBER	LA962
SCALE	AS SHOWN
FIGURE NUMBER	8



APPENDIX A
LIST OF PLANT SPECIES

(Source: WRA report dated August 2011)

<u>Wetland Indicator Status</u>		
OBL	Always found in wetlands	>99% frequency
FACW	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
UPL	Upland/Not listed (upland)	<1%



Family	Scientific Name	Common Name	Wetland Indicator Status
Plant species documented from the Ballona Wetlands ¹ Project Site. Species names given according to Hickman (1993) or Jepson Interchange (2010). Old names (Hickman 1993) are given in parentheses, as needed.			
DICOTS			
Aizoaceae	<i>Aptenia cordifolia</i>	Baby sun rose	UPL
Aizoaceae	<i>Carpobrotus chilense</i>	Sea-fig	UPL
Aizoaceae	<i>Carpobrotus edulis</i>	Sour-fig (Hottentot-fig)	UPL
Aizoaceae	<i>Delosperma litorale</i>	Seaside delosperma	UPL
Aizoaceae	<i>Malephora crocea</i>	Red-flowered iceplant	UPL
Aizoaceae	<i>Mesembryanthemum crystallinum</i>	Crystalline iceplant	UPL
Aizoaceae	<i>Mesembryanthemum nodiflorum</i>	Slender leaf iceplant	UPL
Aizoaceae	<i>Sesuvium verrucosum</i>	Western sea-purslane	FACW
Aizoaceae	<i>Tetragonia tetragonioides</i>	New Zealand spinach	UPL
Amaranthaceae	<i>Amaranthus albus</i>	White tumbleweed	FACU
Amaranthaceae	<i>Amaranthus californicus</i>	Amaranth/Ca. pigweed	FACW
Amaranthaceae	<i>Amaranthus deflexus</i>	Pigweed	UPL
Amaranthaceae	<i>Amaranthus tamariscanus</i>	Indehiscent pigweed	FACU
Amaryllidaceae	<i>Narcissus tazetta</i>	Paper white narcissus	UPL
Anacardiaceae	<i>Malosma laurina</i> (<i>Rhus laurina</i>)	Laurel sumac	UPL
Anacardiaceae	<i>Rhus integrifolia</i>	Lemonade berry	UPL
Anacardiaceae	<i>Schinus molle</i>	Peruvian pepper tree	UPL
Anacardiaceae	<i>Schinus terebinthifolius</i>	Brazilian pepper tree	UPL

¹ Species list adapted from 08/18/2006 Ballona Wetlands Floral Compendium

Family	Scientific Name	Common Name	Wetland Indicator Status
Apiaceae	<i>Apium graveolens</i>	Celery	FACW
Apiaceae	<i>Apium leptophyllum</i>	Marsh parsley	UPL
Apiaceae	<i>Conium maculatum</i>	Poison hemlock	FACW
Apiaceae	<i>Foeniculum vulgare</i>	Fennel	FACU
Apocynaceae	<i>Nerium oleander</i>	oleander	UPL
Araliaceae	<i>Hedera canariensis</i>	Algerian ivy	UPL
Asteraceae	<i>Ambrosia acanthicarpa</i>	Ragweed/Annual bursage	UPL
Asteraceae	<i>Ambrosia chamissonis</i>	Ragweed/Beach bur	UPL
Asteraceae	<i>Ambrosia psilostachya</i>	Western ragweed	FAC
Asteraceae	<i>Artemisia californica</i>	California sage brush	UPL
Asteraceae	<i>Artemisia douglasiana</i>	California/Douglas' mugwort	FACW
Asteraceae	<i>Artemisia dracunculus</i>	Dragon sagewort/Tarragon	UPL
Asteraceae	<i>Symphyotrichum subulatum</i> var. <i>ligulatum</i>	Marsh aster/Slender aster	UPL
Asteraceae	<i>Baccharis pilularis</i>	Coyote brush	UPL
Asteraceae	<i>Baccharis salicifolia</i>	Mule fat	FACW
Asteraceae	<i>Brickellia californica</i>	Brickellbush	FACU
Asteraceae	<i>Centaurea melitensis</i>	Tocalote	UPL
Asteraceae	<i>Centaurea repens</i>	Russian knapweed	UPL
Asteraceae	<i>Chaenactis glabriuscula</i>	Yellow chaenactis	UPL
Asteraceae	<i>Chamomilla suaveolens</i>	Pineapple weed	UPL
Asteraceae	<i>Chondrilla juncea</i>	Skelton weed	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Asteraceae	<i>Chrysanthemum coronarium</i>	Garland daisy	UPL
Asteraceae	<i>Cichorium intybus</i>	Chicory	UPL
Asteraceae	<i>Cirsium vulgare</i>	Bull thistle	UPL
Asteraceae	<i>Conyza bonariensis</i>	Flax-leaved horseweed	UPL
Asteraceae	<i>Conyza canadensis</i>	Horseweed	FAC
Asteraceae	<i>Conyza coulteri</i>	Sticky conyza	FAC
Asteraceae	<i>Cotula australis</i>	Cotula	UPL
Asteraceae	<i>Cotula coronopifolia</i>	Brass buttons	FACW
Asteraceae	<i>Encelia californica</i>	California bush sunflower	UPL
Asteraceae	<i>Ericameria ericoides</i> (<i>Haplopappus e.</i>)	Goldenbush/Mock	UPL
Asteraceae	<i>Ericameria pinifolia</i> (<i>Haplopappus p.</i>)	Goldenbush	UPL
Asteraceae	<i>Euryops pectinatus</i>	Euryops daisy	UPL
Asteraceae	<i>Euthamia occidentalis</i> (<i>Solidago occidentalis</i>)	Western goldenrod	OBL
Asteraceae	<i>Filago sp.</i>	Filago	UPL
Asteraceae	<i>Gazania linearis</i> (<i>G. longiscapa</i>)	African daisy	UPL
Asteraceae	<i>Gazania scaposa</i>	African daisy	UPL
Asteraceae	<i>Gnaphalium bicolor</i>	Cudweed	UPL
Asteraceae	<i>Gnaphalium californicum</i>	California cudweed	UPL
Asteraceae	<i>Gnaphalium canescens</i> ssp. <i>beneolens</i>	Everlasting cudweed	UPL
Asteraceae	<i>Gnaphalium ramosissimum</i>	Pink cudweed	UPL
Asteraceae	<i>Gnaphalium stramineum</i> (<i>G. chilense</i>)	Chilean cudweed	FAC

Family	Scientific Name	Common Name	Wetland Indicator Status
Asteraceae	<i>Grindelia camporum</i> (G. robusta)	Gum plant	FACU
Asteraceae	<i>Hedypnois cretica</i>	Cretan weed	UPL
Asteraceae	<i>Helianthus annuus</i>	California sunflower	FAC
Asteraceae	<i>Deinandra fasciculata</i> (Hemizonia f.)	Common tarweed	UPL
Asteraceae	<i>Deinandra paniculata</i> (Hemizonia p.)	San Diego tarweed	FACU
Asteraceae	<i>Centromadia parryi australis</i> (Hemizonia p. ssp. a.)		FAC
Asteraceae	<i>Heterotheca grandiflora</i>	Telegraph weed	UPL
Asteraceae	<i>Heterotheca villosa</i> (Chrysopsis v.)	Hairy goldenaster	UPL
Asteraceae	<i>Hypochaeris glabra</i>	Smooth cat's ear	UPL
Asteraceae	<i>Jaumea carnosa</i>	Fleshy juamea	OBL
Asteraceae	<i>Lactuca eucra</i>	-	-
Asteraceae	<i>Lactuca serriola</i>	Prickly lettuce	FAC
Asteraceae	<i>Lactuca virosa</i>	Wild lettuce	UPL
Asteraceae	<i>Lessingia filaginifolia</i> (Corethrogyne filaginifolia)		UPL
Asteraceae	<i>Malacothrix saxatilis</i>	Cliff aster	UPL
Asteraceae	<i>Osteospermum fruticosum</i> (Dimorphotheca f.)	African daisy	UPL
Asteraceae	<i>Picris echioides</i>	Bristly ox-tongue	FAC
Asteraceae	<i>Senecio vulgaris</i>	Common groundsel	UPL
Asteraceae	<i>Silybum marianum</i>	Milk thistle	UPL
Asteraceae	<i>Solidago californica</i>	California goldenrod	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Asteraceae	<i>Euthamia occidentalis</i> (<i>Solidago o.</i>)	Western goldenrod	OBL
Asteraceae	<i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	FAC
Asteraceae	<i>Sonchus oleraceus</i>	Common sow thistle	NI
Asteraceae	<i>Stephanomeria exigua</i>	Small wire lettuce	UPL
Asteraceae	<i>Stephanomeria virgata</i>	Tall stephanomeria	UPL
Asteraceae	<i>Taraxacum officinale</i>	Dandelion	FACU
Asteraceae	<i>Xanthium spinosum</i>	Spiny cocklebur	FAC
Asteraceae	<i>Xanthium strumarium</i>	Rough cocklebur	FAC
Bataceae	<i>Batis maritima</i>	Salt wort	OBL
Boraginaceae	<i>Cryptantha intermedia</i>	White forget-me-not/popcorn flower	UPL
Boraginaceae	<i>Heliotropium curassavicum</i> (<i>H. ocellatum</i>)	Salt heliotrope	UPL
Brassicaceae	<i>Brassica nigra</i>	Black mustard	UPL
Brassicaceae	<i>Brassica rapa</i>	Field mustard	UPL
Brassicaceae	<i>Cakile maritima</i>	Sea-rocket	FACW
Brassicaceae	<i>Coronopus didymus</i>	Lesser swine cress	UPL
Brassicaceae	<i>Erysimum insulare</i> ssp. <i>suffrutescens</i>	Island wallflower	UPL
Brassicaceae	<i>Guillenia lasiophylla</i>	California mustard	UPL
Brassicaceae	<i>Hirschfeldia incana</i> (<i>Brassica geniculata</i>)	Field mustard	UPL
Brassicaceae	<i>Lepidium latifolium</i>	Broad-leaved peppergrass	FACW
Brassicaceae	<i>Lepidium virginicum</i> var. <i>pubescens</i> (<i>L. pubescens</i>)	Tall peppergrass	FACU

Family	Scientific Name	Common Name	Wetland Indicator Status
Brassicaceae	<i>Lobularia maritima</i>	Sweet alyssum	UPL
Brassicaceae	<i>Raphanus sativus</i>	Wild radish	UPL
Brassicaceae	<i>Sinapis alba</i> (<i>Brassica cf. hirta</i>)	White mustard	UPL
Brassicaceae	<i>Sisymbrium altissimum</i>	Tumble-mustard	UPL
Brassicaceae	<i>Sisymbrium irio</i>	London rocket	UPL
Cactaceae	<i>Opuntia ficus-indica</i>	Indian-fig	UPL
Cactaceae	<i>Opuntia littoralis</i>	Coastal prickly pear	UPL
Caprifoliaceae	<i>Sambucus mexicana</i>	elderberry	FAC
Caryophyllaceae	<i>Polycarpon tetraphyllum</i>	Four-leaved allseed	UPL
Caryophyllaceae	<i>Spergula arvensis</i>	Spurry starwort	UPL
Caryophyllaceae	<i>Silene gallica</i>	Common catchfly/ windmill pink	UPL
Caryophyllaceae	<i>Spergularia bocconeii</i>	Boccone's sand-spurrey	UPL
Caryophyllaceae	<i>Spergularia macrotheca</i>	Salt marsh sand-spurrey	FAC
Caryophyllaceae	<i>Spergularia marina</i>	Hairy sand-spurrey	OBL
Caryophyllaceae	<i>Spergularia villosa</i>	Sand-spurrey	UPL
Chenopodiaceae	<i>Atriplex californica</i>	California saltbush	FAC
Chenopodiaceae	<i>Atriplex lentiformis</i>	Saltbush	FAC
Chenopodiaceae	<i>Atriplex patula</i>	Spear oracle	FACW
Chenopodiaceae	<i>Atriplex rosea</i>	Tumbling oracle	FACU
Chenopodiaceae	<i>Atriplex semibaccata</i>	Australian saltbush	FAC
Chenopodiaceae	<i>Atriplex triangularis</i>	Spearscale	FACW

Family	Scientific Name	Common Name	Wetland Indicator Status
Chenopodiaceae	<i>Bassia hyssopifolia</i>	Bassia	FAC
Chenopodiaceae	<i>Beta vulgaris</i>	Beet	FACU
Chenopodiaceae	<i>Chenopodium album</i>	White goosefoot/ Lambs-quarters	FAC
Chenopodiaceae	<i>Chenopodium ambrosioides</i>	Mexican tea	FAC
Chenopodiaceae	<i>Chenopodium berlandieri</i>	Pitseed goosefoot	UPL
Chenopodiaceae	<i>Chenopodium botrys</i>	Jerusalem oak	FACU
Chenopodiaceae	<i>Chenopodium murale</i>	Shiny-leaf goosefoot	UPL
Chenopodiaceae	<i>Chenopodium pumilio</i>	Glomerate goosefoot	UPL
Chenopodiaceae	<i>Salicornia bigelovii</i>	Annual pickleweed	OBL
Chenopodiaceae	<i>Arthrocnemum subterminale</i>	Parish's pickleweed	OBL
Chenopodiaceae	<i>Sarcocornia pacifica</i> (<i>Salicornia virginica</i>)	Common pickleweed	OBL
Chenopodiaceae	<i>Salsola tragus</i>	Russian thistle	FACU
Chenopodiaceae	<i>Suaeda calceoliformis</i> (<i>S. depressa</i> var. <i>erecta</i>)	Horned sea-blite	FACW
Chenopodiaceae	<i>Suaeda esteroa</i>	Sea-blite	UPL
Chenopodiaceae	<i>Suaeda taxifolia</i>	Woolly sea-blite	FACW
Convolvulaceae	<i>Calystegia macrostegia</i> var. <i>cyclostegia</i>	Coast morning glory	UPL
Convolvulaceae	<i>Convolvulus arvensis</i>	Bindweed	UPL
Convolvulaceae	<i>Cressa truxillensis</i> var. <i>vallicola</i>	Alkali weed	FACW
Convolvulaceae	<i>Dichondra occidentalis</i> *	Western ponysfoot	UPL
Crassulaceae	<i>Crassula argentea</i>	Jade plant	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Crassulaceae	<i>Crassula connata</i>	Pygmy weed	FAC
Cucurbitaceae	<i>Citrullus lanatus</i>	Watermelon	UPL
Cucurbitaceae	<i>Cucurbita foetidissima</i>	Calibazilla	UPL
Cupressaceae	<i>Cupressus arizonica</i> ssp. <i>arizonica</i>	cypress	UPL
Cuscutaceae	<i>Cuscuta californica</i>	California dodder	UPL
Cuscutaceae	<i>Cuscuta indecora</i>	Big-seed alfalfa dodder	UPL
Cuscutaceae	<i>Cuscuta pentagona</i> (<i>C. campestris</i>)	Five-angled dodder	UPL
Cuscutaceae	<i>Cuscuta salina</i>	Saltmarsh dodder	UPL
Euphorbiaceae	<i>Chamaesyce albomarginata</i>	Rattlesnake weed	FACU
Euphorbiaceae	<i>Chamaesyce maculata</i>	Spotted spurge	UPL
Euphorbiaceae	<i>Chamaesyce polycarpa</i>	Smallseeded sandmat	UPL
Euphorbiaceae	<i>Chamaesyce serpens</i>	Matted sandmat	UPL
Euphorbiaceae	<i>Croton californicus</i>	California Croton	UPL
Euphorbiaceae	<i>Euphorbia esula</i>	Leafy spurge	UPL
Euphorbiaceae	<i>Euphorbia peplus</i>	Petty spurge	UPL
Euphorbiaceae	<i>Ricinus communis</i>	Castor bean	FACU
Fabaceae	<i>Acacia longifolia</i>	Australian wattle	UPL
Fabaceae	<i>Acacia decurrens</i>	Green wattle	UPL
Fabaceae	<i>Acacia neriifolia</i>	Wattle	UPL
Fabaceae	<i>Albizia lophantha</i> (<i>A. distachya</i>)	Albizia	UPL
Fabaceae	<i>Astragalus trichopodus</i>	Ocean locoweed	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Fabaceae	<i>Bauhinia variegata</i>	Orchid tree	UPL
Fabaceae	<i>Ceratonia siliqua</i>	Carob	UPL
Fabaceae	<i>Hoffmannseggia glauca</i>	Pig nut, Hog-potato	FACU
Fabaceae	<i>Lotus purshianus</i>	Spanish clover/Bird's foot trefoil	UPL
Fabaceae	<i>Lotus scoparius</i>	Deerweed	UPL
Fabaceae	<i>Lotus strigosus</i>	Strigose lotus	UPL
Fabaceae	<i>Lupinus bicolor</i>	Miniature lupine	UPL
Fabaceae	<i>Lupinus chamissonis</i>	Coastal bush lupine	UPL
Fabaceae	<i>Lupinus excubitus</i> ssp. <i>hallii</i>	Hall's lupine	UPL
Fabaceae	<i>Lupinus longifolius</i>	Longleaf bush lupine	UPL
Fabaceae	<i>Lupinus succulentus</i>	Arroyo lupine	UPL
Fabaceae	<i>Lupinus truncatus</i>	Lupine	UPL
Fabaceae	<i>Medicago polymorpha</i> (<i>M. hispida</i>)	California burclover	UPL
Fabaceae	<i>Melilotus albus</i>	White sweetclover	FACU
Fabaceae	<i>Melilotus indica</i>	Sourclover	FAC
Fabaceae	<i>Phaseolus limensis</i>	Large lima bean	UPL
Fabaceae	<i>Spartium junceum</i>	Spanish broom	UPL
Fagaceae	<i>Quercus agrifolia</i>	Coast live oak	UPL
Fagaceae	<i>Quercus x virginica</i>	Hybrid live oak	UPL
Frankeniaceae	<i>Frankenia salina</i>	Alkali heath	FACW
Geraniaceae	<i>Erodium botrys</i>	Storksbill/broad-lobed filaree	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Geraniaceae	<i>Erodium cicutarium</i>	Storksbill	UPL
Geraniaceae	<i>Pelargonium zonale</i>	Garden Geranium	UPL
Grossulariaceae	<i>Ribes malvaceum</i>	Chaparral currant	UPL
Hamamelidaceae	<i>Liquidambar styraciflua</i>	liquidambar	UPL
Hydrophyllaceae	<i>Phacelia ramosissima</i> var. <i>australitoralis</i>	Branching phacelia	UPL
Juglandaceae	<i>Juglans regia</i>	English walnut	UPL
Lamiaceae	<i>Marrubium vulgare</i>	Horehound	FAC
Lythraceae	<i>Ammannia</i> sp.	Red stem	OBL
Lythraceae	<i>Lythrum hyssopifolium</i>	Hyssop loosestrife	FACW
Malvaceae	<i>Malacothamnus fasciculatus</i>	Bush mallow/Chaparral	UPL
Malvaceae	<i>Malva nicaeensis</i>	Bull mallow	UPL
Malvaceae	<i>Malva parviflora</i>	Cheeseweed mallow	UPL
Malvaceae	<i>Malvella leprosa</i>	Alkali mallow	FAC
Moraceae F	<i>Ficus carica</i>	Edible fig	UPL
Moraceae	<i>Morus alba</i>	White mulberry	NI
Myoporaceae	<i>Myoporum laetum</i>	Lollypop tree	UPL
Myrtaceae	<i>Eucalyptus camaldulensis</i>	Red gum	UPL
Myrtaceae	<i>Eucalyptus globulus</i>	Blue gum	UPL
Myrtaceae	<i>Eucalyptus tereticornis</i>	Forest red gum	UPL
Myrtaceae	<i>Eucalyptus viminalis</i>	Manna gum	UPL
Myrtaceae	<i>Luma apiculata</i> (<i>Eugenia</i> sp.)	temu	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Nyctaginaceae	<i>Abronia umbellata</i>	Pink sand verbena	UPL
Oleaceae	<i>Fraxinus velutina</i>	Arizona/Velvet	FACW
Oleaceae	<i>Olea europaea</i>	Olive	UPL
Onagraceae	<i>Camissonia bistorta</i>	California sun cup	UPL
Onagraceae	<i>Camissonia cheiranthifolia</i> var. <i>suffruticosa</i>	Beach evening	UPL
Onagraceae	<i>Camissonia lewisii</i>	Lewis' evening primrose	UPL
Onagraceae	<i>Camissonia micrantha</i>	Miniture sun cup	UPL
Onagraceae	<i>Epilobium ciliatum</i>	Willow-herb	FACW
Onagraceae	<i>Oenothera elata</i> ssp. <i>hookeri</i>	Hooter's evening primrose	FACW
Onagraceae	<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	Hairy evening primrose	FACW
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda buttercup	UPL
Papaveraceae	<i>Eschscholzia californica</i>	California poppy	UPL
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	FAC
Plantaginaceae	<i>Plantago major</i>	Common plantain	FACW
Plumbaginaceae	<i>Limonium californicum</i>	Sea lavender	OBL
Polygonaceae	<i>Eriogonum fasciculatum</i>	California buckwheat	UPL
Polygonaceae	<i>Eriogonum gracile</i>	Slender buckwheat	UPL
Polygonaceae	<i>Eriogonum parvifolium</i>	Dune buckwheat	UPL
Polygonaceae	<i>Polygonum arenastrum</i>	Common knotweed	FAC
Polygonaceae	<i>Polygonum lapathifolium</i>	Willow weed	OBL
Polygonaceae	<i>Rumex crispus</i>	Curly dock	FACW

Family	Scientific Name	Common Name	Wetland Indicator Status
Polygonaceae	<i>Rumex maritimus</i> (<i>Rumex fueginus</i>)	Golden dock	OBL
Polygonaceae	<i>Rumex salicifolius</i>	Willow dock	OBL
Primulaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel	FAC
Ranunculaceae	<i>Clematis</i> sp.	clematis	UPL
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise	UPL
Rosaceae	<i>Heteromeles arbutifolia</i>	Toyon	UPL
Rosaceae	<i>Prunus persica</i>	Peach	UPL
Rosaceae	<i>Pyracantha</i> sp.	Firethorn	UPL
Rosaceae	<i>Rosa californica</i>	California rose	FAC
Rubiaceae	<i>Galium angustifolium</i>	Narrowleaf bedstraw	UPL
Salicaceae	<i>Populus fremontii</i>	Fremont cottonwood	FACW
Salicaceae	<i>Salix exigua</i> (<i>S. hindsiana</i>)	Narrow-leaved willow	OBL
Salicaceae	<i>Salix gooddingii</i>	Black willow	OBL
Salicaceae	<i>Salix laevigata</i>	Red willow	UPL
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow	FACW
Saururaceae	<i>Anemopsis californica</i>	Yerba mansa	OBL
Scrophulariaceae	<i>Verbascum virgatum</i>	Wand mullein	UPL
Scrophulariaceae	<i>Cordylanthus maritimus</i>	Bird's beak	OBL
Solanaceae	<i>Datura wrightii</i> (<i>D. meteloides</i>)	Jimsonweed	UPL
Solanaceae	<i>Lycium ferocissimum</i>	African boxthorn	UPL
Solanaceae	<i>Lycopersicon esculentum</i>	Tomato	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Solanaceae	<i>Nicotiana glauca</i>	Tree tobacco	FAC
Solanaceae	<i>Petunia parviflora</i>	Wild Petunia	FACW
Solanaceae	<i>Solanum americanum</i> (S. <i>nodiflorum</i>)	Small-flowered nightshade	FAC
Solanaceae	<i>Solanum douglasii</i>	Douglas's Nightshade	FAC
Solanaceae	<i>Solanum nigrum</i>	Black nightshade	FACU
Solanaceae	<i>Solanum sarrachoides</i>	Hairy nightshade	UPL
Solanaceae	<i>Solanum xanti</i>	Chaparral nightshade	UPL
Tropaeolaceae	<i>Tropaeolum majus</i>	Garden nasturtium	UPL
Typhaceae	<i>Typha domingensis</i>	Southern Cattail	OBL
Typhaceae	<i>Typha latifolia</i>	Broad-leaved Cattail	OBL
Ulmaceae	<i>Ulmus parvifolia</i>	Chinese elm	UPL
Urticaceae	<i>Urtica dioica</i> ssp. <i>holosericea</i> (U. <i>holosericea</i>)	Hoary nettle	FACW
Urticaceae	<i>Urtica urens</i>	Dwarf nettle	UPL
Verbenaceae	<i>Verbena lasiostachys</i>	Common verbena	FAC
Verbenaceae	<i>Lantana camara</i>	Orange-flowered lantana	NI
Zygophyllaceae	<i>Tribulus terrestris</i>	Puncture vine	UPL
MONOCOTS			
Alismataceae	<i>Sagittaria montevidensis</i> ssp. <i>calycina</i>	Arrowhead	OBL
Arecaceae	<i>Phoenix canariensis</i>	Canary island date palm	UPL
Arecaceae	<i>Phoenix dactylifera</i>	Date palm	UPL
Arecaceae	<i>Washingtonia robusta</i>	Slender fan palm	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Cyperaceae	<i>Carex praegracilis</i>	Clustered field sedge	FACW
Cyperaceae	<i>Cyperus eragrostis</i>	Galingale/Tall flat sedge	FACW
Cyperaceae	<i>Cyperus esculentus</i>	Yellow nutsedge	FACW
Cyperaceae	<i>Cyperus involucratus</i> (C. <i>alternifolius</i>)	Umbrella plant	OBL
Cyperaceae	<i>Eleocharis macrostachya</i>	Pale spike rush	OBL
Cyperaceae	<i>Eleocharis montevidensis</i>	Dombey's spike rush	FACW
Cyperaceae	<i>Schoenoplectus americanus</i> (Scirpus a.)	Olney bulrush	OBL
Cyperaceae	<i>Schoenoplectus californicus</i> (Scirpus c.)	California bulrush/Tule	OBL
Cyperaceae	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i> (Scirpus m.)	Prairie burush	OBL
Cyperaceae	<i>Bolboschoenus robustus</i> (Scirpus r.)	Saltmarsh bulrush	OBL
Iridaceae	<i>Chasmanthe aethiopica</i>	Adams iris	UPL
Iridaceae	<i>Iris pseudacorus</i> var. <i>alba</i>	Horticultural iris	OBL
Juncaceae	<i>Juncus acutus</i> var. <i>leopoldii</i> (J. a. var. <i>sphaerocarpus</i>)	Spike-rush	FACW
Juncaceae	<i>Juncus balticus</i>	Wire rush	OBL
Juncaceae	<i>Juncus bufonius</i> var. <i>occidentalis</i> (J. <i>sphaerocarpus</i>)	rush	FACW
Juncaceae	<i>Juncus mexicanus</i>	Mexican rush	FACW
Juncaginaceae	<i>Triglochin maritima</i> (likely a misidentification of <i>T. concinnum</i>)	Arrow grass	OBL
Liliaceae	<i>Agave americana</i> var. <i>striata</i>	Giant agave	UPL
Liliaceae	<i>Agave attenuata</i>	Foxtail agave	UPL

Family	Scientific Name	Common Name	Wetland Indicator Status
Liliaceae	<i>Yucca gloriosa</i>	Spanish dagger	UPL
Liliaceae	<i>Aloe vera</i>	Medicinal aloe	UPL
Poaceae	<i>Agrostis viridis</i> (<i>A. semiverticillata</i>)	Bentgrass	OBL
Poaceae	<i>Agrostis stolonifera</i>	Redtop	FACW
Poaceae	<i>Arundo donax</i>	Giant reed grass	FACW
Poaceae	<i>Avena barbata</i>	Slender wild oat	UPL
Poaceae	<i>Avena fatua</i>	Wild oat	UPL
Poaceae	<i>Bromus catharticus</i> (<i>B. wildenovii</i>)	Rescue-grass	UPL
Poaceae	<i>Bromus diandrus</i>	Ripgut chess	UPL
Poaceae	<i>Bromus hordeaceus</i> (<i>B. mollis</i>)	Soft chess	FACU
Poaceae	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Foxtail chess	UPL
Poaceae	<i>Bromus carinatus</i> (<i>B. marginatus</i>)	California brome	UPL
Poaceae	<i>Cortaderia selloana</i>	Pampas grass	UPL
Poaceae	<i>Cynodon dactylon</i>	Bermuda grass	FAC
Poaceae	<i>Digitaria sanguinalis</i>	Crabgrass	FACU
Poaceae	<i>Distichlis spicata</i>	Saltgrass	FACW
Poaceae	<i>Echinochloa crus-galli</i>	Barnyard grass	FACW
Poaceae	<i>Ehrharta erecta</i>	Upright veldt grass	UPL
Poaceae	<i>Festuca arundinacea</i>	Tall fescue	FAC
Poaceae	<i>Hordeum depressum</i>	Alkali barley	NI
Poaceae	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Wild barley	NI

Family	Scientific Name	Common Name	Wetland Indicator Status
Poaceae	<i>Hordeum vulgare</i>	Barley	UPL
Poaceae	<i>Lamarckia aurea</i>	Goldentop	UPL
Poaceae	<i>Leymus condensatus (Elymus c.)</i>	Giant ryegrass	FACU
Poaceae	<i>Leymus triticoides</i>	Alkali ryegrass	FAC
Poaceae	<i>Leptochloa uninervia</i>	Mexican sprangle top	FACW
Poaceae	<i>Lolium multiflorum</i>	Italian ryegrass	FAC
Poaceae	<i>Lolium perenne</i>	Perennial ryegrass	FAC
Poaceae	<i>Melica imperfecta</i>	Melic grass	UPL
Poaceae	<i>Monanthochloe littoralis</i>	Shoregrass	OBL
Poaceae	<i>Nassella cernua (Stipa cernua)</i>	Nodding Needlegrass	UPL
Poaceae	<i>Parapholis incurva</i>	Sickle grass	UPL
Poaceae	<i>Paspalum dilatatum</i>	Dallis grass	FAC
Poaceae	<i>Phalaris paradoxa</i>	Hood canary grass	UPL
Poaceae	<i>Piptatherum miliaceum (Oryzopsis miliacea)</i>	Smilo grass	UPL
Poaceae	<i>Poa annua</i>	Annual bluegrass	FACW
Poaceae	<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	FACW
Poaceae	<i>Schismus barbatus</i>	Mediterranean grass	UPL
Poaceae	<i>Setaria gracilis (S. geniculata)</i>	Bristlegrass	FAC
Poaceae	<i>Sorghum halepense</i>	Johnsongrass	FACU
Poaceae	<i>Sorghum nutans</i>	Indian grass	UPL
Poaceae	<i>Stenotaphrum secundatum</i>	St. Augustine grass	FAC

Family	Scientific Name	Common Name	Wetland Indicator Status
Poaceae	<i>Vulpia myuros</i> var. <i>myuros</i> (<i>Festuca myuros</i>)	Fescue	UPL
Poaceae	<i>Vulpia myuros</i> var. <i>hirsuta</i> (<i>Festuca megalura</i>)	Foxtail fescue	UPL
Poaceae	<i>Spartina foliosa</i>	Cordgrass	OBL
Potamogetonaceae	<i>Ruppia maritima</i>	Ditch grass	OBL
Typhaceae	<i>Typha domingensis</i>	Southern Cattail	OBL
Typhaceae	<i>Typha latifolia</i>	Broad-leaved Cattail	OBL

SECTION V

CIVIL

Psomas has an exceptionally long history of working in the area of this restoration project – over 25 years. Psomas will prepare preliminary engineering designs for the following components of the levee breach plan and permit requirements through the duration of the design portion of the project. Civil design elements and support will include the three stages outlined in Section II.

30% Preliminary Design (Eight Months – by December 2012)

The design elements during this Sequence include:

- Preliminary Design Report preparation.
- Overall site plan to be prepared based on the grading schemes developed by PWA/ESA.
- Layout and preliminary design for stabilizing and protecting the ends of the portions of the existing levees to remain.
- Assist PWA/ESA with civil constraints related to the preliminary geometric alignment and stability design for the north levee and maintenance path along Fiji Road and Lincoln Boulevard.
- Preliminary geometric alignment and stability design for the south levee and maintenance path along Culver Boulevard.
- Preliminary geometric alignment and integration of an access/pedestrian/bike path along one or more of the levees.
- Preliminary design and details for protection of the portions of the levee sections that will remain.
- Review of previous studies and refined preliminary design studies and coordination for the ultimate horizontal and vertical alignment of Lincoln Boulevard to assist in determining the location of the perimeter levee in Area A.
- Documentation of the existing gas wells and pipelines that may be impacted by the restoration program.
- Develop exhibits showing the planned construction sequencing for removing the levees and grading the restoration site.
- Provide technical support for maintenance requirements of the infrastructure elements of the design to be incorporated into the operations and maintenance requirements related to the restoration work.
- Prepare preliminary grading plans for Areas B and C that will be used for placement of soil material that is excavated from the Area A and B restoration sites.
- Develop studies and alternatives for transporting excavated soil material from the restoration site to the fill placement areas in Areas B and C.

- Prepare written narrative and exhibits that describe temporary and permanent erosion and sediment transport measures that could be implemented at the restoration site and the fill placement sites.
- Prepare a preliminary hydrology and drainage report in accordance with the City of Los Angeles requirements for the drainage areas associated with Areas B and C.
- Prepare an earthwork analysis of the restoration area grading design and fill disposal areas that identify the earthwork volumes and incorporate shrinkage factors as identified by the geotechnical consultant.
- Preliminary Utility Analysis – Review all utilities affected by the restoration project grading. Priority will be given to those utilities that must be removed or relocated. Those affected agencies will be identified and approached to determine their requirements. A constraints matrix will be populated with the pertinent criteria and actions necessary. If appropriate, applications will be made to initiate their review, but execution of work will not be included in this phase.
- Prepare preliminary plans for a new bike trail to be located on the new north side perimeter levee. These preliminary plans will be prepared using County of Los Angeles requirements.
- If not addressed by a third party development entity, prepare preliminary plans for reconstruction of the existing sports fields located within Area C. The existing sports fields may be removed as part of the overall grading design of the area.
- Constructability Analysis – Conduct a constructability analysis of the preliminary design to determine the options for physical delivery of the project. Review durations and sequencing of work, timing in addressing of constraints, availability and test timing of materials, etc. Options will be reviewed with the team to determine the most appropriate courses of action and acceptable options.
- Prepare an Engineer's Estimate of Probable Construction Costs – This estimate of probable construction costs will be based on the preliminary design documents. At this stage the estimate will be at a level sufficient for overall budgeting purposes with appropriate contingencies. Through later stages, this estimate will be refined as additional information and analysis is available. The estimate will be developed for the Phase 1 project as well as a general estimate for the entire project.
- Preliminary Hydrology and Hydraulic Analysis – Conduct an analysis of the local hydrology within Areas B and C, and then evaluate the capacity of existing and proposed drainage structures and areas.
- Stormwater Pollution Prevention Plan (SWPPP) – In coordination with the Psomas team and other PMT team members, prepare the overall project SWPPP to identify the specific sediment transport impacts due to storm events, and the mitigations necessary during the construction process. This report will be prepared in conjunction with the preparation of the erosion control plans.

- Erosion Control Plans – Prepare an overall erosion control plan and separate erosion control plan details and exhibits to address the construction phases that may be utilized.

Deliverables

1. Project Schedule
2. Overall Project Site Plan
3. Preliminary Levee Removal Plans/Details
4. Preliminary Levee Protection Design and Details
5. Preliminary Grading Plan – Area B and C
6. Preliminary Earthwork Analysis Areas A, B and C
7. Bike Trail Plans
8. Preliminary Gas Well / Pipelines Abandonment Plans (Diana to lead processing)
9. Construction Sequencing Exhibit
10. Project Meetings
11. Assist with Application and Permit Processing
12. Excavated Materials Transportation Study
13. Preliminary Erosion and Sediment Control Plan
14. Preliminary Hydrology and Drainage Report for Area B and C Fill Locations1
15. Preliminary Existing Utility Analysis and Exhibit
16. Constructability Analysis Report
17. Preliminary Engineers Estimate of Probable Construction Costs
18. Design Coordination
19. Permit Application and Processing Support

70% Design Documents (Six Months – January to June 2013)

The design elements during this Sequence include:

- Refine, add detail, and prepare final technical design and details for stabilizing and protecting the ends of the proposed levees and the portions of the levees to remain. This would include identifying

the size, thickness, toe down and extent of riprap or concrete facing protection including backing systems.

- Refine, add detail, and prepare final design, layout and details of the maintenance access road and bike trail on the proposed levees.
- Documentation of coordination with the Gas Company for disposition of their existing wells and pipelines.
- Provide input to other consultants to take advantage of our local knowledge during the preparation of their restoration and final grading plans and details in accordance with County of Los Angeles and City of Los Angeles requirements.
- Refine, add detail to, and prepare final grading plans for the disposal grading in Area B and the fill placement areas in Area C.
- If required, prepare or refine and add detail to the grading plans and layouts for reconstruction of the sports facilities within Area C south of Culver Boulevard.
- Refine, add detail to, and finalize earthwork calculation reports for inclusion with permit application documents submitted to Los Angeles City and County, and the USACE.
- Refine, add detail to, and finalize the SWPPP documentation and Erosion Control plans for grading and construction activity in Area A, B and C in accordance with State requirements as well as the local specific requirements of the City and County of Los Angeles.
- Refine, add detail to, and prepare final hydraulics calculations and reports for drainage devices to be constructed with grading activities in Areas B and C.
- Prepare a Haul Route Application, exhibits and supporting documents for submittal to the City of Los Angeles for transport of earthwork across public streets to the disposal areas in Areas B and C.
- Refine, add detail, and prepare updated final engineers estimate of probable construction costs based on the 70% design documents.
- Refine the 408 application package to the USACE for the 70% submittal.
- Prepare a Conditional Use Permit (CUP) application for the County of Los Angeles for export of more than 100,000 cubic yards from a site as required by County codes. The CUP process for LA County may also require approval of the haul route that will be processed through the City of Los Angeles.
- Prepare other applications and submit plans, calculations, reports and other supporting documents for the grading, bridges, and levee modifications to the other applicable agencies for review. This would include the County and City of Los Angeles, Fish and Game, and FEMA.
- Provide coordination services for design work as well as relocation work undertaken by the Gas Company and other utility franchises to remove and relocate facilities which interfere with the planned work.
- Participate in meetings with the PMT and other consultant team members, and other public agencies or local groups as directed.

- Provide peer review of plans, documents and calculations prepared by other consultants. Specifically our focus will be on the grading design and hydrology/hydraulics package that will be reviewed by LA County as part of the grading permit and levee modification process.

Deliverables

1. Detailed Levee Removal Plans and Details
2. Detailed Levee Protection Plans/Details
3. Grading Plans – Areas B and C
4. Detailed Bike Trail Plans
5. Pedestrian/Bike Bridge Plans/Details
6. Final Gas Well/Pipeline Abandonment Exhibit and Coordination
7. Sports Facilities Final Grading Plans
8. Construction Sequencing Plan
9. Haul Route Plan/Permit
10. SWPPP/Local Erosion Control
11. Local Hydrology Report for Storm Drain Culverts
12. Culvert Hydraulics Report
13. Earthwork Calculations
14. Engineers Estimate of Probable Construction Costs

100% Construction Documents (Six Months – June to December 2013)

Work effort during this 100% stage will include coordination, processing, and updates to address plan check comments to the 70% design documents through the various public agencies for design and permit approval for the construction work. The 70% construction cost estimate will be updated when the plans are at an approval stage. We anticipate that approvals and clearance letters will be required from the following agencies:

- County of Los Angeles
- City of Los Angeles
- USACE
- The Gas Company

- Coastal Commission
- Department of Fish & Game
- FEMA
- Other utility providers

Any or all of the services listed during the 70% phase may be refined and adjusted to complete this process. Therefore, we have not relisted these services and tasks in this section. There is one additional service during this phase which is that we will assist the Hydrology Consultant in assembling and preparing the application to FEMA for a Conditional Letter of Map Revision (CLOMR) for adjustment of flood zones. During this time we will also provide updates to the environmental impacts analysis and mitigation measures as appropriate.

Deliverables

1. Detailed Levee Removal Plans and Details
2. Detailed Levee Protection Plans/Details
3. Grading Plans – Areas B and C
4. Detailed Bike Trail Plans
5. Pedestrian/Bike Bridge Plans/Details
6. Structural Report
7. Detailed Geotechnical Report
8. Final Gas Well/Pipeline Abandonment Exhibit and Coordination
9. Sports Facilities Final Grading Plans
10. Construction Sequencing Plan
11. Haul Route Plan/Permit
12. SWPPP/Local Erosion Control
13. Local Hydrology Report for Storm Drain Culverts
14. Culvert Hydraulics Report
15. Earthwork Calculations
16. Engineers Estimate of Probable Construction Costs
17. Supporting Information for CLOMR

SECTION VI

STRUCTURAL

JCE Structural Engineers will be engaged during the preliminary design phase to provide support services related to bridge and structural design. This will include:

30% Preliminary Design (Eight Months – by December 2012)

- Preliminary Bridge Analysis – Prepare options for a pedestrian/bike bridge crossing of the Ballona Creek adjacent to the existing Culver Boulevard Bridge. A number of options may be reviewed initially from both a structural and aesthetic standpoint. This might include free spanning the entire width of the Ballona Creek to multiple piers within the creek bed.
- Initial Constructability Review – The potential options for bridge design will be reviewed including order of magnitude costs, construction impacts, staging requirements, and environmental impacts. After a full understanding of the options, a preferred option will be selected.
- Preliminary Bridge Design – When the preferred option is selected, prepare preliminary structural drawings and supporting structural calculations.
- Structures Design – Structural design drawings and supporting calculations will be prepared for the structural elements associated with the levee and drainage conveyance structures.
- Structural Consultation – Coordinate with the team and review the proposed construction and provide input about the impacts and risks associated with the construction proposed.

Deliverables

1. Project Schedule.
2. Preliminary Structural Analysis.
3. Preliminary Structural Design for all structures.
4. Preliminary Structural Design for levee reinforcement
5. Preliminary Bridge Report.

70% Design Documents (Six Months – January to June 2013)

This will be the completed technical submittal to include structural design. Refinements to the design reports and products from the 30% submittal will be provided to execute this final design and will include:

1. Formal Technical Structural Analysis.

2. Formal Technical Structural Design for all structures.
3. Formal Technical Structural Design for levee reinforcement
4. Formal Technical Bridge Design.

100% Construction Documents (Six Months – June to December 2013)

As in any technical review, additional comments and questions from the USACE are expected. This 100% construction documents phase is expected to include the work efforts necessary to answer their questions and incorporate their comments up to the time a formal 408 permit approval is issued.

1. Final Structural Analysis.
2. Final Structural Design for all structures.
3. Final Structural Design for levee reinforcement
4. Final Bridge Design.

SECTION VII

QA / QC

Quality is one of the cornerstones of our company and a key part of the Psomas culture. Quality is not a product, yet without it, we have nothing to sell. A principal of our quality philosophy is that the job be done right the first time:

“Do it once, do it right”

We wish to fulfill or exceed the expectations and needs of our clients and will do so by providing quality services. As stated in our Key Beliefs, “We believe quality is achieved through teamwork, adherence to firm-wide procedures and the setting of high standards.”

Quality assurance at Psomas is a company-wide approach, supported by specific procedures, to ensure delivery of accurate, coordinated, and complete maps, plans, specifications, reports, stakes, and/or other engineering, surveying and planning deliverables in support of the client’s requirements identified in the client’s contract.

As mentioned above, quality is what we are about at Psomas. The concept and importance of quality is taught to every employee. Guidelines are set out in the Project Manager’s Manual, Engineering Design Manual, Survey Procedures Manual, and the Construction Staking Manual (the manuals) for every task in a project. These guidelines are augmented by the project work plan and the project quality assurance plan that identifies and lays out the procedures for specific project tasks. These manuals were written by the leaders of Psomas who have committed to them fully. By following the guidelines we assure our clients that their project will conform to requirements.

Approach

The entire company participates in quality assurance. Quality work is what Psomas must furnish to a client in order to compete successfully for new work. Some of the procedures utilized to help assure that quality work is performed are discussed in this manual. The Psomas commitment to excellence is incorporated in the manuals.

Quality assurance at Psomas includes all activities that are sometimes known in the engineering profession as either quality assurance (primarily strategies) or quality control (primarily detailed procedures for implementing the quality assurance strategies). Quality assurance is a Psomas commitment to the quality of all contract documents and deliverables. It starts with a thorough understanding of the project, organizing a highly qualified project team, and applying skilled planning, surveying and engineering. This approach is consistently presented in the manuals.

As most of the deliverables provided by Psomas are related to constructing something, quality assurance, focuses on project planning, design reviews and checking procedures whose purpose is to assure that Psomas deliverables:

- Are sufficiently clear to be understood, administered, and enforced by all participants exercising only a moderate degree of professional expertise.
- Reflect acceptance and constructability by using local and/or readily available materials and construction methods.
- Will incur virtually no additional costs resulting from design errors and/or omissions.

- Meet the governmental agency's requirements.
- Meet the client's expectations.

Responsibilities

Psomas

Psomas has the responsibility for the accuracy and completeness of the maps, plans, specifications, construction cost estimates, reports, and stakes under its scope of work, and should meet that responsibility through the implementation of the quality assurance plan.

Principal-in-Charge (PIC)

The PIC leader is responsible for ensuring that the project managers and sub-consultants fully understand the scope, contract terms, and work plan. The PIC is responsible for approving Psomas' responsibilities as a consultant, including quality assurance requirements. Mike Crehan of Psomas is the PIC for the Psomas team.

Quality Control Manager (QCM)

The quality control manager is responsible for managing and ensuring proper execution of the quality control plan and procedures established for the project. Ross Barker of Psomas is the QCM for Psomas engineering and the Psomas team. Matt Rowe of Psomas is the QCM for Survey efforts. Miko Reader of Group Delta is the QCM for geotechnical efforts. Juan Carlos Esquivel of JCE is the QCM for structural efforts.

Project Manager

The project manager is responsible for managing the establishment of quality assurance procedures appropriate to the project requirements. A number of project managers are assigned including John Chiappe of Psomas for survey and Tom Swantko for geotechnical. Each sub-consultant will also have a project manager assigned.

Technical Manager – Engineering/Surveying/Planning/Construction (E/S/P/C)

In support of the project manager, the technical manager(s) has the prime responsibility for selecting the design criteria, reviews, and checking procedures that form the detailed components of the quality assurance plan. Andrew Nickerson of Psomas is one of our engineering technical managers.

Project Engineer/Surveyor/Planner (E/S/P)

The project engineer/surveyor/planner assist the project manager and the technical manager(s) in establishing the appropriate design and review criteria, ensure that the review and checking forms are properly used and work to produce designs that are accurate, complete and coordinated.

Project Team

All members of the project staff assist in providing a high quality of work.

Procedures

The Quality Assurance Plan

- Deliverables for the project should be well defined, including their related schedule. These should include such items as design criteria, reports, schematics, contract drawings, specifications, calculations, cost estimates, etc. These deliverables will be listed in the work plan.
- Description of the specific quality assurance procedures to be applied to various elements of the services to include the level of frequency of review required. Include or make references to specific procedures for verifying computer programs, preparing and checking calculations, checking of drawings, drafting standards to be used, and coordination checking. These descriptions will be listed in the work plan.
- Identification of elements of the project, if any, requiring special quality assurance attention or emphasis. Include applicable standards of quality of practice to be met, level of completeness, or extent of detail required. For this project, that will include review of processes for construction phasing/staging, secondary hydraulic impacts to existing facilities, and limitations for environmental impact.
- As outlined in the work plan definition of quality assurance responsibilities and authorities within the project team. List names of key personnel, by discipline, responsible for design as well as for checking, including project organization chart.
- Estimation of the resources required for the quality assurance functions to include specific timing, budgets, and manpower requirements. Include these quality assurance functions in overall project

schedule. Identify deliverables to be reviewed at each stage (i.e. 35 percent, 65 percent, and 100 percent).

- Submittal of plans and computations at the preplanned milestones (i.e. 35 percent, 65 percent and 100 percent levels) should be accompanied by a statement that **Psomas** has been following its quality assurance plan. This may include copies of appropriate lists of deliverables, tables and plan sheet punch lists that show columns for checking, revisions, back checking, and quality control reviews. Documentation of quality control procedures is considered to be a requisite element of each review submittal, as described in the technical manuals.

Technical Review of Plans

Prior to the final submittal, the QCM shall perform an internal quality assurance review with the technical managers E/S/P/C and engineers experienced in the appropriate discipline(s). The purpose of the review is to satisfy the QCM that the plans and special provisions are of quality acceptable to the client as well as **Psomas**. The criteria for acceptance will be products of neat appearance, well organized, technically and grammatically correct, checked, signed and stamped by the drafter, designer, checker and engineer, as appropriate.

Checking Procedure

In keeping with Psomas policy and sound engineering practice, all design analyses, calculations, drawings, specifications, cost estimates, other contract documents, and reports produced by the Company are to be checked prior to submission to clients or agencies. Detailed procedures for the checking of various types of documents are defined in the Psomas Technical Manuals. Staff involved in design are expected to be well versed in these procedures.

The Technical Managers are normally responsible for the quality assurance review, as overseen by the QCM. The reviews are conducted independently of the project e/s/p who prepared the design. A set of check prints will be formalized to document the checking process. If the technical manager is directly involved in the project, the project manager will arranged with another senior e/s/p to perform the review.

Different colors are used to identify the various stages of the checking process.

- Yellow is used to indicate agreement, and all lines, dimensions, and written text are to be yellowed-in if correct.
- Red is used to indicate required corrections and additions.
- Green is used by the project e/s/p to indicate approval of changes, plus additional changes as agreed to by the technical manager.
- Blue is used to indicate that changes to the document original have been made.
- Green is also used to verify that the change to the document original is correct.
- Black is used for non-record comments or instructions.

Check prints are formalized through the addition of a check print stamp. On the stamp, each participant in the checking process signs on the appropriate line, indicating that that stage of the process is completed.

Checklists

Checklists are provided in the Technical Manuals for normal E/S/P/C activities. These checklists should be reviewed by the project manager, technical manager and project engineer/surveyor/planner (e/s/p) prior to beginning the project. This review will determine which checklist items will be included in the design. As each element of the design is completed, the project e/s/p should initial the checklist items that have been completed. The technical manager initials the checklist items as the final review progresses.

QCM and PIC Review of Plans

In addition to the technical manager's quality assurance review, the Quality Control Manager and PIC reviews all deliverables. The purpose of these reviews is not to supplement or replace the technical manager's review, but to add a perspective which is to confirm that the deliverables committed to the client are all included, and that the deliverables meet the level of client expectations that were originally proposed by Psomas.

Additional Requirements

As Psomas is the lead for a multi-disciplinary technical team, when responding to a client on these quality assurance issues, the following will also be a requirement in addition to the above. That Psomas:

- Define the requirements for documentation for the filing of design notes, calculations, drawings, and supporting materials, and for the specific assigned responsibilities in satisfying these requirements.
- Define procedures for resolving differing technical viewpoints.
- Define design change control procedures to be employed.
- Define internal approval procedures.
- Define external communication procedures and protocol.

Reference to Manuals (Available in the Psomas Intranet to all employees):

- **Project Management Manual**

- Quality assurance exists throughout all aspects and phases of project management at Psomas, and thus all parts of the Project Management Manual. The team leader must be satisfied that the project manager clearly understands each new project, including the following:
 - Contractual arrangements
 - Detail scope
 - Standards to be used
 - Tasks/responsibilities
 - Schedules/budget
 - Deliverables

- **Technical Manuals**

Important elements of quality assurance incorporated in the technical manuals include the following:

- Design criteria collection
- Definition of design standards and/or agency manuals to be used
- Design criteria review forms
- Drafting standards to be used (client or Psomas)
- Computer calculation review forms
- Review forms/checklists for:
 - *Technical Managers of E/S/P/C Services*
 - *Project Engineers*
 - *Engineers*
 - *Surveyors*
 - *Draftspersons*

During the project planning and start-up phase, the PIC and QCM will work with the project and technical managers to select the checking and review forms applicable to a particular project. They may add additional review and checking items that are unique for that project. These will be included in the project work plan.

SECTION VIII

SUMMARY

This work plan outlines the sequence of work, specific tasks, and general timeline goals for the efforts the Psomas team will provide. However, we consider it a flexible, living document that will adjust as the project progresses. This must occur as the design considerations and permitting process evolve and additional considerations are discovered and addressed. Flexibility in the scope schedule has been built into the work plan.

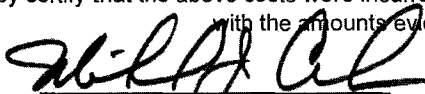
As previously stated, our goal at the end of the project is to obtain a USACE Section 408 permit, obtain other jurisdictional permits, and provide a set of documents sufficient to satisfy the further development of the project.

REQUEST FOR DISBURSEMENT

Name of Grantee/Contractor: PSOMAS		Agreement Number: 11-101		Invoice Number: 81966	
Address (include zip code): 555 S. Flower Street, Ste. #4400 Los Angeles, CA 90071		Project Name: BALLONA WETLANDS ECOLOGICAL RESERVE			
		Billing Period Covered: From: 4/27/2012 To: 5/31/2012			
Work Plan Task Number and Name <i>(insert rows as needed for work plan)</i>	Task Budget	Costs Incurred this Period	Total Cost to Date	Remaining Balance	
Task 1. Project Initiation	\$ 52,980.00	\$ 12,945.00	\$ 34,555.00	\$ 18,425.00	
Task 2. Data Gathering	\$ 483,770.00	\$ 135,747.75	\$ 141,177.75	\$ 342,592.25	
Task 3. EIR/EIS Support	\$ 100,220.00	\$ -	\$ -	\$ 100,220.00	
Task 4. Engineering Design Services					
4.1 30% Preliminary Design	\$ 656,735.00	\$ -	\$ -	\$ 656,735.00	
4.2 70% Design Submittal	\$ 609,840.00	\$ -	\$ -	\$ 609,840.00	
4.3 100% Design - Construction Documents	\$ 340,260.00	\$ -	\$ -	\$ 340,260.00	
	\$ -	\$ -	\$ -	\$ -	
	\$ -		\$ -	\$ -	
				\$ -	
TOTAL	\$ 2,243,805.00	\$ 148,692.75	\$ 175,732.75	\$ 2,068,072.25	
LESS Ten (10%) Percent Withhold (if applicable) Not applicable see Progress report		\$ -	Attach all receipts of expenditures , Progress Report & other supporting documents required.		
TOTAL AMOUNT REQUESTED		\$ 148,692.75			

CERTIFICATION OF GRANTEE/CONTRACTOR

I hereby certify that the above costs were incurred in the performance of work required under the agreement and are consistent with the amounts evidenced by supporting documents and expenditures.


Signature

Michael J. Crehan, VP
Printed Name and Title

6/27/2012
Date

(FOR STATE COASTAL CONSERVANCY USE ONLY)

AGREEMENT EXPENDITURE APPROVALS

The undersigned certifies that all conditions precedent to disbursement and all other legal prerequisites for this disbursement have been met.

Approval Requested:		Approval Recommended:		Request Approved:	
Project Manager		Work Group Leader		Executive Officer	
Budget Item:			Project/Program:		

GRANTEE/CONTRACTOR DIRECT EXPENDITURE:		
(A) Materials and Equipment	Reference	Amount
SUB-TOTAL (A)		\$ -
(B) Labor - Description	Reference	Amount
Psomas Labor Charges		\$ 103,022.50
SUB-TOTAL (B)		\$ 103,022.50
(C) SUB-CONTRACTOR'S EXPENDITURE:		
Name	Reference	Amount
Group Delta Consulting	20901	\$42,256.25
Commercial Aerial Images	360	\$3,414.00
SUB-TOTAL (C)		\$45,670.25
GRAND TOTAL (A+B+C)*		\$148,692.75

NOTE: (1) * Should agree with "Total Costs Incurred This Period" on front page.

BALLONA WETLANDS RESTORATION BILLING BACKUP

Billing Period Ending May 31, 2012

Job No. 1CCC010100

Task 1	PROJECT INITIATION
	<p><u>Civil:</u></p> <p>The effort during this second billing period (May) continued the project initiation begun last month. From a management standpoint, this included our weekly technical team conference calls, internal team meetings and conference calls, and a site orientation tour with additional Psomas engineering staff. We prepared and submitted two of the work plan sections - the Survey Workplan and the QA/QC Workplan. Our subconsultant Group Delta also prepared and submitted their Geotechnical Workplan. Psomas provided a section to the overall H & H Workplan addressing the local drainage analysis process. And finally related to Workplan efforts, we commenced the overall Psomas Team Workplan. During this billing period, the four deliverables provided were the Survey, Geotechnical, QA/QC, and H&H Workplan sections.</p>
	<p><u>Geotech:</u></p> <p>During this second billing period (May), Group Delta staff attended meetings and coordinated regarding their geotechnical issues, and continued their research efforts. The deliverable they provided was the Geotechnical Work Plan. Billing was received from Group Delta for these efforts and is included in the payment request. A more detailed description of their efforts is included on their invoice.</p>
	<p><u>Structural:</u></p> <p>The structural engineer's (JCE) involvement has still not been initiated.</p>
	<p><u>Survey:</u></p> <p>Survey continued heavily with field and office support for the aerial topography, channel cross sectional data collection and preparation, site specific data collection, the Survey Workplan, and coordination of survey needs for the project. The aerial survey will still require near-term adjustment for incorporation of the transects for earthwork quantity estimates, and channel cross sectional data. This is expected to be completed next month. A third adjustment may be necessary if and when data for the channel dredging is provided. This adjustment should only have a minor effect on the downstream portion of the hydraulics model. This data is not expected for a number of months. Deliverables included two items, the Survey Workplan and the boundary and aerial survey.</p>

BALLONA WETLANDS RESTORATION BILLING BACKUP

Billing Period Ending May 31, 2012

Job No. 1CCC010100

Task 2	DATA GATHERING
	<p><u>Civil:</u></p> <p>The utility data collection was completed. We initiated the local hydrology of the upstream basin analysis which will be utilized for the Psomas local hydrology model for conduit and conveyence sizing, as well as incorporation into the overall hydrology analysis. No deliverables wer required beyond those described in Task 1.</p>
	<p><u>Geotech:</u></p> <p>See description above in Task 1</p>
	<p><u>Structural:</u></p>
	<p><u>Survey:</u></p> <p>Field data continued to be collected. Collection was expanded to include areas within Area A, and along the existing Ballona Creek levees. See the Task 1 description for further detail.</p>

BALLONA WETLANDS RESTORATION BILLING BACKUP

Billing Period Ending May 31, 2012

Job No. 1CCC010100

Task 3	EIR/EIS SUPPORT
	<i>Civil:</i>
	Minor support related to EIR efforts was provided.
	<i>Geotech:</i>
	<i>Structural:</i>
	<i>Survey:</i>

Task 4	DESIGN SERVICES
	<i>Civil:</i>
	<i>Geotech:</i>
	<i>Structural:</i>
	<i>Survey:</i>

BALLONA WETLANDS RESTORATION BILLING BACKUP

Billing Period Ending May 31, 2012

Job No. 1CCC010100

Task 5	70% DESIGN DOCUMENTS
	<u>Civil:</u>
	<u>Geotech:</u>
	<u>Structural:</u>
	<u>Survey:</u>

Task 6	100% CONSTRUCTION DOCUMENTS
	<u>Civil:</u>
	<u>Geotech:</u>
	<u>Structural:</u>
	<u>Survey:</u>

BALLONA WETLANDS RESTORATION BILLING BACKUP

Billing Period Ending May 31, 2012

Job No. 1CCC010100

Task 7	ADVISORY SUPPORT SERVICES
	<u>Civil:</u>
	<u>Geotech:</u>
	<u>Structural:</u>
	<u>Survey:</u>

BALLONA WETLANDS RESTORATION

Invoice Task No.	Item	Task Description	Billing Summary					Invoice # 81966	
			Budget	Percent Invoiced	Remaining Budget	Invoiced To Date	Prior Invoiced Amount	Current Invoice Amount	
	1	PROJECT INITIATION							
200	1.1	PROJECT SCHEDULE / DETAILED WORK PLAN	\$12,360	57.4%	\$ 5,270.00	\$ 7,090.00	\$ 977.50	\$ 6,112.50	
201	1.2	START UP MEETINGS - ENTIRE TEAM	\$13,880	85.6%	2,000.00	11,880.00	7,462.50	4,417.50	
100	1.3	INITIATE PERMITS FOR FIELD WORK (2)	\$11,620	99.3%	85.00	11,535.00	11,535.00	0.00	
202	1.4	MEETINGS	\$8,420	14.3%	5,500.00	920.00	0.00	920.00	
203	1.5	COORDINATION	\$8,700	36.0%	5,570.00	3,130.00	1,635.00	1,495.00	
		SUBTOTAL	\$52,980	65.2%	\$18,425.00	\$34,555.00	\$ 21,610.00	\$12,945.00	
	2	DATA GATHERING							
107	2.1	TOPOGRAPHIC SURVEY	\$40,660	100.0%	20.00	40,640.00	0.00	40,640.00	
101	2.2	BOUNDARY / EASEMENTS EXHIBIT FROM ALTA	\$5,340	100.0%	2.50	5,337.50	2,205.00	3,132.50	
204	2.3	UTILITY MAPPING	\$9,200	89.6%	952.50	8,247.50	3,225.00	5,022.50	
108	2.4	AERIAL PHOTOGRAPHY	\$5,000	99.8%	11.00	4,989.00	0.00	4,989.00	
205	2.5	GEOTECH TEST LOCATIONS	\$5,440	100.0%	0.00	5,440.00	0.00	5,440.00	
102	2.6	HABITAT SURVEY OVERLAYS	\$4,660	0.0%	4,660.00	0.00	0.00	0.00	
103	2.7	SPECIFIC DESIGN SURVEY	\$7,880	99.9%	5.00	7,875.00	0.00	7,875.00	
104	2.7a	CHANNEL CROSS SECTIONS (5)	\$28,460	68.3%	9,020.00	19,440.00	0.00	19,440.00	
105	2.8	CONSTRAINTS MAP	\$6,640	0.0%	6,640.00	0.00	0.00	0.00	
206	2.9	GEOTECHNICAL FIELD INVESTIGATION	\$98,520	37.4%	61,703.75	36,816.25	0.00	36,816.25	
207	2.9a	NATIVE AMERICAN MONITOR (6)	\$11,110	0.0%	11,110.00	0.00	0.00	0.00	
208	2.10	LABORATORY PHYSICAL TESTING	\$40,660	0.0%	40,660.00	0.00	0.00	0.00	
209	2.11	CHEMICAL TESTING	\$30,000	0.0%	30,000.00	0.00	0.00	0.00	
210	2.12	PRELIMINARY GEOTECHNICAL ANALYSIS	\$56,600	0.0%	56,600.00	0.00	0.00	0.00	
211	2.13	STRATEGY AND MASTER PLANNING (3)	\$41,440	27.8%	29,907.50	11,532.50	0.00	11,532.50	
212	2.14	MEETINGS	\$32,640	0.8%	32,370.00	270.00	0.00	270.00	
213	2.15	COORDINATION	\$59,520	1.0%	58,930.00	590.00	0.00	590.00	
		SUBTOTAL	\$483,770	29.2%	\$342,592	\$141,178	\$ 5,430.00	\$135,747.75	
	3	EIR / EIS SUPPORT (ONGOING)							
214	3.1	EXHIBITS - AS NEEDED - BUDGET ALLOCATION	\$27,440	0.0%	27,440.00	0.00	0.00	0.00	
215	3.2	STUDIES - AS NEEDED - BUDGET ALLOCATION	\$45,180	0.0%	45,180.00	0.00	0.00	0.00	
		SUBTOTAL	\$72,620	0.0%	\$72,620	\$ -	\$ -	\$ -	
	4	DESIGN SERVICES							
	4.1	30% PRELIMINARY DESIGN							
4101	4.1.1	DEVELOP OVERALL SITE PLAN	\$7,340	0.0%	7,340.00	0.00	0.00	0.00	
4102	4.1.2	LEEVE REMOVAL	\$18,315	0.0%	18,315.00	0.00	0.00	0.00	
4103	4.1.3	LINCOLN BOULEVARD ULTIMATE ALIGNMENT STUDY	\$10,550	0.0%	10,550.00	0.00	0.00	0.00	
4104	4.1.4	MAINTENANCE ROAD DESIGN	\$9,030	0.0%	9,030.00	0.00	0.00	0.00	
4105	4.1.5	SOUTH LEEVE LAYOUT DESIGN	\$27,100	0.0%	27,100.00	0.00	0.00	0.00	
4106	4.1.6	LEEVE PROTECTION DESIGN	\$28,150	0.0%	28,150.00	0.00	0.00	0.00	
4107	4.1.7	GAS WELLS AND PIPELINE EXHIBIT	\$11,600	0.0%	11,600.00	0.00	0.00	0.00	
4108	4.1.8	CONSTRUCTION SEQUENCING EXHIBITS	\$15,760	0.0%	15,760.00	0.00	0.00	0.00	
4109	4.1.9	O&M TECHNICAL SUPPORT	\$16,080	0.0%	16,080.00	0.00	0.00	0.00	
4110	4.1.10	LAND OWNERSHIP EXHIBIT FOR LEEVE REMOVAL	\$10,800	0.0%	10,800.00	0.00	0.00	0.00	
4111	4.1.11	PRELIM GRADING FOR AREA B AND AREA C DISPOSAL	\$20,300	0.0%	20,300.00	0.00	0.00	0.00	
4112	4.1.12	DIRT TRANSPORT STUDIES AND EXHIBITS	\$20,560	0.0%	20,560.00	0.00	0.00	0.00	
4113	4.1.13	PRELIMINARY HYDROLOGY AND DRAINAGE FOR AREA C	\$11,885	0.0%	11,885.00	0.00	0.00	0.00	
4114	4.1.14	PRELIMINARY HYDROLOGY AND DRAINAGE FOR AREA B	\$11,885	0.0%	11,885.00	0.00	0.00	0.00	
4115	4.1.15	DRAINAGE STRUCTURES DESIGN	\$20,590	0.0%	20,590.00	0.00	0.00	0.00	
4116	4.1.16	BRIDGE DESIGN STUDY	\$32,100	0.0%	32,100.00	0.00	0.00	0.00	
4117	4.1.17	EARTHWORK CALCS - AREA A, B AND C	\$9,920	0.0%	9,920.00	0.00	0.00	0.00	
4118	4.1.18	PRELIM UTILITY ANALYSIS	\$16,810	0.0%	16,810.00	0.00	0.00	0.00	
4119	4.1.19	PRELIM BIKE TRAIL/MAINT. ROAD PLANS	\$13,680	0.0%	13,680.00	0.00	0.00	0.00	
4120	4.1.20	CONSTRUCTABILITY ANALYSIS	\$17,620	0.0%	17,620.00	0.00	0.00	0.00	
4121	4.1.21	ENGINEERS CONST COST ESTIMATE	\$15,260	0.0%	15,260.00	0.00	0.00	0.00	
4122	4.1.22	PEER REVIEW OF HYDROLOGY CONSULTANT DESIGN	\$25,080	0.0%	25,080.00	0.00	0.00	0.00	
4123	4.1.23	COMPLETION OF GEOTECHNICAL ANALYSIS	\$98,080	0.0%	98,080.00	0.00	0.00	0.00	
4124	4.1.24	GEOTECHNICAL REPORT	\$44,960	0.0%	44,960.00	0.00	0.00	0.00	
4125	4.1.25	STRUCTURES REPORT	\$10,320	0.0%	10,320.00	0.00	0.00	0.00	
4126	4.1.26	CONSTRUCTION MASTER PLANNING REFINEMENT	\$15,200	0.0%	15,200.00	0.00	0.00	0.00	
4127	4.1.27	PROJECT MEETINGS	\$32,640	0.0%	32,640.00	0.00	0.00	0.00	
4128	4.1.28	PROJECT COORDINATION	\$59,520	0.0%	59,520.00	0.00	0.00	0.00	
4129	4.1.29	APPLICATION AND PERMIT PROCESSING	\$25,600	0.0%	25,600.00	0.00	0.00	0.00	
		SUBTOTAL	\$656,735	0.0%	\$656,735		\$ -	\$ -	

\\vestla\Projects\1CCC010100\ADMIN\Billing\Monthly Billing Back Up\20120627 Billing Summary

BALLONA WETLANDS RESTORATION

Invoice Task No.	Item	Task Description	Billing Summary Invoice # 81966					
			Budget	Percent Invoiced	Remaining Budget	Invoiced To Date	Prior Invoiced Amount	Current Invoice Amount
	4.2	70% DESIGN DOCUMENTS						
4201	4.2.1	LEEVE REMOVAL DESIGN	\$30,620	0.0%	30,620.00	0.00	0.00	0.00
4202	4.2.2	SOILS ENG STABILITY ANALYSIS COORDINATION	\$16,400	0.0%	16,400.00	0.00	0.00	0.00
4203	4.2.3	LEEVE PROTECTION DESIGN / DETAILS	\$48,240	0.0%	48,240.00	0.00	0.00	0.00
4204	4.2.4	MAINTENANCE ROAD / BIKE TRAIL DESIGN	\$22,030	0.0%	22,030.00	0.00	0.00	0.00
4205	4.2.5	SOUTH LEEVE DESIGN	\$42,200	0.0%	42,200.00	0.00	0.00	0.00
4206	4.2.6	GAS CO FACILITIES ABANDONMENT DOCUMENTATION	\$26,350	0.0%	26,350.00	0.00	0.00	0.00
4207	4.2.7	LOCAL AGENCY SUPPORT TO HYDROLOGY CONSULTANT FOR GRADING DESIGN	\$34,300	0.0%	34,300.00	0.00	0.00	0.00
4208	4.2.8	GRADING PLANS AREA B AND AREA C	\$35,900	0.0%	35,900.00	0.00	0.00	0.00
4209	4.2.9	STORM DRAINAGE CULVERT EXTENSIONS / RELOCATIONS - AREA B	\$41,080	0.0%	41,080.00	0.00	0.00	0.00
4210	4.2.10	FINAL EARTHWORK CALCS - ALL AREAS	\$9,080	0.0%	9,080.00	0.00	0.00	0.00
4211	4.2.11	SWPPP - ALL AREAS	\$9,240	0.0%	9,240.00	0.00	0.00	0.00
4212	4.2.12	EROSION CONTROL PLANS - ALL AREAS, WITH PHASING	\$20,040	0.0%	20,040.00	0.00	0.00	0.00
4213	4.2.13	CONSTRUCTION MASTER PLANNING COMPLETION	\$15,000	0.0%	15,000.00	0.00	0.00	0.00
4214	4.2.14	STAGED / PHASED CONSTRUCTION EXHIBITS	\$8,980	0.0%	8,980.00	0.00	0.00	0.00
4215	4.2.15	INTERIM CONDITIONS EXHIBITS	\$14,780	0.0%	14,780.00	0.00	0.00	0.00
4216	4.2.16	DRAINAGE HYDRAULIC CALCS - AREA B AND AREA C	\$11,120	0.0%	11,120.00	0.00	0.00	0.00
4217	4.2.17	HAUL ROUTE EXHIBITS, APPLICATION AND DOCS	\$7,900	0.0%	7,900.00	0.00	0.00	0.00
4218	4.2.18	C.U.P. FOR AREA A DIRT EXPORT - LA COUNTY	\$15,400	0.0%	15,400.00	0.00	0.00	0.00
4219	4.2.19	ENGINEERS CONSTRUCTION COST ESTIMATE	\$15,440	0.0%	15,440.00	0.00	0.00	0.00
4220	4.2.20	APPLICATIONS AND SUBMITTALS	\$16,640	0.0%	16,640.00	0.00	0.00	0.00
4221	4.2.21	RESPOND TO GEOTECHNICAL COMMENTS	\$21,740	0.0%	21,740.00	0.00	0.00	0.00
4222	4.2.22	COMPLETE BRIDGE DESIGN	\$23,200	0.0%	23,200.00	0.00	0.00	0.00
4223	4.2.23	SUPPORT FOR PUBLIC OUTREACH	\$14,400	0.0%	14,400.00	0.00	0.00	0.00
4224	4.2.24	PROJECT MEETINGS AND WORKSHOPS	\$32,640	0.0%	32,640.00	0.00	0.00	0.00
4225	4.2.25	PROJECT COORDINATION	\$59,520	0.0%	59,520.00	0.00	0.00	0.00
4226	4.2.26	PEER REVIEW OF HYDROLOGY CONSULTANT DOCS	\$17,600	0.0%	17,600.00	0.00	0.00	0.00
		SUBTOTAL	\$609,840	0.0%	\$609,840	\$ -	\$ -	\$ -
	4.3	100% CONSTRUCTION DOCUMENTS						
4301	4.3.1	RESPOND TO LEEVE PROTECTION COMMENTS	\$29,800	0.0%	29,800.00	0.00	0.00	0.00
4302	4.3.2	RESPOND TO SOUTH LEEVE DESIGN COMMENTS	\$17,500	0.0%	17,500.00	0.00	0.00	0.00
4303	4.3.3	RESPOND TO GRADING PLANS COMMENTS - AREA B / C	\$22,200	0.0%	22,200.00	0.00	0.00	0.00
4304	4.3.4	RESPOND TO DRAINAGE CULVERT COMMENTS	\$22,300	0.0%	22,300.00	0.00	0.00	0.00
4305	4.3.5	RESPOND TO HYDROLOGY COMMENTS - AREA B / C	\$16,800	0.0%	16,800.00	0.00	0.00	0.00
4306	4.3.6	RESPOND TO GEOTECHNICAL COMMENTS	\$21,740	0.0%	21,740.00	0.00	0.00	0.00
4307	4.3.7	RESPOND TO BRIDGE COMMENTS	\$30,640	0.0%	30,640.00	0.00	0.00	0.00
4308	4.3.8	RESPOND TO SWPPP / EROSION CONTROL COMMENTS	\$13,160	0.0%	13,160.00	0.00	0.00	0.00
4309	4.3.9	FINAL EARTHWORK CALCS - ALL AREAS	\$9,220	0.0%	9,220.00	0.00	0.00	0.00
4310	4.3.10	RESPOND TO EIR / EIS COMMENTS	\$32,800	0.0%	32,800.00	0.00	0.00	0.00
4311	4.3.11	ENGINEERS CONSTRUCTION COST ESTIMATE	\$13,520	0.0%	13,520.00	0.00	0.00	0.00
4312	4.3.12	HAUL ROUTE / EXPORT APPROVAL	\$7,300	0.0%	7,300.00	0.00	0.00	0.00
4313	4.3.13	C.U.P. APPROVAL	\$10,200	0.0%	10,200.00	0.00	0.00	0.00
4314	4.3.14	SUPPORT CLOMR PREP BY HYDROLOGY CONSULTANT	\$25,900	0.0%	25,900.00	0.00	0.00	0.00
4315	4.3.15	AGENCY DOCUMENT AND PERMIT PROCESSING	\$21,100	0.0%	21,100.00	0.00	0.00	0.00
4316	4.3.16	PROJECT MEETINGS AND WORKSHOPS	\$16,320	0.0%	16,320.00	0.00	0.00	0.00
4317	4.3.17	PROJECT COORDINATION	\$29,760	0.0%	29,760.00	0.00	0.00	0.00
		SUBTOTAL	\$340,260	0.0%	340,260.00	0.00	0.00	0.00
	5	ADVISORY SUPPORT SERVICES	\$27,600	0.0%	27,600.00	0.00	0.00	0.00

PSOMAS

Invoice

PO Box 51463, Los Angeles, CA 90051-5763
888.203.3311 fax: 213.223.1444
www.psomas.com

Mary Small
State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

June 27, 2012

Project No: 1CCC010100
Invoice No: 81966

Total this Invoice: \$148,692.75

Ballona Wetlands Ecological Reserve
Contract # 11-101

INITIATED PROJECT

Professional Services from April 27, 2012 to May 31, 2012

Task 00101 2.2 Boundary Easements Exh. from ALTA

Professional Personnel

	Hours	Rate	Amount
Two Person Survey Party	12.50	245.00	3,062.50
Project Surveyor	.50	140.00	70.00
Totals	13.00		3,132.50
Total Labor			3,132.50

Total this Task \$3,132.50

Task 00103 Specific Design Survey Task 2.7

Professional Personnel

	Hours	Rate	Amount
Two Person Survey Party	28.00	245.00	6,860.00
Principal	.50	230.00	115.00
Project Manager	4.50	200.00	900.00
Totals	33.00		7,875.00
Total Labor			7,875.00

Total this Task \$7,875.00

Task 00104 Channel Cross Sections 5 Task 2.7a

Professional Personnel

	Hours	Rate	Amount
Two Person Survey Party	34.50	245.00	8,452.50
One Person Survey Party	14.00	175.00	2,450.00

Please reference invoice number on payment. Invoices more than 30 days past due will be subject to interest charges.

Project	1CCC010100	Ballona Wetlands Ecological Reserve	Invoice 81966
Principal	7.00	230.00	1,610.00
Project Manager	5.50	200.00	1,100.00
Project Engineer	3.00	155.00	465.00
Project Surveyor	5.50	140.00	770.00
Senior Autocadd Technician	34.00	120.00	4,080.00
Drafter	.50	90.00	45.00
Project Assistant	5.50	85.00	467.50
Totals	109.50		19,440.00
Total Labor			19,440.00

Total this Task \$19,440.00

Task	00107	Topographic Survey Task 2.1
Professional Personnel		
	Hours	Rate
Two Person Survey Party	19.00	245.00
Principal	8.50	230.00
Project Manager	4.00	200.00
Project Surveyor	94.00	140.00
Drafter	223.00	90.00
Totals	348.50	
Total Labor		40,640.00

Total this Task \$40,640.00

Task	00108	Aerial Topography Task 2.4
Professional Personnel		
	Hours	Rate
Drafter	17.50	90.00
Totals	17.50	
Total Labor		1,575.00

Reimbursable Expenses

Consultants	3,414.00
Total Consultants	3,414.00
Total this Task	\$4,989.00

Task	00200	Proj Schedule/Detailed Work Pln Task 1.1
Professional Personnel		
	Hours	Rate
Principal	25.50	230.00
Project Engineer	.50	155.00
Project Assistant	2.00	85.00

Project	1CCC010100	Ballona Wetlands Ecological Reserve	Invoice 81966
	Totals	28.00	6,112.50
	Total Labor		6,112.50

Total this Task \$6,112.50

Task 00201 Start Up Meetings Entire Team Task 1.2

Professional Personnel

	Hours	Rate	Amount
Principal	6.50	230.00	1,495.00
Civil Engineer Designer	18.50	135.00	2,497.50
Project Assistant	5.00	85.00	425.00
Totals	30.00		4,417.50
Total Labor			4,417.50

Total this Task \$4,417.50

Task 00202 Meetings Task 1.4

Professional Personnel

	Hours	Rate	Amount
Principal	4.00	230.00	920.00
Totals	4.00		920.00
Total Labor			920.00

Total this Task \$920.00

Task 00203 Coordination Task 1.5

Professional Personnel

	Hours	Rate	Amount
Principal	6.50	230.00	1,495.00
Totals	6.50		1,495.00
Total Labor			1,495.00

Total this Task \$1,495.00

Task 00204 Utility Mapping Task 2.3

Professional Personnel

	Hours	Rate	Amount
Senior Project Manager	6.00	210.00	1,260.00
Project Engineer	16.00	155.00	2,480.00
Civil Engineer Designer	9.50	135.00	1,282.50
Totals	31.50		5,022.50
Total Labor			5,022.50

Project	1CCC010100	Ballona Wetlands Ecological Reserve	Invoice 81966
Total this Task			\$5,022.50
Task	00205	Geotech Test Locations Task 2.5	
Reimbursable Expenses			
Consultants			5,440.00
Total Consultants			5,440.00
Total this Task			\$5,440.00
Task	00206	Geotech Field Investigation Task 2.9	
Reimbursable Expenses			
Consultants			36,816.25
Total Consultants			36,816.25
Total this Task			\$36,816.25
Task	00211	Strategy and Master Planning 3 Task 2.13	
Professional Personnel			
		Hours	Rate
Principal		12.00	230.00
Project Engineer		44.50	155.00
Civil Engineer Designer		12.00	135.00
Project Assistant		3.00	85.00
Totals		71.50	11,532.50
Total Labor			11,532.50
Total this Task			\$11,532.50
Task	00212	Meetings Task 2.14	
Professional Personnel			
		Hours	Rate
Civil Engineer Designer		2.00	135.00
Totals		2.00	270.00
Total Labor			270.00
Total this Task			\$270.00
Task	00213	Coordination Task 2.15	
Professional Personnel			
		Hours	Rate
Project Engineer		2.50	155.00
Civil Engineer Designer		1.50	135.00

Project	1CCC010100	Ballona Wetlands Ecological Reserve	Invoice 81966
	Totals	4.00	590.00
	Total Labor		590.00

Total this Task	\$590.00
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Total this Invoice	\$148,692.75
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Outstanding Invoices

Number	Date	Balance	
81371	5/31/12	27,040.00	
Total Outstanding		27,040.00	
Account Balance Due			\$175,732.75

Invoice

Michael Crehan
 Psomas
 555 South Flower Street, Suite 4400
 Los Angeles, CA 90071-2416

June 10, 2012
 Invoice No: 20901



Project Manager Thomas Swantko
 Project LA962A Ballona Wetland Restoration - Engineering

During this period, we prepared a Geotechnical workplan that included locations of 65 explorations for investigation of the subsurface condition throughout the project and outlined our approach to working around protected habitats, describing the type of equipment and tasks to be performed. This included preparation of boring location plans overlaid on maps of protected areas, review of proposed locations by other members of the team and making adjustments as appropriate. Site walks were also performed to review access issues and to become familiarized with the site areas. We also participated in weekly team meetings/calls; attended a review meeting with LA County; met with the Gas Company and walked the site with the group. We reviewed requirements of the U.S. Army Corp regarding the investigation and analysis required for levees, which were used in development of the workplan. We went to Psomas to discuss surveying of boring locations in the field and reviewed archived geotechnical reports of past investigations conducted with the project limits. This previous borings were plotted on a map of the area. We assisted with input to the project description and QC documents, including discussion of construction staging and potential use of a cofferdam.

Professional Services through May 25, 2012

Professional Services

	Hours	Rate	Amount
Project Manager			
Pradel, Daniel	18.50	200.00	3,700.00
Reader, Michael	28.00	200.00	5,600.00
Sr. Project Engineer			
Swantko, Thomas	66.50	175.00	11,637.50
Project Engineer			
Chiu, Peter	103.00	150.00	15,450.00
Cunneen, James	2.50	150.00	375.00
Sr. Autocadd Technician			
Briffa, Nicholas	4.00	120.00	480.00
Latimer, Taylor	5.50	120.00	660.00
Drafter			
Fernandes, Konrad	33.00	85.00	2,805.00
Helma, Ashley	10.00	85.00	850.00
Administrative Assistant			
Beltran, Salvador	9.50	65.00	617.50
Beltran, Salvador	1.25	65.00	81.25

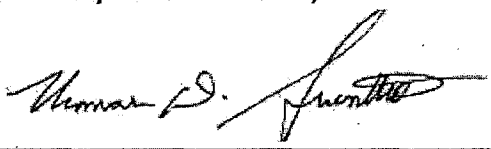
32 Mauchly, Suite B ▲ Irvine, California 92618-2336 ▲ (949) 450-2100 voice ▲ (949) 450-2108 fax
 Torrance (310) 320-5100 ▲ Ontario (909) 605-6500 ▲ San Diego (858) 536-1000 ▲ El Centro (760) 337-2067 ▲ Sacramento (916) 774-7123
 www.GroupDelta.com

Project	LA962A	Ballona Wetland Restoration - Engineerin	Invoice	20901
	Totals	281.75	42,256.25	
	Total Professional Services			42,256.25
		Total Project Invoice Amount		\$42,256.25 <i>mjc</i>

	Current	Prior	Total
Billing Summary	42,256.25	0.00	42,256.25

We appreciate the opportunity to provide our services. Please contact us if you have any questions.

Remit Payment to: Group Delta Consultants, Inc. 32 Mauchly Suite B Irvine, CA 92618

Authorized By: 

Thomas Swantko

Note:
Efforts + fees as expected.
mjc

Commercial Aerial Images, Inc.
1787 Whittier Ave
Costa Mesa, CA 92627

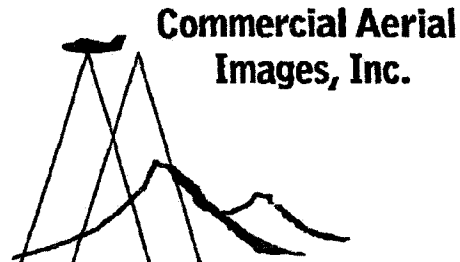
COM195

Invoice

Date	Invoice #
5/8/2012	360

Bill To

PSOMAS
3 Hutton Center Drive, Suite 200
Santa Ana, CA 92707



Item	Description <i>Ron Moojen</i>	Qty	Rate	Amount
RC-30 Mobilization	Job No 1CC010100 <i>T-108 66300</i> Oil Fields, just North of LAX		450.00	450.00T
Airspace Class B			250.00	250.00T
Flight Line Charge		5	40.00	200.00T
Color Exposure	\$200 Minimum charge.	31	35.00	1,085.00T
Color Scans		31	30.00	930.00T
Film Annotation	\$15.00 Minimum	31	1.00	31.00T
Color Balancing			38.00	38.00T
Color Contact Prints		31	5.95	184.45T
	Sales Tax		7.75%	245.55
<p style="text-align: center;">RECEIVED</p> <p style="text-align: center;">MAY 10 2012</p> <p>Initial: <i>gr</i></p>				
Total				\$3,414.00

EXHIBIT 10

California Department of Fish and Game
Att: C. Bonham Executive Director
Att: All California Fish and Game Commissioners
Re: Ballona Wetlands Ecological Preserve
California Contract Code Violation by DFG
California Water Code Violations by DFG

September 14, 2012

Executive Director Bonham,

A Notice of Exemption was filed by this Agency on August 13, 2012 and signed by Agency Staff Person Ed Pert, then transmitted to the California Office of Planning and Research. The Project title is:

GEOTECHNICAL AND BIOLOGICAL DATA COLLECTOIN TO SUPPORT HABITAT RESTORATION AND MANAGEMENT PLANNING ACTIVITIES AT THE BALLONA WETLANDS ECOLOGICAL PRESERVE.

Attachment 1. (DFG NOI)

I hereby notify this agency that it is currently in violation of California Law in regard to the afore said noticed project.

A Contractor acting on behalf of the Agency has been hired in violation of California (Contract Code Notification and Conflict Requirements pursuant to Sections 10140-10141 and 10515-10518). The Contractors name is Psomas. The Contractor was hired by the California Coastal Conservancy.

Attachment 2 (Psomas Proposal to Coastal Conservancy)

The Coastal Conservancy approved the agreement with Psomas on April 20th, 2012.

Attachment 3 (Standard Agreement by Coastal Conservancy)

Psomas submitted a Request for Disbursement to the Coastal Conservancy for the work dated June 27, 2012.

Attachment 4 (Request for Disbursement from Psomas)

CALIFORNIA CONTRACT CODE

The contractor hired by the Coastal Conservancy and currently representing the California Department of Fish and Game was hired by the Conservancy without compliance with California Contract Code Notification and Conflict Requirement pursuant to Sections 10140-10141 and 10515-10518.

In my request submitted to the California Coastal Conservancy on August 23, 2012, pursuant to the California Public Records, Request No. 5 read as follows:

5. Provide any and all records that demonstrate that the Agency complied with California Contract Code Notification and Conflict Requirement pursuant to Sections 10140-10141 and 10515-10518 of California Contract Code in regard to Conservancy File Number 04-088, Ballona Wetlands Restoration Engineering and Technical Studies approved by the Governing Board on 1/19/2012 as it relates to contractors hired by the Agency in accordance with that approval.

Attachment 5 (John Davis PRA to Coastal Conservancy)

The Coastal Conservancy responded that it had no records responsive to this request No. 5. The Agency purported to respond to items 1-4, the Conservancy only responds to request No. 5. as follows:

We do not possess any further responsive records to your August 23, 2012 request.

Sincerely,

*Elena Eger
Senior Staff Attorney
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax*

Therefore, there is no public record to demonstrate the contractor currently acting on behalf of the DFG has been hired in conformance with the aforesaid requirements of California Contract Code Notification and Conflict Code Sections 10140-10141 and 10515 -10518. For this reason other qualified contractors were not offered the same opportunity to submit a proposals, resulting in discrimination, and the current contractor may be conflicted, as there is no proof to the contrary available as a public record.

My response to the Conservancy transmitted to the Agency on September 13th is attached. It confirms no such records exist.

Attachment 7 (Reply to Coastal Conservancy by John Davis)

STATE WATER CODE

The Contractor representing DFG is currently conducting geotechnical borings in the State Ballona Ecological Preserve.

Attachment 8 (DFG CCC Application)

Attachment 9 (CCC NOE)

Such borings on behalf of DFG will be extracted and will contain Waters of the State of California extracted from the underground as defined by (California Water Code Section 13710). The three aquifers that will be intercepted by such borings are the Bellflower Aquitard, Ballona Aquifer, and Silverado Aquifer. The Silverado aquifer extends South of the Palos Verdes peninsula and is a source of drinking water.

As a consequence of extracting groundwater (Waters of the State) from extracted geotechnical borings, the aforesaid contractor acting on behalf of this Agency is drilling water wells as defined by (California Water Code 13710).

California Water Code Section 13710

"Well" or "water well" as used in this chapter, means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the underground. This definition shall not include: (a) oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation, except those wells converted to use as water wells; or (b) wells used for the purpose of (1) dewatering excavation during construction, or (2) stabilizing hillsides or earth embankments.

A map produced by the United States Department of the Interior Geological Survey demonstrates the aforesaid aquifers and their depth from MSL.

Attachment 10 (USGS Cross-Sectional Map)

The aforesaid map is contained in GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1464.

Attachment 11 (USGS Water Supply Report)

The Contractor acting on behalf of DFG is therefore, artificially excavating and constructing by method of geotechnical borehole and extraction thereof containing water from the underground is, therefore, constructing a Water Well as defined by the California Water Code.

To drill such a water well, the Contractor must have a State License in accordance with the California Code of Regulations.

C57 - Water Well Drilling Contractor

*California Code of Regulations
Title 16, Division 8, Article 3. Classifications*

A well drilling contractor installs and repairs water wells and pumps by boring, drilling, excavating, casing, cementing and cleaning to provide a supply of uncontaminated water.

Authority cited: Sections 7008 and 7059, Reference: Sections 7058 and 7059 (Business and Professions Code)

When such a water well is drilled Well Completion Reports DWR-188 must be filed with the California Department of Water Resources according to the Department of Water Resources website @

http://www.water.ca.gov/groundwater/well_info_and_other/well_completion_reports.cfm

Therefore, no public record associated with this project demonstrates the contractor acting on behalf of DFG has a C-57 permit or has filed and or will file any Well Report on behalf of the DFG pursuant to (California Water Code 13710) regarding “geotechnical borings”. The contractor was not authorized by DFG to construct a water well and is doing so without formal permission of the Agency. Oversight by the Agency has failed.

In summary, the California Department of Fish and Game cannot prove to the public its aforesaid contractor was hired by the State of California within the requirements of (California Contract Codes 10140-10141 and 10515-10518).

The California Department of Fish and Game cannot prove to the public geotechnical borings portrayed by the aforesaid contractor for DFG **do not** meet the criteria of the definition of water well in accordance with (California Water Code 13710)

CADFG did not engage the aforesaid contractor to drill water wells.

For these reasons, I request the Executive Director of the California Department of Fish and Game, Charles Bonham to cease the aforesaid contractors drilling activities if and until the provisions of California Code are fully addressed by this Agency.

I request that this document be submitted to the California Fish And Game Commission prior to their next meeting.

I finally request that this document a submission for scoping in regard to the Ballona Wetlands Ecological Reserve Project currently being undertaken by this Agency.

Please reply to these concerns in a timely fashion.

Sincerely,

John Davis
PO 10152
Marina del Rey Ca. 90295

ATTACHMENT 1

NOTICE OF EXEMPTION

TO: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814
Tel#: (916) 322-2318
Fax#: (916) 322-3785

FROM: Calif. Dept of Fish and Game-R5
3883 Ruffin Road
San Diego, CA 92123
Tel#: (858) 467-4201
Fax#: (858) 467-4299

PROJECT TITLE: Geotechnical and biological data collection to support habitat restoration and management planning activities at the Ballona Wetlands Ecological Reserve

PROJECT LOCATION (CITY AND COUNTY): City and County of Los Angeles, south of Marina del Rey and north of Playa del Rey.

PROJECT DESCRIPTION: The approximately 600-acre Ballona Wetlands Ecological Reserve is the largest remaining tidal wetland area remaining in the Los Angeles area, and restoration and management of this degraded wetland is the focus of this project. To create a restoration plan baseline data collection of multiple resources on-site is necessary. Data collection will include geotechnical soil borings, and biological assessments and sampling. Geotechnical soil borings will be located primarily in areas that are already disturbed, and will be taken during the non-breeding season (August – February) to avoid impact to breeding birds. Borings will be 4-8 inches in diameter and from 20 to 70 feet deep. Boring holes will be filled with tailings or bentonite when completed, and the site restored to pre-drilling conditions. Specific boring locations, and access to those locations for drilling equipment, will be selected in consultation with biologists and archeologists familiar with the property. Biological and archeological monitors will accompany and guide the boring work to ensure that any sensitive biological or cultural resources are avoided to the maximum extent possible. Soil borings are expected to only take 2-3 weeks to complete. Biological sampling will consist of general observation data collection, trap and release of wildlife and fish specimens, vegetation sampling, and other technical studies.

NAME OF PUBLIC AGENCY APPROVING PROJECT: California Department of Fish and Game-R5

NAME OF AGENCY CARRYING OUT PROJECT: California Coastal Conservancy, Santa Monica Bay Restoration Commission, and consultants

EXEMPT STATUS (CLASS AND GUIDELINES SECTION): Class 4 (15304) and Class 6 (15306)

REASONS WHY PROJECT IS EXEMPT:

- Minor public alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees (Class 4).
- Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource (Class 6).

LEAD AGENCY CONTACT PERSON - David Lawhead, Staff Environmental Scientist
PHONE: (858) 627-3997

Signature: 
Title: Regional Manager

Date: 8-13-12

Date sent to OPR for posting: 8-13-12

ATTACHMENT 2

PROPOSAL FOR

**BALLONA WETLANDS
ECOLOGICAL RESERVE
CIVIL AND GEOTECHNICAL
ENGINEERING AND
PERMIT ASSISTANCE**

PRESENTED TO

**STATE OF CALIFORNIA
COASTAL CONSERVANCY**



FEBRUARY 29, 2012

Balancing the Natural and Built Environment

PSOMAS



February 29, 2012

Ms. Mary Small
Deputy Executive Officer
California Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

Email: msmall@scc.ca.gov

Subject: Proposal for Ballona Wetlands Ecological Reserve
Civil and Geotechnical Engineering and Permit Assistance

Dear Ms. Small:

Psomas is pleased to present our proposal to assist the California Coastal Conservancy in restoring the Ballona Wetlands Ecological Reserve to a more natural state. Having been involved in the planning and design of the Ballona Wetlands and its surrounding natural areas starting 25 years ago, we are uniquely qualified and share a passion to continue to assist in restoring and protecting this rare natural resource.

Psomas brings the following benefits to the project.

- **Unmatched technical civil and geotechnical engineering knowledge of the Wetlands and its opportunities and constraints that goes back 25 years.**
No other firm has been as involved or has more engineering knowledge of the Ballona Wetlands and its surrounding area than Psomas.
- **Long-term successful working relationship with the involved agencies, stakeholders and neighborhoods.**
These relationships are a result not only of our past work at the Wetlands, but also from Psomas' 65-year history in the Los Angeles region. Over a dozen agencies at the local, state and federal level will be involved, in addition to about a half dozen diverse neighborhoods and stakeholders.
- **Detailed knowledge of adjacent infrastructure and key issues.**
We have intimate knowledge of local utility facilities and the requirements for abandonment, relocation and/or protection in place. We have conducted a wide variety of engineering and environmental studies in the Reserve area and are therefore familiar with the issues of the watershed area surrounding the wetlands. *In*

555 South Flower Street
Suite 4400
Los Angeles, CA 90071-2416

Tel 213.223.1400
Fax 213.223.1444
www.psomas.com

Ms. Mary Small
Page Two
February 29, 2012

addition to the engineering and environmental studies, we have also addressed sensitive issues including:

- Evaluating nearby street lighting and landscape compatibility
 - Archeology
 - Habitat protection
 - Hydrology and hydraulics
 - Sediment transport
 - Salinity modeling and
 - Stormwater quality impact issues.
- **Current experience processing a Section 408 permit through the Los Angeles District of the US Army Corps of Engineers (USACE)**
Psomas is in the final stages of processing a 408 permit through the USACE for the City of Los Angeles on the North Spring Street Historic Bridge widening project. In addition, other members of our team are currently working on projects that involve a 408 permit.

We'd also like to directly address a few issues mentioned in your Request for Services.

- **DVBE Participation — *Two DVBE Firms on Psomas' Team***
Psomas has included two Disabled Veteran Business Enterprise (DVBE) firms on our team to help bring this project to a successful conclusion. We will ensure they receive as a minimum the percentage of work stated as a goal in Public Contract Code Section 10115.
- **Principal-Level Involvement on the Team — *Four Psomas Principals on Team***
The four key Psomas staff that will be involved in this project are Principals of the firm. And all of them have worked on projects in the Ballona Wetlands region while employed at Psomas – either directly on the wetlands or adjoining areas such as the Playa Vista Development. One of these Principals, Jacob Lipa, has been providing services on this project and its environs for 25 years – all while working at Psomas. His institutional knowledge of the site will prove invaluable during the course of this project.

We thank you for this opportunity and look forward to continuing to work with you in bringing the restoration of the Ballona Wetlands Ecological Reserve to fruition.

Sincerely,

PSOMAS



Michael J. Crehan, PE
Project Director / Principal

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California Coastal Conservancy

March 28, 2012

Att: All Governing Board Members and Alternates

Re: PUBLIC COMMENT 3/29/12:

Request to Hold Emergency Meeting to Rescind Approval Action on File No. 04-088

Douglas Bosco
Marisa Moret
Ann Nothoff
John Laird
Ana J. Matosantos
Mary Shallenberger
Susan Hancsh
Karen Finn
Bryan Cash
Noreen Evens
Joe Simitan
Anthony Cannella
Bill Mornning
Luis Alejo
Das Williams

CC

John Chang State Controller
California Department of Finance Director Ana Matosantos
U.S. Army Corp of Engineers Att: Commander Mark Toy
U.S. Senator Barbara Boxer
U.S. Congress Person Maxine Waters

Honorable Chair Bosco, Distinguished Commissioners,

Attachments will be submitted to the Governing Board on March 29, 2012.

I hereby request this public body instruct its Staff to schedule an emergency meeting in accordance with the Bagley Keene Act section 11125.5(b) to rescind its approval of File No. 04-088 on January 19, 2012 for the following reasons;

1. NON-COMPLIANCE DEPARTMENT OF FINANCE ATTACHMENT 1

Final Report—Audit of California State Coastal Conservancy's Propositions 12, 13, 40, 50 Bond Funds

The Department of Finance, Office of State Audits and Evaluations, has completed its audit of the California State Coastal Conservancy's (Conservancy) Propositions 12, 13, 40, and 50 bond funds for the period ending June 30, 2008.

Staff Project Manager Mary Small **failed to require Potential Grantee**, the Santa Monica Bay Restoration Foundation, **to fill out a Grant Application Form** on the Conservancy Website.

Background:

On January 24, 2011 The **California Department of Finance Issued a Final Report -- Audit** of the California State Coastal Conservancy. The Report Found that ;

*The Conservancy did not establish formal program guidelines: project awarding criteria; and **grant applications** to document its project merit review process. Also, the Conservancy website included limited or incomplete information about ongoing programs and efforts, regional priorities, and funding opportunities.*

On October 7, 2010, Executive Director Samuel Schuchat responded to the Audit.

*The Conservancy website has been updated to included the **standardized grant application**, more information about funding opportunities.*

The Conservancy has formally adopted project selection criteria, and a formal, transparent awarding process that follows statute.

*It generally does not institute grant rounds but instead has an **open grant process**. Application can be and are made, and these are considered at any time.*

*With respect to the form of **grant applications**, based on discussions with the auditors, we have created a **uniform grant application** that is posted on our website. There is now more information available to the public concerning priorities and how to apply for funding.*

*We have developed a **standard grant application that is now in use.***

A. Staff Project Manager Mary Small failed to obtain any written documentation to identify the Potential Grantee, no address, no agent name, nor an account to which the grant could be deposited is recorded.

B. Staff Project Manager Mary Small had no paperwork whatsoever from the Potential Grantee prior to January 19, 2012 nor did the Potential Grantee request funding. Staff did not provide public notice that such Grant Funds were available to other qualified entities.

C. Staff Project Manager Mary Small failed to determine if the private business, Santa Monica Bay Restoration Foundation was legally operating out of a State Water Board Office, the Los Angeles Regional Water Quality Control Board. Filings with the California Secretary of State show the private business is operating out of a State Office. There is no legal authority allowing for this.

D. Staff Project Manager Mary Small failed to disclose the fact she was a Director of the Corporation of the Proposed Grantee in 2006 creating an appearance of impropriety.

2. FALSEFICATION OF PUBLIC RECORDS ATTACHMENT 2

Staff falsified a Form SCC 08-08, Work Transmittal.

The Form was initialized by;

Executive Director - Sam Schuchat

Project Manager - Mary Small

Legal - Elena Eger

Staff filled out the form as follows:

Will this project receive federal or other outside funding? Yes ___ No X

The January 19, 2012 **Staff Report** contradicts on page 6 :

"The SMRBF in-kind funds would come from U.S. EPA funding provided to the SMRBF for its staff and from a U.S. EPA Wetland Program Development Grant received for work at Ballona"

3. INCOMPLETE PUBLIC RECORDS ATTACHMENT 2

Staff failed to complete Form SCC 08-08, Work Transmittal.

The Form was initialized by;

Executive Director - Sam Schuchat

Project Manager - Mary Small

Legal - Elena Eger

Is the Grantee a Nonprofit Organization Yes ___ No ___ - NOT CHECKED

If nonprofit: Is the status file complete and current Yes ___ No ___ - NOT CHECKED

GRANT / CONTRACT AMMENDMENTS REVIEW - BLANK

MAIL OUT APPROVALS - BLANK

APPLICATION - BLANK

GRANT TRANSMITTAL - BLANK

REVIEW OF AGREEMENT - BLANK

4. DISCRIMINATION ATTACHMENT 3

Staff Project Manager Mary Small has improperly lobbied private individuals, private businesses, State and Federal Officials and entities prior to the release of the Staff Report, thusly, discriminating against all others by failing to provide the same comment opportunity prior to the issuance of the Staff Report.

Further Discrimination has taken place because only one Potential Grantee has been selected by Staff Project Manager Mary Small, excluding all others that may have chosen to apply.

Moreover, Discrimination has taken place in that only a select group of Potential contractors was noticed by Staff Project Manager Mary Small, in non-compliance with the California Contract Code, excluding all other qualified firms.

5. PREJUDICE OF PROCESS ATTACHMENT 4

Staff Project Manager Mary Small requested Potential Grantee to help write Staff Report.

Staff Project Manager Mary Small worked with Potential Grantee to engage in media spin to avoid scrutiny.

6. STAFF REPORT EXCLUDED VITAL INFORMATION ATTACHMENT 5

The Staff Report is ambiguous. It describes the Grantee in detail with no supporting documentation whatsoever.

The Staff Report does not establish terms of compliance for the Proposed Grantee nor for entities that will complete the described studies.

The Staff Report does not define that contractors will be hired. Staff Project Manager Mary Small discussed hiring contractors with the Potential Grantee and others before the Staff Report was approved, purposely avoiding the requirement under the Bagley Keene Act for the Governing Board to approve contractors and Notice requirements of the California Contract Code.

Legal Staff Elena Eger encouraged Staff Project Manager Mary Small to complete a grant agreement form because I requested it pursuant to the Public Records Act. The form should have been completed without my request for it.

The Staff Report failed to inform this Board that a Federal Environmental Protection Act Process was initiated by the Army Corp of Engineers Los Angeles in 2005 that governs the Ballona Wetlands.

Staff has failed to inform the Governing Board and Public that the Project Manager, Mary Small, lobbied the Department of Fish and Game to ignore the EIS Notice published in the Federal Register, in favor of a new EIR/EIS process desired by the Project Manager and the Proposed Grantee, without informing and seeking authorization from this Governing Board. This clearly constitutes interference with a legally noticed federal NEPA process. Furthermore Staff Project Manager Mary Small failed to inform this Governing Board that the entire area is governed by U.S. Public Law 780, the Rivers and Harbors Act of 1954, which is the subject of the EIS process currently being conducted by the USACE.

In the Minutes of the Ballona Ecosystem Restoration Planning Management Committee, obtained from the USACE by FOIA Staff Project Manager Mary Small, without the

authorization of this Board, represented to the Army Corp of Engineers on June 28, 2010 that:

Coastal Conservancy is supplying most of the funding toward the in-kind local sponsor efforts.

The Governing Board has not authorized Mary Small to represent the Coastal Conservancy at a meeting of the Army Corp of Engineers and the Local Sponsor (Santa Monica Bay Restoration Authority). The Conservancy is neither a partner nor is there any MOU to with the SMRBA, which is under contract to the USACE. Minutes of other such meetings provide evidence that Mary Small also discussed;

A. Changing the scoping of an Environmental Protection Act process began by the USACE in 2005.

B. Using only the Conservancy's Alternatives.

C. Attempting to gain in kind credits from the USACE.

D. Further documents provided by the USACE provide evidence that the local sponsor, never provided any funding to the USACE whatsoever nor did it provide any in-kind credit.

E. Resumes provided to the Coastal Conservancy by potential contractors for this Project include studies finished and paid for by federal funding stated in the resume(s) as part of the Lower Ballona Creek Feasibility Studies of the Joint EIR/EIS (2005) initiated by the USACE.

7. VIOLATIONS OF CALIFORNIA CONTRACT CODE ATTACHMENT 6

Staff Project Manager Mary Small failed to comply with the California Contract Code Notification and Conflict requirements, Sections 10140-10141 and 10515-10518.

Staff Project Manager Mary Small conducted a Request for Services for Contractors in 2009, and again in 2010 in regard to a Project not noticed to the Public or Governing Board until 2012, both in non-compliance with California Contract Code.

Staff Project Manager Mary Small purports to have initiated another Request for Services in February 2012 with responses due on the 29th of that month outside in non-compliance with the California Contract Code.

8. VIOLATIONS OF BAGLEY KEENE ATTACHMENT 6

Staff failed to obtain permission from the Governing Board to hire contractors to complete studies.

9. QUID PRO QUO INFERED ATTACHMENT 7

The attached e-mails contain an inference of a quid pro quo. The request for a support letter is accompanied by a discussion of bond money provisions. In one email a support letter request exists alongside a discussion to close out another matter, without specificity.

**10. INIMIDATION AND HARRASSNMENT OF PUBLIC BY LEGAL STAFF
VIOLATING STATE LAW AND AGENCIES PRIVACY POLICY
ATTACHMENT 8**

Legal Staff Elena Eger has attempted to intimidate and harass me by copying private business persons on emails to me which disclose my private address, even after I requested the practice cease in writing, in clear contradiction to Information Practices Act (Civil Code section 1798 et seq.) and the Agencies Privacy Policy.

Staff has violated the Conservancy Privacy Policy by the aforesaid action(s).

Privacy Policy

Pursuant to Government Code § 11019.9, all departments and agencies of the State of California shall enact and maintain a permanent privacy policy, in adherence with the Information Practices Act of 1977 (Civil Code § 1798 et seq.), that includes, but is not necessarily limited to, the following principles:

- (a) Personally identifiable information may only be obtained through lawful means.*
- (b) The purposes for which personally identifiable data are collected shall be specified at or prior to the time of collection, and any subsequent use of the data shall be limited to and consistent with the fulfillment of those purposes previously specified.*
- (c) Personal data may not be disclosed, made available, or otherwise used for a purpose other than those specified, except with the consent of the subject of the data, or as required by law or regulation.*
- (d) Personal data collected shall be relevant to the purpose for which it is needed.*
- (e) The general means by which personal data is protected against loss, unauthorized access, use, modification, or disclosure shall be posted, unless the disclosure of those general means would compromise legitimate agency objectives or law enforcement purposes.*

Each department shall implement this privacy policy by:

- Designating which position within the department or agency is responsible for the implementation of and adherence to this privacy policy;*
- Prominently posting the policy physically in its offices and on its internet website, if any;*
- Distributing the policy to each of its employees and contractors who have access to personal data;*
- Complying with the Information Practices Act (Civil Code § 1798 et seq.); the Public Records Act (Government Code § 6250 et seq.); Government Code § 11015.5, and all other laws pertaining to information privacy;*
- Using appropriate means to successfully implement and adhere to this privacy policy.'*

Sincerely,

A handwritten signature in black ink, appearing to read "John Davis". The signature is fluid and cursive, with a large loop at the top of the first name.

John Davis
PO 10152
Marina del Rey Ca. 90295

ATTACHMENT 1

RE: Public Records Request from John Davis

From: Philip Wyels <PWyels@waterboards.ca.gov> (Add as Preferred Sender)
Date: Tue, Feb 21, 2012 2:26 pm
To: <jd@johnanthonydavis.com>

Mr. Davis, I apologize for the delay in responding to your request. I have been unable to locate any records within the possession of the State Water Resources Control Board that are responsive to your requests. The attached two documents may be of interest to you, however, in that they indicate that the Santa Monica Bay Restoration Project's relationship with the Santa Monica Bay Restoration Foundation (Foundation) pre-dated the conversion of the Santa Monica Bay Restoration Project to the Santa Monica Bay Restoration Commission (Commission). Also, as I explained to you by telephone, the Commission staff is currently undertaking a number of steps to more clearly distinguish the Commission from the Foundation. Unfortunately, some of those steps are taking some time. I will let you know when I receive a timetable for those steps from Commission staff.

Sincerely,
Phil

Philip G. Wyels
Assistant Chief Counsel
State Board Water Quality Unit
State Water Resources Control Board

1001 I Street
P.O. Box 95812-0100
Sacramento, CA 95814

(916) 341-5178 (phone)
(916) 341-5199 (fax)
pwyls@waterboards.ca.gov>>>

From: <jd@johnanthonydavis.com>
To: Philip Wyels <pwyls@waterboards.ca.gov>
CC: Michael Lauffer <MLauffer@waterboards.ca.gov>
Date: 2/21/2012 10:00 AM
Subject: RE: Public Records Request from John Davis

California State Water Board
Att: Phil Wyels
Re: Status Request Public Record Request

Council Wyels,

The California Public Records Act requires that Agencies subject to the Act reply to request for records within 10 days after a request is made.

The State Water Resources Board has not complied with the law in this respect in regard to the request for records made on 2/7/12.

Please advise as to if or when the State Agency will reply.

Thanks,

John Davis

----- Original Message -----

Subject: Public Records Request from John Davis

From: <jd@johnanthonydavis.com>

Date: Tue, February 07, 2012 3:03 pm

To: "Philip Wyels" <pwyls@waterboards.ca.gov>

Cc: "Elena Eger" <eeger@scc.ca.gov>

California State Water Board

Att: Phil Wyels

Re: Public Record Request

Dear Mr. Wyeles,

This is a request for public records pursuant to the California Public Records Act. Each numbered request is distinct.

1. Please provide any record of any law, regulation, or policy of the State Water Board which allows a private business to operate out of a State Water Board Office.
2. Please provide any record of any law, regulation, or policy that allows a private business to use a State Water Board Office as a corporate street address of principal office in California, and or as a mailing address of the corporation, and or mailing address of the corporation, and or address of a corporate Chief Executive Officer, and or of a corporate secretary, and or of a corporate financial agent.
3. Please provide any law, and or regulation, and or policy that allows any State Water Board Commission to designate a private business as its "FISCAL AGENT"
4. Please provide any law, and or regulation, and or policy that allows any State Water Board Commission to designate a private business to receive, manage, and to treat money granted by the U.S. Government to the State of California as revenue of the private business.

Thank you for your continued assistance,

John Davis

PO 10152

Marina del Rey Ca. 90295

310.795.9640

From: Elena Eger
To: "jd@johnanthonydavis.com"
Cc: "Shelley Luce"; "svalor@santamonibay.org"; "Mary Small"; "Dick Wayman"; "Nadine Peterson"; "Samuel Schuchat"
Subject: Davis call to Eger of 2-6-12
Date: Tuesday, February 07, 2012 1:00:00 PM
Attachments: SWRCB memo2011aug re accusations.pdf
SWRCB Ltr to Davis re PRAs.pdf

Dear Mr. Davis:

Pursuant to our phone conversation of yesterday, February 6, 2012, in which you provided a warning to me that the Conservancy should be informed that the Santa Monica Bay Foundation allegedly is appropriating public resources for private gain, attached please find the State Water Resources Control Board's (SWRCB) August 15, 2011 legal memo addressing your contentions and a September 13, 2011 letter to you regarding the same.

As analyzed in the SWRCB memo, especially in #3, pp. 4-5 of that memo, your contentions that the Foundation is improperly utilizing public resources for private use, namely in your assertions yesterday when you identified as improper the fact that the Foundation uses the same mailing address as the SWRCB's Los Angeles office, are specifically addressed. Frances McChesney, Esq., Office of the Chief Counsel for the SWRCB concludes in that memo that the Foundation is not improperly appropriating public resources for its private use.

The Conservancy intends to proceed with its grant to the Foundation approved as Item #5 at its January 19, 2012 meeting.

Sincerely,

Elena Eger
Senior Staff Counsel
California Coastal Conservancy
1330 Broadway, Ste. 1300
Oakland, CA 94612
510-286-4089 tele/voicemail
510-286-0470 fax



State of California
Secretary of State



E-945038

FILED

In the office of the Secretary of State
of the State of California

Feb - 5 2010

This Space For Filing Use Only

STATEMENT OF INFORMATION

(Domestic Nonprofit, Credit Union and Consumer Cooperative Corporations)

Filing Fee \$20.00. If amendment, see instructions.

IMPORTANT - READ INSTRUCTIONS BEFORE COMPLETING THIS FORM

N

1. CORPORATE NAME (Please do not alter if name is preprinted.)

C1481142

SANTA MONICA BAY RESTORATION FOUNDATION

320 W 4TH ST STE 200

LOS ANGELES CA 90013

DUE DATE:

COMPLETE PRINCIPAL OFFICE ADDRESS (Do not abbreviate the name of the city. Item 2 cannot be a P.O. Box.)

2. STREET ADDRESS OF PRINCIPAL OFFICE IN CALIFORNIA, IF ANY

CITY

STATE

ZIP CODE

320 W 4TH ST STE 200 LOS ANGELES CA 90013

3. MAILING ADDRESS OF THE CORPORATION, IF REQUIRED

CITY

STATE

ZIP CODE

320 W 4TH ST STE 200 LOS ANGELES CA 90013

NAMES AND COMPLETE ADDRESSES OF THE FOLLOWING OFFICERS (The corporation must have these three officers. A comparable title for the specific officer may be added; however, the preprinted titles on this form must not be altered.)

4. CHIEF EXECUTIVE OFFICER/

ADDRESS

CITY

STATE

ZIP CODE

SHELLY LUCE 320 W 4TH ST STE 200 LOS ANGELES, CA 90013

5. SECRETARY/

ADDRESS

CITY

STATE

ZIP CODE

CATHERINE TYRRELL 320 W 4TH ST STE 200 LOS ANGELES CA 90013

6. CHIEF FINANCIAL OFFICER/

ADDRESS

CITY

STATE

ZIP CODE

LAURIE NEWMAN 320 W 4TH ST STE 200 LOS ANGELES CA 90013

AGENT FOR SERVICE OF PROCESS (If the agent is an individual, the agent must reside in California and Item 8 must be completed with a California street address (a P.O. Box address is not acceptable). If the agent is another corporation, the agent must have on file with the California Secretary of State a certificate pursuant to Corporations Code section 1505 and Item 8 must be left blank.)

7. NAME OF AGENT FOR SERVICE OF PROCESS

SHELLEY LUCE

8. STREET ADDRESS OF AGENT FOR SERVICE OF PROCESS IN CALIFORNIA, IF AN INDIVIDUAL

CITY

STATE

ZIP CODE

320 W 4TH ST STE 200 LOS ANGELES, CA 90013

DAVIS-STIRLING COMMON INTEREST DEVELOPMENT ACT (California Civil Code section 1350, et seq.)

9. ☐ Check here if the corporation is an association formed to manage common interest development under the Davis-Stirling Common Interest Development Act and proceed to items 10, 11 and 12.

NOTE: Corporations formed to manage a common interest development must also file a Statement by Common Interest Development Association (Form SI-CID) as required by California Civil Code section 1363.6. Please see instructions on the reverse side of this form.

10. ADDRESS OF BUSINESS OR CORPORATE OFFICE OF THE ASSOCIATION, IF ANY

CITY

STATE

ZIP CODE

11. FRONT STREET AND NEAREST CROSS STREET FOR THE PHYSICAL LOCATION OF THE COMMON INTEREST DEVELOPMENT
(Complete if the business or corporate office is not on the site of the common interest development.)

9-DIGIT ZIP CODE

12. NAME AND ADDRESS OF ASSOCIATION'S MANAGING AGENT, IF ANY

CITY

STATE

ZIP CODE

13. THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT.

02/05/2010

SHELLEY LUCE

EXECUTIVE DIRECTOR

DATE

TYPE OR PRINT NAME OF PERSON COMPLETING THE FORM

TITLE

SIGNATURE

Form 990

Return of Organization Exempt From Income Tax

OMB No. 1545-0047

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except black lung benefit trust or private foundation)

2006

Open to Public Inspection

Department of the Treasury
Internal Revenue Service

The organization may have to use a copy of this return to satisfy state reporting requirements

A For the 2006 calendar year, or tax year beginning **Jul 01, 2006**, and ending **Jun 30, 2007**

B Check if applicable: ☐ Address change, ☐ Name change, ☐ Initial return, ☐ Final return, ☐ Amended return, ☐ Application pending. Please use IRS label or print or type. See Specific Instructions.

C Name of organization, number and street, city, town, state, and ZIP code: **Santa Monica Bay Restoration Foundation**
320 West 4th Street Suite 200
LOS ANGELES CA 90013

D Employer identification number: **33-0420271**

E Telephone number: **213-576-6642**

F Acctg. method: ☒ Cash ☐ Accrual ☐ Other (specify) _____

G Website: **WWW.SANTAMONICABAY.ORG**

H and **I** are not applicable to section 527 organizations.

H(a) Is this a group return for affiliates? ☐ Yes ☒ No

H(b) If "Yes," enter number of affiliates: _____

H(c) Are all affiliates included? (If "No," attach a list. See instructions.) ☐ Yes ☐ No

H(d) Is this a separate return filed by an organization covered by a group ruling? ☐ Yes ☒ No

I Group Exemption Number: _____

J Organization type (check only one): ☒ 501(c)(3) (insert no.) ☐ 4947(a)(1) or ☐ 527

K Check here ☐ if the organization is not a 509(a)(3) supporting organization and its gross receipts are normally not more than \$25,000. A return is not required, but if the organization chooses to file a return, be sure to file a complete return.

L Gross receipts. Add lines 6b, 8b, 9b, and 10b to line 12: **979,681.**

M Check ☐ if the organization is not required to attach Sch. B (Form 990, 990-EZ, or 990-PF).

Part I Revenue, Expenses, and Changes in Net Assets or Fund Balances (See the instructions.)

1 Contributions, gifts, grants, and similar amounts received			
a Contributions to donor advised funds	1a		
b Direct public support (not included on line 1a)	1b	342,406.	
c Indirect public support (not included on line 1a)	1c		
d Government contributions (grants) (not included on line 1a)	1d	576,050.	
e Total (add lines 1a through 1d) (cash \$ 918,456. noncash \$)	1e	918,456.	
2 Program service revenue including government fees and contracts (from Part VII, line 93)	2	18,485.	
3 Membership dues and assessments	3		
4 Interest on savings and temporary cash investments	4	41,773.	
5 Dividends and interest from securities	5	967.	
6 a Gross rents	6a		
b Less rental expenses	6b		
c Net rental income or (loss). Subtract line 6b from line 6a	6c		
7 Other investment income (describe) _____	7		
8 a Gross amount from sales of assets other than inventory	8a		
b Less cost or other basis & sales expenses	8b		
c Gain or (loss) (attach schedule)	8c		
d Net gain or (loss). Combine line 8c, columns (A) and (B)	8d		
9 Special events and activities (attach schedule). If any amount is from gaming, check here <input type="checkbox"/>			
a Gross revenue (not including \$ _____ of contributions reported on line 1b)	9a		
b Less direct expenses other than fundraising expenses	9b		
c Net income or (loss) from special events. Subtract line 9b from line 9a	9c		
10 a Gross sales of inventory, less returns and allowances	10a		
b Less cost of goods sold	10b		
c Gross profit or (loss) from sales of inventory (attach schedule). Subtract line 10b from line 10a	10c		
11 Other revenue (from Part VII, line 103)	11		
12 Total revenue. Add lines 1e, 2, 3, 4, 5, 6c, 7, 8d, 9c, 10c, and 11	12	979,681.	
13 Program services (from line 44, column (B))	13	757,878.	
14 Management and general (from line 44, column (C))	14	102,224.	
15 Fundraising (from line 44, column (D))	15	7,373.	
16 Payments to affiliates (attach schedule)	16		
17 Total expenses. Add lines 16 and 44, column (A)	17	867,475.	
18 Excess or (deficit) for the year. Subtract line 17 from line 12	18	112,206.	
19 Net assets or fund balances at beginning of year (from line 73, column (A))	19	872,326.	
20 Other changes in net assets or fund balances (attach explanation)	20		
21 Net assets or fund balances at end of year. Combine lines 18, 19, and 20	21	984,532.	

For Privacy Act and Paperwork Reduction Act Notice, see the separate instructions.

Form 990 (2006) 7

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US990SS1 Rev 1

97

List of Officers, Directors, Trustees and Key Employees

US 990 990: Page 5, Part V; 990EZ: Page 2 Part IV; 990-PF: Page 6, Part VIII 2006

Name and Address		Title/Average Hours Per Week Devoted to Position	Amount Paid	Amount for Employee Benefit Plan	Expense Account and Other Allowances
Rod Spackman	320 W 4th St	President	2		
Randal Orton	320 W 4th St	CFO	2		
Mark Gold	320 W 4th St	Director	1		
Tom Ford	320 W 4th St	Director	1		
Richard Bloom	320 W 4th St	Director	1		
Fran Diamond	320 W 4th St	Director	1		
Marvin Sachse	320 W 4th St	Director	1		
Bob Hoffman	320 W 4th St	Director	1		
S Wisniewski	320 W 4th St	Director	1		
Laurie Newman	320 W 4th St	Director	1		
Mary Small	320 W 4th St	Director	1		
Bryant Chesney	320 W 4th St	Director	1		
Dean Kubani	320 W 4th St	Director	1		
Shelley Luce	320 W 4th St	Executive	40	55,830. 55,830.	

ATTACHMENTS 2

WORK TRANSMITTAL

Project Development Approval

Date: 12/13/11 WG Leader: MS Date: 12/13/11
 Project Manager: Mary Small Project #: 04-088-01
 Project Name: Ballona Wetlands County/City: LA²
 Grantee/Contractor Name: hda / Santa Monica Bay Foundation
 Is Grantee a Nonprofit Organization? Yes No If Nonprofit: Is status file complete and current? Yes No
 Nature of Job: planning / design

RESERVATION OF FUNDS

Will this project receive federal or other "outside" funding? Yes ☒ No ☐ If Yes, fill out back side of this form (Grant Transmittal - A)
 Will this project receive state / other funding? Yes (Reimb. -0995) ☒ No ☐ If Yes, fill out back side of this form (Grant Transmittal - B)

Total Amount to be Reserved: \$ 6,490,000.00

Prop 54 - Planning?	Yes	No	Encumb.	Liquid.
Proposed Budget Item(s):				
1. 3760-30203-0005 (2)(B)()				
Fiscal Year (Budget Act)	2000			
Chapter:	052/a			
Amount	\$ 6,490,000.00			
Expiration Date	(6/13)(6/15)			
2. 3760- () () ()				
Chapter:	\$			
3. 3760- () () ()				
Chapter:	\$			
Reap. by Chapter:	712/10 for item 1			
Reap. by Chapter:	for item			
Reap. by Chapter:	for item			

Program: enhancement

Project Info entered onto applicable Bond Data Spreadsheet? Y ☒ N ☐ Date: N/A

☐ Public Access: VRA (Capital Outlay)
☐ Habitat Conservation Fund (0262)
☐ Support: 001 Fund 0505 only: Yes
☐ IT Consult & Prof. (External) ☐ (Inter-Dept.)

Repayment Feature? (Loan Receivable) Yes ☒ No ☐
 Private Activity? Yes ☐ No ☒ N/A
 (Tax Reportable to Treasurer's Office)

Expected Date of Board Action: 1/19/12 Project Entered onto SCC Database? Y ☒ N ☐ Date: 12/13/11

1. WG Leader: MS Date: 12/13/11 4. Legal: EE Date: 12/14/11
 2. Acctg Officer: HT 6.49M Date: 12/13/11 5. EO/DEO: SS Date: 12/15/11
 3. Additional WG Leader responsible for management of specific funds (if applicable): _____ Date: _____

STAFF RECOMMENDATION REVIEW (For 1/19/12 Board Meeting)

1. WG Leader: MS Date: 12/13/11 3. EO/DEO: SS Date: 12/15/11
 2. Legal: EE Date: 12/14/11 4. *Legat: _____ Date: _____
 *At EO/DEO's discretion

GRANT/CONTRACT AMENDMENTS REVIEW

(CEQA Submitted? Yes ☐ No ☐ N/A ☐ Project Manager _____ Date: _____)

Amount Encumbered: \$ _____

Grant/Contract No.: _____

Termination Date: _____

Amendment No.: _____

Disabled Veteran Business Enterprise (DVBE)? Yes ☐ No ☐

20-yr Agreement? Yes ☐ No ☐

Small Business Enterprise (SBE)? Yes ☐ No ☐

(If Yes, provide OSDS# _____)

MAIL OUT APPROVALS

1. Legal: _____ Date: _____ 2. Project Manager: _____ Date: _____
 3. Proofreader: _____ Date: _____

GRANT TRANSMITTAL

Grant No. _____

(for receivable grants)

INTENT TO APPLY

Date: _____

Project Manager: _____

SCC Program: _____

Grant Amount: _____

Grant Program Name: _____

Granting Agency: _____

Project Name: _____

Project Number: _____

SCC required Matching Funds: (if other than in-kind services, please use reverse side of this form to reserve SCC funds)

In - Kind: \$ _____

(Copy from reverse side)

Support: \$ _____

Fund No.: _____ FY: _____

Capital Outlay: \$ _____

Fund No.: _____ FY: _____

TOTAL: \$ _____

Funding Mechanism: Will or will not hit SCC account? _____

Electronic Transfer? _____

Paid in Arrears? _____

Cash Advance? _____

(A) For Federal Grant

Support (Staff, travel, equipment): \$ _____

3760 - 001 - 0890 FY: _____

Capital Outlay: \$ _____

3760 - 301 - 0890 FY: _____

Other (Specify) \$ _____

3760 - _____ FY: _____

TOTAL: \$ _____

(B) For State Reimbursable Grant

(Please use reverse side of this form to reserve up-front SCC funds)

Support (Staff, travel, equipment): \$ _____

3760 - 001 - 0565 - F90 FY: _____

Capital Outlay: \$ _____

3760 - 301 - _____ - F90 FY: _____

Other (Specify) \$ _____

3760 - _____ - _____ - F90 FY: _____

TOTAL: \$ _____

Authorization:

Program Manager: _____ Date: _____

Accounting Officer: _____ Date: _____

Grants Manager: _____ Date: _____

APPLICATION

(Provide copy of Application to Grants Manager)

Legal * _____ Date: _____

*Please inform Grants Manager if signature are missing in the "INTENT TO APPLY" SECTION

EO/DEO: _____ Date: _____

Date Applied: _____ Expected Date of Grant Award: _____

REVIEW OF AGREEMENT (for receipt of funds)

Board Authorization To Spend The Grant:

Date (s): _____

Project Manager: _____

Date: _____

Program Manager: _____

Date: _____

Legal: _____

Date: _____

EO/DEO: _____

Date: _____

Grants Manager: _____

Date: _____

Inform Acct. Date: _____

Amendment #: _____

Legal Reviewed by: _____ Date: _____

ATTACHMENT 3

From: Mary Small
To: sluce@santamonibay.org; "Barbara Romero"
Subject: FW: hard copy in the mail tomorrow
Date: Friday, January 06, 2012 4:04:00 PM

-----Original Message-----

From: Ruth Galanter [<mailto:ruth.galanter@verizon.net>]
Sent: Friday, January 06, 2012 3:57 PM
To: Mary Small
Subject: Re: hard copy in the mail tomorrow

I am planning to attend the meeting, and I'm trying to get some more support letters and maybe attendees. You have no idea how much pleasure I would get from foiling your opponents. I can either stand up during the hearing, or if you want, I can instead meet you and the board between the tour and the meeting (since you must be going to feed them someplace) and just chat informally.

Your choice. I'm free at about 11:30 and have a meeting at 3 pm. In between I am at your service.

On Jan 6, 2012, at 3:50 PM, Mary Small wrote:

> Thanks that's a very generous offer. If you have time to attend the
> meeting, that would be great. It starts at 1pm at Baldwin Hills Scenic
> Overlook and this is the first substantive item on the agenda. I will have
> pretty limited time to present, but could acknowledge you and if you were
> willing to speak in public comment on the item that would fantastic.
> Mary

> -----Original Message-----

> From: Ruth Galanter [<mailto:ruth.galanter@verizon.net>]
> Sent: Friday, January 06, 2012 9:52 AM
> To: Mary Small
> Subject: Re: hard copy in the mail tomorrow

> I'm available after about 11:30, and you might want to use me as part of a
> board briefing in light of my nearly two decades dealing with the issue.
> That of course is up to you, and I promise not to get huffy if you'd rather
> not.

> On Jan 6, 2012, at 9:10 AM, Mary Small wrote:

>> Thank you very much, your letter is perfect and I appreciate your quick
>> response. It would be great to have a few supporters at the meeting, I am
>> sure the opponents will attend.

>> We are also going to take the Coastal Conservancy board on a quick tour of
>> the site the morning before the meeting from 10-12. I know you are very
>> busy but it would be great if you wanted to join us for either the tour or
>> to attend the meeting.

>> Mary

>> -----Original Message-----

>> From: Ruth Galanter [<mailto:ruth.galanter@verizon.net>]
>> Sent: Thursday, January 05, 2012 9:13 PM
>> To: Small Mary
>> Subject: hard copy in the mail tomorrow

>>

>> Hi Mary,
>>
>> I've emailed you my letter and will send the hard copy tomorrow.
>>
>> I've also emailed various people to suggest attending the hearing in case
>> the eco-loonies show up, as I suppose they will.
>>
>> Have a good weekend.
>>
>> Ruth
>>
>>
>>
>
>
>
>

From: Mary Small
To: "Shelley Luce"
Subject: FW: Letter for Coastal Conservancy Board
Date: Tuesday, December 13, 2011 1:21:00 PM

Do you know Ruth?

From: Joan Cardellino [mailto:jcard@scc.ca.gov]
Sent: Tuesday, December 13, 2011 11:57 AM
To: 'Mary Small'
Subject: RE: Letter for Coastal Conservancy Board

It might be worth calling Ruth Galanter to see if she'd speak in support of the project. She has some good credentials. She might know of other supporters to ask too.

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, December 13, 2011 10:38 AM
To: 'Shelley Luce'
Cc: 'Joan Cardellino (Joan Cardellino)'
Subject: RE: Letter for Coastal Conservancy Board

Hi Shelley-

Do you have time to talk about our Jan meeting? I know you have a board meeting this week, so we could also do this via email – or next week, but before next Fri I'd like to work through some ideas:

- 1) Tour – we'll probably do a tour the morning of the meeting, I think maybe the tour we did with Colonel Toy – view from Cabora Rd and then walk out to boyscout platform
- 2) Press – do you think we could use this meeting as an opportunity to get either local papers and/or try for LA Times to cover the project? I am worried that once the agenda is out Marcia will use as opportunity to get bad press. Our agenda will be mailed out Jan 6th
- 3) Public support – who could we have come to support the project at the meeting or with letters? Geraldine is critical (at least her letter) but how about MRCA?, Joe Geever?, Ballona Creek Renaissance?, Friends?, Miguel Luna?, Audubon? HtB? Baykeeper?

Thanks,
Mary

From: Shelley Luce [mailto:sluce@santamonica.org]
Sent: Monday, December 12, 2011 3:22 PM
To: Mary Small
Subject: FW: Letter for Coastal Conservancy Board

Hi Mary, Geraldine thought her letter went out already. Have you received? I also invited her to tour the wetlands with us after the meeting.

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission*

From: [Mary Small](#)
To: ["Bryant Chesney"](#)
Cc: ["sluce@santamonibay.org"](mailto:sluce@santamonibay.org)
Subject: FW: support letter for Ballona Funding
Date: Friday, January 06, 2012 9:57:00 AM
Attachments: [Ballona Wetlands Engineering and Technical Studies.docx](#)
[ballona support letter 1.docx](#)
[ballona support letter 2.docx](#)

Hi Bryant

I was wondering if you would be willing to send a letter of support (samples attached) to the Coastal Conservancy for the Ballona wetlands project. Also attached is the draft staff recommendation. The Conservancy will be considering this authorization in LA on Jan 19th, we will take the board on a quick tour of the site before the meeting. If you have time, it would be great to have you attend either of those events too.

This is the request for all funding to complete the environmental review, 100% engineering, and all of the hydrology/hydraulics modeling that the Army Corps is requiring for its permit to modify the flood control levees. The later analysis is the about half of the cost estimate.

Since the meeting will be in LA, opponents of the project are likely to show up. This approval is pretty critical to moving the project forward. If the Conservancy Board gets frightened away from large scale, ecological restoration then I think we will have very limited options for the future.

Thanks for your consideration and please let me know if you have any questions.
Mary

From: Mary Small
To: "Miguel Luna"
Cc: "Shelley Luce"
Subject: FW: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:29:00 PM
Attachments: SCC Ballona Tech Support Ltr.docx

Hi Miguel

Happy New year! Hope you are well.

Is there any chance you would be willing to send a letter of support to the Coastal Conservancy for authorization of funding to continue design of the restoration project? I don't know if Shelley contacted you, but it would be great to get community groups weighing in who support ecological restoration. Our meeting will be in LA, so I expect there will be some opposition.

Please let me know if you have any questions or need more info.

Thanks,

Mary

December 14, 2011

Mr. Doug Bosco, Chairman
State Coastal Conservancy
1330 Broadway, #1300
Oakland, CA 94612
Attn: Mary Small

RE: Proposed Conservancy Authorization for Ballona Wetlands Restoration Engineering and Technical Studies

Dear Chairman Bosco:

I am writing to encourage the Conservancy to authorize funding for the Ballona Wetlands Ecological Reserve Restoration Project planning process. These authorizations would enable the development of technical assessments and engineering design, technical review and agency coordination to support environmental impact analysis and permit applications for the restoration of the Ballona Wetlands Ecological Reserve (BWER).

The Ballona Wetlands Ecological Reserve is 600 acres, surrounded by urban Los Angeles County. The BWER provides valuable and scenic open space in the heart of congested Los Angeles County and offers one of the largest and most promising opportunities for coastal wetland restoration in the region. When restored and opened to the public, the site will allow millions of residents and visitors a rare opportunity to experience a coastal wetland. I support this project because it will help to move the restoration of the Ballona Wetlands Ecological Reserve closer to fruition. Thank you for your consideration of this project.

Sincerely,

From: Mary Small
To: "Shelley Luce"
Subject: RE: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:27:00 PM

Thanks!

I will talk to Sam about Boxer and Feinstein. Can LA Co DPW send a letter or do you think that is covered by the Supervisors?

Mary

From: Shelley Luce [mailto:sluce@santamonicabay.org]
Sent: Tuesday, January 03, 2012 1:25 PM
To: Mary Small; Diana Hurlbert
Subject: RE: draft support letter for SCC board meeting

Hi Mary,

We are working on:

Knabe

MRT

Friends of BW

So Cal Edison

So Cal Gas

LMU

Waxman

Lieu

Butler

Rosendahl

And Anyone else you want to add to that list. Figured Feinstein and Boxer will be more important later, and that you and Sam are the best ones to approach them.

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444*

www.santamonicabay.org

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 1:06 PM
To: Shelley Luce; Diana Hurlbert
Subject: FW: draft support letter for SCC board meeting

Hi

I belatedly just sent this request to DFG and SLC. The only support letter I have is from MRCA, though I know the port is working on one too. Can you let me know who you are working on

getting letters from and if there is anyone else I should follow-up with?

Thanks

Mary

From: Mary Small [mailto:msmall@scc.ca.gov]

Sent: Tuesday, January 03, 2012 1:04 PM

To: 'Griggs, Pamela@SLC'; 'Terri Stewart'; 'dlawhead@dfg.ca.gov'; 'Rick Mayfield (rmayfield@dfg.ca.gov)'

Subject: draft support letter for SCC board meeting

Hi

Sorry I didn't send this to you earlier, I meant to send it before the holidays, but forgot. I was wondering if your agencies would send a support letter to Coastal Conservancy for the requested authorization for funds for engineering and final design for Ballona. Our meeting will be in LA so I expect there will be some opposition and it is a huge funding request since we decided to do the EIR and permitting for the whole project.

If you could attend the site tour of Ballona and the meeting (both on Jan 19th) that would be great too.

Please let me know if you have any questions or need more info.

Thanks

Mary

Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444

www.santamonicabay.org

From: Knatz, Geraldine [mailto:knatz@portla.org]
Sent: Sunday, December 11, 2011 1:00 PM
To: Shelley Luce; Zordilla, Eunice
Cc: Tankersley, Eileen
Subject: Re: Letter for Coastal Conservancy Board

The letter was drafted the day after you asked me. Not sure what happened. Eunice- can you check.

Geraldine Knatz
Executive Director
Port of Los Angeles

From: Shelley Luce [mailto:sluce@santamonicabay.org]
Sent: Friday, December 09, 2011 04:26 PM
To: Knatz, Geraldine
Cc: Tankersley, Eileen
Subject: Letter for Coastal Conservancy Board

Dear Geraldine,

When we spoke a month or so ago, I asked if you would provide a letter to Sam Schuchat and his Board regarding your interest in the Ballona Wetlands restoration project. The January meeting of the Conservancy Board will be in Los Angeles and Sam will ask the Board to approve a large sum for continuing the planning and permitting of the restoration project, so your support of the project and interest in providing mitigation funding is important. Do you still intend to provide a letter and can I help with drafting? Also, we will give the Board members a tour of the wetland and briefing on the restoration plan before or after the Board meeting. As soon as we have a date I will send you an invitation and hope that you could come along.

Thank you Geraldine,
Shelley

Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444

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Mark Gold, D.Env. | President

Heal the Bay | 1444 9th Street | Santa Monica CA 90401

Tel: 310 451 1500 X123 | Fax: 310 496 1902 | mgold@healthebay.org

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From: Mary Small [<mailto:msmall@scc.ca.gov>]

Sent: Tuesday, January 03, 2012 2:16 PM

To: Mark Gold

Subject: support letter for SCC board meeting?

Hello Mark,

Happy New Year. I am emailing to see if Heal the Bay would be willing to send a letter of support to the Coastal Conservancy for the recommendation that we authorize \$6.5M for the design and engineering of the proposed restoration project? My draft staff report is attached along with a sample letter. I know you have talked to Shelley about the project, but I would be happy to give you an update at any time. Of course I understand if you are not prepared to take a position on this project at this point, but our meeting will be in Culver City, so I expect there will be some opposition.

Please let me know if you have any questions or need more info.

Thanks,

Mary

From: Shelley Luce
To: Mary Small; Karina Johnston
Subject: Fw: Coastal Conservancy funding to complete Ballona Wetlands restoration planning
Date: Wednesday, January 18, 2012 10:13:14 PM
Attachments: BCR Support for SCC Ballona Wetlands Funding Authorization.pdf

Jim Lank comes through! Karina or Elena can you please print a copy for me when you get in the office tomorrow? Thank you.

Shelley,

Emails have been flying today, with the end result that BCR is a strong supporter of the requested authorization. See the attached letter. Should we bring copies to give to the board and staff?

As I said before, both Bobbi Gold and I plan to be at the Scenic Overlook for the 1pm meeting start. Bobbi plans to be there for the whole discussion of the agenda item, while I'll stay as long as I can. Both of us plan to sign in to speak on the item. As part of that, I assume it would be appropriate to read the letter, at least in part. If not, let me know.

I hope the tour and meeting both go well. FYI, I'll be leaving soon for another meeting.

Thanks again for your quick response with the helpful cost information.

Jim

Jim Lamm, President

Ballona Creek Renaissance (BCR)...Connecting Creek and Community from the Hills to the Bay
310-839-6896, 310-367-0336 (c), <http://facebook.com/ballonacreekrenaissance>, www.ballonacreek.org

From: Shelley Luce <sluce@santamonicabay.org>
To: Jim Lamm <jim.lamm@sbcglobal.net>
Sent: Wed, January 11, 2012 11:19:55 AM
Subject: RE: [REPLY] Fw: Coastal Conservancy funding to complete Ballona Wetlands restoration planning

Thank you very much Jim! I hope you had a nice holiday too. It's going to be a great 2012.
Shelley

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444*

www.santamonicabay.org

From: Jim Lamm [<mailto:jim.lamm@sbcglobal.net>]
Sent: Wednesday, January 11, 2012 10:58 AM
To: Shelley Luce

Subject: Re: [REPLY] Fw: Coastal Conservancy funding to complete Ballona Wetlands restoration planning

Shelley,

Please accept my apologies for this late response. Cathi and I were away on a 2 1/2 week driving trip to the Seattle area for a holiday visit with our kids and grandkids. Then after returning late last Thursday, we've been focused on moving Cathi's 93-year-old mom in with us. I'm just now beginning to turn more of my attention to a backlog of BCR and other matters.

Unfortunately I have an important 3pm meeting at Culver City Hall on the afternoon of the 1pm SCC board meeting at the Scenic Overlook. If I were able to speak on the restoration planning agenda item before about 2:40pm, it could work. Otherwise (or in addition) I might be able to get Bobbi Gold or another knowledgeable BCR board member to represent us.

As for a BCR support letter, I'm pretty sure that would not be a problem. This is on my list of things to bounce off the board prior to our next board meeting.

Here's to a great new year, despite the challenges ahead!

Jim

Jim Lamm, President

Ballona Creek Renaissance (BCR)...Connecting Creek and Community from the Hills to the Bay

310-839-6896, 310-367-0336 (c), <http://facebook.com/ballonacreekrenaissance>, www.ballonacreek.org

From: Shelley Luce <sluce@santamonicabay.org>

To: Jim Lamm <jim.lamm@sbcglobal.net>

Sent: Fri, January 6, 2012 5:32:52 PM

Subject: Coastal Conservancy funding to complete Ballona Wetlands restoration planning

Hello Jim,

I hope you had a lovely Christmas and a happy new year! I did enjoy a nice break.

You may have heard that the Board of the Coastal Conservancy will meet in LA on Jan. 19 and will consider a request from their staff to authorize funding to complete the Ballona Wetlands restoration planning. The request is for about \$6.3M and most will go to consultants for additional engineering (through final design), to create a public access master plan, and to do extensive hydraulic modeling as required by Army Corp permitting (the major expense). About \$240k will come to SMBRF to fund Diana's position as well as monitoring on the site for the next three years. I don't know if there will be active opposition to this but I am preparing for that nonetheless. Also I see this as a good opportunity to let the SCC board members see the great support that exists in our community for restoration at Ballona.

Please let me know if you are able to support by letter or by attending the meeting. It was posted today on SCC website <http://scc.ca.gov/2012/01/06/coastal-conservancy-public-meeting-january-19-2012/>

I am attaching the staff report for the item and a couple of example support letters as well. Thank you Jim!

shelley

Shelley Luce, D.Env.

Executive Director

Santa Monica Bay Restoration Commission

Pereira Annex MS:8160

Subject: Re: Letter for Coastal Conservancy Board

The letter was drafted the day after you asked me. Not sure what happened. Eunice- can you check.

Geraldine Knatz
Executive Director
Port of Los Angeles

From: Shelley Luce [mailto:sluce@santamonicabay.org]
Sent: Friday, December 09, 2011 04:26 PM
To: Knatz, Geraldine
Cc: Tankersley, Eileen
Subject: Letter for Coastal Conservancy Board

Dear Geraldine,

When we spoke a month or so ago, I asked if you would provide a letter to Sam Schuchat and his Board regarding your interest in the Ballona Wetlands restoration project. The January meeting of the Conservancy Board will be in Los Angeles and Sam will ask the Board to approve a large sum for continuing the planning and permitting of the restoration project, so your support of the project and interest in providing mitigation funding is important. Do you still intend to provide a letter and can I help with drafting? Also, we will give the Board members a tour of the wetland and briefing on the restoration plan before or after the Board meeting. As soon as we have a date I will send you an invitation and hope that you could come along.

Thank you Geraldine,
Shelley

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
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From: Mary Small
To: "Shelley Luce"; "Diana Hurlbert"
Subject: FW: draft support letter for SCC board meeting
Date: Tuesday, January 03, 2012 1:05:00 PM
Attachments: SCC Ballona Tech Support Ltr.docx

Hi

I belatedly just sent this request to DFG and SLC. The only support letter I have is from MRCA, though I know the port is working on one too. Can you let me know who you are working on getting letters from and if there is anyone else I should follow-up with?

Thanks

Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 1:04 PM
To: 'Griggs, Pamela@SLC'; 'Terri Stewart'; 'dlawhead@dfg.ca.gov'; 'Rick Mayfield (rmayfield@dfg.ca.gov)'
Subject: draft support letter for SCC board meeting

Hi

Sorry I didn't send this to you earlier, I meant to send it before the holidays, but forgot. I was wondering if your agencies would send a support letter to Coastal Conservancy for the requested authorization for funds for engineering and final design for Ballona. Our meeting will be in LA so I expect there will be some opposition and it is a huge funding request since we decided to do the EIR and permitting for the whole project.

If you could attend the site tour of Ballona and the meeting (both on Jan 19th) that would be great too.

Please let me know if you have any questions or need more info.

Thanks

Mary

1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-216-9827
www.santamonicabay.org

From: Jim Lamm [jim.lamm@sbcglobal.net]
Sent: Monday, November 14, 2011 8:51 PM
To: Jessica Hall
Cc: Diana Hurlbert; Shelley Luce
Subject: Re: Request for Support Letters - Urban Greening - Cochran Avenue

Jessica,

BCR's letter of support is attached. Here's to a successful project!

Jim

Jim Lamm, President
Ballona Creek Renaissance (BCR)...Connecting Creek and Community from the Hills to the Bay
310-839-6896, 310-367-0336 (c), <http://facebook.com/ballonacreekrenaissance>, www.ballonacreek.org

From: Jessica Hall <jishica@mac.com>
To: Jim Lamm <jim.lamm@ballonacreek.org>; diana hurlbert <dhurlbert@santamonicabay.org>
Cc: shelly <sluce@santamonicabay.org>
Sent: Mon, November 14, 2011 10:44:14 AM
Subject: Request for Support Letters - Urban Greening - Cochran Avenue

Hi Jim and Diana,

I am working on the urban greening grant for SMBRF for Cochran Avenue Gateway project. Jim, I was wondering if BCR would write a letter of support, and Diana, I was wondering if there were other stakeholders in the Ballona community that you have contact info for, that would also provide a letter of support. Any technical experts would be especially appreciated. A draft letter is enclosed.

The grant is due Thursday.

Thanks!
Jessica

From: Mary Small
To: "Mark Gold"
Cc: sluce@santamonibay.org
Subject: RE: support letter for SCC board meeting?
Date: Friday, January 06, 2012 4:23:00 PM

I was just talking to Shelley and we were wondering if you could send a staff person to the meeting even if you don't want to sign a letter? Maybe Meredith or someone on her staff could come to talk about the need to open the site to public access and restore nature in the city?

This authorization doesn't commit to any one project, we still will be going through CEQA and NEPA.

Thanks
Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 3:00 PM
To: 'Mark Gold'
Subject: RE: support letter for SCC board meeting?

Thanks, the meeting is the 19th so that's the deadline. Yes, I totally understand.

I was just sending Sarah an email about possible dates I'll be in LA when I'd like to stop in and talk about OPC, so maybe I'll see you then.

Happy new year (and MLPA implementation)
Mary

From: Mark Gold [mailto:mgold@healthebay.org]
Sent: Tuesday, January 03, 2012 2:39 PM
To: Mary Small
Subject: RE: support letter for SCC board meeting?

Mary – Happy new year to you too. We will definitely take a look at this and think it through. It is a great project and needs to happen. The political baggage that goes with it is no picnic as you know.

When is the deadline?

Mark Gold, D.Env. | President
Heal the Bay | 1444 9th Street | Santa Monica CA 90401
Tel: 310 451 1500 X123 | Fax: 310 496 1902 | mgold@healthebay.org
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From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, January 03, 2012 2:16 PM
To: Mark Gold
Subject: support letter for SCC board meeting?

Hello Mark,

Happy New Year. I am emailing to see if Heal the Bay would be willing to send a letter of support to the Coastal Conservancy for the recommendation that we authorize \$6.5M for the design and engineering of the proposed restoration project? My draft staff report is attached along with a sample letter. I know you have talked to Shelley about the project, but I would be happy to give you an update at any time. Of course I understand if you are not prepared to take a position on this project at this point, but our meeting will be in Culver City, so I expect there will be some opposition.

Please let me know if you have any questions or need more info.

Thanks,

Mary

From: Mary Small
To: "Dick Wayman"
Subject: FW: Ballona Wetlands presentation materials at SCC meeting
Date: Friday, January 20, 2012 4:03:00 PM

From: Shelley Luce [mailto:sluce@santamonibay.org]
Sent: Friday, January 20, 2012 3:12 PM
To: Mary Small; Karina Johnston; Diana Hurlbert
Subject: RE: Ballona Wetlands presentation materials at SCC meeting

Yes Mary - Karina or Diana can you please?

Also wanted to make sure you saw/heard the NPR coverage:

<http://www.scp.org/news/2012/01/20/20862/coastal-conservancy-releases-65-million-ballona-wet>

The MDR patch did a pretty good job covering - except Lisa F's comments which are confusing to me, but I will call her about it - and LATimes is going to run something this weekend, I am told. Fingers crossed.

<http://venice.patch.com/articles/coastal-conservancy-approves-6-5-million-for-ballona-wetlands-restoration-plans>

Thank you Diana and Karina for helping get this press coverage - the advance work we did made a HUGE difference! Please stay on top of me in the future to make sure we have the same success next time. great job.
shelley

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-216-9827
www.santamonibay.org*

From: Mary Small [msmall@scc.ca.gov]
Sent: Friday, January 20, 2012 2:52 PM
To: Karina Johnston; Diana Hurlbert
Cc: Shelley Luce
Subject: Fwd: Ballona Wetlands presentation materials at SCC meeting

Could one of you email this to him?
Thanks

sent from my phone

Begin forwarded message:

From: Rex Frankel <rexfrankel@yahoo.com>
Date: January 20, 2012 12:46:45 PST
To: Mary Small <msmall@scc.ca.gov>
Subject: Re: Ballona Wetlands presentation materials at SCC meeting
Reply-To: Rex Frankel <rexfrankel@yahoo.com>

Mary,

thank you for the presentation materials. However, on the Baseline monitoring report page,

<http://santamonibay.org/smbay/ProgramsProjects/HabitatRestorationProject/BaselineAssessmentReport/tabid/203/Default.aspx>

the Chapter 4--Vegetation report does not come up when you click on it. I assume this is where Dr. Luce's conclusion comes from.

If you can, please email that chapter to me.

Thank you, Rex Frankel

From: Mary Small <msmall@scc.ca.gov>
To: 'Rex Frankel' <rexfrankel@yahoo.com>
Sent: Friday, January 20, 2012 12:09 PM
Subject: RE: Ballona Wetlands presentation materials at SCC meeting

Hello Rex
Attached is our slide presentation.

Yes, Dr. Luce was referring to the findings of the baseline assessment. I just went to the project website and clicked on the image of the report cover and was able to download the documents, but if there are specific chapters that you are unable to download, please let us know and we'll get them to you.

Mary

From: Rex Frankel [mailto:rexfrankel@yahoo.com]

Sent: Friday, January 20, 2012 10:13 AM
To: msmail@scc.ca.gov
Subject: Ballona Wetlands presentation materials at SCC meeting

Mary,

I am interested in getting a copy of your slide presentation from yesterday's SCC Board meeting. Can you email it to me?

I am also interested in seeing the source documents that were used to make Dr. Luce's point that very little of the site is now functioning habitat.

Are they in the recently released SMBRC's Ballona Wetlands Baseline Assessment Program reports? The SMBRC has a website, ballonarestoration.org, with the Baseline Assessment Program report, unfortunately, most of these documents do not open when clicked upon. They are posted here:

<http://santamonicabay.org/smbay/ProgramsProjects/HabitatRestorationProject/BaselineAssessmentReport/tabid/203/Default.aspx>

Please call me or email if you can help.

Thanks, Rex Frankel, 310-738-0861

From: Mary Small
To: "Joe Geever"
Cc: "Shelley Luce"; "Diana Hurlbert"
Subject: Coastal Conservancy Jan 19th Meeting
Date: Thursday, December 15, 2011 11:25:00 AM
Attachments: Ballona Wetlands Engineering and Technical Studies.docx

Hi Joe

Nice to talk to you this morning, and thanks for agreeing to come to the Coastal Conservancy meeting in Jan. It will be on Jan 19th at the Baldwin Hills Scenic Overlook starting around noon.

Ballona funding (draft staff report attached) will be the first major item on the agenda. We are planning to take the Board on a tour of Ballona that morning. The tour and meeting are open to the public and details will be posted on our website by the 6th of Jan.

As I mentioned, we (Shelley and I) would be happy to provide additional information to you &/or your chapters at any point. Since we are finally getting ready to initiate the public environmental review, now would be a good time to get you engaged.

Thanks,
Mary

~~~~~

Mary Small  
Deputy Executive Officer, Coastal Conservancy  
1330 Broadway #1300 Oakland, CA 94612  
510-286-4181

## **ATTACHMENT 4**

**From:** Mary Small  
**To:** "Shelley Luce"  
**Cc:** "Joan Cardellino (Joan Cardellino)"; "Diana Hurlbert"  
**Subject:** RE: Letter for Coastal Conservancy Board  
**Date:** Tuesday, December 13, 2011 1:11:00 PM

---

Thanks

Sorry, the plan is to have the tour from roughly 9-11:30 and then start the meeting at noon or 12:30 – something like that. We're afraid that if we do the tour after the meeting none of the board members will come.

I'll call Barbara today to get her ideas and see if they will help with the tour, come to the mtg or send a letter

Mary

---

**From:** Shelley Luce [mailto:sluce@santamonicaabay.org]  
**Sent:** Tuesday, December 13, 2011 1:08 PM  
**To:** Mary Small  
**Cc:** 'Joan Cardellino (Joan Cardellino)'; Diana Hurlbert  
**Subject:** RE: Letter for Coastal Conservancy Board

Mary, here are some thoughts from me and Diana:

- 1) Tour – we'll do the tour anytime that works for your members but it seems tight to finish it by 9:15 in order to get them all to Baldwin Hills Overlook for a 10 am meeting. I know we have the Toy meeting the day before so right after the board meeting makes most sense. Could you convince your members to stick around for it?
- 2) Press – this is troubling. It'll be hard for us to get good press on a \$7M expenditure... we can spin this if we get the right people. What if we did a brief presentation on the Monitoring Report before hand? We'll have beautiful hard copies, it's over 400 pages and very impressive and did not cost a lot for the amount of work and info. I think it makes SCC and SMBRC look great. Could we make this the press focus, i.e. with Molly Peterson at least? I'll give her a call for starters.
- 3) Support – I will talk with Geever, Jim Lamm, Miguel, Lisa Fimiana, Baykeeper, HTB, Nate from Rosendahl's office, Napolitano from Knabe's and Karly from MRT's. I can't say who will show up or do a letter but I will make the asks. I'll also ask Pestrella. Can you talk to MRCA Mary? Also what about the Corps – Rick Liefeld's support would be very meaningful, or Toy's if we can get it. Maybe a letter from Toy with Rick or someone else attending the meeting?

We'll draft a support letter asap and run it by you.

Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160*

1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444

[www.santamonicabay.org](http://www.santamonicabay.org)

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**From:** Mary Small [mailto:msmail@scc.ca.gov]  
**Sent:** Tuesday, December 13, 2011 10:38 AM  
**To:** Shelley Luce  
**Cc:** 'Joan Cardellino (Joan Cardellino)'  
**Subject:** RE: Letter for Coastal Conservancy Board

Hi Shelley-

Do you have time to talk about our Jan meeting? I know you have a board meeting this week, so we could also do this via email – or next week, but before next Fri I'd like to work through some ideas:

- 1) Tour – we'll probably do a tour the morning of the meeting, I think maybe the tour we did with Colonel Toy – view from Cabora Rd and then walk out to boyscout platform
- 2) Press – do you think we could use this meeting as an opportunity to get either local papers and/or try for LA Times to cover the project? I am worried that once the agenda is out Marcia will use as opportunity to get bad press. Our agenda will be mailed out Jan 6<sup>th</sup>
- 3) Public support – who could we have come to support the project at the meeting or with letters? Geraldine is critical (at least her letter) but how about MRCA?, Joe Geever?, Ballona Creek Renaissance?, Friends?, Miguel Luna?, Audubon? HtB? Baykeeper?

Thanks,  
Mary

---

**From:** Shelley Luce [mailto:sluce@santamonicabay.org]  
**Sent:** Monday, December 12, 2011 3:22 PM  
**To:** Mary Small  
**Subject:** FW: Letter for Coastal Conservancy Board

Hi Mary, Geraldine thought her letter went out already. Have you received? I also invited her to tour the wetlands with us after the meeting.

*Shelley Luce, D.Env.*  
*Executive Director*  
*Santa Monica Bay Restoration Commission*  
*Pereira Annex MS:8160*  
*1 LMU Drive, Loyola Marymount University*  
*Los Angeles, CA 90045*  
*310-961-4444*

[www.santamonicabay.org](http://www.santamonicabay.org)

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**From:** Knatz, Geraldine [mailto:knatz@portla.org]  
**Sent:** Sunday, December 11, 2011 1:00 PM  
**To:** Shelley Luce; Zordilla, Eunice  
**Cc:** Tankersley, Eileen

**From:** [Shelley Luce](#)  
**To:** [Mary Small](#)  
**Subject:** RE: board presentation  
**Date:** Wednesday, January 11, 2012 6:55:23 PM

---

Hi Mary,

I think the presentation looks good. I think we should include some comparative data to show the need for restoration – e.g. the seed bank data, the exotic veg data and some of the animal data (birds and herps). I saw what karina sent you and it doesn't help us – we need numbers like "99% invasive plants" and "lowest seed bank of any so cal wetland". we also need her graphs that show huge percent exotic veg. versus tiny percent native veg, etc. along with those photos of invasive plants that you already included.

I also think we should mention the TMDL –or not the TMDL itself, but we can list the impairments listed on the 303d list, note that TMDL implementation would be consistent with the restoration and that we can work with partners on my governing board and other agencies and leverage resources that would go into implementing the TMDL.

I can help with slides – why don't you send me one or two in your formatting and I will make some with the graphs imentioned and see if you like them. Or rather, since you have to finish by tomorrow and I am out of the office all day, we will ask karina to insert some graphs. Okay with you?

Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonibay.org](http://www.santamonibay.org)

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**From:** Mary Small [mailto:msmall@scc.ca.gov]  
**Sent:** Wednesday, January 11, 2012 2:49 PM  
**To:** Shelley Luce  
**Subject:**

Hi Shelley

Attached is a draft powerpoint, I want to keep it as simple as we can. There are several extra slides at the end, I just want one picture I can leave up when I walk through the actual requested action, maybe just the bird with its head in the water?

There are two slides about the baseline monitoring program – I think we only need one of them, do you prefer lots of words or just a picture.

I am sending in .pdf because the actual powerpoint is too big. If you want me to ftp the powerpoin so you can edit directly, let me know. I have to finish this by tomorrow night.

Thanks!  
Mary



**From:** [Shelley Luce](#)  
**To:** [Karina Johnston](#)  
**Cc:** [msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)  
**Subject:** graphs needed for SCC board presentation  
**Date:** Thursday, January 12, 2012 7:57:56 AM

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Hi Karina,

Thank you for the bullets you prepped for Mary, they are helpful. The photos are also perfect. What we still need for the presentation are graphics or numbers that will really make our case. Mary needs to complete the presentation today so can you and your team help us prep the following ASAP?

- one map of existing conditions that shows the site today: an aerial photo with transparent overlay of BASIC habitat types - how much is wetland, how much is upland/vacant lot style. goal is to illustrate how little of the site can be said to be functioning habitat.
- one simple graph showing predominance of invasive species - the one in the BWER draft TMDL is fine, can you please send that to Mary? we need to say "x percent of the site is covered with 99% invasive vegetation" or whatever the actual numbers are. rather than "dominate by invasives" which could mean only 55% covered.
- some species diversity numbers/charts that show how extremely depauperate poor Ballona is. not just "reduced relative to other wetlands" but "lowest seed bank abundance and diversity of any wetland in southern California" - but i need you to give me the right language so i am not mis-stating anything. please give me those #s or charts or language for seed bank, veg, mammals, birds, fish and herps separately and we'll decide which ones to mention in our presentation.
- any other features of the site or results from your surveys that really illustrate to non-scientists how desperate is the need to restore ecological function and habitat at the site.

I am sorry to ask you for all this today, I hope you or one of your team has time. I think you have all this info readily accessible - if there is something i've requested that is a big pain check with me and we'll decide if it's really needed. please call my cell or email, i will be out of the office all day but checking my phone compulsively. also please suggest other stuff if you think of it - you know these data better than we do! thank you KJ talk to you later today.  
shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-216-9827  
[www.santamonica-bay.org](http://www.santamonica-bay.org)*

**From:** Mary Small  
**To:** "Karina Johnston"; "Diana Hurlbert"; "Shelley Luce"  
**Subject:** please review these two paragraphs  
**Date:** Tuesday, December 13, 2011 9:09:00 AM

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Hi

I'm wrapping up my staff report and I needed to add a little more detail about what SMBRF will do with the grant funds and who you are. Can you please review this and let me know if you have any edits? If you can get it to me today, that'd be great.

Mary

The recommended grant to the SMBRF would provide funds for data collection, technical review and agency coordination to support the proposed restoration project. The SMBRF has implemented a multidisciplinary baseline data collection program using volunteers, students and professional technical experts. The baseline report is the first comprehensive assessment of biological and physical resources at the BWER. It was just published and is available online: <http://www.ballonarestoration.org>. This grant would allow the SMBRF to conduct additional targeted studies based on the resources identified in the baseline assessment as needed to support the environmental impact analysis of the proposed project. In addition, the SMBRF will continue coordination of the agency review, identification of funding partners, and technical review of work products associated with this project.

The SMBRF is a non-profit organization that was created in 1991 to implement the priorities of the Santa Monica Bay Restoration Plan and to support the work of the Santa Monica Bay Restoration Commission. The SMBRF has a number of initiatives including research, public education, and planning, to support these goals. The SMBRF and the Seaver College of Science and Engineering at Loyola Marymount University (LMU) created the Center for Santa Monica Bay Studies to engage in multidisciplinary research on environmental and social issues affecting Santa Monica Bay and its watershed, and to contribute to policies and actions that improve the environmental condition of the Bay. The partnership with LMU has been very valuable to the data collection efforts, SMBRF has used student volunteers to conduct fieldwork and some faculty have coordinated their own research to support the baseline assessment, resulting in hundreds of hours of field work being donated to the project.

~~~~~  
Mary Small
Deputy Executive Officer, Coastal Conservancy
1330 Broadway #1300 Oakland, CA 94612
510-286-4181

ATTACHMENT 5

卷之四 雜著 四庫全書

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 2. 關於本會之經費，應由本會
 3. 關於本會之業務，應由本會
 4. 關於本會之人事，應由本會
 5. 關於本會之財產，應由本會
 6. 關於本會之其他事項，應由本會

JAMES EARL RAY, JR. 1929-1970
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U. S. House of Representatives
COMMITTEE ON PUBLIC WORKS
AND TRANSPORTATION

SUITE 2185 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-4472

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COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.

RESOLUTION

Marina del Rey, California
Docket 2453

Resolved by the Committee on Public Works and Transportation of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on Playa del Rey Inlet and Basin, Venice, California, published as House Document 389, Eighty-third Congress, Second Session, and other pertinent reports, to determine whether modifications of the recommendations contained therein are advisable at the present time, in the interest of navigation, hurricane and storm damage reduction, environmental restoration, and other purposes at Marina del Rey Harbor, Los Angeles, California, with consideration given to the disposal of contaminated sediments from the entrance channel required under the existing operation and maintenance program at Marina del Rey Harbor.

Receives September 22, 1954

QUESTIONS

NORMAN V. MINETA Chair

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DEPARTMENT OF DEFENSE Department of the Army; Corps of Engineers
Notice of Intent To Prepare an Environmental Impact Statement/
Environmental Impact Report for the Ballona Creek Ecosystem Restoration
Feasibility Study, Los Angeles County, CA AGENCY: Department of the
Army, U.S. Army Corps of Engineers, DoD. ACTION: Notice of intent. --

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SUMMARY: The Los Angeles District intends to prepare an Environmental
Impact Statement/Environmental Impact Report (EIS/EIR) to support a
cost-shared ecosystem restoration feasibility study with the Santa
Monica Bay Restoration Commission. The proposed project study areas has
been degraded by encroachment of non-native plants, placement of fill
from Marina Del Rey, interruption of the hydrologic regime, trash
accumulation, and varied attempts at bank protection along the creek
using rock and concrete. Direct benefits of the proposed project
include improved habitat and water quality, reductions in waste and
trash, and aesthetics. The watershed is an important resource for both
recreational uses and for fish, and wildlife and further degradation
could jeopardize remaining. The purpose of the feasibility study is to
evaluate alternatives for channel modification, habitat restoration
(coastal and freshwater wetlands and riparian), recreation, and related
purposes along the lower reach of the Ballona Creek. DATES: A public
scoping meeting will be held on September 29, 2005 at 6 p.m.

ADDRESSES: U.S. Army Corps of Engineers, Los Angeles District, CESPL-
PD, P.O. Box 532711, Los Angeles, CA 90053 and Santa Monica Bay
Restoration Commission, 320 West 4th Street, Los Angeles, CA 90013.

FOR FURTHER INFORMATION CONTACT: Shannon Dellaquila, Project
Environmental Manager, at (213) 452-3850 or Malisa Martin, Project
Study Manager at (213) 452-3828. SUPPLEMENTARY INFORMATION: 1.

Authorization This study was prepared as an interim response to
the following authorities provided by Congress under Section 216 of
the Flood Control Act of 1970, which states: The Secretary of the
Army, acting through the Chief of Engineers, is authorized to review
the operation of projects the construction of which has been completed
and which were constructed by the Corps of Engineers in the interest
of navigation, flood control, water supply, and related purposes, when
found advisable due the significantly changed physical or economic
conditions, and to report thereon to Congress with recommendations on
the advisability of modifying the structures or their operation, and
for improving the quality of the environment in the overall public
interest; supplemented by House Resolution on Public Works and
Transportation dated September 28, 1994 which states: **The
Secretary of the Army is requested to review the report of the Chief
of Engineers on Playa del Rey Inlet and Basin, Venice, California,
published as House Document 389, Eighty-third Congress, Second
Session,** and other pertinent reports, to determine whether
modifications of the recommendations contained therein are advisable
at present time, in the interest of navigation, hurricane and storm
damage reduction, environmental restoration, and other purposes at
Marina del Rey Harbor, Los Angeles, California, with consideration
given to disposal of contaminated sediments from the entrance channel
required under the existing operation and maintenance program at
Marina del Rey. 2. Background The Ballona Creek Ecosystem

Restoration study area lies within Los Angeles County, CA and includes portions of Marina del Rey, Culver City, Playa del Rey, and the City of Los Angeles. The study area, a component of the greater Ballona Creek Watershed, includes the lower reach of Ballona Creek extending southwest from Cochran Avenue, in Los Angeles, to Pacific Ocean in Marina del Rey. specific features of the Ballona Creek watershed, including existing and historic wetland areas, the Ballona Lagoon, Del Rey Lagoon, Venice Canal, Grand Canal, the Oxford Drain and the Ballona Channel and tributaries, will be addressed in this study. The greater Ballona Creek system drains a watershed of approximately 329 square kilometers (81,300 acres), and is the largest tributary that drains into the Santa Monica Bay. Ballona Creek collects runoff from several partially urbanized canyons on the south slopes of the Santa Monica Mountains as well as from intensely urbanized areas of West Los Angeles, Culver City, Beverly Hills, Hollywood, and parts of Central Los Angeles. The urbanized areas account for 80 percent of the watershed area, and the partially developed foothills and mountains make up the remaining 20 percent. The watershed boundary includes the Santa Monica Mountains on the north, the unincorporated area known as Baldwin Hills, and the City of Inglewood on the south. The Ballona Creek Ecosystem Restoration study footprint's southern boundary is defined by the Westcheste Bluffs, which run southwest from the San Diego (405) Freeway beyond Loyola Marymount University. The western boundary extends from the Pacific Ocean. The eastern boundary begins where Ballona Creek daylights at Cochran Avenue and Venice Boulevard in a section of Los Angeles known as the Mid City. Tributaries of Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The Ballona Creek watershed ecosystem has been altered by intense land development, encroachment of non-native plants, trash accumulation, and varied attempts at bank protection along the creek using rock and concrete. Although an important function of the Ballona Creek is as a flood control channel, the lower watershed is still an important resource for both recreational uses and for fish and wildlife habitat. Further impairment could jeopardize remaining habitat. This study will evaluate opportunities for habitat restoration (including wetland and riparian habitat), improvements to water quality, trash mitigation, and recreation and related purposes along the lower reach of the Ballona creek.

3. Problems and Needs At least ninety (90) percent of historic coastal wetlands in California have been lost due to filling, dredging, flood control and intensive development. Within the Lower Ballona Creek Watershed, remaining fragmented wetland areas have been degraded due to diminished hydraulic function, poor water quality and introduction of exotic plants and animals. While functioning wetland systems and riparian habitat remain, they are stressed. Channelization of the Ballona Creek and filling of historic wetland and riparian areas have contributed to degradation and loss of habitat due to impeded tidal exchange and circulation. Contaminated stormwater runoff and trash loading has degraded Ballona Creek water quality. Habitat alteration and loss has decreased biodiversity and overall ecological health, threatening the survival of native endangered species such as the California least tern (*Sterna antillarum brown*), snowy plover (*Charadrius alexandrinus*), and the Belding's Savannah Sparrow (*Sandwichensis beldingi*). The current design of the Flood Control channel has resulted in a lack [[Page 55117]] of recreational opportunities and is considered aesthetically challenged. At present there is no integrated approach and partnership amongst stakeholders to resolve lower Ballona Creek in-stream and wetland

degradation issues, which has led to uncoordinated and sometimes redundant and unsuccessful improvement measures. 4. Proposed Action and Alternative The Los Angeles District will investigate and evaluate all reasonable alternatives to address the problems and need stated above. In addition to a without project (No Action) Alternative, both structural and non-structural environmental measures will be investigated. An assessment of the feasibility of removing impervious surfaces from the Ballona Channel will also be evaluated. Proposed restoration measures include: re-grading and removal of fill, remove invasive and non-native plant species, reintroduction of a water source and installation of native plants to restore previously filled coastal wetlands. Other measures to be evaluated include features to improve or restore tidal regime in Oxford Basin, the Grand and Venice canals, and Ballona and Del Rey Lagoons; the potential for in stream wetland development in Centinela, Sepulveda and Ballona Creek; sediment loading in the upper watershed; and related recreation and educational opportunities. 5. Scoping Process The scoping process is on-going, and has involved preliminary coordination with Federal, State, and local agencies and the general public. A public scoping meeting is scheduled for Thursday September 29th from 6-8 p.m. at the Rotunda Room of the Veteran's Memorial Building, 4117 Overland Avenue, Culver City, CA. This information is being published in the local news media, and a notice is being mailed to all parties on the study mailing list to ensure that public will have an opportunity to express opinions and raise any issues relating to the scope of the Feasibility Study and the Environmental Impact Study/Environmental Impact Report. The public as well as Federal, state, and local agencies are encouraged to participate by submitting data, information, and comments identifying relevant environmental and socioeconomic issues to be addressed in the study. Useful information includes other environmental studies, published and unpublished data, alternatives that could be addressed in the analysis, and, potential mitigation measures associated with the proposed action. All comments will be considered in the project development. Concerns may be submitted in writing to the Santa Monica Bay Restoration Commission, or to the Los Angeles District (see ADDRESSES). Comments, suggestions, and request to be placed on the mailing list for announcements should be sp101.usace.army.mil. Availability of the Draft EIS/EIR The Draft EIS/EIR is scheduled to be published and circulated in December 2007, and a public hearing to receive comments on the Draft EIS/EIR will be held after it is published. Dated: September 13, 2005. Alex C. Dornstaeder, Colonel, U.S. Army, District Engineer. [FR Doc. 05-18651 Filed 9-19-05; 8:45 am] BILLING CODE 3710-KF-M

From: Shelley Luce
To: Mary Small; "Rick Mayfield"
Cc: "Terri Stewart"
Subject: RE: From John Davis Re Ballona CEQA process
Date: Tuesday, February 07, 2012 1:39:26 PM

Agreed. The doc he references was for a completely different project, a feasibility study in which SMBRC was the local sponsor for the Corps' study. The EIR/EIS that we want to start is for a separate project, i.e. the BWER restoration/enhancement project. As the landowner, DFG will be the lead agency.

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
Pereira Annex MS:8160
1 LMU Drive, Loyola Marymount University
Los Angeles, CA 90045
310-961-4444*

www.santamonibay.org

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, February 07, 2012 1:30 PM
To: 'Rick Mayfield'; Shelley Luce
Cc: 'Terri Stewart'
Subject: RE: From John Davis Re Ballona CEQA process

Suggested response.

- 1) The EIS/EIR process begun in 2005 was for the Army Corps' Lower Ballona Ecosystem Restoration Feasibility Study, that project and the associated environmental review has not been completed and is not moving forward at this time. The EIR/S process for the proposed enhancement project will be separate.
- 2) The CEQA statute where lead agency is defined is Public Resources Code Section 21000.
- 3) DFG as landowner intends to be the lead agency on the proposed enhancement project that will be analyzed in the EIR/EIS.

From: Rick Mayfield [mailto:rmayfield@dfg.ca.gov]
Sent: Tuesday, February 07, 2012 9:30 AM
To: Mary Small; Shelley Luce
Cc: Terri Stewart
Subject: Fwd: From John Davis Re Ballona CEQA process

Please take a look at the attached from Mr. Davis and let me know if you can provide any further information before I respond.

Thanks,

Rick
>>> <jd@johnanthonydavis.com> 2/6/2012 5:11 PM >>>

Ca DFG
Att: Mr. Mayfield

Hi Mr. Mayfield, attached is the congressional and corp docs we discussed.

The document states an joint EIS/EIR process was begun in 2005 per the request of Congress.

The Santa Monica Bay Restoration Commission is noted as the lead agency for CEQA in the joint EIR/EIS.

It also states that at least one scoping hearing has already occurred.

My question is does DFG plan on beginning another EIR process for the same area that is already been started by the SMRBC and Corp. If so, how can there be two lead agencies.

To me, logic indicates the SMRBC should be lead.

Thanks,

John Davis
PO 10152
Marina del Rey Ca. 90045

From: Mary Small
To: "Diana Hurlbert"; "David Lawhead (DLawhead@dfg.ca.gov)"; "Eichler, Monica SPL"; "Eric Gillies"; "griggsp@slc.ca.gov"; "Hamamoto, Bruce"; "Patrick Holland (pholland@dpw.lacounty.gov)"; "Rick Mayfield (rmayfield@dfg.ca.gov)"; "Serpa, Phillip J SPL"; "Shelley Luce"; "Strum, Stuart R MVN-Contractor"; "Swenson, Daniel P SPL"; "Terri Grant (tgrant@dpw.lacounty.gov)"; "Youn Sim (vsim@dpw.lacounty.gov)"
Subject: FW: request for services - ballona wetlands
Date: Wednesday, February 08, 2012 4:46:00 PM
Attachments: [Ballona Civil Engineering and Geotech.pdf](#)
[Ballona Hydrology and Engineering.pdf](#)

The request for services for the civil engineering and geotechnical contract and the hydrology and engineering contracts went out today. Feel free to forward to other potential contractors, I sent it to about 60 in our database and we will post it on the web. Proposals are due on Feb 29th.

Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Wednesday, February 08, 2012 4:39 PM
Subject: FW: request for services - ballona wetlands

The California State Coastal Conservancy is requesting proposals for consultant services for two separate contracts related to the proposed enhancement of the Ballona Wetlands Ecological Reserve in Los Angeles County. Services are needed to complete engineering and geotechnical evaluations, hydrology, technical studies, design and related services to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers. One contract will be for Civil and Geotechnical Engineering and a second contract will be for Hydrology and Engineering Design Analysis.

~~~~~

Mary Small  
Deputy Executive Officer, Coastal Conservancy  
1330 Broadway #1300 Oakland, CA 94612  
510-286-4181

Ballona Ecosystem Restoration Planning Management Meeting  
June 28, 2010  
3:00-5:00pm

Attendees:

|                       |                                            |                           |
|-----------------------|--------------------------------------------|---------------------------|
| Josephine Axt, USACE  | Ed Demesa, USACE                           | Julian Serafin, USACE     |
| Rene Vermeeren, USACE | Ben Nakayama, USACE                        | Rhiannon Kucharski, USACE |
| Diana Hurlbert, SMBRC | Sean Bergquist, SMBRC                      | Kathy Anderson, USACE     |
| Larry Smith, USACE    | Mary Small, Coastal Conservancy (by phone) |                           |

- I. Mary Small: Coastal Conservancy is supplying most of the funding toward the in-kind local sponsor efforts.
- II. Ed Demesa: Corps Process Overview
  - a. We are coming up to our first major milestone (F3)
    - i. Baseline and future without project conditions; preliminary alternatives analysis
      1. Describes problems and opportunities, planning objectives
      2. This product will be the basis for future steps
    - ii. Next milestone (F4A/F4)
      1. Formulation, evaluation and comparison of alternatives
      2. F4A: SPD requirement, Alternative Formulation Briefing
    - iii. (F5) Public Draft Feasibility Report
      1. Headquarters Policy and Public Review
  - b. Josephine Axt: New Review Guidance (Estimated at \$500,000; IEPR is federally funded)
    - i. Agency Technical Review (ATR) - Requires coordination with the planning center of expertise, and coordinates a team of reviewers from another Corps Division
    - ii. Model certifications required
    - iii. Independent External Peer Review (IEPR)
    - iv. Note for budget: call out what IEPR is estimated to cost, and that it does not have to be cost shared
    - v. Diana Hurlbert: Under each discipline, there are costs for responding to comments. Are those related to ATR?
      1. Josephine Axt: Yes. There is a formal comment and response system that must be used for ATRs (DrChecks)
  - c. Kathy Anderson: Partnership
    - i. Communication
      1. Sean Bergquist: Communication has been much better since Rhiannon has taken over as Lead Planner.
      2. Mary Small: Rhiannon has been great in communication.
    - ii. Cost share
      1. Sean Bergquist: Our cost share component is 100% in-kind. It is anticipated that most of that work is and will continue to be in the wetlands.
        - a. We are finished our F3 equivalent (2006)
        - b. We are also finished our alternatives development and analysis (2008)
          - i. We want to make sure that all of the products feed in to the Corps process and products.
        - c. The Corps and us on not on the same timeline.

2. Mary Small: It was always our understanding that the Corps would use our restoration alternatives. It makes us nervous that this was never in writing. We have done our F4 equivalent.
3. Because of Federal funding starts and stops, the Corps is still in the F3 process, while the sponsor has completed alternatives analysis (F4 equivalent).
4. Diana Hurlbert: We want to make sure you are maximizing our products, and we want to understand what if any deficiencies are found.
5. Josephine Axt: In-kind has to be formally submitted, directly applicable to the project and it must be understood that in-kind increases increase the overall budget increases.
  - a. Mary Small: We fear that our in-kind is not properly reflected in the PMP.
  - b. Rhiannon Kucharski: This may be the case. We need to go in detail in to this upon receipt of in-kind submissions, quality check them and revisit the PMP.
6. Sean Bergquist: For credit, do we get credit for what we paid or for what it would have cost the Corps to do the same work?
  - a. Josephine Axt: The in-kind credit needs to match the estimate for that work in the PMP. Likewise, if the work costs more than estimated, credit will only be given for up to the estimated amount.
- iii. Ed Demesa: As the project goes up the chain, we have to be careful for policy issues. When the project is competing nationally, it starts to become a factor. The cost of land acquisition is part of the project costs. We can only credit up to 35% of total project costs.
- iv. Mary Small: If the Corps falls too behind, we will work with Corps Regulatory for a permit for their activities (NEPA/CEQA, design, permitting, and Phase 1 construction).
  1. Josephine Axt: If you are going full steam ahead, what is your timeline?
  2. Sean Bergquist: We purchased the property in 2005, and have to do something with the property in the near future. There is no set deadline, but they must show the state that something is being done.
    - a. In about 4 years, they would like to be constructing something.
    - b. Early phase: Do South portion of Area B, South of Jefferson and below Gas Company (low areas, reconnect tidal flows)
  3. Ed Demesa: The law to partially build a project and receive credit for a larger project applies only to flood control when there is imminent need. Unfortunately, that law does not apply to ecosystem restoration. There is not an authority for us to give credit for it down the line. So, this may be something you want to consider for a WRDA request to change the authorization.

### III. Project Status

- a. Corps is working on baseline (F3) right now. Due to H&H delays, the milestone will most likely happen early in FY11.
- b. PMP amendment
  - i. Study area
    1. Will be clearly defined in the PMP amendment (to the satisfaction of all parties).

- a. Definition: Ballona Creek from the Pacific Ocean to Cochran, Del Rey Lagoon; and Centinela and Sepulveda Channels from Ballona Creek to where they go underground.
    2. Grand canal is out.
    3. Sean Bergquist: We have always planned on the daylighted part of Ballona Creek up to Cochran.
    4. Coordination needs to go through Diana Hurlbert and Rhiannon Kucharski.
  - ii. Costs
    1. Ed Demesa: For in-kind credit, it is important to let the PDT know what work the sponsor is doing, even if it will not be submitted for in-kind credit.
    2. Sean Bergquist: Historical analysis of the watershed is in the works. We are also working with UCLA to do a watershed budget.
    3. Sean Bergquist: When things have to be redone, how does the cost share work?
      - a. Hydraulic study
        - i. Rene Vermeeren: Our H&H models are in DRAFT form and have not yet had the first ATR. They are not ready for use on alternatives.
    4. SMBRC Governing Board will have to sign the PMP and FCSA amendments.
    5. In construction phase, can the cost of the land/property be used toward sponsor in-kind credit?
      - a. Kathy Anderson: Yes, as long as the constructed project uses those lands. The state paid \$140 million in 2005 for the property that makes up areas A, B and C.
  - iii. In-kind submittals
    1. Mary Small: Is there really much more additional work that needs to be done to review the submittals? How much is left to be done by the Army Corps depends on the in-kind submittals?
      - a. Diana and Rhiannon can work together with each PDT member to work through these. Set up meetings ASAP.
      - b. Kathy Anderson: The whole PDT needs to sit down and go through the PMP, in-kind and costs step-by with SMBRC.
    2. Mary Small: I am worried about the water quality report in terms of the data being what is needed per the Corps and less worried about the write-up
      - a. Confirm with James Chieh that the data is what is needed.
  - c. Kathy Anderson: Sponsor financial capability?
    - i. Even in light of cost increases, the sponsor has enough money to fund all of their study activities and even begin phase I construction (Area B).
    - ii. Corps needs to get details of sponsor plans for "phase I" in Area B and determine if this must be added as a future without project condition or not.
- IV. Action items are noted in RED.

Lower Ballona Creek Ecosystem Restoration Study Monthly Coordination Meeting Minutes  
April 28, 2010  
10-11am

Attendees:

Mary Small, CC

Sean Bergquist, SMBRC

Rhiannon Kucharski, USACE

Kathy Anderson, USACE

James Chieh, USACE

- I. Comments to the DRAFT Corps F3 products and the DRAFT PMP update are due by the next coordination meeting, May 26, 2010.
  - a. Comment from Sean related to updated costs/project area: SMBRC considers lower Ballona Creek to be everything from Cochran Avenue to the Ocean.
  - b. Sean is concerned about how SMBRC can come up with matching funds and/or in-kind work for a study totaling \$6.2 million (the updated estimated study cost total)
    - i. Mary: We may not be able to get approval for the cost increases
- II. Frank Wu was not able to attend today's meeting. He will contact Mary and Sean independently to discuss his question on the Engineering and Design Section I, Task 3 from the PMP.
- III. In-kind submittals
  - a. Mary and Sean will try to submit the first set within one week.
- IV. Water Quality Analysis
  - a. Document forthcoming from SCCWRP (early June)
  - b. Document forthcoming from Geosyntech (June)
    - i. Delay due to 2 very dry seasons
  - c. Some data is already available on the website (Ballonarestoration.org)
    - i. Some prior reports from previous years are available
  - d. The Corps (James Chieh) will need to translate and analyze the data and put it into the Appendix Report.
    - i. Sean will send everything that is currently available to James Chieh, Co Rhiannon ASAP. This will include the Geosyntech scope of work and cost estimate for water quality data analysis.
- V. Other Discussion
  - a. There will be a site tour with the Corps, URS and Sean on May 5, 2010.
  - b. Kathy: We were able to request \$345k for FY11, but need to get amended FCSA executed.
    - i. Mary: We need to credit in-kind work before amending the FCSA. We hope this will bring down the overall study cost.
- VI. Action items noted in ORANGE.

## Ballona Coordination Meeting Minutes

June 2, 2010

10am

### Attendees:

|                                 |                           |                          |
|---------------------------------|---------------------------|--------------------------|
| Mary Small, Coastal Conservancy | Diana Hurlbert, SMBRC     | Heather Schlosser, USACE |
| Julian Serafin, USACE           | Rhiannon Kucharski, USACE |                          |
| Ben Nakayama, USACE             | Robert Browning, USACE    | Robert Grimes, USACE     |

- I. In kind submittals
  - a. For In-kind submittals, Mary, Sean and Diana tried to break down the submittals per the PMP, but had a hard time. Please see in-kind spreadsheet submitted last week.
  - b. SMBRC and Coastal Conservancy will submit the In Kind Submittal sheets that correspond with each document from the website, along with reference to the document or file they correspond to and a link to that document on the web.
- II. PMP updates
  - a. Mary Small is concerned that the revised PMP does not reflect the products they have completed, and very concerned about the cost increases.
  - b. Mary Small: Have all the PMP sections looked at the same project area? Parts still refer to Ballona Lagoon, Grand Canal, Venice Canals and Oxford Basin, which are no longer in the study area.
    - i. All sections should include: Del Rey Lagoon; Areas A, B and C; Ballona Creek from the Ocean to Cochran; and Centinela and Sepulveda Channels from where they daylight to Ballona Creek.
  - c. Mary and Diana requested that the Corps add geographic location to the PMP amendment chapter. The scopes of work are confusing because they do not make the study area clear.
  - d. Mary: Why have the F3 economics costs gone up?
    - i. Ben Nakayama: Economics had to re-run their model due to the revised flood plain hence their cost increase. The potential flooded parcels went from 6000 to 600.
    - ii. Sponsor wants to understand why the economics costs for F3 doubled. The model was originally run at a larger scope (6000 parcels) and is now being re-run at a smaller scope (600 parcels). That should not cost double. There should be economies of scale.
    - iii. Ben Nakayama: The model had to be completely re-run for the new parcels. This along with added review costs are the reasons behind the cost increase.
  - e. Review Guidance has led to approximately \$505k in cost increases. \$260k of that is for Independent External Peer Review (IEPR), which is NOT cost shared. The other levels of review such as Agency Technical Review (ATR) and model certification ARE cost shared.
    - i. Rhiannon will send another copy of the review guidance.
  - f. The Coastal Conservancy is worried that there will be no political appetite to support a feasibility study at this cost level.

- g. The language in the PMP needs to itemize what the additional costs would go towards.
  - i. Rhiannon will send the detailed cost estimates from each PDT member.
- h. The Coastal Conservancy believes their GIS work should decrease the revised GIS costs.
  - i. This can be investigated further in conjunction with the in-kind review process. USACE will ask Dave Bianco to review the GIS products and scope and cost estimate after the formal in-kind submittal.

### III. Coordination

- a. Heather Schlosser: It is hard to assure proper coordination when the Corps is trying to complete the baseline F3 this year, while the sponsor is well in to alternatives analysis in the wetlands areas (A, B, C).
  - i. Mary and Diana, what do you see as the Corps' role in this feasibility study?
    - 1. Mary Small: The discussion was that the Corps would focus on the Creek (there aren't state funds for that) and that the wetlands study would go forward separate from the larger feasibility study, but feed in to the project as in-kind credit. The restoration of the wetlands (A, B, C) is being led by SMBRC in conjunction with the State of California.
    - 2. SMBRC and Coastal Conservancy are both interested in the Creek as well.
      - a. Heather Schlosser: Are you willing to cost share the implementation phase of a recommended alternative that includes the Creek and Wetlands?
      - b. Mary Small: Our funding strategy for implementing the restoration is the value of the land. However, the Coastal Conservancy's focus is the restoration planning at the wetlands.

### IV. Executive Management Meeting

- a. Aim to have this in June. SMBRC and Coastal Conservancy will send potential dates and times to Rhiannon Kucharski, who will coordinate with USACE management schedules.



Ballona Telecon Minutes  
March 29, 2010

Attendees:

|                                 |                        |                      |
|---------------------------------|------------------------|----------------------|
| Rhiannon Kucharski, USACE       | Kathy Anderson, USACE  | Larry Smith, USACE   |
| John Killeen, USACE             | James Chieh, USACE     | Frank Wu, USACE      |
| Julian Serafin, USACE           | Michael Hallisy, USACE | Patrick Singh, USACE |
| Mary Small, Coastal Conservancy |                        | Sean Berquist, SMBRC |

- I. Introductions
- II. PMP update
  - a. DRAFT SOW Amendment Chapter distributed
  - b. Cost estimates
    - i. Frank Wu: Coastal Engineering F3 Baseline Conditions
      - 1. Need to incorporate PWA information in to the appendix
  - c. SMBRC Board will have to buy off on the updated PMP and cost estimates
    - i. At this Thursday's meeting they are asking the Board to generally support the study
    - ii. Cost increase approval will have to come through the Coastal Conservancy's Board
  - d. FCSA amendment would come after the PMP update is complete
    - i. Have to work with Corps Legal Counsel and SMBRC Legal/Board
  - e. Study Area
    - i. For F4, the Corps suggests focused study area of A,B & C plus the Creek up to the I-405, and the Centinela Channel and Sepulveda Wash
      - 1. H&H and Survey and Mapping Sections believe this focused area is best due to cost considerations
      - 2. Per Frank Wu: Coastal Engineering work has focused on A, B, & C
    - ii. Sponsors feel that we need to keep Ballona Creek up to Cochran Boulevard. Otherwise, the map is okay.
  - f. Rhiannon and Kathy will set up a meeting between the sponsors and Survey and Mapping (Alan Nichols).<sup>1</sup>
  - g. URS and the Corps are in negotiations for the Plan Formulation and Environmental Appendix
- III. Corps work Audit
  - a. Environmental Resources Branch (ERB )
    - i. Review of sponsor work
    - ii. Fish survey of creek and channels
    - iii. Work with SAC on HEP evaluation
      - 1. Including scope of work to score A, B & C and the creek between the marsh areas
      - 2. Mary can re-start the Conservancy agreement with the SAC to possibly fund them.
        - a. Larry will send Mary the scope of work he has written.
  - b. Cultural Resources
    - 1. Write-up from PWA, which summarizes a library record search
      - a. Corps and Conservancy both feel that the write-up is inadequate

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<sup>1</sup> Action Items marked in GREEN.



1. Sponsor needs to keep records of the in-kind and the values in case of an audit.
  - ii. Mary Small: What is the best way to do that?
  - iii. Kathy Anderson: We can have a separate meeting to go through the in-kind line by line with Kathy, Rhiannon, Sean and Mary.
  - iv. Mary Small: Is it what we spend on the product that gets credited or is it what the federal government would have spent to do the same thing?
    1. It is up to the PDT to QA/QC the products and agree to the accounting both in amount and content.
    2. Coastal Conservancy would feel more comfortable if the in-kind is credited at the value they spent on the product.
- V. Coordination
- a. Corps requests going forward
    - i. Each PDT member needs to coordinate with their equivalent on the sponsor's contractor team(s)
      1. Rhiannon will send a PDT list to Sean and Mary so that coordination contacts can be filled in next to the corresponding PDT member(s).
  - b. Sponsor requests
    - i. Tie up the in-kind process and update more often
  - c. Our coordination meetings from now on will be the last Wednesday of every month at 10am.
- VI. Other Discussion
- a. Bike tour with Congresswoman Harman April 9<sup>th</sup>.
    - i. Kathy will forward info to Mary and Sean.

**DRAFT  
ITINERARY FOR  
COL R. MARK TOY  
MEETING WITH SANTA MONICA BAY  
RESTORATION COMMISSION AND  
VISIT TO BALLONA CREEK**

**26 MAY 2011**

**TIME/ACTIVITY**

**TRANSP/REMARKS**

**THURSDAY – 26 MAY 2011**

**UNIFORM: ACUs**

|                                               |                                                                                                                                                                                                                                                                                      |                                                                                                 |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 0830                                          | Depart SPL for Loyola-Marymount<br>University (LMU) – 1 LMU                                                                                                                                                                                                                          | Govt vehicle<br>Driver: Phil Serpa<br>Rick Leifield<br>Josephine Axt                            |
| 310-338-2700<br>PAX:                          |                                                                                                                                                                                                                                                                                      |                                                                                                 |
| Monica Eichler<br>Stuart Strum<br>Dan Swenson |                                                                                                                                                                                                                                                                                      |                                                                                                 |
| 0920                                          | Arrive LMU – Santa Monica Bay<br>Restoration Commission Staff Office<br>(SMBRC)                                                                                                                                                                                                      | Location:<br>University Hall<br>Room ECC1857<br>Note: Met by Stuart<br>Strum and Dan<br>Swenson |
| 0930                                          | Executive Management Meeting with<br>SMBRC and California State<br>Coastal Conservancy (CC)<br>Los Angeles County Public Works<br>Dr. Shelley Luce, Executive Director,<br>SMBRB<br>Mary Small, Deputy Executive Officer,<br>Coastal Conservancy<br>Mark Prestrella, Deputy Director |                                                                                                 |

TIME/ACTIVITY

TRANSP/REMARKS

THURSDAY – 26 MAY (Continued)

Agenda:

- Introductions
- Project Overview – SMBRC/CC
  - o Project goals and regional importance
  - o Planning Process (Science Advisory Committee and Public Meetings)
  - o Proposed Project
  - o Schedule
- Partnership with Corps: Discussion (All)
  - o 408 Permit – Outstanding Questions
  - o Status of Feasibility Study
  - o Discussion of Future Coordination

|      |                                                                                                                                                                                                                                        |                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 1100 | Depart for Ballona Creek<br>PAX: See above                                                                                                                                                                                             | Govt Vehicle<br>Driver: Phil Serpa |
| 1110 | Ballona Creek Site Visit <ul style="list-style-type: none"><li>- Overview of the Site</li><li>- Ballona Channel</li><li>- Muted Tidal Wetland</li></ul><br>SMBRC/CC and LAPW Participants:<br>Dr. Luce, Mary Small and Mark Prestrella |                                    |
| 1210 | Depart for Ballona Creek for SPL<br>PAX: See above                                                                                                                                                                                     | Govt Vehicle<br>Driver: Phil Serpa |
|      | Note: Lunch enroute                                                                                                                                                                                                                    |                                    |
| 1330 | Arrive SPL                                                                                                                                                                                                                             |                                    |

**From:** [Mary Small](#)  
**To:** [Diana Hurlbert](#); [sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)  
**Subject:** talking points ballona - scc board  
**Date:** Thursday, January 05, 2012 2:08:00 PM  
**Attachments:** [talking points ballona board item.docx](#)

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Hi

Shelley, I am hoping that you will share the presentation of this item to the Conservancy board with me. Attached is an outline of what I am thinking we should cover, please take a look and give me your thoughts. My suggestion is that I'd introduce the project and you, you'd cover the need for restoration and the proposed project and then I could go through the details of the proposed action. I am thinking we will have a short (10ish slide) powerpoint with few words but good pictures. I can pull a draft of it together.

Diana, I am hoping you can fill in the highlighted sections in the attached to help me think about how to explain the work that will be done if approved, why it's so expensive and why we are going with this approach, as opposed to phasing differently etc.

Thanks,  
Mary

## Outline for the presentation

(Mary)

### Background

- 600 acres owned by the state, DFG and State Lands
- Designated State Ecological Reserve
- Purchased for the purpose of wetland restoration

### Project Partners, introduce Shelley

(Shelley)

### Need For Restoration, Site Mgt

- Currently no open public access, very restricted
- Site management issues: homeless encampments, trespass, trash, eyesore

### Need for restoration, biology

- Very degraded ecological resources – key findings of baseline assessment
- Regional significance – wetland loss around SM Bay and throughout So CA

### Proposed project

- Description of grand vision
- Ecological benefits
- Sustainability – adaption to SLR, restoration of ecological processes
- Public access components

### Planning process to date 2 slides(?)

- Public and Science Based Process
- Evaluation of broadest possible range of alternatives
- Refinement and assessment of preferred alternative –ideas we rejected, scaling down due to cost considerations, planning for phased implementation

(Mary)

### Recommended action:

- 1) Authorization for a grant of \$250 K to SMBRC to fund their ongoing work to advance this restoration project, including continuation of data collection, agency coordination and technical review and oversight.
- 2) Authorization of \$6.25 million to be contracted by SCC through competitive environmental services contracts for specific technical studies that are needed to complete the environmental review and permitting.

### Description of the technical work (what will be done and why so expensive)

This authorization would provide funds for several specific scopes of work to support environmental impact review and permitting of the restoration project.

- Soils and Geotechnical assessment – Some soil sampling has been completed onsite, however the main cost for implementation of the project will be soil management. To

reduce construction costs, the project is designed to balance cut and fill onsite. To effectively implement that program, we have to have clear understanding of soil characteristics – which soils can be used to construct levees, which soils should be used to create upland habitat, etc.

- Landscape Architect to design public access improvements. Conceptual designs for public access improvements have been included in the project from the very start. Now that we have a project description for the land-form of the restoration, it will be important to design the public access improvements. One of the major benefits of this project will be to create a new natural area in the urban center of Los Angeles. We intend to design public access amenities
- Civil engineering – design of levees and construction details up to \_\_\_% details of proposed work...
- Hydraulics and Hydrology – evaluation of flood risk and uncertainty details of proposed work...

In addition to environmental impact review, this project will need the following permits: Coastal Commission CDP, LA RWQCB permit, and an Army Corps Section 408 permit. Much of the additional technical work that is recommended in this action will be needed to comply with the 408 permit process.

The 408 permit is a permit issued by the Corps to modify an existing flood control project. After Hurricane Katrina, these permit requirements became much stricter and more comprehensive. This permit will have to be approved in DC and will require that the project have \_\_\_% design completed. *Explain why so expensive...*

Over the past several months, the project management team has been in conversation with the ACOE and internally discussing the best path forward given the significant costs to complete the design and hydraulic/hydrology studies.

We considered several options of initial projects that would involve installation of tide gates or breaches rather than full levee removal. Tide gate projects were determined to be less desirable because they do not restore full tidal range, are unable to adapt to sea level rise and have higher maintenance costs. We also considered a moving forward only with a smaller Phase 1 project that would restore wetlands north of the channel.

This would reduce the design and technical review costs now, but if we were ever to implement the full restoration project, we would have to go through some of the permit processes again. Our estimate is that the total planning costs would increase by X-XX amt in the end.

Of course the actual amount will be determined through contractor selection process and evaluation of proposals, but we have based this recommendation on a comprehensive, conservative but complete estimate to finish all of the pre-project work.

Acknowledge Some Opposition

- Is restoration needed, impacts to existing resources?



Some individuals think that this site is providing important habitat as is. This is a case of shifting baselines, the site does provide some habitat, but is severely degraded. Example - data pt from Karina's work?: To restore estuarine wetlands at Ballona, the land needs to be reconnected to the ocean.

- Can project be done with volunteers and without bulldozers?

The project that we are recommending is enormous in scale. It involves uncovering the wetlands that were buried with the construction of the marina and that have been cut off from the ocean for almost 90 years. We will work to continue working with youth groups and volunteers to implement portions of this restoration.

- Money would be better spend buying small parcels in the neighborhood

Some neighbors to the project have advocated that the restoration of the wetlands is a poor investment and the bond money should be spent to acquire small parcels (each 3-5 acres) rather than to restore the ecological reserve.

Funds are limited to Ballona, consequences if not approved, who will pay for construction?

#### Conclusion:

Even though this is a major investment and a controversial project, your staff recommends that you approve it. The ecological restoration of the Ballona wetlands is a rare opportunity to bring back coastal wetlands and to develop an urban natural area that will enhance the lives of millions of Californians. To really restore this site we have to implement a big vision and in order to do that we

Questions I will need to be prepared to answer:

Consequences if not approved

Who will pay for construction?

Why not grant all funds to SMBRC?

## NOTES

|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| Cost of other wetland restoration projects – engineering and environmental review |         |
| South Bay Salt Ponds Initial Planning, EIR and Phase I Design (15,000 acres)      | \$23 M  |
| Batiquitos Lagoon                                                                 | \$5 M   |
| San Elijo Lagoon                                                                  | \$1.9 M |
| S San Diego Bay Salt Ponds                                                        | \$550K  |

### Questions we need to answer:

Why is this so expensive?

How does it compare to the costs other wetland restoration projects?

Is it needed? Is it a waste of money?

Is this the right alternative?

Will there be more habitat destruction than restoration

Who will implement the project?

Wouldn't we be better off with ngos and volunteers?

What about long term management?

### Key Points

Plan developed with extensive scientific review and public input

Plan goals: habitat restoration, sustainability, public access, lower maintenance cost

Funds are specific to Ballona

**From:** [Shelley Luce](#)  
**To:** [Mary Small](#)  
**Cc:** [Diana Hurlbert](#)  
**Subject:** RE: timelines...  
**Date:** Monday, January 30, 2012 4:44:09 PM

---

Let's meet downtown at 11 am at Bottega Louie, it's on the corner of 7<sup>th</sup> and Grand. We can eat or just have coffee for as long as we want there, and then head over. Sound good?

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonicabay.org](http://www.santamonicabay.org)

---

**From:** Mary Small [mailto:msmall@scc.ca.gov]  
**Sent:** Monday, January 30, 2012 4:30 PM  
**To:** Shelley Luce  
**Cc:** Diana Hurlbert  
**Subject:** Re: timelines...

Great, let's meet before maybe 11?  
Downtown would be easy for me but I could also fly to LAX and meet at LMU, if we do that maybe we could meet a little earlier?

Sam can't make it, this rescheduled time didn't work for him.  
Mary

sent from my phone

On Jan 27, 2012, at 12:38, Shelley Luce <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)> wrote:

I have kept the whole day open. You can Sam can tell us what works for you - meet earlier downtown or at LMU, anytime after 9:30 is good for me. We can reserve a conf room at water board offices or meet at a coffee shop if we do it downtown.

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-216-9827  
[www.santamonicabay.org](http://www.santamonicabay.org)*

---

**From:** Diana Hurlbert  
**Sent:** Friday, January 27, 2012 10:07 AM  
**To:** Mary Small; Shelley Luce  
**Subject:** RE: timelines...

The 1<sup>st</sup> works for me. As for timeline this is what I am shooting for....

Early Feb for Nick's revised engineering/construction PD  
Late Feb/early March for summary NOP/NOI to be circulated  
March/April for Habitat/Adaptive Mgmt Plan  
Early May for draft geotech, recreation/Area C, hydraulics, traffic, and 30% engineering/design  
Working over summer on & circulating admin draft chapters and finalizing reports, recreation/Area C etc.  
Finalizing Public review Draft for circulation in late Sept.

Please keep in mind that we will be creating and circulating draft chapters for review as information is available. All document preparation will be on concurrent paths. Keeping to the timeline depends mostly on how responsive reviewers are to deadlines for comment (ie. a 2 week turn around). The consultants are all aware of these targets and have committed to meeting them.

---

**From:** Mary Small [mailto:msmall@scc.ca.gov]  
**Sent:** Thursday, January 26, 2012 3:24 PM  
**To:** Shelley Luce  
**Cc:** Diana Hurlbert  
**Subject:** Re: timelines...

Hi

Sorry if I misspoke I feel like I have promised dates that we haven't met so many times that I instinctively underestimate when we'll get things done. It would be super valuable to have some key milestones on a schedule that we all are working off of- MRCA asked for that too. I can draft it up next week or you guys can send it to me.

I think there may be a role for Sci input going fwd but after I'm not sure I think we should have more SAC mtgs. Do you guys have time on the 1st? I think there are a few things we should touch base on and I could meet before or immediately after our mtg w ACOE.

Thanks  
Mary

sent from my phone

On Jan 26, 2012, at 15:47, Shelley Luce <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)> wrote:

Hi Mary,

I wanted to check in on our timelines but I forgot to mention yesterday. I've been shooting for end of Feb. release of the NOP/NOI and public review draft of EIR/EIS in Sept. 2012. In the SAC meeting I thought I heard you say something longer than that – a few months until the NOP comes out. Also in the SAC meeting we kind of indicated there could be more SAC meetings to resolve

things that we were discussing and I didn't think that was part of our plan. I do think we can continue discussion of relevant things with SAC members as we write the draft EIR, and reconvene if necessary. Is that what you were thinking?

Talk to you Monday!  
Shelley

*Shelley Luce, D.Env.  
Executive Director  
Santa Monica Bay Restoration Commission  
Pereira Annex MS:8160  
1 LMU Drive, Loyola Marymount University  
Los Angeles, CA 90045  
310-961-4444*

[www.santamonibay.org](http://www.santamonibay.org)

**From:** Mary Small  
**To:** "Shelley Luce"  
**Subject:** LA Co  
**Date:** Tuesday, December 13, 2011 9:14:00 AM

---

Hi

Do you think there is any chance that we could get a commitment from LA Co to fund the permit process before Jan? Then I could add them as matching funds to my staff report.

Mary

~~~~~

Mary Small
Deputy Executive Officer, Coastal Conservancy
1330 Broadway #1300 Oakland, CA 94612
510-286-4181

From: Mary Small
To: "Mary Small"; "Shelley Luce"
Cc: "Diana Hurlbert"
Subject: RE: draft agmt SMBRF 2
Date: Monday, February 13, 2012 9:28:00 AM

Hi

Can you let me know if this looks basically ok so I can send it to Mr. Davis?

Thanks

Mary

From: Mary Small [mailto:msmall@scc.ca.gov]
Sent: Tuesday, February 07, 2012 2:28 PM
To: 'Shelley Luce'
Cc: 'Diana Hurlbert'
Subject: draft agmt SMBRF 2

Hi Shelley

Attached is a draft of the grant agmt to the SMBRF for the \$240K. We'll need to develop a work plan and budget separately.

Can you take a quick review and let me know if it looks ok? Elena has asked me to produce this draft quickly as it seems the best way to respond to our most recent PRA from Mr. Davis.

Thanks

Mary

ATTACHMENT 6



REQUEST FOR SERVICES

Ballona Wetlands Ecological Reserve Environmental Analysis and Permit Assistance

May 11, 2009

Contract Type: Environmental Professional Services

Scope:

Perform environmental analysis and assist in applying for permits for habitat enhancement and public access improvements at the Ballona Wetlands Ecological Reserve in Los Angeles.

Submittal Deadline: June 1, 2009

Proposals should be submitted electronically in adobe acrobat format and must be received at the Conservancy by June 1, 2009.

Contact: Mary Small, California Coastal Conservancy, msmall@scc.ca.gov

From: [Mary Smail](#)
To: ["Ivan Medel"](#)
Cc: ["Shelley Luce"](#); ["Karina Johnston"](#); ["Diana Hurlbert"](#)
Subject: FW: post to web?
Date: Wednesday, February 08, 2012 4:48:00 PM
Attachments: [Ballona Civil Engineering and Geotech.pdf](#)
[Ballona Hydrology and Engineering.pdf](#)

Hi Ivan

Could you post the following on the homepage of the Ballona Restoration Project website?

The California State Coastal Conservancy is requesting proposals for consultant services for two separate contracts related to the proposed enhancement of the Ballona Wetlands Ecological Reserve in Los Angeles County. Services are needed to complete engineering and geotechnical evaluations, hydrology, technical studies, design and related services to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers. One contract will be for Civil and Geotechnical Engineering and a second contract will be for Hydrology and Engineering Design Analysis.

Please unhighlight the text above but insert hyperlinks to the attached docs to the highlighted text to the RFS, does that make sense?

Thanks,
Mary

REQUEST FOR SERVICES

Ballona Wetlands Ecological Reserve Civil and Geotechnical Engineering and Permit Assistance

February 8, 2010

Contract Type: Civil Engineering and Geotechnical Professional Services

Scope: Provide engineering and geotechnical evaluations, design and related services for the proposed wetland restoration design of the Ballona Wetlands Ecological Reserve in Los Angeles. Technical studies, evaluations, and designs will be of sufficient detail to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers.

Submittal Deadline: February 29, 2012

Proposals should be submitted electronically in adobe acrobat format and must be received at the Conservancy by February 29, 2012.

Contact: Mary Small, California Coastal Conservancy, msmall@scc.ca.gov

From: Mary Small
To: "Diana Hurlbert"; "David Lawhead (DLawhead@dfg.ca.gov)"; "Eichler, Monica SPL"; "Eric Gillies"; "griggsp@slc.ca.gov"; "Hamamoto, Bruce"; "Patrick Holland (pholland@dpw.lacounty.gov)"; "Rick Mayfield (rmayfield@dfg.ca.gov)"; "Serpa, Phillip J SPL"; "Shelley Luce"; "Strum, Stuart R MVN-Contractor"; "Swenson, Daniel P SPL"; "Terri Grant (tgrant@dpw.lacounty.gov)"; "Youn Sim (ysim@dpw.lacounty.gov)"
Subject: RE: request for services - ballona wetlands
Date: Thursday, February 09, 2012 5:02:00 PM

Hello all-

Here's some more information about the Coastal Conservancy's contractor selection process. It is a quick process and I am hoping PMT members will assist us so I want to be sure you are aware of the schedule.

I am really hoping the PMT will help in reviewing proposals and that staff from the County and Corp will participate on the selection panel. These contracts are for work to support the County's 408 submittal. Here's the schedule for the review/selection:

- Proposals will be submitted electronically to me on 2/29
- I will post them on a secure site by 3/1 for PMT review
- PMT will select the top 3 or 4 firms we'll interview for each contract by 3/5
- PMT will do a detailed review of the written proposals of the top proposals by 3/13
- Interviews will be in LA on 3/13 – all day

I am assuming the selection panel will be Diana, me, and a representative from the County and the Corps. If anyone else wants to spend March 13th interviewing firms, please let me know.

Mary

From: Mary Small [mailto:mssmall@scc.ca.gov]
Sent: Wednesday, February 08, 2012 4:46 PM
To: 'Diana Hurlbert'; 'David Lawhead (DLawhead@dfg.ca.gov)'; 'Eichler, Monica SPL'; 'Eric Gillies'; 'griggsp@slc.ca.gov'; 'Hamamoto, Bruce'; 'Patrick Holland (pholland@dpw.lacounty.gov)'; 'Rick Mayfield (rmayfield@dfg.ca.gov)'; 'Serpa, Phillip J SPL'; 'Shelley Luce'; 'Strum, Stuart R MVN-Contractor'; 'Swenson, Daniel P SPL'; 'Terri Grant (tgrant@dpw.lacounty.gov)'; 'Youn Sim (ysim@dpw.lacounty.gov)'
Subject: FW: request for services - ballona wetlands

The request for services for the civil engineering and geotechnical contract and the hydrology and engineering contracts went out today. Feel free to forward to other potential contractors, I sent it to about 60 in our database and we will post it on the web. Proposals are due on Feb 29th.

Mary

From: Mary Small [mailto:mssmall@scc.ca.gov]
Sent: Wednesday, February 08, 2012 4:39 PM
Subject: FW: request for services - ballona wetlands

The California State Coastal Conservancy is requesting proposals for consultant services for two separate contracts related to the proposed enhancement of the Ballona Wetlands Ecological

Reserve in Los Angeles County. Services are needed to complete engineering and geotechnical evaluations, hydrology, technical studies, design and related services to support completion of a project level EIR/EIS and preparation and processing of a Section 408 permit through the Army Corp of Engineers. One contract will be for Civil and Geotechnical Engineering and a second contract will be for Hydrology and Engineering Design Analysis.

~~~~~  
Mary Small  
Deputy Executive Officer, Coastal Conservancy  
1330 Broadway #1300 Oakland, CA 94612  
510-286-4181

**Subject:** RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 27, 2012

**From:** "Elena Eger" <eeger@scc.ca.gov>(Add as Preferred Sender)

**Date:** Wed, Mar 28, 2012 8:46 am

**To:** <jd@johnanthonydavis.com>

**Cc:** "Mary Small" <msmall@scc.ca.gov>, <sschuchat@scc.ca.gov>

Dear Mr. Davis:

The Conservancy does not possess a responsive record to your request, below.

Sincerely,

Elena Eger

Senior Staff Counsel

California Coastal Conservancy

1330 Broadway, Ste. 1300

Oakland, CA 94612

510-286-4089 tele/voicemail

510-286-0470 fax

**From:** jd@johnanthonydavis.com [mailto:jd@johnanthonydavis.com]

**Sent:** Tuesday, March 27, 2012 5:55 PM

**To:** Elena Eger

**Cc:** 'Mary Small'; sschuchat@scc.ca.gov

**Subject:** RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 27, 2012

California Coastal Conservancy

Re: Public Records Request

Please provide any statute which exempts the California Coastal Conservancy from the California Contract Code as it relates to the Agency entering into contracts of any type.

Thank you,

John Davis

----- Original Message -----

Subject: RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012

From: "Elena Eger" <[eeeger@scc.ca.gov](mailto:eeeger@scc.ca.gov)>

Date: Tue, March 27, 2012 5:27 pm

To: <[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)>

Cc: "Mary Small" <[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)>, <[sschuchat@scc.ca.gov](mailto:sschuchat@scc.ca.gov)>

Dear Mr. Davis:

Your request below does not constitute a request for a record pursuant to the Public Records Act. Rather, your request is for an analysis of statutory law. I am ethically prohibited from providing counsel to anyone other than my client. Assuming that you are not a lawyer, I am also ethically bound to suggest to you that you obtain your own counsel to advise you on such matters. You may utilize the California State Bar website for referrals to counsel at [www.calbar.ca.gov](http://www.calbar.ca.gov).

Sincerely,

Elena Eger

Senior Staff Counsel

California Coastal Conservancy

1330 Broadway, Ste. 1300

Oakland, CA 94612

510-286-4089 tele/voicemail

510-286-0470 fax

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [mailto:[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)]  
**Sent:** Tuesday, March 27, 2012 1:38 PM  
**To:** Elena Eger  
**Subject:** RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012

Hello,

Thank you for the citations. However, neither removes the requirement of the Coastal Conservancy to comply with Public Contract Code Sections 10140-10141 nor 10515-10518.

If the Conservancy is exempt from the California Contract Code, please inform me as to what statute or code provides for such an exemption.

John Davis

----- Original Message -----  
Subject: RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012  
From: "Elena Eger" <[eger@scc.ca.gov](mailto:eger@scc.ca.gov)>  
Date: Tue, March 27, 2012 12:50 pm  
To: <[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)>  
Cc: "Schuchat, Sam" <[sschuchat@scc.ca.gov](mailto:sschuchat@scc.ca.gov)>, "Mary Small" <[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)>, "Dick Wayman" <[dwayman@scc.ca.gov](mailto:dwayman@scc.ca.gov)>, "Nadine Peterson" <[npeterson@scc.ca.gov](mailto:npeterson@scc.ca.gov)>, "Heather Baugh" <[heather.baugh@resources.ca.gov](mailto:heather.baugh@resources.ca.gov)>, <[kimg@resources.ca.gov](mailto:kimg@resources.ca.gov)>



Dear Mr. Davis:

This correspondence contains the Coastal Conservancy's (Conservancy) response to your March 21, 2012 Public Records Act request, below.

The Conservancy does not possess any responsive records to either of your numbered requests. However, we direct you to Government Code Sections 4525 *et seq.* and 14 California Code of Regulations Sections 13870 *et seq.* for our contracting process.

Sincerely,

Elena Eger

Senior Staff Counsel

California Coastal Conservancy

1330 Broadway, Ste. 1300

Oakland, CA 94612

510-286-4089 tele/voicemail

510-286-0470 fax

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [mailto:[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)]

**Sent:** Wednesday, March 21, 2012 2:11 PM

**To:** "Samuel Schuchat"; "John Laird"; "Dick Wayman"; "Nadine Peterson"; [carmenp@scc.ca.gov](mailto:carmenp@scc.ca.gov); [king@resources.ca.gov](mailto:king@resources.ca.gov)

**Cc:** John Chang

**Subject:** PUBLIC RECORDS REQUEST FROM JOHN DAVIS MARCH 21, 2012

California Coastal Conservancy

Att: Executive Director Sam Schuchat

California Coastal Conservancy

March 21, 2012

To: Governing Board and Management

Douglas Bosco  
Marisa Moret  
Ann Nothoff  
John Laird  
Susan Hancsh

Karen Finn

Bryan Cash

Noreen Evens

Joe Simitan

Anthony Cannella

Bill Mornning

Luis Alejo

Das Williams

CC  
John Chang State Controller

Att: Executive Director Schuchat, Please Send This Letter to All California Coastal Conservancy Governing Board and Management.

This is a request for public records made pursuant to the California Public Records Act. Each numbered item is a distinct request for public records.

1. Please provide any and all public records that demonstrate compliance with California Public Contract Code Section 10140-10141 in regard to the California Coastal Conservancy approval on January 19, 2012 of File No. 04-088 which approved money to be disbursed for engineering, hydrologic analyses, geotechnical assessments, and public design.

2. Please provide any and all public records that demonstrate compliance with California Public Contract Code Section 10515-10518 in regard to the California Coastal Conservancy approval on January 19, 2012 of File No. 04-088 which approved money to be disbursed for engineering, hydrologic analyses, geotechnical assessments, and public design.

No such records have been requested or received by me to date.

See Attached Approval for File No. 04-088

Thank you,

John Davis  
PO 10152  
Marina del Rey Ca. 90295

## **PUBLIC CONTRACT CODE SECTION 10140-10141**

**10140. Public notice of a project shall be given by publication once a week for at least two consecutive weeks or once a week for more than two consecutive weeks if the longer period of advertising is deemed necessary by the department, as follows: (a) In a newspaper of general circulation published in the county in which the project is located, or if located in more than one county, in such a newspaper in a county in which a major portion of the work is to be done. (b) In a trade paper of general circulation published in San Francisco for projects located in County Group No. 1, as defined in Section 187 of the Streets and Highways Code, or in Los Angeles for projects located in County Group No. 2, as defined in said Section 187, devoted primarily to the dissemination of contract and building news among contracting and building materials supply firms. The department may publish the notice to bidders for a project in additional trade papers or newspapers of general circulation that it deems advisable. 10141. The notice shall state the time and place for the receiving and opening of sealed bids, describing in general terms the work to be done and that the bids will be required for the entire project and for the performance of separate designated parts of the entire project, when the department determines that segregation is advisable.**

## **PUBLIC CONTRACT CODE**

### **SECTION 10515-10518**

10515. (a) No person, firm, or subsidiary thereof who has been awarded a consulting services contract may submit a bid for, nor be awarded a contract on or after July 1, 2003, for the provision of services, procurement of goods or supplies, or any other related action that is required, suggested, or otherwise deemed appropriate in the end product of the consulting services contract. (b) Subdivision (a) does not apply to either of the following: (1) Any person, firm, or subsidiary thereof who is awarded a subcontract of a consulting services contract that amounts to no more than 10 percent of the total monetary value of the consulting services contract. (2) Consulting services contracts that comply with Article 2.5 (commencing with Section 10510.4). (c) (1) Subdivision (a) does not apply to any person, firm, or subsidiary awarded a consulting services contract by a University of California medical center when the provision of service, procurement of goods or supplies, or any other related action required, suggested, or otherwise deemed appropriate in the end product of the consulting services contract, is necessary to avoid a competitive disadvantage in the hospital industry, improve patient care, protect the privacy of patient information, or avoid significant delay and additional expense. (2) The University of California shall report within 30 days on any exemption granted under paragraph (1) to the Joint Legislative Budget Committee and the Department of Finance. The report shall include a description of the circumstances that warranted the exemption, the effects of the exemption on patient care or patient privacy, and a calculation of the projected costs savings to the institution as a result of the exemption. 10516. No officer or employee of the University of California shall engage in any employment, activity, or enterprise from which the officer or employee receives compensation or in which the officer or employee has a financial interest if that employment, activity, or enterprise is sponsored or funded, or sponsored and funded, by any university department through or by a university contract unless the employment, activity, or enterprise is within the course and scope of the officer's or employee's regular university employment. No officer or employee in the university shall contract on his or her own individual behalf as an independent contractor with any university department to provide services or goods. This section shall not apply to officers or employees of the university with teaching or research responsibilities, nor shall it apply to student employees for payment for additional campus activities or engagements outside of the scope of their primary university employment. 10517. (a) No retired, dismissed, separated, or formerly employed person of the University of California employed with the university or otherwise appointed to serve in the university may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements, or any part of the decisionmaking process relevant to the contract while employed in any capacity by any university department. The prohibition of this subdivision shall apply to a person only during the two-year period beginning on the date the person left university employment. (b) For a period of 12 months following the date of his or her retirement, dismissal, or separation from the University of California, no person employed in the university or otherwise appointed to serve in the university may enter into a contract with any university department, if he or she was employed by that department in a policymaking position in the same general subject area as the proposed contract within the 12-month period prior to his or her retirement, dismissal, or separation.

The prohibition of this subdivision shall not apply to a contract requiring the person's services as an expert witness in a civil case or to a contract for the continuation of an attorney's services on a matter he or she was involved with prior to leaving the university. (c) This section does not prohibit the rehire or reappointment of University of California employees after retirement, consistent with university administrative policies, nor does it apply to inventors and authors of intellectual property licensed under technology transfer agreements. 10518. (a) Except as otherwise provided in subdivision (b), each contractor who enters into a contract with a University of California campus for ten thousand dollars (\$10,000) or more shall be assigned an identification number by the chancellor of that university campus. Each contractor who has been assigned a number shall list it on each contract the contractor enters into with the university campus, regardless of the amount of the contract. In the case of a corporation or firm, the chancellor's assigned number shall be used exclusively on each contract with that particular chancellor's campus. The assigned number shall remain unchanged regardless of future name changes. (b) If the identification numbers cannot be tracked centrally by the Regents of the University of California, then the regents, and not the chancellors, shall assign the identification numbers.

## **ATTACHMENT 7**

**From:** Mary Small  
**To:** "Barbara Romero"  
**Cc:** "Melissa Guerrero"; "Diana Hurlbert"; "Shelley Luce"  
**Subject:** SCC mtg in Jan  
**Date:** Monday, December 19, 2011 3:30:00 PM  
**Attachments:** Ballona Wetlands Engineering and Technical Studies.docx

---

Hi Barbara,

Thanks for agreeing to support the recommendation for funding for engineering work at Ballona. Attached is the draft staff report, the project will be heard at our Jan 19th meeting at the Baldwin Hills Scenic Overlook. As you can see it's a pretty big authorization, so we'd love your support. I think we may take the Board on a tour of Ballona that morning and then the meeting will start around 12:30. It would be great to have MRCA join us for either the tour or the meeting.

Thanks also for the message about the early action plan grant. When you have time submit any final billing or just a letter stating that the work is all done and I'll close it out.

Hope you are doing well and have a great holiday.

Mary

**From:** [Mary Small](#)  
**To:** "Shelley Luce"; "Scott Valor"  
**Subject:** FW: support letter for SCC board meeting?  
**Date:** Wednesday, January 11, 2012 3:53:00 PM

---

Good news

---

**From:** Sarah Sikich [<mailto:ssikich@healthebay.org>]  
**Sent:** Wednesday, January 11, 2012 3:44 PM  
**To:** Mary Small  
**Subject:** RE: support letter for SCC board meeting?

Hi Mary,

Mark forwarded me your email about the Ballona technical study support letter for the SCC board meeting. We discussed it at our department meeting this week, and will send in a letter. Is an electronic copy fine, or do you need a hard copy? Also, should I just send it to you?

Additionally, Alix Hobbs would like to join our meeting while you are at Heal the Bay to discuss some of our Coastal Conservancy projects and potential future ideas. Is it okay with you if she joins for the second half of the meeting?

Thanks,  
Sarah

---

**From:** Mary Small [<mailto:msmall@scc.ca.gov>]  
**Sent:** Tuesday, January 03, 2012 3:00 PM  
**To:** Mark Gold  
**Subject:** RE: support letter for SCC board meeting?

Thanks, the meeting is the 19<sup>th</sup> so that's the deadline. Yes, I totally understand.

I was just sending Sarah an email about possible dates I'll be in LA when I'd like to stop in and talk about OPC, so maybe I'll see you then.

Happy new year (and MLPA implementation)  
Mary

---

**From:** Mark Gold [<mailto:mgold@healthebay.org>]  
**Sent:** Tuesday, January 03, 2012 2:39 PM  
**To:** Mary Small  
**Subject:** RE: support letter for SCC board meeting?

Mary – Happy new year to you too. We will definitely take a look at this and think it through. It is a great project and needs to happen. The political baggage that goes with it is no picnic as you know.

When is the deadline?



## **ATTACHMENT 8**

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [<mailto:jd@johnanthonydavis.com>]

**Sent:** Wednesday, March 21, 2012 12:34 PM

**To:** "Samuel Schuchat"; "John Laird"; 'Dick Wayman'; 'Nadine Peterson'; [carmenp@scc.ca.gov](mailto:carmenp@scc.ca.gov); [king@resources.ca.gov](mailto:king@resources.ca.gov)

**Cc:** David Lawhead; John Chang

**Subject:** To All California Coastal Conservancy Board Members from John Davis

California Coastal Conservancy

Att: Executive Director Sam Schuchat

California Coastal Conservancy

March 21, 2012

To: Governing Board and Management

Douglas Bosco

Marisa Moret

Ann Nothoff

John Laird

Susan Hancsh

Karen Finn

Bryan Cash

Noreen Evens

Joe Simitan

Anthony Cannella

Bill Mornning

Luis Alejo

Das Williams

CC

John Chang State Controller

Att: Executive Director Schuchat, Please Send This Letter to All California Coastal Conservancy Governing Board and Management.

Your Staff Attorney, Elena Eger has indicted this State Agency will not answer the fair questions I, as a member of the public asked regarding the procedures of the Conservancy.

Failure to answer such questions is contrary to the role of the State Agency to enjoin the public in the processes.

Please request that Staff respond to the questions I have asked.

Furthermore I have requested that your Staff not copy any Private Business or Individuals on responses to me as I consider it harassment and intimidation by the State Agency.

Should any such private business or individual wish to obtain such email records, such records should ONLY be provide if requests for such records are made pursuant to the Law, the California Public Records Act.

The Information Practices Act (Civil Code section 1798 et seq.) generally prohibits agencies from disclosing an individual's personal information to the public.

Thank you,

John Davis  
PO 10152  
Marina del Rey Ca. 90295

---

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [<mailto:jd@johnanthonydavis.com>]  
**Sent:** Thursday, February 16, 2012 1:29 PM  
**To:** Elena Eger  
**Cc:** 'Mary Small'; 'Sam Schuchat'; 'Dick Wayman'; 'Shelley Luce'; [svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)  
**Subject:** Reply from John Davis RE: Davis' Requests for Information

California Coastal Conservancy  
Att: E.Eger  
Re: Reply

Dear E. Eger,

The request for public records submitted on 2/14/2012 remains outstanding.

The Commission still needs to reply to this request within 10 days of the submission date. I do expect a reply by 2/24/2012 as the Public Records Act requires under law.

I also would take issue with your recent email stating that I made a DEMAND of the Commission. This is far from true.

In fact my email stated the INTENDED PURPOSE of the email and made no demands as you stated to me in your email to me.

Prior to that, you inferred in another email that I made statements and or asserted things that I clearly did not.

I corrected you once already in writing, and find I must do so yet again.

Your accuracy in characterizing my telephonic conversations or written documents should not be clouded by your misconceptions as I do not find it to be professional in your role as a State Attorney.

Regards,

John Davis  
PO 10152  
Marina del Rey Ca. 90295

\*\*\*\*\*

**Subject:** Reply from John Davis RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS  
**From:** <jd@johnanthonydavis.com> (Add as Preferred Sender)  
**Date:** Tue, Feb 14, 2012 2:05 pm  
**To:** "Elena Eger" <eeeger@scc.ca.gov>

California Coastal Conservancy  
Att: Elana Eger Council  
Re: Reply to your communication

Counsel Eger,

Please pardon my typo in your title.

Also, I still do not understand why a State Agency would share my letter, and personal email address with a private business, unless requested pursuant to the Public Records Act. I am not sure what other private businesses you intend to copy on my letters to the State Agency using State facilities.

I do understand that you will continue to provide my emails to this State Agency with private businesses:

" Indeed, we will continue to share communications to you or from you with our other Ballona project partners, irrespective of whether the partner is a public or private organization, when we, at our sole discretion, determine that dissemination to be useful for our project purposes."

How does the Coastal Conservancy define the term "partner" as used in your statement?

How, at the Coastal Conservancy, is a determination made at its sole discretion whether the dissemination of my email to the State Agency would be useful for the Conservancy's project purposes?

What entity of the Coastal Conservancy is entitled to make such a determination and under what authority?

These are fair questions given that my letters to you have already been shared with a private business.

Thank you for your continued assistance.

John Davis  
PO 10152

Marina del Rey Ca. 90295

----- Original Message -----

Subject: RE: PUBLIC RECORDS REQUEST FROM JOHN DAVIS

From: "Elena Eger" <[eeeger@scc.ca.gov](mailto:eeeger@scc.ca.gov)>  
Date: Tue, February 14, 2012 12:32 pm  
To: <[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)>  
Cc: "Mary Small" <[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)>, <[svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)>,  
"Shelley Luce" <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)>, "Dick Wayman"  
<[dwayman@scc.ca.gov](mailto:dwayman@scc.ca.gov)>

Mr. Davis:

This is in partial response to your PRA, below and your request of yesterday at 5:15 p.m. in which you demand that we not share your communications with "any private business" and in which you characterize such communications as "private".

While we will provide you with your requests to the extent possible and in compliance with the PRA, we must clarify to you that communications between you, as a member of the public, and the Conservancy, a public agency, are not considered under the PRA and thus not by the Conservancy to be "private communications", subject to any privilege or exception under the Act. Indeed, we will continue to share communications to you or from you with our other Ballona project partners, irrespective of whether the partner is a public or private organization, when we, at our sole discretion, determine that dissemination to be useful for our project purposes.

I would also like to clarify for you for your future purposes that my title is not "council" but "counsel", that is, I am a lawyer, not a member of a council.

Sincerely,

Elena Eger  
Senior Staff Counsel  
California Coastal Conservancy  
1330 Broadway, Ste. 1300  
Oakland, CA 94612  
510-286-4089 tele/voicemail  
510-286-0470 fax

\*\*\*\*\*

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [<mailto:jd@johnanthonydavis.com>]  
**Sent:** Tuesday, February 14, 2012 10:49 AM  
**To:** Elena Eger  
**Subject:** PUBLIC RECORDS REQUEST FROM JOHN DAVIS

California Coastal Conservancy  
Att: Council E. Eger  
Re: Public Records Request

This is a public records request made pursuant to the California Public Records Act. Each numbered item is a separate and distinct request for public records. This letter is only intended to for the California Coastal Conservancy and NOT FOR ANY PRIVATE BUSINESS, unless requested by such a business via the California Public Records Act.

1. Provide any and all emails to and received by the California Coastal Conservancy

from the following email address in regard and prior to Item 5 of the Conservancy hearing on January 19, 2012: [sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)

2. Provide any and all emails to and received by the California Coastal Conservancy from the following email address in regard and prior to Item 5 of the Conservancy hearing on January 19, 2012: [svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)

3. Provide any and all emails to and received by the California Coastal Conservancy from the following email address AFTER the Conservancy hearing on January 19, 2012: [sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)

4. Provide any and all emails to and received by the California Coastal Conservancy from the following email address AFTER the Conservancy hearing on January 19, 2012: [svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)

6. Provide any and all emails sent by the Conservancy to following email address in regard and prior to Item 5 of the Conservancy hearing on January 19, 2012: [sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)

7. Provide any and all emails sent by the Conservancy to following email address in regard and prior to Item 5 of the Conservancy hearing on January 19, 2012: [svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)

8. Provide any and all email sent by the California Coastal Conservancy to following email address in AFTER the Conservancy hearing on January 19, 2012: [sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)

9. Provide any and all email sent by the California Coastal Conservancy to following email address in AFTER the Conservancy hearing on January 19, 2012: [svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)

Thank you for your assistance,

John Davis  
PO 10152  
Marina del Rey Ca. 90295

----- Original Message -----

Subject: RE: Reply from John Davis RE: Davis' Requests for Information

From: "Elena Eger" <[eeeger@scc.ca.gov](mailto:eeeger@scc.ca.gov)>

Date: Thu, February 16, 2012 7:48 pm

To: <[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)>

Cc: "Mary Small" <[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)>, "Sam Schuchat"

<[sschuchat@scc.ca.gov](mailto:sschuchat@scc.ca.gov)>, "Dick Wayman" <[dwayman@scc.ca.gov](mailto:dwayman@scc.ca.gov)>, "Shelley Luce" <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)>, <[svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)>

Dear Mr. Davis:

As I stated in my email of yesterday to you, we intend to comply with your records request to us of 2/14. We are working on compiling the records that you have requested. Please clarify whether you wish to receive the emails pertaining to correspondence among Mr. Valor, Ms. Luce and Conservancy staff with respect to the Item #5 on the 1-19-12 agenda only.

Please clarify that you are referring to the Conservancy when you make reference to the "Commission" in your message below.

As to your other allegations contained in your email below, I remind you that, as I said yesterday, we will make no further comment, which, of course, does not mean that we agree or disagree with your interpretations. Again, unless you are requesting a record from us under the Public Records Act, we do not intend to make further explanatory comments to you.

Sincerely,

Elena Eger  
Senior Staff Counsel  
California Coastal Conservancy  
1330 Broadway, Ste. 1300  
Oakland, CA 94612  
510-286-4089 tele/voicemail  
510-286-0470 fax

----- Original Message -----

Subject: Davis' Requests for Information

From: "Elena Eger" <[eeeger@scc.ca.gov](mailto:eeeger@scc.ca.gov)>

Date: Wed, February 15, 2012 6:45 pm

To: <[jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com)>

Cc: "Mary Small" <[msmall@scc.ca.gov](mailto:msmall@scc.ca.gov)>, "Sam Schuchat" <[sschuchat@scc.ca.gov](mailto:sschuchat@scc.ca.gov)>, "Dick Wayman" <[dwayman@scc.ca.gov](mailto:dwayman@scc.ca.gov)>, "Shelley Luce" <[sluce@santamonicabay.org](mailto:sluce@santamonicabay.org)>, <[svalor@santamonicabay.org](mailto:svalor@santamonicabay.org)>

Dear Mr. Davis:

In response to your inquiry below, I am providing you with the link to our website's contents of Item 5, Ballona Restoration Project, approved at the Conservancy's 1-19-12 public meeting unanimously. All my references are to the contents in this link. [http://scc.ca.gov/webmaster/ftp/pdf/sccbb/2012/1201/20120119Board05\\_Ballona\\_Wetlands.pdf](http://scc.ca.gov/webmaster/ftp/pdf/sccbb/2012/1201/20120119Board05_Ballona_Wetlands.pdf).

I believe in your message below you are referencing Exhibit 4. This record reads at the bottom of the page in the key: "Existing habitat units based on field survey conducted by the California Department of Fish and Game, October – December 2000. Map created by GreenInfo Network October 20, 2011." The Conservancy's logo is next to this statement.

With respect to the remainder of your email to us, below, except for our response to your last statement regarding the Conservancy's

dissemination of your correspondence to and with us, which we responded to in my earlier email to you of yesterday at 11:32 a.m., we wish to direct your attention to the Public Records Act (PRA), which provides the public with the mechanism to request a public record from a public agency. Additionally, we wish to direct your attention to the Ballona Restoration website, linked on our Conservancy website at [www.scc.ca.gov](http://www.scc.ca.gov), which among other resources, has project documents and provides a calendar of upcoming meetings, if any, where you have the opportunity to seek clarification and information regarding the restoration project.

We have cooperatively provided you with both oral and written clarifications on requests you have made to us for information or on allegations you have made that we or our project partners are violating particular laws or practices or conducting our respective project business improperly. In fact, since the Conservancy unanimously approved Item 5 for Ballona Restoration Planning, on 1-19-12, we responded to every one of your requests for records under the PRA or for explanations or to answer your allegations, which now amount to some 16 written requests to date for both information and records in the 18 business days from our 1-19-12 meeting, except for two requests for information and one request for records, received yesterday. Additionally, you have spoken by phone with six of our staff numerous times each, none of which were records requests but were rather in the nature of your seeking more information or explanation from us. Despite our willingness to provide you with explanations and/or clarifications, we continue to receive more requests for the same information from you, often accompanied by accusations of improper behavior.

In compliance with our obligations under the Public Records Act, we will continue to provide our records to you upon written request for such records. However, we will not be responding to your further requests for non-record information or explanation or to your allegations of improper business practices beyond this request, below. We cannot conduct our regular business in service of the public and continue to respond to your almost-daily and, if daily, often numerous daily requests for non-record information or to answer your allegations. Despite our willingness to provide you with explanations, clarifications and information, our good-faith responses back to you seem to be unsatisfactory to you since you follow-up often with yet another request for the same information. Continuing this "asked and answered" process seems an unproductive use of public resources. So, with respect to your statement that DFG produced this map, please note that as cited above here, GreenInfo Network produced the map for the Conservancy and its project partners/team's use; DFG is



our restoration partner on this project. We direct you to the Conservancy's website at [www.scc.ca.gov](http://www.scc.ca.gov), Ballona restoration for identification of our project partners on this project.

With respect to whether DFG provided the Conservancy with permission to put our logo on this proposed restoration design, please note that the Conservancy is a project partner with DFG and that within this partnership, the Conservancy acts as the lead in restoration planning with the full agreement of the other project partners, including the DFG.

Sincerely,

Elena Eger  
Senior Staff Counsel  
California Coastal Conservancy  
1330 Broadway, Ste. 1300  
Oakland, CA 94612  
510-286-4089 tele/voicemail  
510-286-0470 fax

**From:** [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com) [<mailto:jd@johnanthonydavis.com>]

**Sent:** Monday, February 13, 2012 5:15 PM

**To:** 'Elena Eger'

**Cc:** 'Nadine Peterson'; 'Sam Schuchat'; 'Dick Wayman'; Mary Small

**Subject:** RE: Davis call to Eger of 2-6-12

California Coastal Conservancy  
Att: Elena Eger Legal Council  
CC Mary Small Project Manager  
Re: Item 5 January 19th 2012 Meeting

Hello Council Eger,

Mary Small directed me to you to answer a question about the hearing noted above.

The attached map was presented as a projection.

It bears the seal of the State Coastal Conservancy. The small text below the legend is hard to read but it does reference the California Dpt. of Fish and Game in 2011. The text is not clear. It appears to say Ballona Wetlands units.....summary conducted the California Dpt of Fish and Game .....Map created by .....October 20, 2011.

Could you provide the correct reading of this text?

For what purpose did Fish and Game produce this map?

Did Fish and Game provide specific permission for the Conservancy to place its seal (logo) on this

map for official purposes such as for grant approvals?

I understand the Conservancy is a partner of Fish and Game in the Ballona preserve.

However it is unclear if Fish and Game authorized the use of this map for purposes of another Agency to consider in its grant process.

Please DO NOT CC ANY PRIVATE BUSINESSES ON MY E-Mail COMMUNICATIONS anymore. This is met to be a private communication between myself and the State Agency, and not to be shared with any private business, whatsoever.

Again,

Thank you for your assistance,

John Davis  
PO 10152  
Marina del Rey Ca. 90045

**From:** [Mary Small](#)  
**To:** ["Elena Eger"](#)  
**Cc:** ["Scott Valor"](#)  
**Subject:** FW: State Water Board Legal's Memo to our Governing Board  
**Date:** Monday, February 06, 2012 4:47:02 PM  
**Attachments:** [SWRCB memo2011aug re accusations.pdf](#)  
[SWRCB Ltr to Davis re PRAs.pdf](#)

---

Hi Elena

Scott Valor emailed this to you but he had the wrong address.

Mary

---

**From:** Scott Valor [<mailto:svalor@santamonicabay.org>]  
**Sent:** Monday, February 06, 2012 3:42 PM  
**To:** [msmall@scc.ca.gov](mailto:msmall@scc.ca.gov); [eeeger@scc.ca.gov](mailto:eeeger@scc.ca.gov)  
**Subject:** State Water Board Legal's Memo to our Governing Board

Mary & Elena--

The attached memo to our Governing Board may help with some background. It was not only given to our Governing Board, it is posted on our website, and was forwarded to John Davis and Patricia McPherson, among others. It addresses virtually all of the accusations made against the Foundation and Commission.

Attached also is a direct letter to John Davis from SWRCB legal noting how Foundation staff and contractors legally serve the SMBRC. For example, I am a contractor to the Foundation, but I am authorized to act on behalf of the Commission. He refuses to acknowledge that, which will never change. However, the documents speak for themselves.

One reason he may be contacting you (again) is that SWRCB legal told him that any future PRA queries to the Commission must be directed to me. He simply won't do that so he seeks ways around it. It would be entirely appropriate for you to re-direct any queries relevant to the SMBRC to me.

Call me if/when questions arise.

/s

Scott Valor  
Director of Government Affairs  
Santa Monica Bay Restoration Commission  
310-922-2376

visit us at [www.smbrc.ca.gov](http://www.smbrc.ca.gov)

## Natural Resources – Goal 7

State Lands Commission owns approximately 60 acres, including the Freshwater Marsh and the Expanded Wetlands parcel. The State Coastal Conservancy (SCC) is taking the lead in funding for planning and restoring the property. Together, the three agencies are working with stakeholders, scientific experts and other agencies to develop a plan for restoration of this extraordinary resource. Their goals are to:

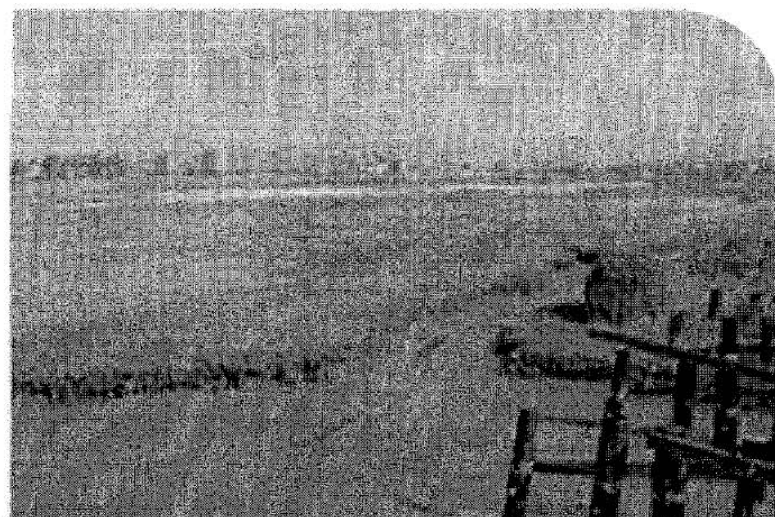
- Restore and enhance salt-water influenced wetland habitats to benefit endangered and threatened species, migratory shorebirds, waterfowl, seabirds, and coastal fish and aquatic species. Restoration of seasonal ponds, riparian and freshwater wetlands, and upland habitats will be considered where beneficial to other project goals or biological and habitat diversity;
- Provide for wildlife-dependent public access and recreation opportunities compatible with the habitats, fish, and wildlife conservation;
- Identify and implement a cost-effective, ecologically beneficial, and sustainable (low maintenance) habitat restoration alternative.

**Milestone 7.1c:** Secure funding source (approximately \$50 million, total project cost \$100–200 million) sufficient to complete first phase implementation of preferred alternative by 2010.

**Implementation Lead:** Coastal Conservancy

**Implementation Partners:** State Parks, SCWRP, NMFS

**Role of the SMBRC:** Participate



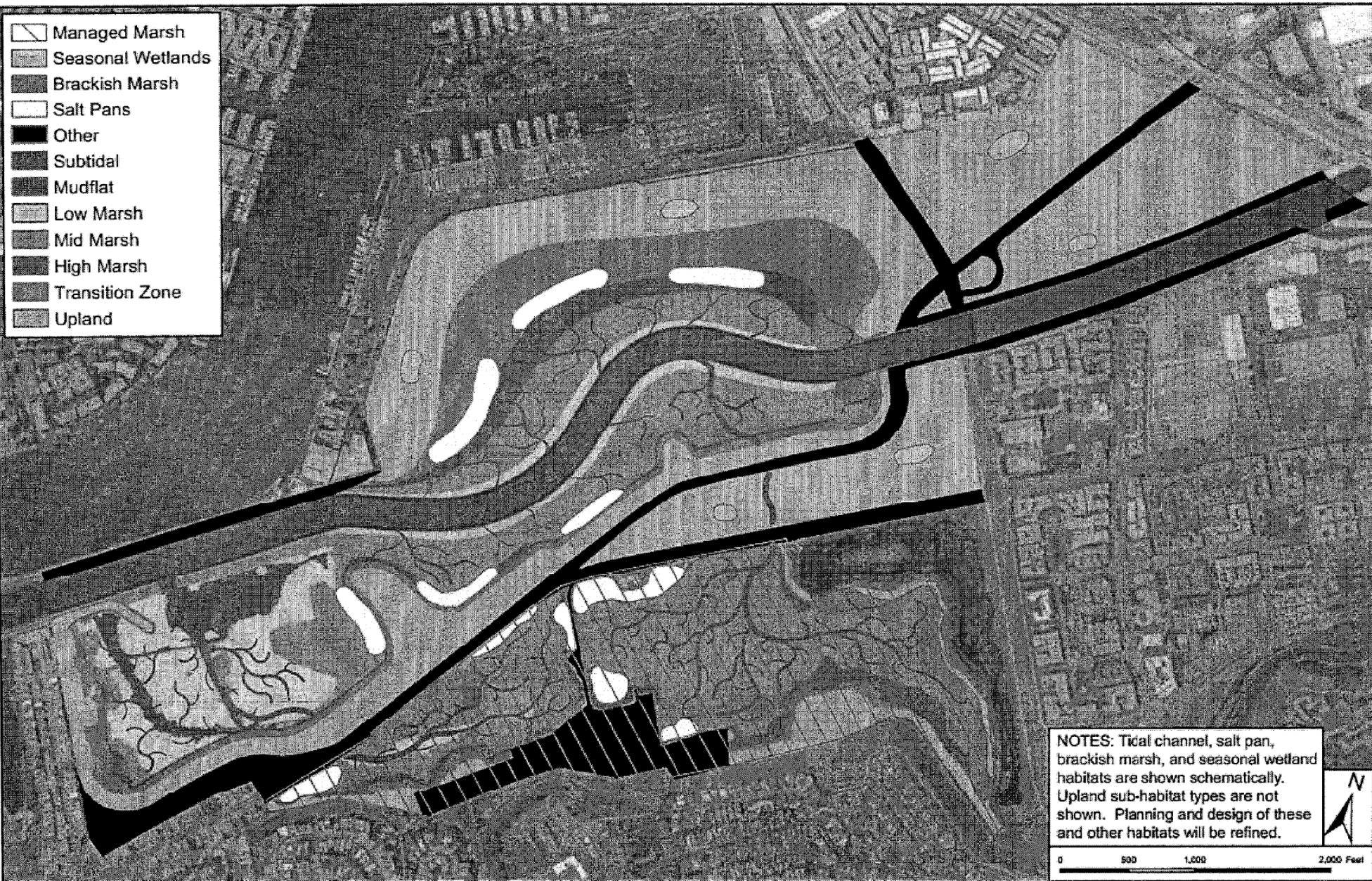
On Fri, Sep 28, 2012 at 2:52 PM, John Tommy Rosas

Bay watershed ecosystem and their preservation and restoration is a high priority of the Bay Restoration Commission. Wetlands are areas of transition between land and water, where soils, plants, and animals are adapted to periods of inundation and saturation. Wetlands are one of the most productive ecosystems in nature, providing essential habitat for a variety of species, including birds, fish, reptiles, invertebrates, and mammals. Wetlands act as natural filters which are able to absorb and remove pollutants from the water. They are also valuable in providing flood protection, groundwater recharge, recreational use, and aesthetic

channelization of Ballona Creek have all reduced what was once a 2,200-acre coastal estuary to less than 200 degraded acres today. Poor tidal exchange, polluted runoff, and invasive plants and animals also impact the wetlands.

In 2004, the State of California took title to 600 acres of the former Ballona Wetlands in Los Angeles. The property is now owned by two state agencies, the Department of Fish and Game (DFG) and the State Lands Commission (CSLC). DFG took title to approximately 540 acres of the former wetlands. DFG also holds title to a section of Ballona Creek. The





Source: ESA PWA



## **PSOMAS WORK PLAN**

# **BALLONA WETLANDS RESTORATION**

**Prepared for**

**California State Coastal Conservancy  
1330 Broadway, 13<sup>th</sup> Floor  
Oakland, California 94612**

**Prepared by:**

**PSOMAS  
555 South Flower Street, Suite 4400  
Los Angeles, CA 90071  
Project Number 1CCC0101.00**

**June 22, 2012**

555 South Flower Street  
Suite 4400  
Los Angeles, CA 90071

Tel 213.223.1400  
Fax 213.223.1444  
[www.Psomas.com](http://www.Psomas.com)

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## **SECTION I**

### **INTRODUCTION**



## **Project Understanding**

Psomas has unmatched technical engineering knowledge of the Ballona Wetlands that spans 25 years. No other firm has been involved or has more engineering knowledge of the wetlands and its surroundings than Psomas. We have extensive knowledge of the infrastructure of the surrounding community as well as The Gas Company facilities throughout the area as a result of our extensive previous work in the community surrounding the Ballona Wetlands. This extensive historical knowledge, has provided us with unique insight and understanding of the opportunities for the restoration plan and the Conservancy's goals for this project.

The State Coastal Conservancy through the PMT team has developed a conceptual plan to restore the Ballona Wetlands ecosystem. It will comprise diverse habitat ranging from sub-tidal through various marshland conditions to upland habitat. The objective of this restoration program is to reintroduce and revive critical wetland habitat and provide a remarkable natural open space for the public benefit. The Ballona Wetlands Restoration Project will enhance the coastal environment for reintroduction of target animal and plant species that left the area because of human development and related loss of the coastal wetland.

The existing Ballona Wetlands have suffered from more than a century of human neglect and abuse that has resulted in a highly degraded habitat area. Much of the area was used for disposal of dredging spoils from construction of Marina Del Rey and the Ballona Creek flood control channel. The Ballona Creek flood control channel was constructed to provide flooding protection for development of lands upstream from the original wetlands; however, the channel also severed the historic natural connection between the freshwater creek and the ocean. As a result, many of the historic ecological functions of the wetlands were lost and no longer support the wide variety of native species that once inhabited the area.

The PMT and their consultant team have studied several alternatives that would allow the reconstruction of a coastal wetland environment and reintroduction of the native species common to these wetlands. While a number of alternatives have been analyzed, a preferred alternative has been developed that involves the removal of segments of the Ballona Creek levees and the reconstruction of a portion of the Ballona Creek channel on an alignment that more closely represents a natural meandering water course. Implementation of this plan will require a technical analysis and review and approval by the County of Los Angeles and U.S. Army Corps of Engineers (USACE) with a Section 408 permit.

More specifically, the preferred project proposes to implement restoration of areas on the north and south sides of the existing Ballona Creek on lands adjacent to Marina Del Rey within Los Angeles County (County) Area A and City of Los Angeles Area B, as well as some restoration in Area C in the City of Los Angeles. This work will generally include:

- Build in flexibility of delivery to address availability of funding. Staged or phased delivery through master planning the construction sequencing.
- The removal of the north and south Ballona Creek levees to allow tidal and stormwater interaction within the Ballona Wetlands Ecological Reserve area.

- Construction of new perimeter levees along the perimeter and strategic alignments within the restoration area to provide the flood protection of existing developed areas when the existing levees are removed.
- Grading to create a restored condition allowing multiple habitat regimes from sub-tidal to upland conditions.
- Execute the proposed construction through a master planned and phased program designed to reduce the environmental impacts as much as possible, balancing earthwork within the Reserve area.
- Assist the PMT in coordinating with and addressing the concerns of the many governmental agencies and other interested parties.

## **Project Objectives**

Consistent with the Conservancy's stated goals, our project team's approach will be driven by the following three primary objectives and secondary objectives for the Civil/Geotechnical team:

### **Primary Objectives:**

- Working with the PMT and Hydrology consultant team, obtain Section 408 approval from the USACE for the levee removal and its supporting analysis.
- Analyze impacts and mitigations for incorporation into the environmental analysis.
- Prepare plans and supporting documents for the grading and infrastructure at the appropriate level for the restoration project.

### **Secondary Objectives:**

- Assist the PMT in obtaining approvals in the most efficient and effective manner. The process to obtain a 408 approval is by design not clearly defined to allow for the many existing conditions in USACE facilities.
- Assist the PMT in addressing the issues and concerns of the community and interested parties. Many groups and agencies are interested in this restoration. They each view it in different terms. Our goal is to provide information and support that is appropriately tailored for public presentation of our technical information in a non-technical manner.
- Ensure that the proposed design elements are sensitive to the environmental goals of the project. The overarching goal of restoring a natural wetland system must be the primary focus in our design.

**EXHIBIT 11**

# Playa Capital Company, LLC

## **Soil and Groundwater Remediation Plan – Campus Area**

June 7, 2002

*Prepared for:*

Playa Capital Company, LLC  
12555 West Jefferson Boulevard, Suite 300  
Los Angeles, California 90666

*Prepared by:*

**CDM**

18881 Von Karman Avenue, Suite 650  
Irvine, California 92612

Project No. 10610-32615-RT.SCM

# Signatures

The information contained in this Soil and Groundwater Remediation Plan - Campus Area, dated June 7, 2002 has received appropriate technical review and approval. The conclusions and recommendations presented represent professional judgments and are based upon findings from the investigation identified in the report and the interpretation of such data based on our experience and background. This acknowledgment is made in lieu of all warranties, either expressed or implied.

Reviewed and Approved by:

---

David C. Chamberlin  
Senior Vice President

---

William J. Weaver, R.G., 6738  
Project Manager/Geologist

---

Jay Accashian  
Project Engineer

---

John Eisenbeis, Ph.D.  
Senior Scientist

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# List of Acronyms

|             |                                                                       |
|-------------|-----------------------------------------------------------------------|
| 1,1,1-TCA   | 1,1,1-Trichloroethane                                                 |
| 1,1,2-TCA   | 1,1,2-Trichloroethane                                                 |
| 1,1-DCA     | 1,1-Dichloroethane                                                    |
| 1,1-DCE     | 1,1-Dichloroethene                                                    |
| 1,2-DCA     | 1,2-Dichloroethane                                                    |
| 1,4-DCB     | 1,4-Dichlorobenzene                                                   |
| ASTM        | American Society for Testing and Materials                            |
| B&C         | Brown and Caldwell                                                    |
| bgs         | Below Ground Surface                                                  |
| BTEX        | Benzene, Toluene, Ethyl Benzene, and Xylene                           |
| CA          | Chloroethane                                                          |
| CaCR        | California Code of Regulations                                        |
| Cal/EPA     | California Environmental Protection Agency                            |
| CAM         | California Assessment Manual                                          |
| CAO         | Cleanup and Abatement Order                                           |
| CC&Rs       | Covenants, Conditions, and Restrictions                               |
| CDM         | Camp Dresser & McKee Inc.                                             |
| CEM         | Conceptual Exposure Model                                             |
| CERCLA      | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR         | Code of Federal Regulations                                           |
| cis-1,2-DCE | Cis-1,2-Dichloroethene                                                |
| CLA         | Chief Legislative Analyst                                             |
| COCs        | Chemicals of Concern                                                  |

|                  |                                         |
|------------------|-----------------------------------------|
| COPCs            | Chemicals of Potential Concern          |
| DBS              | Department of Building and Safety       |
| DO               | Dissolved Oxygen                        |
| DOC              | Dissolved Organic Carbon                |
| DPE              | Dual Phase Extraction                   |
| DTSC             | Department of Toxic Substances Control  |
| DWR              | Department of Water Resources           |
| EAB              | Enhanced Anaerobic Bioremediation       |
| EEC              | Environmental Engineers and Contractors |
| ENSR             | ENSR Consulting and Engineering         |
| ft bgs           | Feet Below Ground Surface               |
| ft <sup>2</sup>  | Square Feet                             |
| ft/day           | Feet per Day                            |
| GAC              | Granular Activated Carbon               |
| Geomatrix        | Geomatrix Consultants                   |
| gpd/ft           | Gallons per Day per Foot                |
| gpm              | Gallons per Minute                      |
| GSI              | Groundwater Services Inc.               |
| H <sub>2</sub> S | Hydrogen Sulfide                        |
| HA               | Hargis & Associates                     |
| HASP             | Health and Safety Plan                  |
| HBRGs            | Health-Based Remediation Goals          |
| IESI             | Integrated Environmental Services, Inc. |
| IR               | Infrared Spectrometer                   |
| LNAPL            | Light Non-Aqueous Phase Liquid          |

|                          |                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------|
| LSRTs                    | Lower Soil Remediation Triggers                                                                 |
| MC                       | Methylene Chloride                                                                              |
| MCL                      | Maximum Contaminant Levels                                                                      |
| MCP                      | Monitoring and Contingency Plan                                                                 |
| mg/kg                    | Milligram per Kilogram                                                                          |
| mg/L                     | Milligrams per Liter                                                                            |
| mg/m <sup>3</sup>        | Milligrams per Cubic Meter                                                                      |
| µg/(m <sup>2</sup> /min) | Micrograms per Square Meter per Minute                                                          |
| MNA                      | Monitored Natural Attenuation                                                                   |
| MSL                      | Mean Sea Level                                                                                  |
| NCP                      | National Contingency Plan                                                                       |
| NFA                      | No Further Action                                                                               |
| NPDES                    | National Pollution Discharge Elimination System                                                 |
| O&M                      | Operation and Maintenance                                                                       |
| OEHHA                    | Office of Environmental Health Hazard Assessment                                                |
| OM&M                     | Operation, Maintenance & Monitoring                                                             |
| OSHA                     | Occupational Health & Safety Administration                                                     |
| PCA                      | Tetrachloroethane                                                                               |
| PCBs                     | Polychlorinated Biphenyls                                                                       |
| PCC                      | Playa Capital Company, LLC; Playa Phase I Commercial Land Company, LLC; and affiliate companies |
| PCE                      | Tetrachloroethene                                                                               |
| PID                      | Photo-Ionization Detector                                                                       |
| POTW                     | Public Owned Treatment Works                                                                    |
| PPE                      | Personal Protective Equipment                                                                   |

|        |                                                                                                        |
|--------|--------------------------------------------------------------------------------------------------------|
| ppmv   | Parts per Million by Volume                                                                            |
| PRGs   | Preliminary Remediation Goals                                                                          |
| PVC    | Polyvinyl Chloride                                                                                     |
| RA     | Remedial Action                                                                                        |
| RBCA   | Risk-Based Corrective Action                                                                           |
| RD     | Remedial Design                                                                                        |
| RGs    | Remedial Goals                                                                                         |
| RME    | Reasonable Maximum Exposure                                                                            |
| ROs    | Remedial Objectives                                                                                    |
| RP     | Remediation Plan                                                                                       |
| RWQCB  | Regional Water Quality Control Board                                                                   |
| SAs    | Source Areas                                                                                           |
| SCAQMD | South Coast Air Quality Management District                                                            |
| SCM    | Site Conceptual Model                                                                                  |
| SECOR  | Secor International Incorporated                                                                       |
| SGI1   | <i>Soil and Groundwater Investigation Report, Former Dream Works Project Area, Playa Vista Site</i>    |
| SGI2   | <i>Soil and Groundwater Investigation Phase 1 Project (Excluding Former Dream Work Project) Report</i> |
| SRTs   | Soil Remediation Triggers                                                                              |
| SVE    | Soil Vapor Extraction                                                                                  |
| SVOCs  | Semi-Volatile Organic Compounds                                                                        |
| SWMP   | Storm Water Management Plan                                                                            |
| TCE    | Trichloroethene                                                                                        |
| TDS    | Total Dissolved Solids                                                                                 |
| TPH    | Total Petroleum Hydrocarbons                                                                           |



*List of Acronyms  
(continued)*

|               |                                               |
|---------------|-----------------------------------------------|
| trans-1,2-DCE | Trans-1,2-Dichloroethene                      |
| TRPH          | Total Recoverable Petroleum Hydrocarbons      |
| TSS           | Total Suspended Solids                        |
| USEPA         | United States Environmental Protection Agency |
| USRTs         | Upper Soil Remediation Triggers               |
| UST           | Underground Storage Tanks                     |
| UV            | Ultraviolet                                   |
| VC            | Vinyl Chloride                                |
| VOCs          | Volatile Organic Compounds                    |
| WTP           | Water Treatment Plant                         |
| ZOI           | Zone of Influence                             |

# Section1

## Introduction

Playa Capital Company, LLC; Playa Phase 1 Commercial Land Company, LLC; and affiliate companies (collectively "PCC") are developing a large tract of land (Playa Vista) north of Los Angeles International Airport for residential, commercial, community serving, and wildlife habitat uses (herein referred to as the "Site"). As part of this development, residual chemical contamination from past industrial operations and other land-use activities at the site is being investigated and remediated, as necessary. Camp Dresser & McKee Inc. (CDM) has prepared this Soil and Groundwater Remediation Plan (RP) on behalf of PCC to address contaminants of concern in soil and groundwater present within the Campus Area portion of the proposed development, which is planned for commercial land use. This document is submitted in response to Cleanup and Abatement Order No. 98-125 (CAO, attached as Appendix A), issued by the California Regional Water Quality Control Board, Los Angeles Region (RWQCB), in December 1998. The CAO directs PCC to initiate a phased cleanup and abatement program that addresses discharges of contaminants into soil and groundwater from historical land use and former manufacturing operations.

### 1.1 Purpose and Organization of Report

The purpose of this RP is to develop, evaluate, and select potential remedial alternatives to address soil and groundwater impacted with contaminants of concern in the Campus Area of the Site and to propose remedial actions for soil and groundwater contamination in each source area. The report is organized into ten separate sections. A brief description of each section is provided below:

The remainder of Section 1 provides a summary of the approach to remediation in the Campus Area along with the regulatory context for remedial activities, which is the framework for remediation activities described in this RP.

Section 2, *Site Characteristics*, provides a brief description of the Site history, historical investigations and operations, and regional and Site-specific geology and hydrogeology.

Section 3, *Remedial Objectives and Goals*, provides a discussion of media-specific Remedial Objectives (ROs) and Remedial Goals (RGs) applicable to a list of Chemicals of Potential Concern (COPCs) for the purposes of protecting human health and groundwater quality in the Campus Area. This section also evaluates the list of COPCs to identify specific chemicals of concern (COCs) and source areas.

Section 4, *Known Nature and Extent of Contamination*, provides a brief summary of the nature, extent, and fate and transport of contamination is provided in this section, along with the distribution of COCs in soil and groundwater. Finally, nine source

areas are identified based on a comparison of historical COPC concentrations in soil and groundwater contamination data with RGs described in Section 3.

Section 5, *Identification of Remedial Technologies and Process Options*, covers the first step in the remedial alternative evaluation process, namely the identification of response actions, potential remedial technologies and process options capable of meeting the ROs.

Section 6, *Development of Remedial Alternatives*, develops a series of remedial alternatives from an array of the retained general response actions, remedial technologies, and process options identified in Section 5. A conceptual-level description of each remedial alternative is provided.

Section 7, *Evaluation of Remedial Alternatives*, evaluates each remedial action alternative in relation to the seven evaluation criteria established in the National Contingency Plan (NCP) (40 CFR Part 300.430). Although the Site does not fall under the jurisdiction of the NCP, the seven evaluation criteria were chosen for this section to ensure a complete and comprehensive evaluation of each remedial alternative. The recommended remedial alternative is highlighted at the end of this section.

Section 8, *Proposed Remedial Action*, provides an overview of the proposed remedial actions for soil and groundwater in each source area. The overview is followed by detailed descriptions of the proposed remedial action for the nine source areas. Finally, the section presents a remedial implementation plan that outlines the phases of implementation for the proposed remedial actions to achieve optimal effectiveness.

Section 9, *Monitoring and Contingency Plan*, provides the basis for a Monitoring and Contingency Plan that will be prepared following remedial design activities and prior to remedial action implementation.

Finally, Section 10 provides a reference list of sources used in preparing this document.

## **1.2 Overview of Approach to Remediation and Mitigation**

Investigation and characterization of contamination in the Campus Area at Playa Vista has been the subject of numerous reports prepared during the past nearly twenty years. This section briefly summarizes how those past efforts relate to this RP, and outlines the strategies, methods, and goals of Site cleanup developed in those documents to set the context for the detailed discussion of remediation for soil, groundwater, and soil gas contamination set out in this RP for the Campus Area portion of the Site development.

### 1.2.1 The Playa Vista Site Development

The Site, located in western Los Angeles, encompasses 1,087 acres of land north of the Los Angeles International Airport and just south of the community of Marina del Rey (Figure 1-1, *Site Location Map*). The Site is divided into four planning areas identified as Areas A, B, C, and D (Figure 1-1).

The Site is being developed in two phases. The Phase 1 Development Area (parts of Area D and the freshwater marsh in Area B) is fully entitled and is under construction. The easterly-most portion of the Phase 1 Development Area, known as the Campus Area, is planned for mixed-use commercial development. As discussed below, this portion of the Phase 1 development includes areas where Hughes Aircraft Company and other industrial operations were once located (Figure 1-2, *Area D Features Map*). Residential development and a limited amount of mixed-use commercial development will also occur at the westerly end of the Phase 1 Development Area (i.e., western portion of Area D).

The Campus Area consists of approximately 114 acres of Area D that were used from the 1940s to the 1990s by the former Hughes Aircraft Company and the former McDonnell Douglas Helicopter Company for the manufacture, research, development and testing of electronics, aircraft, and other equipment<sup>1</sup>. Historically, structures, asphalt pavement, aircraft taxiways, and a runway covered approximately 80 percent of the Campus Area.

The types of chemicals historically used by Hughes Aircraft Company and other industrial operators in the Campus Area included VOCs and semi-volatile organic compounds (SVOCs), petroleum hydrocarbons, metals, pesticides, and polychlorinated biphenyls (PCBs). Based on reviews of industrial records, interviews of former employees, and extensive sampling of the property, it was determined that some of these chemicals were either stored and/or used in the Campus Area in locations of previous industrial activity, such as a former drum storage area, former underground storage tanks, several clarifiers, utility trenches, former degreaser area, sumps and a former storm drain discharge. Investigations of these locations have revealed several areas of environmental concern in the Campus Area, which this RP intends to address.

Additionally, the City of Los Angeles Office of the Chief Legislative Analyst (CLA, 2001), with input from independent consultants and various City departments and State agencies, issued a report in May 2001 that investigated the potential public health and safety impacts, and appropriate mitigations if any, associated with naturally-occurring compounds and other environmental conditions in portions of the Phase 1 Development Area of the Site (see Figure 1-2). The CLA report addressed soil

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<sup>1</sup> The Campus Area consists of Tracts 49104-04 and 52092

gas (methane, hydrogen sulfide (H<sub>2</sub>S), and benzene, toluene, ethyl benzene, xylene (BTEX)), subsidence, and earthquake fault impacts. Specifically, the study addressed five primary questions, which are presented below along with a summary of the CLA findings:

1. Is the Southern California Gas Company Playa Del Rey Gas Storage Facility located in the adjacent Playa Del Rey area leaking and, therefore, a source of the methane observed at the Site and a risk to workers and future residents?

The CLA concluded the gas storage facility is not the source of methane observed at the Site; there is no evidence to suggest the storage facility is leaking or improperly maintained; and there is no evidence that the gas storage facility presents a danger to workers or future residents at the Site.

2. Is the extent of the methane observed at the Site fully defined and can it be mitigated?

The CLA concluded the numerous extensive studies of methane concentrations “yielded a data set that is more than adequate for the assessment of potential methane hazards and for the design of appropriate mitigation measures.” Further, the report recommended that a methane mitigation system be implemented to prevent, detect, and monitor the presence of methane for future development (CLA, 2001, Table 2-1). The report noted that mitigation measures would vary depending upon the concentration of methane present.

3. Is there significant subsidence at the Site currently, or will future methane mitigation cause subsidence issues that may undermine the structural integrity of future building structures?

The CLA concluded that “no significant or clearly defined trend of increased subsidence” was observed in the vicinity of the Site. The report noted that a minimal level of settlement and uplift was observed, however, design measures are adequate to address such occurrences. Further, the report concluded that there is no evidence the proposed methane mitigation measures would result in increased potential for subsidence in the area.

4. Is there an active earthquake fault at the Site that presents an unacceptable risk to workers and future residents?

The CLA concluded that the geologic and geophysical data do not support the existence of the postulated Lincoln Boulevard fault. In addition, the CLA report also noted that the Division of Geology and Mines was reviewing offshore seismic data to ascertain if observed

anomalies were indicative of offshore faults.<sup>2</sup> Subsequent to the issuance of the CLA report, the City of Los Angeles Planning and Land Use Management Committee issued a statement on behalf of the Division of Geology and Mines that there are several plausible explanations for the anomalies, and "it appears that the anomalies could be associated with depositional features characteristic of stream channels."

5. Is there BTEX and H<sub>2</sub>S contamination associated with the methane that presents a health risk to workers and future residents?

The CLA concluded the potential health risks associated with BTEX and H<sub>2</sub>S soil gas emissions are below the benchmarks established by the U.S. Environmental Protection Agency (USEPA), Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA) and other regulatory agencies to indicate insignificant risk, and therefore no further investigation or remediation is warranted.

PCC and other developers at the Site will implement appropriate methane mitigation measures at new buildings in the Phase 1 Development Area, including those proposed in the Campus Area in accordance with City of Los Angeles building codes.

## 1.2.2 The Regulatory Process for the Site

The California Environmental Protection Agency (Cal/EPA) has designated the RWQCB as the lead agency for the Site. A copy of the letter reporting that designation is included in Appendix B.

The RWQCB has provided oversight for remedial activities at the Site since the 1980s, and in 1998 issued a CAO, which directs PCC to address discharges of contaminants into soil and groundwater from past industrial operations at the Site (RWQCB, 1998). Specifically, the CAO defines several requirements: to implement free product recovery, to monitor groundwater on a quarterly basis, and to design and implement appropriate soil and groundwater remediation.

To achieve these goals, PCC conducted a Site-wide soil and groundwater assessment to supplement previous studies and to better define the nature and extent of contamination. PCC submitted to the RWQCB a Soil Remedial Action Plan (SRAP) addressing portions of the Campus Area (CDM, 1999a), later extended to the entire Phase 1 Development Area (PCC, 2000), and a Groundwater Treatment System Evaluation (IESI, 1999a). Both documents recommended additional activities in order to finalize soil and groundwater remediation plans (see Appendix A). Under the oversight of the RWQCB, PCC performed these additional activities for the Campus

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<sup>2</sup> These anomalies were observed approximately ½ mile west and ¼ north of the sites.

Area. Using these results, this RP addresses areas of concern within the Campus Area that require further remediation.

### **1.2.3 General Approach For Addressing Environmental Contamination**

PCC has developed both a risk-based and resource-protection approach to the investigation and remediation of contamination for the Site development, based on several important principles:

- PCC will address chemical contamination that presents human health risks at the Site in a conservative fashion. Where uncertainty is present, PCC remediation will base its decisions in favor of public health protection;
- During remediation, PCC will address potentially complete human exposure pathways (i.e., ways in which exposure may occur as opposed to purely hypothetical exposure pathways) as its first priority. PCC will also implement mitigation measures to prevent or reduce, as appropriate, potential exposures that may occur while remediation is underway;
- PCC will also work to protect resources (e.g., groundwater), even though no direct human exposure to contaminants in this water is likely now or in the foreseeable future<sup>3</sup>;
- PCC will employ an approach to Site cleanup that addresses the needs and concerns of all involved regulatory agencies.

PCC's general approach to addressing contaminated areas of the Site is outlined in the flow diagram in Figure 1-3, *Summary of Approach to Remediation for the Phase 1 Site Development*.

In support of this approach, various numerical remediation goals or triggers have been developed in a series of stand-alone documents. Particularly important are the Site-specific health-based remediation goals (HBRGs) and soil remediation triggers (SRTs). The documents in which they have been developed, and the relationship of those documents to other environmental reports for the Site, are shown in Figure 1-4, *Flow of Information Among Playa Vista Environmental Reports*.

#### **1.2.3.1 Health-Based Remediation Goals**

Remediation has been completed for most areas of the Site where chemical releases had been identified. However, residual contamination is still present in some areas and this RP evaluates whether further remediation is needed to protect human health. Initially, for purposes of identifying residual contamination that would require

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<sup>3</sup> Presently, groundwater at the Site, which is of poor quality due to high TDS, sulfate, and chloride levels unrelated to Site activities, is not used as a source of drinking water. Prospectively, the Covenants, Conditions, and Restrictions (CC&Rs) adopted for the Site will prohibit use of groundwater for such purposes.

remediation, PCC considered comparing contaminant levels with the relevant PRGs developed by the USEPA. (PRGs are non-Site-specific quantitative levels for contaminants expected to be protective of human health). However, USEPA developed these PRGs without consideration of indoor air exposures, which is the primary exposure pathway at the Site. Additionally, EPA's PRGs assume certain site conditions, not all of which exist at the Site.

For these and other reasons, PCC developed its own media-specific HBRGs. HBRGs are concentrations of chemical contaminants in soil, groundwater, and soil gas that will protect the public from unacceptable exposures to these chemicals at the Site. Calculating these concentrations involves, in general terms, deciding how people might be exposed to Site contaminants, and then establishing levels of these contaminants that are sufficiently low to ensure that exposures would not represent threats to human health. The methodology for calculating HBRGs is the subject of considerable Cal/EPA and USEPA guidance. This guidance was followed in developing the HBRGs.

The PCC-developed HBRGs take into account the indoor air exposure pathway and other specific Site conditions (IESI, 2000; 2001a) using standard risk assessment methods, and are designed to assist PCC in identifying contaminated areas and environmental media (soil, groundwater, and soil gas) that would need to be addressed during remediation to ensure the protection of human health. Additional details regarding the development of HBRGs that are applicable to the Campus Area remediation are presented in Section 3.

#### **1.2.3.2 Soil Remediation Triggers**

PCC developed SRTs to identify soil contamination requiring remediation to protect shallow groundwater as a resource (IESI, 2001b). SRTs are concentrations of chemical contaminants in soil that will protect shallow groundwater resources at the Site. These values are based on protecting groundwater resources, not on potential human health risk. Calculating these concentrations involves, in general, establishing how leachable COPCs in soil could migrate to groundwater, quantifying this migration, and then determining levels of such COPCs in soil that are sufficiently low to ensure that concentrations of COPCs in groundwater will not exceed acceptable levels.

SRTs were developed for both the upper (USRTs) and lower strata (LSRTs) in the shallow hydrologic zone to address the very different geological conditions of these units. Additional details regarding the development of SRTs that are applicable to the Campus Area remediation are presented in Section 3.

#### **1.2.3.3 Application of HBRGs and SRTs in Campus Area Remediation**

In this RP, HBRGs and SRTs are used to identify and prioritize areas in the Campus Area that require remediation. Essentially, they are remediation triggers; these



numerical goals may not be the final cleanup criteria. The RWQCB will determine final cleanup goals.<sup>4</sup>

Identifying areas where remediation is potentially required is based on exceedances of HBRGs, SRTs, and/or protection goals. Appropriate remediation technologies to address these areas are then designed and implemented. This process is discussed in more detail in Section 8.

Specific remedial technologies comprising the recommended remedial action will be implemented within each source area based on a comparison of source area-specific soil and groundwater contamination with appropriate HBRGs, SRTs, and other resource protection goals. The decision process is complex because, in some cases, remediation in one medium (e.g., groundwater) will address contamination in another medium. In such cases, it may not be necessary to apply a full suite of remedial technologies for both soil and groundwater contamination. Where remediation in one medium (e.g., groundwater) will address contamination in another (e.g., soil), the proposed remediation is limited to the most appropriate media and justification for such action is provided.

Remedial efforts for the Campus Area, especially for groundwater, may require relatively long periods of time to complete. In order for development of the Campus Area to proceed concurrently with implementation of the remedial measures identified in this RP, additional mitigation of potential human exposures may be necessary to ensure protection of human health prior to completion of remedial activities. This mitigation will take several forms. During construction, worker health and safety will be addressed through the existing *Construction Safety Standards* that cover the Site. In addition, certain engineered and institutional controls may be implemented as part of construction and development activities. Engineered and institutional controls may include vapor intrusion barriers and certain land use restrictions designed to restrict potential uses and activities within the Campus Area once construction and implementation of all components of the remedial alternative are completed. These mitigation measures would remain in affect as long as necessary.

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<sup>4</sup> The process of determining final cleanup levels will consider, as appropriate, a number of factors, including, for example, a comparison of residual contaminant levels to HBRGs, PRGs, SRTs and other resource protection goals; a post-remediation cumulative risk assessment; and the technical feasibility of achieving greater contamination reduction.

## Section2

# Site Characteristics

This section sets out the current understanding of the known or suspected contaminant source(s), the known lateral extent of impacts to groundwater, soil, and soil gas, and the vertical extent of impacts to groundwater, as compiled from previous investigation reports. This section also discusses the potential fate and transport mechanisms affecting the observed contaminants. Specifically, this section presents the current understanding of contaminant mass; groundwater flow directions and velocities; contaminant phase distribution and partitioning between soil, groundwater, and soil gas; mechanisms of biotic and abiotic contaminant transformation; and the current understanding of the temporal variability of such processes.

The data and information presented in this section are important in identifying remedial options capable of addressing COPCs within the Campus Area. This information is also relevant to the development of ROs discussed in Section 3.

The site-specific information presented in this section includes:

- A description of the Campus Area and historical operations;
- A summary of historical investigations at this location;
- An interpretation of Site geology and hydrogeology with respect to subsurface contaminant transport; and
- A conceptual understanding of the fate and transport of dissolved phase contaminants and natural attenuation mechanisms including advection, dispersion, matrix diffusion, sorption, volatilization, and biotic or abiotic transformation.

## 2.1 Site Description

This Remediation Plan is limited to areas of concern within the Campus Area of the Site (Figure 2-1, *Project Location Map*), which lies within the eastern region of the Area D planning area.

The Campus Area consists of approximately 114 acres of Area D that were used from the 1940s to the 1990s by the former Hughes Aircraft Company and the former McDonnell Douglas Helicopter Company for the manufacture, research, development and testing of electronics, aircraft, and other equipment.

Historically, aircraft manufacturing, metal plating, machining, painting, ordnance development and manufacturing, aircraft cleaning and maintenance, aircraft testing, and aerospace research were conducted at the Campus Area. During such

operations, structures, asphalt pavement, aircraft taxiways, and a runway covered approximately 80 percent of the Campus Area (McLaren Environmental Engineering, [MEE], 1987a, b).

As part of the historical operations, numerous chemicals were used for industrial activities. MEE indicated the following compounds were stored and handled at the Campus Area: VOCs, SVOCs, total petroleum hydrocarbons (TPH), metals, pesticides, and PCBs (MEE, 1987a).

More recently, mass grading, decommissioning of building structures, and construction of underground utilities and roadways has occurred within the Campus Area. These activities are ongoing and will be carefully coordinated with the remediation activities proposed in this RP.

## 2.2 Historical Investigations

Investigation and remediation of the Campus Area has been ongoing since 1983. These activities and results are described in numerous reports and documents.<sup>5</sup>

The compounds historically detected in Campus Area soil and groundwater include VOCs, phenol, metals, PCBs, TPH, and pesticides. Light non-aqueous phase liquid (LNAPL) hydrocarbons continue to be encountered west of Building 11, in the form of a hydrocarbon sheen. A summary of groundwater data collected within the Campus Area since the issuance of the CAO in 1998 is attached as Appendix C. A summary table of historical soil investigations conducted within the Campus Area is attached as Appendix D.

Unrelated to past human activities at the Site, naturally-occurring methane, H<sub>2</sub>S, and associated naturally-occurring hydrocarbons are also present in the subsurface in many locations throughout the Site. The findings of the *Report of Sampling and Analysis of Soil Gas for Methane within Eastern Portion of Area D at Playa Vista* (CDM, 2001a) indicate that methane concentrations in the Campus Area are among the lowest detected throughout the Site (CLA, 2001).

### 2.2.1 Distribution of VOCs in Subsurface

The most recent, comprehensive summaries of soil data collected during the historical investigations are provided in reports prepared by CDM and EEC. Findings of these investigations indicated that chlorinated VOCs (primarily 1,1-Dichloroethene [1,1-DCE], 1,1-Dichloroethane [1,1-DCA], cis-1,2-Dichloroethene [cis-1,2-DCE], and Trichloroethene [TCE]) and fuel hydrocarbons were found in a limited number of soil samples. In August and September 1999, CDM conducted a soil and groundwater

<sup>5</sup> Refer to Aqua Science Engineers, Inc. 1996; Brown and Caldwell (B&C), 1998a, 1998b, 1999a, 1999b, CDM, 1999a, 1999b, 1999c, 1999d; 2000a, 2000b; Environmental Engineering & Contracting Services (EEC), 2001a, 2001b, 2001c, 2001d; ENSR Consulting and Engineering, 1997; Geomatrix Consultants, Inc. 2001; Integrated Environmental Services, Inc. (IESI), 1999a, 2000, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f, 2001g; MEE 1987a, 1989a. References for these and other relevant reports are provided in Section 10.

investigation of a portion of the Campus Area. A total of 60 soil borings were advanced and samples collected at depths of approximately 6 and 12 feet below ground surface (ft bgs); six of the borings were advanced to the water table. Results of the investigation were presented in the *Soil and Groundwater Investigation Report, Former Dream Works Project Area, Playa Vista Site (SGI1)* (CDM, 2000a). In December 1999 and January 2000, CDM conducted an additional soil and groundwater investigation in the balance of the Phase I project area, including the remainder of the Campus Area. The investigation included 61 soil borings. The results of the investigation were summarized in the *Soil and Groundwater Investigation Phase 1 Project (Excluding Former Dream Works Project) Report (SGI2)* (CDM, 2000b). Finally, EEC conducted several investigations and soil excavation activities in the Campus Area from March through October, 2001 (EEC, 2001a, 2001b, 2001c, 2001d). The results from these activities are provided in Appendix F.

In accordance with the provisions of the CAO, sampling of groundwater monitoring wells has been performed quarterly since March 1999. Results of the most recent quarterly groundwater sampling, which provide groundwater data from 62 groundwater monitoring wells throughout the Campus Area, were presented in the *First Quarter 2002 Groundwater Monitoring and Progress Report* (CDM, 2002). These data represent the most recent, comprehensive summaries of groundwater data collected in the Campus Area. The chlorinated VOCs that were detected in Campus Area groundwater samples most frequently and at the highest concentrations include the following: Tetrachloroethene (PCE), TCE, 1,1-DCE, 1,1-DCA, cis- and trans-1,2-DCE and Vinyl Chloride (VC).

A VOC groundwater summary concentration map for the Campus Area, summarizing detected chlorinated and non-chlorinated organic compounds from the first quarter 2002 analytical results is provided as Figure 2-2, *First Quarter 2002 Groundwater Sampling VOC Concentration Summary Map*. These data are also provided in Appendix C (Tables C-2 through C-13), along with groundwater monitoring well construction details, analytical testing methods and sample holding times, quality control samples, and other relevant data presented previously in the *First Quarter 2002 Groundwater Monitoring and Progress Report* (CDM, 2002).

Separate VOC groundwater plume contour maps are provided for 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, VC, and 1,1-DCA for each impacted water bearing zone (Bellflower Aquitard and the Ballona Aquifer) in Figure 2-3, *1,1-Dichloroethene Concentration Summary Map – Bellflower Aquitard*, through Figure 2-12, *1,1-Dichloroethane Concentration Summary Map – Ballona Aquifer*. Data for other groundwater contaminants such as PCE, TCE, and methylene chloride (MC) (commonly referred to as dichloromethane) are presented in Figure 2-2 and Appendix C. The interpreted extent of groundwater impacted by PCE, TCE, and MC suggest that the lateral extent of these contaminants is isolated and therefore plume maps have not been provided.

## 2.2.2 Groundwater Treatment System

In 1994, Secor International Incorporated (SECOR) started operating a groundwater treatment system to remediate chlorinated VOCs. There were 10 extraction wells discharging to the system. Historically, treated groundwater from this system has been discharged to Centinela Channel under National Pollution Discharge Elimination System (NPDES) permit #CAG834001.

In 1999, the RWQCB approved the temporary suspension of active groundwater treatment due to Site development activities (RWQCB, 1999). The groundwater treatment system was taken off-line on June 19, 2000.<sup>6</sup>

During the third quarter 2000, a new and more efficient water treatment system, designed to treat a wider range of contaminants was installed north of Building 2. Since then, the system has been used predominantly to treat dewatering and purge water.<sup>7</sup> Quarterly and annual NPDES reports on discharges of treated dewatering and purge water have been submitted to the RWQCB (IESI, 2001c, 2001d, 2001e, 2001f, 2001g, ; IESI, 2002a, and 2002b), and continue to be submitted as such activities are ongoing.

## 2.3 Geology and Hydrogeology

This section presents regional and Site geology and hydrogeology, as interpreted from previous Site investigations. A generalized cross section of the geology and hydrogeology beneath the Campus Area is shown in Figure 2-13, *Generalized Cross Section*.

### 2.3.1 Regional Geology

The Site is in the Los Angeles Basin, which is at the juncture of three southern California physiographic provinces: the Transverse Ranges to the north, the Peninsular Ranges to the east and southeast, and the continental borderland to the west (Wright, 1991). The basin is a central alluvial lowland that slopes gently to the south and is bordered by highlands and their foothills. The basin overlies a structural depression where deposition occurred since late Cretaceous time.

The great relief of the present basin floor began forming during the middle-Miocene period, and has since been filled with both marine and continental sediments. The primarily fine-grained marine sediments were deposited during marine transgressions. The primarily coarse-grained continental sediments were deposited during marine regressions. Fine-grained marine deposits typically form aquitards, whereas stream deposits from the surrounding uplifted areas (San Gabriel Mountains, Santa Ana, and Puente Hills) and coarser marine deposits (Yerkes, et. al., 1965) form aquifers.

<sup>6</sup> A report documenting the decommissioning of the groundwater treatment system was submitted to the RWQCB in December 2000 (SECOR, 2000).

<sup>7</sup> On July 31, 2000, the RWQCB gave written approval to include construction dewatering as an additional influent source for the treatment system (RWQCB, 2000).

The Site is more specifically located in the Ballona Gap, a lowland between the Beverly Hills and the Baldwin Hills that extends to the coast and the southerly adjacent Ballona Bluffs (Poland et al, 1959; Barrows, 1974). The Ballona Gap resulted from erosion by the ancestral and present-day Los Angeles River.

The generalized Los Angeles Basin stratigraphy described below is based on descriptions presented by Yerkes, et. al., 1965; California Department of Water Resources (DWR), 1961; Poland, et. al., 1956; Poland, et. al., 1959; and Blake, 1991. In order of shallow to deeper, the formations generally encountered are:

**Recent alluvium.** These deposits consist primarily of unconsolidated stream gravel, sand, silt, and clay with some interbedded littoral and estuary or bay sediments near the ocean. The Recent alluvium includes the Bellflower aquiclude and Ballona aquifer.

**Lakewood formation.** This Pleistocene aged deposit contains primarily shallow marine silt, sand, and gravel. The Lakewood formation is absent beneath the Site.

**San Pedro formation.** Silt, clay, sand, and gravel comprise this formation. This deposit, dating from the upper Pleistocene, represents the transition from neritic to nonmarine deposition. The San Pedro formation includes the Silverado aquifer.

**Pico formation.** This marine-derived (bathyal and neritic) formation is composed of poorly consolidated micaceous siltstone and claystone, interbedded with shale and sandstone. The Pico formation is upper Pliocene to upper Pleistocene in age. The upper portion of the Pico formation contains potable groundwater with mid and lower portions of the formation containing saline groundwater (Poland, et. al., 1959).

## 2.3.2 Regional Hydrogeology

The Site is located within the Santa Monica Basin, a sub-basin of the Los Angeles County Coastal Plain (DWR, 1961).

The aquifers and aquitards in the Los Angeles Basin are formations created during the Recent and Pleistocene Epochs. The Recent and Pleistocene deposits are similar in composition, since their depositional environments were similar. The following summarizes the significant hydrostratigraphic units in the vicinity of the Site (DWR, 1961; Poland, et. al., 1959):

**Bellflower Aquiclude/Aquitard** The uppermost hydrostratigraphic unit beneath the Site is the Bellflower aquiclude (Recent alluvium), which is a sequence of low permeability continental, marine and wind-blown deposits consisting primarily of clay and silty clay (DWR, 1961). Although this sequence is regionally classified as an aquiclude (DWR, 1961), site-specific data indicate that recharge to the underlying aquifer, although minimal, occurs in this sequence. Therefore, for this RP, the Bellflower aquiclude is considered to be a semi-confining layer and will be referred to as the Bellflower aquitard.

**Ballona Aquifer.** Below the Bellflower aquitard is the Ballona aquifer (Recent alluvium), which is encountered in the Ballona Gap north of the Ballona Bluffs and merges into the Gage/Gardena aquifer to the southeast. Although the Ballona aquifer is considered Recent in age, at least part of the aquifer may have been deposited in the late Pleistocene. The Ballona aquifer is often times called the "50-foot Gravel" aquifer because it is generally encountered 50 feet below native grade, and primarily consists of stream deposited coarse sand, rounded to sub-rounded gravel, and cobbles (up to 5 inches in diameter) of granitic and metamorphic origin. The Ballona aquifer ranges in thickness from less than 10 feet near the coast to 40 feet near Beverly Hills. The base of the aquifer is approximately 40 to 60 feet below sea level in the vicinity of the Site (DWR, 1961).

**Silverado Aquifer.** Further below, the Silverado aquifer was deposited during the Pleistocene Epoch (San Pedro formation). The Silverado is composed primarily of marine and non-marine sand and gravel. The Silverado can be up to 500 feet thick in parts of the Los Angeles Basin. Locally, the elevation of the base of the aquifer is estimated to be approximately 200 feet below mean sea level (MSL) (DWR, 1961), although Site-specific data indicate this dimension is somewhat variable.

### 2.3.3 Site Geology

Site geologic conditions have been determined based on lithologic logs from numerous monitoring wells and soil borings and from published reports of regional and local geology (MEE, 1987a). Monitoring well locations and the locations of transect lines for four geologic cross-sections are shown on Figure 2-14, *Cross-Section Location Map*. The four geologic cross-sections, Figure 2-15, *Geological Cross-Section A-A'* through Figure 2-18, *Cross Section D-D'*, summarize geologic conditions, as recorded during the recent drilling and monitoring well installation performed by CDM (CDM, 2001b). The Site geologic description focuses on the near-surface water-bearing geologic units encountered beneath the Campus Area. These units include the Bellflower aquitard and Ballona aquifer of the recent alluvium, and the Silverado aquifer of the San Pedro formation.

Soil borings show that the shallow soil zone beneath the Campus Area consists of fine- to medium-grained sand. The sand is interpreted to have been derived from water and wind erosion of the sand deposits on the Playa del Rey Bluff, and it varies from 2 to 10 feet in thickness (MEE, 1987a). The sandy soil deposits are thickest at the base of the Playa del Rey Bluff and become thinner to the north. The sand is unconsolidated, loosely compacted, and its permeable nature allows downward percolation of fluids. The shallow sand is shown on the geologic cross-sections (Figure 2-15 through Figure 2-18). Some of the shallow soils also reflect non-native fill materials that originated from the Playa del Rey Bluff (used beneath existing buildings) and clean imported fill for placement under existing or proposed roads. The characteristics of these shallow non-native fill materials are variable.

The Bellflower aquitard (Recent alluvium) underlies the surficial sands throughout the Campus Area. The Bellflower aquitard consists mostly of clay and silty sand layers with smaller lenses of clays, silts, and silty sands throughout. The Bellflower aquitard is depicted as “clay” and “silty sand” on the geologic cross-sections (Figure 2-15 through Figure 2-18) and is approximately 10 to 40 feet thick. The upper half of the Bellflower tends to be dominated by clays, and the lower half tends to be dominated by silty/clayey sands. For the purposes of remedial alternatives evaluation and design, the Bellflower aquitard will be subdivided into two zones: the “upper Bellflower aquitard”, which is comprised generally of less permeable soils; and the “lower Bellflower aquitard”, which is comprised generally of more permeable soils.

The Ballona aquifer (Recent alluvium) underlies the Bellflower aquitard throughout the Campus Area. The Ballona aquifer consists of mostly well graded to poorly graded sands and gravels, and is approximately 10 to 40 feet thick. The Ballona aquifer is depicted as “sand” on the geologic cross-sections (Figure 2-15 through Figure 2-18). The Silverado aquifer of the San Pedro formation lies unconformably beneath the Ballona aquifer throughout most of the Campus Area.

Regional geological studies by DWR (1961) and Poland, et. al. (1959) identified the presence of a fault underlying a portion of the Central Basin. This fault, named the Charnock fault, was thought to act as a partial barrier to groundwater flow in the Central Basin especially in the deeper aquifers (DWR, 1961). MEE (1987a, b) postulated that the Charnock fault offset some of the deeper formations in the western portion of Area D, including the Silverado aquifer of the San Pedro formation. The MEE (1987a) interpretation is based primarily on a recent geophysical study performed at the Site, using high-resolution seismic surveys and geologic data from local oil wells and Site monitoring wells, found no evidence of the Charnock fault at the Site (Davis and Namson, 2000). The Site seismic survey showed that geologic units used as seismic “reflectors” are continuous across the entire Site to a depth of 4,500 feet (Davis and Namson, 2000). The authors concluded that the Charnock fault may actually bend east of the Site, be deeper than 4,500 feet at the Site, or it may actually truncate north of the Site. The authors found no evidence of faulting at the Site in the past 4 million years (Davis and Namson, 2000).

### **2.3.4 Site Hydrogeology**

As presented in Section 2.3.2, the hydrogeologic units beneath the Site generally consist of, from top to bottom, thin surficial sands (2 to 10 feet thick), the Bellflower aquitard (about 30 feet thick for the sum of the upper and lower Bellflower aquitard), the Ballona aquifer (about 10 to 40 feet thick), and the Silverado aquifer (about 60 feet to 100+ feet thick). The upper and lower Bellflower aquitard are in hydraulic communication with the underlying Ballona aquifer, based on the interpretation of water level data and the presence of Site-originated contaminants in the Ballona aquifer. However, this vertical hydraulic communication is limited by the low transmissivity of the Bellflower aquitard soils, particularly those belonging to the



upper Bellflower aquitard. MEE (1987a) depicts the Ballona and Silverado aquifers in direct hydraulic communication and suggests that they act as a single aquifer.

### 2.3.4.1 Beneficial Uses of Groundwater

In accordance with the California Porter-Cologne Water Quality Control Act and the federal Clean Water Act, the RWQCB has established a Water Quality Control Plan for the Los Angeles River Basin (the "Basin Plan"). The function of the Basin Plan, which is amended from time to time, is to preserve and enhance water quality, and to protect the beneficial uses of all regional waters including groundwater (RWQCB, 1994).

Existing beneficial uses designated in the Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties (RWQCB, 1994) include municipal and domestic supply; agricultural supply; industrial process supply; and industrial service supply. The Basin Plan sets forth a number of general objectives for all groundwater, and specific mineral objectives for most basins. Mineral objectives for naturally-occurring chemicals in the Santa Monica Basin include, among others, Total Dissolved Solids (TDS) [1,000 milligrams per liter (mg/L)]<sup>8</sup>, sulfate (250 mg/L), and chloride (200 mg/L).

The Silverado aquifer is a regionally significant source of drinking water, although groundwater samples collected from Silverado wells in the Campus Area indicate this water-bearing unit is of poor quality for drinking water purposes as a result of naturally-occurring minerals. Analytical data from monitoring wells screened within the Silverado aquifer, indicate high TDS concentrations ranging from 660 to 2,600 mg/L (Appendix C; Table C-10), well above both the Maximum Contaminant Level (MCL) (Secondary) of 500 mg/L, and the recommended level in the Basin Plan (1,000 mg/L) for drinking water. In addition, elevated concentrations of chloride (as high as 770 mg/L) and sulfate (as high as 850 mg/L) have also been detected in Silverado aquifer monitoring wells located within the Campus Area (Table C-10).

Groundwater quality, particularly given the levels of naturally-occurring minerals, is also considered degraded within the lower Bellflower aquitard and Ballona aquifer as a consequence of the site's proximity to brackish or saline water. Monitoring wells screened within these water-bearing units have shown elevated concentrations of TDS (as high as 13,000 mg/L)<sup>9</sup>, chloride (as high as 4,400 mg/L), and sulfate (as high as 3,600 mg/L) (Table C-10).

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<sup>8</sup> The RWQCB, as a matter of general policy, also assumes that water with TDS as high as 3,000 mg/L has the potential to be potable (RWQCB, 1994). However, such potability would require treatment of these naturally-occurring solutes to a level at or below 500 mg/L, the state and federal standard for drinking water. Such treatment is very costly, and currently is not a cost-effective technology.

<sup>9</sup> The 13,000 mg/L TDS concentration was observed at perimeter Campus Area monitoring well C-66; typical TDS concentrations in the Campus Area range from approximately 1,000 to 4,000 mg/L (See Appendix C).

The nearest potential public water supply well was located at Venice Polytechnic High School, approximately 1.5 miles north of the Site. The subject well was capped in 1960 and is not active. The next closest public supply wells are located approximately 2.5 miles north of the Site in the City of Santa Monica. The nearest irrigation well is located approximately 1.5 miles southeast of the Site at the Hillside Memorial Park Cemetery (MEE, 1987a). Records indicate that the irrigation well is screened across multiple, deep hydrologic zones ranging in depth from 188 to 590 feet below ground surface (bgs), and therefore not likely to be influenced by the shallow groundwater at the Site.

#### **2.3.4.2 Groundwater Elevations and Flow Directions**

Potentiometric contour maps depicting groundwater elevations and flow direction in the Bellflower aquitard and the Ballona and Silverado aquifers (Figure 2-19, *Potentiometric Surface Map for the Bellflower Aquitard* through Figure 2-21, *Potentiometric Surface Map for the Silverado Aquifer*) were last presented in the First Quarter 2002 Groundwater Monitoring and Progress Report (CDM, 2002).

The groundwater elevations in Campus Area wells screened in the Bellflower aquitard ranged between 2.39 feet below MSL (C-72be) and 8.07 feet above MSL (EMS-2) (Figure 2-19). A summary of groundwater elevation data at all monitoring wells in the Campus Area is included in Appendix C (Table C-1). The apparent groundwater flow direction across the Bellflower aquitard is toward the northeast at an apparent gradient of 0.002 ft./ft. (Figure 2-19).

Groundwater contours show a “mound” and a depression in the Campus Area that impact local flow within the Bellflower aquitard. The observed groundwater “mound” (Figure 2-19) may be explained by water leaking from the large catch basin in that area.

The depression is most likely due to Groundwater extraction or dewatering for construction purposes within the Bellflower aquitard occurs near C-72be. These groundwater extraction activities are currently ongoing.

Groundwater elevation levels measured in Ballona aquifer wells ranged between 2.92 (C-72ba) feet below MSL and 4.70 (C-73ba) feet above MSL. The apparent groundwater flow direction for the Ballona aquifer in the Campus Area is toward the northeast at an apparent gradient of 0.0008 ft./ft. (Figure 2-20).

Groundwater elevations for Silverado aquifer wells in the Campus Area (C-30 C-65d, C-87, and C-88) ranged between 2.01 (C-88) and 3.77 (C-30) feet above MSL (Figure 2-21). The groundwater flow direction across the Site within the Silverado aquifer based on the January 2002 data is toward the northeast at an apparent gradient of 0.001 ft./ft. (Figure 2-21).

Table 2-1, *Hydraulic Gradient and Flow Direction to the Shallow Water Bearing Limits Beneath the Campus Area*, summarizes hydraulic gradient and flow direction for the shallow water-bearing units beneath the Campus Area. The gradients and flow directions have been consistent over the past year for all of the aquifers. The only exception is the Bellflower aquitard data from June 2001, which are influenced by construction dewatering activities.

Geologic cross-sections (Figure 2-15 through Figure 2-18) show water level data from January 2002 for a number of the well pairs (i.e., adjacent wells completed in the Bellflower aquitard and Ballona aquifer). Water levels in these well pairs generally indicate only a slight downward vertical gradient from the Bellflower aquitard to the Ballona aquifer.

### **2.3.43 Aquifer Pumping Tests**

#### ***McLaren Environmental Engineering (1987)***

Hargis performed a series of short-term aquifer pumping tests and one 36-day pumping test between 1984 and 1985. The following summarizes the findings of these pumping tests as reported by MEE (MEE, 1987b).

Monitoring wells were pumped for 40- to 410-minute time periods using submersible pumps. Water production varied from 1.7 to 45.3 gallons per minute (gpm). MEE used the Jacob straight-line method to estimate transmissivity from each of the wells tested. This method assumes a homogenous, isotropic, and fully confined aquifer. Transmissivity estimates for each of the wells tested are summarized in Table 2-2, *Hydraulic Conductivity Estimates for Shallow Water Bearing Units*.

The transmissivity estimates ranged from 100 to 32,000 gallons per day per foot (gpd/ft) (13 to 4,278 ft<sup>2</sup>/day), suggesting large differences in the aquifer characteristics within the Campus Area. Monitoring wells C-18, C-19, C-20, C-21, C-23, C-24, C-27, C-28, and C-30, which are screened within both the Bellflower and Ballona units, yielded an average transmissivity estimate of 19,000 gpd/ft, (2,540 ft<sup>2</sup>/day) with values ranging from 8,000 to 32,000 gpd/ft. Monitoring wells C-16 and C-17, which are screened in the Bellflower aquitard, yielded an average transmissivity estimate of 3,000 gpd/ft (401 ft<sup>2</sup>/day), with values ranging from 100 to 4600 gpd/ft (13 to 615 ft<sup>2</sup>/day).

Wells C-29 and C-31 are screened within the Silverado aquifer. Well C-31 is located west of the purported Charnock fault zone, and it has an estimated transmissivity of 10,000 gpd/ft (1,337 ft<sup>2</sup>/day). Well C-29 was drilled into the Silverado aquifer east of the purported fault, and it has an estimated transmissivity of 31,000 gpd/ft (4,145 ft<sup>2</sup>/day). The Silverado is known to have lateral heterogeneities that could account for the difference between the estimated transmissivities derived from the two short-term pumping tests.

MEE (1987a) performed a 36-day pumping test in the Campus Area using extraction well EW-1 and seven observation wells (C-18, C-36, C-37, C-53, C-54, C-55, and C-56). All but one of the observation wells was screened in both the Bellflower aquitard and the Ballona aquifer. One well, C-53, was screened in the Silverado aquifer. Transmissivities in the observation wells ranged from 18,000 to 34,000 gpd/ft (2,407 to 4,546 ft<sup>2</sup>/day), with an average of 29,000 gpd/ft (3,877 ft<sup>2</sup>/day).

***McLaren/Hart (1991)***

McLaren/Hart also performed a pumping test in the Campus Area during February 1991 (McLaren, 1991). Extraction well EW-3 was pumped in a step-wise fashion for a 24-hour period. Pressure readings were recorded in observation wells EW-1, EW-1A, EW-2, EW-4, EW-8 and EW-9 during the test, and inter-well permeabilities were estimated using a curve-matching modeling technique. The pumping test results estimated aquifer permeabilities ranging from 0.481 darcies to 30.05 darcies (McLaren, 1991). CDM converted these permeabilities to hydraulic conductivities using the conversion factor published in Fetter (1980). Converted hydraulic conductivity values range from 1.16 to 72.18 feet per day (ft/day), with an average value of 17.3 ft/day.

The groundwater observation wells used during the test were screened across both the Bellflower aquitard and the Ballona aquifer. Since the Bellflower aquitard is thought to be less permeable because of its finer grained composition, these hydraulic conductivity values may be lower than for only the Ballona aquifer.

**2.3.4.4 Groundwater Flow Velocities**

Groundwater flow velocities may be estimated using hydraulic conductivity, hydraulic gradient, and effective porosity estimates and applying Darcy's Equation. This equation states that the average linear groundwater flow velocity (i.e., seepage velocity) through a saturated porous medium is given by:

$$V_x = K(dh/dl)/\phi_e$$

Where  $V_x$  = average linear groundwater velocity parallel to the groundwater flow direction.

$K$  = hydraulic conductivity

$\phi_e$  = effective porosity

$dh/dl$  = average hydraulic gradient

Table 2-3, *Groundwater Velocities with Shallow Water Bearing Units*, summarizes groundwater velocities using hydraulic gradient and hydraulic conductivities presented in Sections 2.3.4.2 and 2.3.4.3.

## 2.4 Fate and Transport of Contaminants in Groundwater

Groundwater in the Bellflower aquitard and Ballona aquifer has been sampled periodically since 1984 for priority pollutants including VOCs, SVOCs, metals, pesticides, and PCBs. With respect to the Campus Area, the primary classes of contaminants in groundwater are VOCs and TPH. The VOCs include chlorinated ethenes, namely PCE, TCE, cis-1,2-DCE, trans-1,2-dichloroethene (trans-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and VC. They also include chlorinated ethanes; namely tetrachloroethane (PCA), 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2-trichloroethane (1,1,2-TCA), 1,1-DCA, 1,2-DCA, and chloroethane (CA). TPH consists of refined fuel hydrocarbons, including BTEX.

The fate and transport of these organic chemicals in groundwater is affected by a variety of chemical, physical and biological processes. Some of these processes are destructive and result in contaminant mass removal from the groundwater. Destructive mechanisms include both chemical and biological processes. Others are non-destructive and do not result in a change in contaminant mass or migration ability. Non-destructive mechanisms include sorption, dispersion, matrix diffusion, dilution from recharge, and volatilization. Typically the most important processes contributing to the ultimate fate of groundwater contaminants is biodegradation. The significance of biodegradation is discussed in Section 2.4.4.

The following factors are important in evaluating the fate and transport of the groundwater contaminants within the Campus Area:

- Groundwater flow directions and velocities in the Bellflower aquitard and Ballona aquifer;
- Implementation of remedial programs at source areas; and
- Natural attenuation (including adsorption, biodegradation, matrix diffusion, and dispersion).

Each of these factors is discussed below.

### 2.4.1 Migration Pathways

In the Campus Area, the majority of the contaminant mass is located adjacent to the source areas in the stratified, lower hydraulic conductivity material of the Bellflower aquitard. The lateral migration of contaminants from the source areas in this unit is generally in a north to northeast direction and is limited by the presence of less permeable soils with a groundwater flow velocity of approximately 0.09 feet per day (Table 2-3). However, plume migration will likely be slower than predicted by the calculated groundwater velocity due to the effects of contaminant adsorption and biotransformation (as much as several times slower, depending on the hydrophobicity and biological fate of the migrating compound).

Downward vertical migration in the Bellflower aquitard is also expected to be limited by the presence of fine-grained layers and hydraulic anisotropies in the aquitard. However, the presence of contaminants in the Ballona aquifer indicates that some contaminants have migrated vertically through the entire aquitard thickness. This is important because groundwater velocities in the Ballona aquifer (and presumably the lower Bellflower aquitard) are higher than in the upper Bellflower aquitard. As such, the Ballona aquifer is the most important medium for lateral migration of groundwater contaminants in the Campus Area.

Once the contaminants have reached the more permeable portions of the Bellflower aquitard (lower Bellflower aquitard) or deeper Ballona aquifer, lateral mobility is greatly enhanced. Much of the organic contaminant mass, however will be adsorbed to naturally-occurring organic material in soils near the source locations.

### **2.4.2 Implementation of Remedial Programs at Source Areas**

Source area remedial activities have already been implemented at numerous locations in the Campus Area (see Section 4). The majority of these actions involved excavation of contaminated soils. These source-specific actions are important because they have removed contaminants that might have otherwise migrated to underlying groundwater.

Remedial actions proposed as part of this document will be designed to remove as much of the remaining contaminant mass from groundwater, unsaturated zone soil, and saturated zone soil, as technically feasible.

### **2.4.3 Natural Attenuation Processes**

Various naturally-occurring processes affect the transport of contaminants in saturated zone soil and groundwater. Most of these mechanisms or processes combine to limit the rate of contaminant migration. However, other processes, such as desorption of adsorbed contaminants and matrix diffusion may prolong the time necessary for groundwater remediation. The following mechanisms also affect the fate and transport of contaminants in the Campus Area groundwater systems:

- Biological transformation (biodegradation);
- Adsorption to and desorption from the aquifer media;
- Matrix diffusion;
- Abiotic degradation;
- Volatilization; and
- Advection and dispersion.

Biological transformation processes, including biodegradation, are summarized below, while the other processes/mechanisms are described briefly in Appendix E.

## 2.4.4 Biological Transformation

The principal contaminants in groundwater at the Campus Area are chloroethanes (e.g., 1,1,1-trichloroethane) and chloroethenes (e.g., TCE) and their respective family of metabolic products. Other contaminants are fuel hydrocarbons, including gasoline. Groundwater conditions underlying the Campus Area are conducive to biodegradation of the more oxidized forms of chlorinated VOCs such as source contaminants (e.g., 1,1,1-TCA and TCE). The biological mechanisms for biodegradation of petroleum hydrocarbons and reductive dechlorination of chlorinated ethenes and ethanes are more fully described in Appendix E.

In general terms, the biodegradation of petroleum hydrocarbons such as BTEX and other organic compounds (e.g., naturally-occurring organic materials such as humic substances), serve as the carbon and energy sources (i.e., electron donors) for microorganisms. These carbon and energy sources are biodegraded/biotransformed, thereby driving groundwater reducing conditions to an anaerobic state (dissolved oxygen [DO] < 1.0 mg/L). Furthermore, the metabolism of these compounds can employ chlorinated VOCs as electron acceptors. In the process of acting as electron acceptors, the chlorinated VOCs are reductively dechlorinated (reduced). The sequential reduction of chlorinated VOCs eventually leads to the production of innocuous end-products such as ethene/ethane.

A schematic pathway for the primary contaminants and their degradation products is shown in Figure 2-22, *Biotransformation Pathways*. For TCE, a common source contaminant historically used within the Campus Area, reductive dechlorination could eventually result in the formation of non-toxic ethene and ethane. However, incomplete reductive dechlorination could lead to the accumulation of intermediate toxic products (e.g., VC), although the lower chlorinated contaminants may subsequently degrade to innocuous carbon dioxide through oxidation processes. TCA, an additional source contaminant used historically in the Campus Area, is subject to abiotic transformations under aerobic and anaerobic conditions, and biological transformations under anaerobic conditions. TCA transformations and breakdown products are also summarized in Figure 2-22. The abiotic and biotic pathways are important to the ultimate fate of chloroethanes. In particular, 1,1,1-TCA may be transformed abiotically to form 1,1-DCE that can then undergo reductive dechlorination to form VC, and ultimately over time ethene and ethane. Under anaerobic conditions, 1,1,1-TCA may also be rapidly transformed by biotic processes into 1,1-DCA, which may be further reduced to CA. CA is relatively stable biologically under anaerobic conditions, but is transformed rapidly to ethanol and chloride by an abiotic hydrolysis reaction.

The redox conditions of groundwater in the Campus Area that control the biodegradation are briefly described in Appendix E.

## 2.4.5 Summary

The high organic content and low permeability of the soils in the upper Bellflower aquitard appear to have prevented the groundwater contaminant plume from significant horizontal migration in this water-bearing unit. As a result, the majority of the contaminant plume remains close to the probable source areas. However, the contaminant plume has moved vertically into the relatively more permeable lower Bellflower aquitard and Ballona aquifer, and subsequently downgradient in these water-bearing units.

The low organic content and relatively high permeability soils of the Ballona aquifer allow relatively faster dispersion of the VOC contaminant plume compared to the Bellflower aquitard. Some biotransformation and biodegradation of VOCs in the Ballona aquifer also occurs. VOCs are attenuated laterally downgradient through various natural attenuation mechanisms in the Ballona aquifer, and do not appear to migrate vertically below the aquifer to the underlying Silverado aquifer to any significant extent. Data collected from monitoring wells screened in the Silverado aquifer indicate the continued absence, or near detection limit concentrations, of contaminants in this water-bearing unit.

Groundwater data obtained for the Campus Area suggest that biodegradation, abiotic degradation, adsorption/desorption, matrix diffusion, and advection/dispersion are the current dominant factors influencing the fate and transport of observed groundwater contaminants. The most significant attenuation mechanism in the lower Bellflower and Ballona aquifers appears to be dispersion through horizontal transport in this aquifer.

Groundwater data indicate that sulfate concentrations (Appendix C), although an order of magnitude less than in the Bellflower aquitard, are substantially above levels known to inhibit reductive dechlorination (e.g., approximately 50 mg/L). In addition, the lack of significant ethene/ethane production in the Ballona aquifer indicates limited dechlorination activity. Data suggest that only limited quantities of VC, and other highly reduced VOCs, are generated as a result of reductive dechlorination processes occurring in the Ballona aquifer. Rather, most of the highly reduced VOCs detected in the Ballona aquifer are a result of the dechlorination processes occurring in the Bellflower aquitard and subsequent vertical migration of VC. Redox conditions, including elevated sulfate concentrations, and low DOC concentrations in the Ballona aquifer groundwater likely limit further reductive dechlorination from occurring once the chlorinated contaminants reach the Ballona aquifer. Such limitations may be overcome through engineered remediation systems.



## **Section3**

# **Remedial Objectives and Goals**

This section identifies media-specific Remedial Objectives (ROs) and Remedial Goals (RGs) for remedial activities within the Campus Area. ROs and RGs have been developed considering the significant human exposure pathways present at the Site, effects on environmental resources and future planned commercial use. To set such ROs and RGs requires identifying, in turn, media of concern, significant human exposure pathways, and COPCs.

### **3.1 Establishing ROs and RGs**

Establishing ROs is an essential step in the process of identifying and evaluating potential remedial action alternatives ("the Alternatives"). ROs are qualitative statements of what remediation is expected to achieve to protect human health and environmental resources.

The ROs then serve as the foundation for setting quantitative RGs to address contamination within the Campus Area. Protection of human health will be addressed through the use of HBRGs, which are quantitative criteria used to guide remediation to address contamination that could reach potential receptors at unacceptable levels. Protection of environmental resources, specifically shallow groundwater, will be addressed through the use of SRTs, which are quantitative criteria used to identify soils that require remediation, so that contaminants do not reach groundwater at unacceptable levels. HBRGs and SRTs are essentially triggers for remediation, but not necessarily the final cleanup levels. Importantly, for many COPCs, the final cleanup levels will end up being more protective than HBRGs and SRTs, to the extent technically feasible.

#### **3.1.1 Media of Concern**

ROs are developed for each medium of concern, and are designed to address the types of chemicals found in these media. This RP focuses on soil and groundwater as the critical media of concern. Soil gas is also a potential medium of concern as a result of potential "off-gassing" of volatile contaminants from groundwater and/or soil. However, because the proposed remedial actions for soil and groundwater will address the significant sources of such off-gassing, and certain mitigation measures will address potential exposures during and after remediation, contaminants in soil gas are not addressed directly in this RP as a medium of concern.

##### **3.1.1.1 Soils**

For the Campus Area, the focus of remediation is on unsaturated zone soils that extend from ground surface to approximately 15 feet bgs, and on shallow groundwater. Further, as described in the next section (3.1.2), remediation is intended to reduce or eliminate both the migration of vapors from the subsurface to buildings and the migration of COPCs from subsurface soils to groundwater. Preventing the

transport of COPCs away from subsurface sources is, therefore, a critical aspect of evaluating remedial alternatives.

Contaminated soils in the Campus Area are located within the unsaturated portion of the upper Bellflower aquitard as illustrated in Figure 3-1, *Conceptual Model for Transport of COPCs in Soil of Upper Bellflower Aquitard*. As the conceptual model shows, contaminated soil gas occurs as the result of contaminants partitioning across phases including: (1) groundwater to soil vapor, and (2) soil to vadose zone moisture to soil vapor. Once present in soil vapor, some release of contaminants to the atmosphere will occur at the ground surface.

The conceptualized soil layers of the unsaturated upper Bellflower aquitard act as zones of equilibration between phases. Transport of COPCs from groundwater (originating from the capillary fringe) to the surface will be retarded to an extent determined by the adsorption capacity of the soil and varying contaminant concentrations with depth in the soil. Transport of COPCs to the ground surface from vadose zone impacted soil will occur in a similar manner.

#### **3.1.1.2 Groundwater**

For groundwater, the focus of remediation is on water-bearing intervals in the Bellflower aquitard, Ballona aquifer, and the Silverado aquifer. As discussed in Sections 2.3 and 2.4, contamination is currently limited to the Bellflower aquitard and Ballona aquifer; all existing data demonstrate the continued absence or near detection limit concentrations of contaminants in the Silverado aquifer.

Accordingly, this RP focuses on contaminants in groundwater that are present within the Bellflower aquitard and Ballona aquifer. Proposed remedial activities factor in the potential for migration of contaminants from the Bellflower aquitard and Ballona aquifer to the underlying Silverado aquifer. Specifically, the proposed remedial activities address the ability to provide continued protection of the underlying Silverado aquifer. This topic is addressed further in Sections 6, 7, and 8.

### **3.1.2 Potential Exposure Pathways**

In order to develop ROs to guide remediation, an understanding of the exposure scenario that applies to a site's circumstances is necessary. Developing an exposure scenario involves identifying the potentially exposed population (e.g., construction workers, occupants, etc.) and all of the ways this population might be exposed to COPCs. To develop an exposure scenario for each potentially affected population, the many potential exposure pathways by which people might be exposed are evaluated to identify those pathways in the Campus Area that could present an actual source of exposure. By definition, exposure pathways—the ways in which a population comes into contact with environmental contamination—must include a source of chemicals, a release and transport mechanism from the source to a population, and a route of exposure (e.g., inhalation, ingestion, dermal contact). IESI identified the exposure pathways for each potentially exposed population at the Site during the development of a conceptual exposure model (CEM) (Figure 3-2, *Conceptual Exposure Model for*

*Commercial Development*). As explained in that model, certain pathways will not exist in the Campus Area. For example, no residential development is planned for the Campus Area; therefore, residents are not considered a potentially exposed population for this area.

Stated another way, only “complete” exposure pathways are considered in developing ROs. An exposure pathway is deemed “complete” if all elements—source, release and transport, route of exposure, and population—are present. If any element is missing, no exposure will occur. Furthermore, although a pathway is potentially complete, in many instances exposure is expected to be too small to be significant for human health impacts. Relative to the Campus Area, IESI judged several potential exposure pathways as complete as part of its development of HBRGs (IESI, 2000, 2001a). The selection of these pathways as complete has been reviewed and approved by OEHHA. They include:

- Incidental ingestion of surface soil (construction workers);
- Dermal contact with surface soil (construction workers);
- Inhalation of particulate matter suspended in air from surface soil (operations, construction workers);
- Inhalation of vapors migrating from subsurface soil and groundwater to ambient (outdoor) air (operations/office workers, construction workers, and children in day care); and
- Inhalation of vapors migrating from subsurface soil and groundwater to indoor air (operations/office workers and children in day care).

Importantly, direct contact with, or ingestion of, contaminated subsurface soils and groundwater by future occupants, maintenance and repair personnel or children in day care are deemed incomplete pathways. Workers in buildings and children in day care will be separated from subsurface contamination by several feet or more of clean fill, pavement, building foundations, and/or landscaping, once construction is complete. Maintenance and repair personnel who may have to work in subsurface areas will generally be working in clean fill. Where their activities take them into deeper areas, they will be subject to the same health and safety procedures that apply to construction workers. Furthermore, remediation efforts are expected to reach levels appropriate for protection of future workers, day-care children and the groundwater resource. Since these goals are lower than those needed to protect construction workers and others that may excavate into areas of residual contamination, future risks for maintenance/repair workers are not expected to be significant.

Similarly, contact with, or ingestion of, contaminated groundwater is also deemed an incomplete pathway. Shallow groundwater within both the Bellflower aquitard and Ballona aquifer is not currently used on-site for either drinking water or irrigation and

such potential future uses will be prevented by CC&Rs that shall apply to the owners or users of the property. Additionally, the natural mineral content of these waters preclude their use for either drinking water or irrigation without additional treatment. Individual users would find such treatment impracticable, and a supplier of public drinking water would have to assure that the water was treated to meet MCLs. The significance of this determination is thus minimal, meaning only that the groundwater will not occur (discussed in more detail below).

A full discussion of how pathways were selected as complete from among the larger universe of potential exposure pathways can be found in the HBRG Protocol and subsequent Commercial Area HBRG Report and Addendum Report (IESI, 1999b; IESI, 2000; IESI, 2001a).

In consideration of the above potentially complete pathways, priorities for managing possible human health risks associated with current Campus Area contamination and future development therefore should focus on:

- Interrupting potential upward migration of vapors from groundwater or soil to commercial buildings to be constructed above contaminated groundwater or soil;
- Removing contaminant mass, particularly from source areas, so that contaminant concentrations in downgradient areas decrease over time, thereby limiting future contaminant migration and potential human exposure; and
- Preventing unacceptable direct contaminant exposures to workers.

Finally, some park spaces will probably be included within the Campus Area. Planned remediation and subsequent park development are anticipated to address any potential health risks associated with recreational exposures. However, remedial plans will be reviewed, as appropriate, to ensure compliance with future use scenarios for park areas.

#### **3.1.2.1 Exposure Pathways Not Addressed by this Remediation Plan**

For the purposes of developing ROs, one potential exposure pathways is not addressed in this RP. As discussed above, a potential exists for construction worker exposure during remediation and development of the Campus Area. However, the Site health and safety procedures, already in place, and certain risk management protocols that apply to the Campus Area development will protect construction workers and maintenance workers against such exposures. Because subsurface contamination within the Campus Area is well characterized, and under extant health and safety procedures, workers will be informed, trained, and equipped to work safely with known and unknown contamination. As such, this RP does not propose additional remediation measures to address the complete exposure pathways associated with construction workers.

### 3.1.3 Chemicals of Potential Concern (COPCs)

The initial list of COPCs identified for the Site (including the Campus Area and areas extending beyond the Campus Area) by IESI included almost all chemicals detected in the Campus Area, including many that actually present little or no threat to human health (IESI, 2000, IESI, 2001a). The IESI list is presented in Appendix I.

To identify those COPCs pertinent to the Campus Area portion of the Site, CDM reduced IESI's list of COPCs to only those chemicals detected during comprehensive soil and groundwater investigations since March 1999 in the Campus Area. These media-specific COPCs, specific to the Campus Area of the Site, are presented in Table 3-1, *List of Chemicals of Potential Concern for Soil*, and in Table 3-2, *List of Chemicals of Potential Concern for Groundwater*.

### 3.1.4 Identification of Remedial Objectives

Based on the analysis described above, this section sets out the media-specific ROs developed for Campus Area soil and groundwater. For each media, the ROs are designed to meet the two overall objectives of: (1) protecting human health, and (2) protecting the groundwater resource.

#### 3.1.4.1 Soil Remedial Objectives

Soil ROs for the protection of human health are:

- The selected remedial actions shall reduce soil concentrations of COPCs to levels protective of human health, considering exposure pathways and potential future receptors in the Campus Area;
- The selected remedial actions shall prevent exposure of the public to VOC vapors from soil at concentrations above acceptable levels; and
- At a minimum, the selected remedial actions shall reduce COPC concentrations in source area soils to the HBRG levels specifically developed for contaminants in the Campus Area.

The soil RO for the protection of the groundwater resource is:

- The selected remedial actions will seek to reduce COPCs in source area soils so that the groundwater resource can be protected, to the extent technically feasible (see groundwater resource protection RO below).

#### 3.1.4.2 Groundwater Remedial Objectives

Remedial groundwater actions in the Campus Area will be implemented to assure the primary goal of protecting human health. As discussed above, the most significant risks to human health are associated with exposures to VOCs off-gassing from groundwater. In addition, even though all direct exposure pathways (e.g., ingestion or dermal contact) for contaminants in groundwater are currently incomplete, and are unlikely to be completed in the foreseeable future, the proposed remedial actions will

seek to further reduce COPC concentrations beyond that necessary for the protection of human health, as a means to protect the groundwater resource. As applied in this RP, ROs established for the protection of human health must be achieved by the proposed remedial actions, while the proposed remedial actions will seek to achieve the RO for the protection of the groundwater resource to the extent technically feasible.

Groundwater ROs for the protection of human health are:

- The selected remedial actions shall reduce groundwater concentrations of all Site-originated COPCs to levels protective of human health, considering complete exposure pathways and potential future receptors within the Campus Area;
- The selected remedial actions shall prevent exposure of the public to VOC vapors from groundwater at concentrations above acceptable levels; and
- Specifically, the selected remedial action shall reduce COPC concentrations in groundwater in the Campus Area to the HBRG levels specifically developed for the Campus Area.

The RO intended to protect the groundwater resource, above and beyond that necessary to protect human health, is:

- The remediation will seek to reduce Campus Area COPC concentrations to levels equal to the Maximum Contaminant Levels ("MCLs"), to the extent technically feasible, even though MCLs would apply only if the groundwater were to be supplied as drinking water, a highly unlikely scenario.

### 3.2 Proposed Remedial Goals

RGs are quantitative expressions of contaminant concentrations that are used in this RP to identify areas where remediation is needed, to provide an initial indication of the amount of reduction of contamination needed, and to guide the selection of remedial actions appropriate to meet the desired reduction. In effect, the RGs used to develop proposed remedial actions in this RP are more like remediation triggers. They are not being proposed at this time as final cleanup levels. Such final levels are more appropriately set, once the necessary remedial actions have been implemented and performance data are available to use in determining those levels.

Like the ROs, this RP uses both a set of RGs developed to protect human health (HBRGs) and a set to protect the groundwater resource (SRTs). The methods used to develop these quantitative RGs, which are fully developed in documents outside this RP, are briefly described below.

### 3.2.1 Health Based Remediation Goals

HBRGs are calculated concentrations of chemical contaminants in soil, groundwater, and soil gas that will protect the public from unacceptable exposures to these chemicals in the Campus Area. Calculating these concentrations involves, in general, deciding how people might be exposed to Campus Area contaminants, and then establishing levels of these contaminants that are sufficiently low to ensure that exposures would not represent threats to human health.

Development of HBRGs applicable to the Campus Area follows the protocol methods approved in June 1999 by the RWQCB and OEHHA for soil HBRGs. The approved methodology involves several basic steps, including:

1. Identifying and assessing the toxicity of the COPCs;
2. Developing a conceptual exposure model;
3. Calculating unit risk and unit hazard levels; and
4. Integrating the results to calculate HBRGs.

This methodology closely follows guidance developed by Cal/EPA (e.g., 1992) and USEPA (e.g., 1989, 1996, 1997). Key details of that guidance are discussed below. A more complete discussion of the approach used to develop HBRGs is available in several documents, including the HBRG Protocol, the HBRG Report (covering soils), and Addendum to HBRG Report (covering soil gas and groundwater) submitted to the RWQCB by Integrated Environmental Services, Inc. (IESI) (1999b, 2000, 2001a). Set out in the following subsections is a brief summary of the steps used to develop HBRG levels for the Campus Area.

#### 3.2.1.1 Chemicals of Potential Concern for HBRG Development

Typically, chemicals detected in environmental media (soils, groundwater, soil gas) are screened to select a subset of chemicals that would account for all, or nearly all, risk and hazard. For the Campus Area, however, only minimal screening was done to the list of COPCs detected at the Site (see Appendix I). However, because inorganic constituents in groundwater do not partition into soil gas or vapor phases, these chemicals are not considered COPCs for exposure pathways involving exposure to vapors migrating from the subsurface. Rather, soil gas COPCs were selected from those chemicals that may migrate as vapors in the environment and were found in groundwater during recent monitoring. Other than this adjustment, no additional screening of detected chemicals was performed.

#### 3.2.1.2 Conceptual Exposure Model

HBRGs were generated using exposure estimates for all complete pathways considered above. Other pathways included in Figure 3-2 are either incomplete or insignificant. Details of the exposure assessments are found in IESI (2000, 2001a).

All exposure estimates for the development of HBRGs applicable to the Campus Area were based on the concept of reasonable maximum exposure (RME). As defined in Cal/EPA and USEPA guidance, RME is an exposure well above the average but still within the upper range of those possible. Use of the RME approach is conservative, and ensures that even individuals with the greatest exposure are protected.

### **3.2.1.3 HBRG Calculations**

The process of calculating HBRGs for potentially affected populations and complete exposure pathways requires the use of several simple transport models to estimate attenuation factors and exposure algorithms to estimate RME. A convenient means to integrate these calculations is to first calculate cancer risk or noncancer hazard associated with unit concentrations of COPCs. Because the relationship between cancer risk or hazard to COPC concentration is linear, cancer risks and noncancer hazards change proportionally with different levels of COPC concentrations in groundwater or soil gas. For example, if cancer risk for a groundwater concentration of 1 milligram per liter (mg/L) is 1 in one million, cancer risk for a concentration of 2 mg/L is 2 in one million.

#### **3.2.1.3.1 Attenuation Factors**

Calculation of cancer risk and noncancer hazard for exposure to COPC vapors in either outdoor or indoor air requires estimating attenuation factors for each COPC for each medium (soil, groundwater, and soil gas). A similar attenuation factor (termed a particle emission factor) is required to estimate air concentrations of particulate matter suspended in air from surface soil. Attenuation factors are ratios of contaminant concentrations in air to those in soil, groundwater, or soil gas. For instance, an attenuation factor for migration of contaminants from groundwater to indoor air of  $1 \times 10^{-4}$  indicates that indoor air concentrations in milligrams per cubic meter (mg/m<sup>3</sup>) are predicted to be 10,000 times less than groundwater concentrations in mg/L.

Attenuation factors for migration of vapors to indoor air were calculated using electronic spreadsheet models developed by USEPA and based on the Johnson and Ettinger model for vapor intrusion. Similarly, attenuation factors for migration of vapors from groundwater to outdoor air were calculated using a series of spreadsheet models developed by Groundwater Services Inc. (GSI), which are based on Risk-Based Corrective Action (RBCA) methods defined by American Society for Testing and Materials (ASTM) recommendations. Attenuation factors for release of vapors and particulate matter from soil to outdoor air were estimated using methods employed by USEPA to calculate soil-screening levels often used as PRGs.

Attenuation factors developed using methods described above appear to be reasonable, if not overly conservative, for the Site. Flux chamber analyses performed at the former Test Site 2 area in a residential portion of the Phase 1 Development Area (west of the Campus Area) indicated very low vapor fluxes, less than 0.1 microgram per square meter per minute ( $\mu\text{g}/(\text{m}^2/\text{min})$ ). Dr. C.E. Schmidt of Red Bluff, California, performed these analyses in January 2002 under subcontract to CDM. Flux



samples were taken from areas where elevated soil gas VOC concentrations (greater than 1,000 ppbv) were detected at depth and were analyzed for VOCs in accordance with EPA Method No. TO-14. The results of the investigation indicate that the surface emissions are extremely low. For example, using data from sampling location TS2-FLX-17, flux of VC at the soil surface was estimated to be  $<0.0010 \mu\text{g}/(\text{m}^2/\text{min})$  even though VC was present at 2,200 ppbv at 12 feet bgs at nearly co-located SG-5. Although elevated VOC concentrations have been measured at depth beneath the Site, no significant surface emissions from these subsurface source areas have been detected. Low flux rates at the surface are indicative of significant attenuation of vapors in soil gas as they move vertically to the soil surface.

#### **3.2.1.3.2 Target Risks and Hazards**

HBRGs are calculated using target cancer risks or hazard indices that are "acceptable" to California and federal regulatory agencies. In essence, a level of risk or hazard that can be accepted at the Site is chosen, and then concentrations of COPCs in soil, groundwater, and soil gas are calculated to ensure this target is not exceeded.

A target cancer risk of  $1 \times 10^{-6}$  (1 in one million) is the most protective standard commonly used in human health risk management decisions. HBRGs for carcinogens are therefore set at levels such that incremental cancer risks for individual COPCs will not be greater than 1 in one million. This low target risk is chosen to account for the potential for receptors to be exposed to more than one carcinogenic COPC. That is, by choosing a low "acceptable" risk for exposure to individual chemicals, additive impacts from exposure to several chemicals present at their HBRG are also kept low. Generally, acceptable risk from exposure to multiple chemicals should not exceed  $1 \times 10^{-5}$ . Using a target risk of  $1 \times 10^{-6}$  therefore is protective even if 10 chemicals are present at their HBRGs. Examination of Site data indicates that few chemicals are likely to present at such concentrations, confirming that the approach used to develop HBRGs will be protective for cumulative effects of multiple chemical exposures.

For noncancer health effects, a target Hazard Index (HI) of 0.2 is selected for use in commercial areas. This target is one-fifth of the standard target of one. This low target is also selected to account for the potential for receptors to be exposed to more than one chemical that might cause noncancer health effects. The approach used is conceptually the same as that described above for addressing exposure to multiple carcinogens. Using a target HI of 0.2 for individual chemicals suggests that up to 5 chemicals could be present at their HBRGs without exceeding an overall HI of 1. Because hazards are added only for chemicals that affect the same target organ(s), cumulative impacts would only be seen if all chemicals present at their HBRGs also had similar toxicity profiles. Thus, a "safety factor" of 5 is appropriate for considering cumulative impacts for noncarcinogens. Finally, many chemicals demonstrate both carcinogenic and noncarcinogenic effects. For these chemicals, HBRGs based on cancer risks are almost always lower than those based on noncancer hazards. This finding reduces the potential for the occurrence of multiple chemicals at HBRGs based on noncarcinogenic effects.

HBRGs are calculated as the ratio of target risk or hazard to the risk or hazard for a unit concentration of chemical in an environmental medium—1 mg/L for groundwater, 1 milligram per kilogram (mg/kg) for soil and 1 milligram per cubic meter (mg/m<sup>3</sup>) for soil gas. For example, if the calculated cancer risk for a COPC present in groundwater at a concentration of 1 mg/L is  $2 \times 10^{-5}$ , and the HBRG is to be calculated so that possible exposure will not result in a cancer risk greater than the target risk of  $1 \times 10^{-6}$ , then the HBRG is calculated as  $1 \times 10^{-6}$  divided by  $2 \times 10^{-5}$ , which equals 0.05 mg/L. Unit risks and hazards for these calculations assumed additive cancer risk and noncancer hazard. That is, for each scenario, unit risks and hazards were separately summed for all exposure pathways involving a given environmental medium.

HBRGs for several chemicals that demonstrate both carcinogenic and other toxic properties were calculated for both cancer and noncancer effects. HBRGs adopted are the more stringent (i.e., more public health protective) of these two estimates and typically based on cancer risks.

#### **3.2.1.3.3 "Reality Checks" for HBRGs**

HBRGs for soil could exceed saturation limits and those for groundwater could exceed solubility limits. Concentrations that exceed saturation or solubility limits imply that free product is present. Thus, use of HBRGs alone to identify locations where remediation could be required might allow, in such cases, free product to remain in place. Therefore, when an HBRG for a given chemical exceeded saturation or solubility limits, the saturation or solubility limit was substituted for the calculated HBRG.

#### **3.2.1.3.4 Campus Area HBRGs**

Table 3-3, *Final Commercial HBRGs for Organic COPCs in Campus Area Soil*, and Table 3-4, *Final Commercial HBRGs for Inorganic COPCs in Campus Area Soil*, present the HBRGs approved by the RWQCB for the list of Campus Area soil COPCs. Proposed Groundwater HBRGs are presented in Table 3-5, *Final Commercial HBRGs for Organic COPCs in Campus Area Groundwater*. The complete list of HBRGs based on the Site-wide COPC list is included in Appendix I.

### **3.2.2 Soil Remediation Triggers**

SRTs are calculated concentrations of chemical contaminants in soil that will protect shallow groundwater resources within the Campus Area. Calculating these concentrations involves, in general, establishing how leachable COPCs in soil could migrate to groundwater, quantifying this migration, and then determining levels of COPCs in soil that are sufficiently low to ensure that concentrations of these chemicals in groundwater will not exceed acceptable levels (IESI, 2001b).

SRTs aim to protect the quality of the groundwater resource, not to address human health risk. However, as shown in the final calculations of SRTs below, the SRTs are all lower than corresponding HBRGs. In part this is due to the fact that exposure pathways for direct contact with, or ingestion of, contaminated soil or groundwater

are not considered complete within the Campus Area. Thus, the soil and groundwater HBRGs are tied primarily to the risk of off-gassing of VOCs from these media. SRTs, on the other hand, are back-calculated to assure that the groundwater quality will not exceed the groundwater protection RO, which seeks to achieve MCLs. Because MCLs are themselves health-based standards, the effect is that SRTs are more conservative than the corresponding HBRGs. Such SRTs will help ensure that residual soil contamination in the Campus Area will not migrate in significant amounts to shallow groundwater beneath source areas, and subsequently, be carried in groundwater to currently un-impacted areas.

The methodology for making the calculations is the subject of considerable Cal/EPA and USEPA guidance, which has been used in developing SRTs for the Campus Area.

Development of SRTs involves several basic steps, including:

1. Identifying COPCs that can leach to groundwater;
2. Identifying soil and hydrogeologic characteristics that are essential to predicting soil to groundwater migration;
3. Developing a conceptual subsurface model;
4. Estimating COPC migration potentials using appropriate models; and
5. Calculating acceptable concentrations in soil using MCLs as target "acceptable" groundwater concentrations.

As with the preceding discussion of HBRG development, the following subsections set out a summary of how the steps in this methodology were used to develop SRTs. A fuller discussion can be found in *Soil Remediation Triggers, Campus Area at Playa Vista* (IESI, 2001b).

### **3.2.2.1 Chemicals of Potential Concern for SRT Development**

IESI developed SRTs for 18 organic chemicals found in source area soils in the Campus Area (IESI, 2001b). The 18 chemicals included, but were not limited to, all organic contaminants detected in groundwater at concentrations greater than their applicable MCLs.

### **3.2.2.2 Conceptual Exposure Models**

IESI used site-specific soil and hydrogeological data obtained during Campus Area characterization activities to define a conceptual model of the subsurface (Figure 3-1).

Data collected from beneath the Campus Area indicate that analysis of migration of COPCs in groundwater can be adequately characterized assuming two basic water-bearing units. As discussed in more detail in Section 2.4.1, first encountered groundwater exists in the upper Bellflower aquitard. This aquitard consists primarily of clays and silts, and is characterized by limited hydraulic flow. Below the upper Bellflower aquitard is the lower Bellflower aquitard, which also consists primarily of

low permeable soils although increased fractions of silty/clayey sands make this water-bearing unit slightly more hydraulically conductive than the upper Bellflower aquitard. Due to the hydraulic properties of the upper Bellflower aquitard, COPCs that migrate away from source areas must first migrate vertically through the upper Bellflower aquitard before they can migrate horizontally away from the source area in the lower Bellflower aquitard (and Ballona aquifer).

### **3.2.2.3 Determining Migration Potential and Calculating SRTs**

Because protection of groundwater in source areas (protection of upper Bellflower aquitard), and protection of groundwater outside of source areas (protection of lower Bellflower aquitard) involve different migration pathways, two sets of SRTs were developed (IESI, 2001b). Details of the approach and the development of SRTs are available in IESI (2001b). The first set of SRTs, USRTs, are designed to protect the upper Bellflower aquitard; the second, LSRTs, are designed to protect the lower Bellflower aquitard.

SRTs were developed using two transport models in series. First, leaching of COPCs from soil to groundwater was estimated using VLEACH. This model was developed by USEPA and is commonly used to predict vertical (downward) migration of chemicals in the vadose zone to groundwater. The Summers Model used the output from VLEACH to predict concentrations of COPCs in groundwater downgradient from source areas. Together, the two models provide a conservative prediction of COPC concentrations in groundwater directly beneath a source of soil contamination.

To run the models, certain decisions had to be made with respect to the contamination and the nature of the unsaturated zone. Contamination was defined, using Site-specific data, in 1-foot intervals, overlaid on the soil zones described above, from the soil surface to first encountered groundwater (i.e., upper Bellflower aquitard). Downward migration of this contamination is a function of precipitation and infiltration, soil-water partitioning, vaporization and vapor migration, as well as the soil characteristics of the unsaturated zone. These interactions are resolved by the VLEACH model, as discussed by IESI (2001b).

IESI indicated that data collected from soil boring and monitoring well logs could be used to adequately characterize the unsaturated zone for the VLEACH model by assigning three soil layers to this zone. The three layers are denoted as upper, middle, and lower, with the lower layer in communication with the first encountered groundwater. Each soil layer was defined using Site-specific estimates for properties such as dry bulk density, porosity, and moisture content (IESI, 2001b).

The calculated results from running the models are shown in Table 3-6, *Soil Remediation Triggers*. This table presents both USRTs and LSRTs developed under the approach described above. In all instances, USRTs and LSRTs are substantially lower than corresponding HBRGs.

### 3.3 Chemicals of Concern

Media-specific COCs for the Campus Area, which are those chemicals requiring remedial action to meet the ROs, are identified in this section. The COCs were identified for the Campus Area based on the presence of Site COPCs that have been detected at concentrations exceeding RGs for the protection of human health, or the protection of the groundwater resource. Specifically, results from historical soil investigations that exceed soil HBRGs, LSRTs, and USRTs were identified as COCs. Similarly, the results from all groundwater monitoring investigations that exceed groundwater HBRGs were identified as COCs. As an additional protective measure, groundwater data exceeding California Title 22 MCLs were also identified as COCs. A summary of the COCs identified for Campus Area soil and groundwater, including all RGs (i.e., HBRGs, LSRTs, USRTs, and MCLs) is provided in Table 3-7, *Media-Specific Chemicals of Concern and Remedial Goals*.

For soil, COCs identified based on exceedances of soil HBRGs are: PCE, copper, cadmium; total chromium, and vanadium. Additional COCs for soil based on concentrations that exceed LSRTs include: TCE; cis-1,2-DCE; trans-1,2-DCE; VC; 1,1-DCE; 1,1,1-TCA; 1,1-DCA; 1,2-DCA; MC; benzene; toluene; arsenic; and total chromium. No additional COCs were identified based on soil concentrations that exceed USRTs.

For groundwater, COCs identified based on exceedances of groundwater HBRGs are: 1,1-DCE; VC; and benzene. Additional COCs for groundwater based on concentrations that exceed MCLs include: PCE; TCE; 1,1,1-TCA; 1,1,2-TCA; 1,1-DCA; 1,2-DCA; cis-1,2-DCE; trans-1,2-DCE; 1,4-Dichlorobenzene (1,4-DCB); MC; toluene; ethylbenzene; and xylenes.

Remedial activities discussed later in this document focus on the above COCs, and areas and media where exceedances of RGs occur. COC-based remediation assures both human health and the groundwater resource are protected.

### 3.4 Application of Remedial Objectives and Goals

To summarize, the quantitative RGs -- HBRGs and SRTs -- developed for this RP are used in the sections that follow to identify areas where remediation is needed. This identification will provide an initial indication of the amount of reduction of contamination needed, and guide the selection of remedial actions appropriate to meet the desired reduction. Stated another way, HBRGs are used to identify areas where remedial actions are necessary to address the presence of COCs that pose a potential threat to human health, if unabated, while SRTs are used to identify areas where remedial actions are necessary for the protection of the groundwater resource.

HBRGs and SRTs may not be final cleanup standards, but rather remediation triggers for the Campus Area. Remediation is planned for areas where current concentrations of COCs exceed these numerical criteria, but selection of remedial alternatives considers other factors, including the various means to reduce contaminant mass and

media concentrations to the extent feasible. For example, active remediation (e.g. groundwater extraction, enhanced biodegradation, or other) may be followed by MNA, to further reduce COC concentrations in the subsurface.

## Section 4

# Known Nature and Extent of Contamination

This section presents information on the extent of COCs in soil and groundwater in the Campus Area. Source Areas (SAs) were identified by comparing media-specific data to the RGs presented in Section 3 as well as considering historical Campus Area activities and usage. Data showing COCs that exceeded the RGs (HBRGs and LSRTs) resulted in the identification of nine potential SAs.

### 4.1 Identification of Source Areas

As presented previously, numerous investigations have been conducted in the Campus Area to identify impacted soils and groundwater. These investigations have been performed by MEE; IESI, B&C, Environmental Engineers and Contractors (EEC), ENSR Consulting and Engineering (ENSR), SECOR, Geomatrix, CDM, and others. A comprehensive list of the primary Campus Area investigation and characterization reports is presented in Section 2.2. In addition, summary tables of groundwater and soils data collected in the Campus Area are presented in Appendices C and D.

From these data, nine SAs were identified based on COC exceedances of HBRGs for soil and groundwater (i.e., protection of human health) or LSRT exceedance for soil (i.e., protection of the groundwater resource). The nine SAs and their general locations are depicted in Figure 4-1, *Source Areas in the Campus Area*. The SA numbers in Figure 4-1 match Site Location I.D.s provided in the summary of historical investigations (Appendix D).

Table 4-1, *Chemicals of Concern Identified by Media for Each Source Area* identifies the nine SAs as well as the COCs for groundwater and soil at each SA that exceed the RGs presented in Section 3. Additionally, groundwater data exceeding California Title 22 MCLs, a criterion of the ROs, were included in Table 4-1 for completeness. Similarly, soil data exceeding soil USRT values that are designed to protect first encountered groundwater to MCLs, are included in Table 4-1. The significance of groundwater data exceeding MCLs and soil data exceeding USRTs are discussed further in Section 8.

At several of these SAs, some historical remediation activities have been conducted to remove impacted soil that posed a potential threat to human health and/or the groundwater resource.

## **4.2 Summary of Soil and Groundwater Data and Historical Remedial Activities at the Source Areas**

A summary of the identified SAs, existing or formerly impacted soil and/or groundwater; and any historical remedial activities, are presented below. For ease of discussion, the following sections summarize historical detections in soil that exceed the HBRGs, LSRTs, and USRTs, and HBRGs for groundwater. Contaminants in groundwater that exceed MCLs are also summarized in Table 4-1.

### **4.2.1 SA No. 1– Former Underground Storage Tanks (UST) South of Former Building 5**

This area included a 1,500-gallon UST that was used to store cutting oils (MEE, 1987a). Soil samples were collected from four soil borings and analyzed for VOCs, TPH, and PCBs (MEE, 1987a). TCE, PCE, benzene and MC were detected above the soil LSRTs and USRTs. PCBs and TPH were also found in soil samples obtained from this location. The UST at this location and an adjacent 500-gallon UST, were initially abandoned in place in 1992 and remained so until nearby Buildings 5 and 6 were decommissioned in 1998. In 1998, the USTs and some soils were removed (B&C, 1999). Four stockpiles samples were collected and analyzed for PCBs, VOCs, TPH, and metals. All analytes were below the remediation criteria. After removal of the USTs, seven borings (GP-53 through G-58, and GP-60) were advanced in November 1998 to depths between 5 and 20 feet bgs to delineate the vertical and lateral extent of impacted soil. Soil samples were collected from the borings at depths between 5 and 20 feet bgs. Several VOCs were observed below the soil LSRTs and USRTs (B&C, 1999).

An additional investigation was performed during the Soil and Groundwater Investigation (SGI1) Report for the Phase 1 project area (CDM, 2000a). Two soil borings (D37 and D38) were advanced to a maximum depth of 13 feet bgs in the vicinity of the former USTs to better delineate the lateral extent of VOC impacted soil. Laboratory reports of these soil samples indicate that chlorinated VOCs were not present above laboratory reporting limits. Groundwater samples collected in this area, however, indicate the presence of VOCs. Groundwater samples collected from monitoring well C-86ba, which is screened from 45 to 55 feet bgs, during the first quarter of 2002 indicate the presence of several VOCs, including 1,1-DCA (690 µg/L), cis-1,2-DCE (110 µg/L), and VC (200 µg/L) (CDM, 2002).

For SA-1, VC exceeded the groundwater HBRGs. PCE, TCE, and benzene exceeded the soil LSRTs (Table 4-1). However, confirmation soil sampling conducted following the excavation and tank removal did not indicate any VOC detection exceeding LTRs.



#### **4.2.2 SA No. 2– Southwest Corner of Former Building 12**

This area consists of a former Plating Shop, two associated former clarifiers, and a former test sump located near the southwest corner of former Building 12. The test sump received waste containing 1,1,1-TCA, acetone, and other solvents as well as cleaning agents from the plating operations. Soil sampling conducted in 1987 (MEE, 1987a) indicated that VOCs were present, extending from the bottom of the sump down to the water table. Trans-1,2-DCE, 1,1-DCE, 1,1-DCA, benzene, MC and TCE were detected in soil samples and concentrations ranged from 0.004 to 7.9 mg/kg. (MEE 1987a). From 1988 to 1989, the former Building 12 clarifiers and sump were removed and the adjacent soil excavated (MEE, 1989). Confirmation sample results did not indicate any VOC concentrations exceeding LSRTs and USRTs. However, additional investigations by ENSR in 1997 and CDM in 1999 detected VOCs in this area. B&C also conducted sampling of the area in 1998 and metals analysis showed cadmium at 21 mg/kg and total chromium at 360 mg/kg (B&C, 1999b).

In December 2000 and January 2001, nine soil samples were collected from six borings. Samples were analyzed for VOCs and the following compounds with concentrations exceeding soil LSRTs and/or USRTs were detected: cis-1,2-DCE (0.86 to 2.25 mg/kg), VC (0.01 mg/kg), 1,1-DCA (0.039 to 0.191 mg/kg), and TCE (0.038 to 1.23 mg/kg), and PCE (0.007 to 0.264 mg/kg).

Groundwater samples collected from monitoring well C-09, which is screened from 25 to 35 feet bgs, during the first quarter of 2002 indicate the presence of several VOCs, including cis-1,2-DCE (14,000 µg/L), VC (13,000 µg/L), 1,1-DCA (3,300 µg/L), and 1,1-DCE (130 µg/L) (CDM, 2002).

For SA-2, VC and 1,1-DCE exceeded the groundwater HBRGs. Cadmium and Total Chromium exceeded the soil HBRGs. 1,1-DCA, cis-1,2-DCE, trans 1,2-DCE, TCE, and MC exceeded soil LSRTs. 1,1-DCE, VC, PCE, and benzene exceeded only soil USRTs. (Table 4-1).

#### **4.2.3 SA No. 3– Central Area of Former Building 12**

A former plating shop and circuit board lab were located in the south central region of former Building 12 and were operated from 1961 to 1975. Operations at this location included plating, etching, stripping and degreasing. In 1997 ENSR advanced four borings in the area. Soil samples were analyzed for VOCs, TPH and metals. All analytes were below soil HBRGs and LSRTs (ENSR, 1997).

A total of 48 geoprobe soil samples from 12 borings (GP18 through GP-28; and GP-33) were collected at depths between 5 and 20 feet bgs in 1998 (B&C, 1999b). The maximum VOC concentrations detected in the soil samples were TCE (1.2 mg/kg), 1,1-DCA (0.42 mg/kg), and cis-1,2-DCE (1.8 mg/kg). Total chromium was detected at 890 mg/kg. Five additional soil samples (310 series) were also collected during this investigation and analyzed for metals. Total chromium and copper were detected at 1,700 mg/kg and 2,100 mg/kg respectively.

Groundwater samples collected from monitoring well C-89be, which is screened from 23 to 38 feet bgs, during the first quarter of 2002 indicated the presence of several VOCs, including VC (840 µg/L), cis-1,2-DCE (300 µg/L), and 1,1-DCA (96 µg/L) (CDM, 2002).

For SA-3, VC exceeded groundwater HBRGs. Copper and total chromium exceeded soil HBRGs and cis-1,2-DCE exceeded LSRTs. 1,1-DCA and TCE exceeded soil USRTs (Table 4-1).

#### **4.2.4 SA No. 4– Former Drum Storage Area (near Former Building 34)**

The former Drum Storage Area was located south to southwest of former Building 34 and was used for approximately 25 years for the storage of drums containing kerosene, lubricating oils, cutting oils, hydraulic oils, degreasers, solvents and antifreeze (MEE, 1987a). The storage drums were placed on an asphalt-covered area, on five gravel covered spill tarps, and on a leakage collection tray that drained into an underground sump. Soil analyses from 1986 detected elevated concentrations of 1,1,1-TCA (30 mg/kg), 1,1-DCE (340 mg/kg), 1,1-DCA (121 mg/kg), and PCE (340 mg/kg), as well as lesser concentrations of several other VOCs and fuel components (MEE, 1987a).

VOC-impacted soil within the former Drum Storage Area was excavated in 1988 (MEE, 1989b). A total of 23 confirmation soil samples were collected and analyzed for TPH, VOCs and PCBs. Several VOCs were detected in soils including 1,1-DCE, TCE, PCE, and 1,1,1-TCA. Total TPH concentrations were detected up to 6,100 mg/kg. PCBs were not detected above reporting limits.

An additional investigation was performed during the SGI1 for the Phase 1 project area (CDM, 2000a). Two soil borings (D44 and D45) were advanced to maximum depths of 12 and 6 feet bgs, respectively. The samples were analyzed for VOCs, TPH, MTBE, and metals. Laboratory results for these soil samples indicated that all analytes were below LSRTs or HBRGs.

More recently, a soil investigation was conducted from March 28, 2001 to April 3, 2001 to assess the extent of the remaining VOC-impacted soil (EEC, 2001c - see Appendix F). A total of 63 soil samples were collected from 24 locations at depths ranging from 1 to 13 feet bgs and analyzed for TPH, VOCs and metals. TPH and several VOCs were detected in soils, including 1,1-DCA (0.003 to 23 mg/kg), 1,1,1-TCA (0.0031 to 510 mg/kg), 1,1-DCE (0.007 to 14 mg/kg), PCE (0.003 to 130 mg/kg), VC (0.0058 to 0.76 mg/kg) and toluene (0.0054 to 63 mg/kg).

Based on these findings, five areas around the former drum storage area were identified for excavation. In April 2001, potentially impacted soil from 4 feet bgs to approximately 12.5 feet bgs was excavated from each identified area (EEC 2001c -see Appendix F). Following the excavation, confirmation soil samples were collected and analyzed for VOCs. PCE (0.0068 to 15 mg/kg), 1,1-DCE (0.011 to 2 mg/kg), 1,1-DCA

(0.0084 to 2.8 mg/kg), VC (0.0052 to 1.1 mg/kg), and MC (0.022 to 0.94 mg/kg) were detected in soil samples.

Groundwater samples collected from monitoring well C-74be, which is screened from 17 to 32 feet bgs, during the first quarter of 2002 indicated the presence of several VOCs, including 1,1-DCA (6,200 µg/L), VC (270 µg/L), cis-1,2-DCE (21 µg/L), and TCE (14 µg/L), and chloroethane (CET) (2,400 µg/L) (CDM, 2002).

For SA-4, VC exceeded the groundwater HBRGs. PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCA, 1,1-DCE, 1,2-DCA, VC, 1,1,1-TCA, benzene, and toluene exceeded soil LSRTs (Table 4-1).

#### **4.2.5 SA No. 5- Former UST and Degreaser Pit West of Building 11**

During a drilling program in 1983, fuel hydrocarbon free product was observed on groundwater in the vicinity of the USTs located in this area (MEE, 1987a). Since 1987, fuel hydrocarbon free product recovery was subsequently conducted at monitoring wells TB-04, TB-07, TB-11, and TB-12 in the vicinity of Building 11. The results of the fuel hydrocarbon recovery conducted on an approximate monthly basis since March 1999 are provided in Appendix C (Table C-5). Measurable free product has not been observed since April 2000, and only a hydrocarbon sheen has recently been observed in groundwater at these wells (CDM, 2002). First quarter 2002 monitoring data indicated an exceedance of the groundwater HBRG for benzene at monitoring well TB-12 (14,000 µg/L, see groundwater data provided in Appendix C).

Soil samples in this area were collected in 1985 during the drilling of monitoring wells TB-06, TB-07, and TB-08 [Hargis & Associates (HA), 1986]. The samples were analyzed for VOCs and benzene and toluene were detected at 80 mg/kg and 77 mg/kg, respectively. As noted above, leaking UST was subsequently discovered and was taken out of service. Four USTs and associated piping were removed in September of 1996 (AquaScience Engineers, 1996). Confirmatory soil samples were collected from beneath the product piping and from the excavated soil piles and analyzed for TPH and BTEX. The sample results were below LSRTs and USRTs. The excavations were lined with 6-millimeter thick plastic sheeting and backfilled with the excavated soil and clean imported fill sand from an on-Site stockpile.

Soil samples were collected to assess the vertical and lateral extent of contamination at two boring locations southwest of Building 11 near the Degreaser Pit (MEE, 1987a). Soil borings SB-21 and SB-22 were sampled at depths of 0.5, 2.5, 4.5, 9.5, 14.5, and 19.5 feet bgs. VOCs detected in soil included TCA (0.004 to 0.021 mg/kg), TCE (0.002 to 0.13 mg/kg), benzene (0.034 to 1.064 mg/kg), toluene (0.004 to 0.60 mg/kg), MC (0.009 to 0.45 mg/kg), and xylenes (0.68 to 0.862 mg/kg). AquaScience removed soils to a depth of 2 feet bgs in this area in 1996 (AquaScience, 1996).

Groundwater samples collected from monitoring well C-48, which is screened from 35 to 45 feet bgs, during the first quarter of 2002 indicated the presence of benzene at a concentration of 30 µg/L (CDM, 2002). For SA-5, benzene exceeded the groundwater HBRG and also the LSRT for soil. Toluene, benzene, and MC also exceeded LSRTs (see Table 4-1).

#### **4.2.6 SA No. 6-Former Building 35**

Former Building 35 was used for painting, metal plating, and heat-treating. A chromate waste sump, neutralization pit, concrete clarifier and a vapor degreaser were located in and outside of the northeastern quadrant of the building. The sump and pit were lined with fiberglass in 1986/1987 (MEE, 1987a) and they were removed when the building was decommissioned in 1998.

In 1986, MEE performed Site assessment work in the vicinity of former Building 35 and collected samples from SB-14 in the chromate sump area. Benzene and arsenic were detected at concentrations of 0.512 and 10.11 mg/kg, respectively. In 1997, ENSR conducted additional sampling (20 soil samples from ten borings). The samples were analyzed for TPH, metals, VOCs, and SVOCs. Several VOCs including PCE (0.001 to 4.1 mg/kg), TCE (0.004 to 1.2 mg/kg), and cis-1,2-DCE (0.002 to 0.13 mg/kg) exceeded LSRTs. (ENSR, 1997). Vanadium detected in one soil sample at a concentration of 120 mg/kg.

An organic waste sump was located outside of the southwest corner of former Building 35. It received waste solvents and paint sludge from paint booths inside the building (MEE, 1987a). In 1986, MEE collected eight soil samples from C-48 located near the sump, and benzene and MC were detected at concentrations of 0.44 and 0.99 mg/kg, respectively (MEE, 1987a). This sump was removed and the area was excavated to 8 ft bgs in 1998 (MEE, 1989a).

In the fourth quarter of 1998, Building 35 was decommissioned and the chromate waste sump and neutralization pit were excavated and removed during demolition activities (B&C, 1999b). The chromate waste sump and neutralization pit cavities were later backfilled with clean soil to grade.

In January 2000, CDM advanced three borings in the vicinity of the northeast quadrant of former Building 35. Soil samples were collected and analyzed for VOCs and metals. Benzene (0.47 to 6.1 mg/kg) and toluene (3.2 to 100 mg/kg) were detected (CDM, 2000b). Metal concentrations did not exceed soil LSRTs and HBRGs. Arsenic concentrations were below soil HBRGs.

In October of 2001, EEC advanced additional soil borings at the location of former Building 35 (EEC, 2001d - see Appendix F). 116 soil samples were analyzed for VOCs, SVOCs, TPH and metals. EEC encountered soil impacted by PCE and TCE at concentrations in excess of LSRTs. The location of the observed impacted soil was at the northwest quadrant of the former Building 35 at a depth of 20 feet and shallower. TPH concentrations were not detected above the laboratory reporting limits. Metal

concentrations did not exceed soil LSRTs. Arsenic concentrations did not exceed soil HBRGs.

A grab sample of groundwater was taken using geoprobe technology at a depth of 35 ft bgs (the first fully saturated zone). The groundwater analytical results for the grab sample did not indicate an exceedance of groundwater HBRGs.

For SA-6, no exceedance of the groundwater HBRGs has recently been observed at this location (CDM, 2002). PCE, TCE, MC, toluene and benzene exceeded LSRTs. Cis-1,2-DCE exceeded USRTs. Based on the recent investigation results conducted by Geomatrix/CDM and EEC, these compounds are listed as COCs (Table 4-1). Vanadium slightly exceeded the soil HBRGs in one isolated location. This isolated exceedance of the HBRGs is not considered significant and vanadium is not listed as a COC. Arsenic exceeded the soil HBRG in only one isolated sample location. Furthermore, the sample result was only slightly higher than one standard deviation of the established background level of 5.2 mg/kg for the Site, indicating that the arsenic is most likely naturally-occurring and not related to previous industrial activities. Therefore, this isolated exceedance of the HBRG is not considered significant and arsenic is not included as a COC for this SA (Table 4-1).

#### **4.2.7 SA No. 7- Storm Drain Discharge Site**

Prior to 1954, treated industrial wastewater from several industrial waste clarifiers and neutralization sumps on the north side of the Plant Site was discharged into this area. A shallow drainage ditch directed runoff in a northerly direction adjacent to the parking lot. Soil analyses from 1986 indicated the presence of benzene (0.066 to 0.7 mg/kg), and MC (0.098 to 1.2 mg/kg) (MEE, 1987a).

In December 1988 and January 1989, MEE excavated shallow soil in the vicinity of the storm drain outlet (MEE, 1989a). The excavation was extended laterally at least 5 feet beyond the drainage ditch to a depth of approximately 1-foot bgs. Approximately 100 cubic feet of soil was removed. Confirmation samples analyzed for VOCs (USEPA Methods 8020 and 8010) did not contain detectable concentrations of VOCs. Based on the results of confirmation samples analyzed for TPH (2,000 mg/kg), an additional foot of soil was removed from the area. Analysis of subsequent confirmation samples for TPH did not indicate detectable concentrations of TPH (MEE, 1989a).

In March of 2001, EEC removed the storm drain outlet catch basin. The area was excavated and 13 confirmation samples were collected (EEC, 2001a - see Appendix F). During the excavation of the storm drain outlet catch basin, a leach line was observed and additional confirmation sample was collected to determine the presence of any chemicals. Soil excavation confirmation samples were analyzed for VOCs (USEPA Method 8260B), SVOCs (USEPA Method 8270), TPH (USEPA Method 8015M with carbon chain speciation), California Assessment Manual (CAM) Metals (USEPA Method 6010B), mercury (USEPA Method 245.1A), and chromium VI (USEPA Method 7196A). VOCs did not exceed LSRTs and USRTs. Detected metal

concentrations were below HBRGs. Chromium VI was not detected (EEC, 2001a). TPH was detected at concentrations of 2,907 to 6,399 mg/kg.

Additional soil sampling to confirm the presence or absence of VOCs (previously detected at concentrations greater than LSRTs in the vicinity of well C-49) was conducted in October 2001 (EEC, 2001a). VOCs did not exceed LSRTs and USRTs.

First quarter 2002 groundwater sampling results from the closest monitoring well to this area (C-49), which is screened from 20 to 30 feet bgs, indicated the presence of 1,1-DCA (320 µg/L), cis-1,2-DCE (710 µg/L), 1,4-dichlorobenzene (1,4-DCB, 58 µg/L), and VC (14 µg/L), as well as several other VOCs at lesser concentrations (CDM, 2002).

For SA-7, no exceedance of the groundwater HBRGs have recently been observed. Before excavation, MC and benzene concentrations exceeded the soil LSRTs at well C-49 located within SA-7. However, recent investigations conducted by EEC in 2001 did not detect these compounds near locations where previous detections from 1986 sampling were observed. Therefore MC and benzene are not listed as COCs in Table 4-1.

#### **4.2.8 SA No. 8– Sumps, Clarifiers, and Former Vapor Degreaser Northeast Corner of Building 14 to Northeast Corner of Building 15**

This source area consists of the Building 14 clarifier system including two concrete clarifiers and sumps that handled cutting oils and solvents from machining operations prior to 1985. In addition, it includes the former above-floor vapor degreaser area, at the northeast corner of Building 15 which was operated until 1994. Soil samples collected adjacent to the clarifier in 1986 indicated that VOCs were present, including benzene (0.042 to 0.2 mg/kg), and TCE (0.31 to 0.42 µg/kg) at location SB-23 (MEE, 1987a). Impacted soils associated with the trenches and clarifiers could not be excavated because this would have impaired the structural integrity of the now designated historic building. More recently, the Building 14 clarifiers and Building 15 trenches were cleaned and inspected (CDM, 2000a). Soil samples collected as part of the SGI1 in August 1999 confirmed the presence of chlorinated VOCs beneath the foundation. Soil concentrations were observed at five feet bgs for TCE (0.320 mg/kg), cis-1,2-DCE (0.043 mg/kg), and PCE (0.046 mg/kg) (CDM, 2000a).

In January 2001, two soil samples were collected from one boring (Geomatrix/CDM) and analyzed for TPH and VOCs. PCE (0.887 mg/kg) and TCE (0.128 mg/kg) exceeded USRTs.

Groundwater samples collected from monitoring well C-78be, which is screened from 17 to 32 feet bgs, during the first quarter of 2002 indicated the presence of several VOCs, including cis-1,2-DCE (800 µg/L), trans-1,2-DCE (99 µg/L), PCE (2.3 µg/L), and VC (100 µg/L) (CDM, 2002).

For SA-8, VC exceeded the groundwater HBRG. 1,2-DCA, cis-1,2-DCE, and benzene exceeded the LSRTs for soils. 1,1-DCE, TCE, PCE, and trans-1,2-DCE exceeded the USRTs (Table 4-1).

#### **4.2.9 SA No. 9 – Existing Clarifier and Former Vapor Degreaser Pit Building 15 Center Bay and Utility Trenches in Building 15 North Bay**

A 10,000-gallon concrete clarifier, backfilled degreaser pit, and sump are located in the western part of the Center Bay of Building 15 near Column H-33. The clarifier intercepted system drains from rinse tanks. The vapor degreaser pit was backfilled in the 1960's. The initial investigation of this area, conducted in 1986, showed detects in soil samples for 1,1-DCA (0.08 mg/kg), MC (0.08 mg/kg to 0.6 mg/kg), PCE (0.2 mg/kg to 0.4 mg/kg), and TCE (0.56 mg/kg to 9.2 mg/kg) (MEE, 1987a). Subsequent sampling in the area of the clarifier, degreaser pit, and sump, conducted by ENSR (1997) and Geomatrix/CDM (2000) confirmed the presence of VOCs in soils with detections of cis-1,2-DCE (1.5 mg/kg), PCE (12 mg/kg), and TCE (24 mg/kg). In May 2001, EEC collected 12 soil samples from four borings for additional characterization of this area. The samples were analyzed for VOCs. The sample results did not exceed soil USRTs and LSRTs.

Utility trenches located in the north bay of Building 15 run the length of the building (760 feet) and collected drips of solvents and cutting oils (MEE, 1987a). In 1986, MEE collected 16 soil samples from five borings within the trenches. Various VOCs were detected including benzene (0.073 mg/kg), 1,2-DCA (0.2 mg/kg), trans-1,2-DCE (2.8 mg/kg), and TCE (5 mg/kg) (MEE, 1987a). The trenches were pressure washed in 1994 after operations ceased. In April 1999, CDM collected two soil samples from two borings and analyzed for VOCs, metals, BTEXs, and MTBE. VOCs including TCE (5.4 mg/kg), cis-1,2 -DCE (0.77 mg/kg) and trans 1,2-DCE (0.24 mg/kg) and low concentrations of metals were detected. BTEX and MTBE were not detected above the laboratory reporting limits (CDM, 2000a).

Groundwater samples collected from monitoring well C-77be, which is screened from 15 to 25 feet bgs, during the first quarter of 2002 indicated the presence of several VOCs, including cis-1,2-DCE (900 µg/L) and trans-1,2-DCE (21 µg/L) (CDM, 2002).

For SA-9, no exceedances of the groundwater HBRGs were observed. PCE exceeded soil HBRGs at one location near the clarifier. PCE, TCE, cis-1,2-DCE, and MC, exceeded LSRTs. Trans-1,2-DCE, benzene, 1,1-DCA exceeded USRTs (Table 4-1).

### 4.3 Summary of Soil Gas Results

During the week of December 18 through 22, 2000, soil gas samples were collected in the vicinity of Buildings 14, 15, 16 and 21 within the Campus Area. A total of 221 soil gas samples were collected from depths of 3 to 5 feet below ground surface.

Appendix I, *Soil Gas Results*, presents a description of the methods that were used to collect and analyze the samples, as well as a table of the results.

To summarize the findings, 5 of the 221 sample locations were found to have soil gas concentrations that exceeded the final HBRGs for organic compounds in commercial soil gas (IESI 2001). These HBRGs are shown in Appendix H.

All five of the sample locations with HBRG exceedances were located at the western end of Building 15, the area that has been identified above as SA-9.



# **Section 5**

## **Identification of Remedial Technologies and Process Options**

The next step in selecting potential remedial alternatives is to identify technologies and process options that should be considered for the Campus Area.

This section presents remedial technologies and process options that have been identified as capable of meeting ROs in the Campus Area. For groundwater, these were screened remedial technologies and process options on the basis of technical feasibility. The remedial technologies and process options retained following this screening are described and evaluated in more detail in this section. For soils, no screening was done because the list of potentially applicable soil remediation technologies is limited.

### **5.1 Groundwater Remedial Technologies and Process Options**

#### **5.1.1 General Response Actions**

The first step, at this point, is to identify general response actions, which are defined as actions that, singly or in combination, will meet the ROs defined in Section 3 or will provide a baseline for comparison with other actions. From this set, a subset of remedial alternatives is developed.

General response actions for the Campus Area include both passive and active measures to mitigate groundwater contamination. Passive measures include those that involve no active engineered technology(ies) for containment or treatment of groundwater, such as monitoring only of contaminant plume migration and/or biodegradation and attenuation, or use restrictions (e.g., land or groundwater). Active measures include the installation of systems that will contain and/or treat contaminated groundwater. The general response actions for the Campus Area are shown in Table 5-1, *General Response Actions for Groundwater*.

The general response actions listed in Table 5-1 provide a basis upon which to identify and then screen remedial technologies. Process options associated with the remedial technology are also identified. Once screened, acceptable technologies and process options are incorporated into remedial action alternatives that satisfy ROs defined in Section 3.

#### **5.1.2 Preliminary Screening of Groundwater Technologies and Process Options**

The first step, at this point, is to identify general response actions, which are defined as actions that, singly or in combination, will meet the ROs defined in Section 3 or will provide a baseline for comparison with other actions. From this set, a subset of remedial alternatives is developed.

Each remedial technology may have several process options (e.g., enhanced bioremediation, air sparging, *in situ* chemical oxidation, etc.), which refer to the specific material, equipment, or method used to implement a technology. The identified remedial technologies and process options applicable to groundwater remediation within the Campus Area are presented in Table 5-2, *Initial Screening of Groundwater Remediation Technologies and Process Options*. In the initial screening, process options were evaluated on the basis of technical feasibility, i.e. whether there were compatible with Campus Area characteristics (e.g., physical features) and chemical characteristics of the COCs, and on their overall effectiveness. Process options considered clearly infeasible or not applicable for the Campus Area were eliminated as indicated by shading in Table 5-2. In particular, these groundwater process options were eliminated from further consideration:

- Slurry walls, grout curtains, sheet piles, and reactive gates. Due to the lack of a competent geologic unit to “seat” the base of the barrier (e.g., bedrock or competent clay unit), these technologies would likely not reduce vertical migration of VOCs. In as much as the potential for vertical migration of contaminants from the Ballona aquifer to the Silverado aquifer exists, lateral migration may occur if VOCs migrate vertically into the Ballona or Silverado aquifers;
- Phytoremediation was screened because the root systems of the plants are not expected to extend fully through the Bellflower aquitard, the hydrostratigraphic unit where phytoremediation has a higher probability of mass removal; and
- *Ex situ* membrane treatment technologies. These technologies are not as reliable as other technologies available for VOC removal.

The no-action response was retained as a baseline alternative.

### **5.1.3 Evaluation of Retained Groundwater Technologies and Process Options**

The retained technologies and associated process options surviving the initial screening in Section 5.1.2 were deemed potentially applicable to the Campus Area and evaluated further based on three criteria: effectiveness, implementability, and cost.

The effectiveness analysis focuses on the relative merits of process options, when compared to other processes within the same technology type. The criteria used in the effectiveness evaluation are:

- The ability of the process option to address the estimated volume of contaminated media and to attain ROs;
- Potential environmental and health impacts during implementation of the process option; and

- Reliability of the process option with respect to Campus Area contaminants and conditions.

The implementability evaluation considers the technical and administrative feasibility of the process options. Process options that are clearly ineffective or incompatible with the Campus Area were previously eliminated. This analysis focuses primarily on institutional implementability, including:

- Ability to obtain necessary regulatory permission (i.e., permitting), and
- Availability of appropriate process option services (e.g., vendors, technicians).

At this stage of the evaluation, cost is less significant than either effectiveness or implementability, and therefore plays a limited role in the screening of process options. Each process option is evaluated based on its costs being high, medium, or low relative to other process options in the same technology type.

Process options for groundwater, arranged according to remedial technologies and general response actions, are listed in Table 5-3, *Relative Comparison of Retained Groundwater Technologies and Process Options*. This table summarizes the screening of process options for effectiveness, implementability and cost. Process options clearly infeasible or inappropriate based on the evaluation criteria were eliminated from further consideration, as indicated by shading in the table. The evaluations of each of the remaining remedial actions and process options are described in the following subsections.

#### **5.1.3.1 No Further Action (NFA)**

Under this alternative, no remedial action would be undertaken.

Although this option is technically feasible and inexpensive, it is not effective in preventing future contaminant migration or removing the contaminants from the Campus Area. Nonetheless, the evaluation of no further action provides a baseline by which all other alternatives are evaluated.

#### **5.1.3.2 Monitored Natural Attenuation (MNA)**

MNA is an *in situ* remediation technology that relies on naturally-occurring processes (including biodegradation, dispersion, matrix diffusion, sorption, volatilization, and chemical degradation) to reduce the concentration, and in some instances, mass of contaminants in groundwater and soils. MNA is recognized by the USEPA and the State of California as a viable method of remediation that can be evaluated and compared to other remediation strategies. This method of groundwater remediation may be used as the sole remediation technology when it: (1) is combined with some degree of source control; (2) is shown to be fully protective of human health and the environment; and (3) meets ROs within a reasonable time frame. An established monitoring program is required to evaluate the effectiveness of MNA. MNA may

also be used in combination with other process options as a concurrent technology, or implemented following the completion of other technologies.

The effectiveness of MNA is dependent on the types of contaminants, and the chemical, physical, and biological characteristics of the soil and groundwater at a particular location. In areas of elevated contaminant concentrations (e.g., source areas), MNA effectiveness as a stand-alone technology is low because it likely would not meet the RO that requires the reduction of groundwater concentrations to levels protective of human health and the groundwater resource in a timely fashion, as compared with other technologies. However, MNA may be more effective if implemented with appropriate risk control measures, or after alternate remedial technologies have resulted in a reduction of contaminant mass. MNA is easily implemented and requires moderate costs over the lifetime of the project. MNA is therefore retained as a remediation technology.

### **5.1.3.3 Institutional Controls**

Institutional controls function to prevent or reduce public contact with contaminated media and have little or no effect on the presence of contaminants. Examples of institutional controls include Site use restrictions (e.g., deed restrictions) and public education. These are discussed below.

#### **Use Restrictions**

Use restrictions are an institutional control mechanism in which a governing body regulates the access or use of a site. For the Campus Area, restrictions may be imposed to ensure that the land use is limited to commercial development, unless otherwise allowed by governing regulatory agencies in the future. In addition, institutional controls can be established through legally enforceable prohibitions, such as CC&RS that preclude private withdrawals of groundwater. Institutional restrictions on groundwater use is a typical component of a remedial action, because they prevent public use of untreated groundwater.

However, because use restrictions alone do not meet the RO that requires the sources of contaminants to be reduced or eliminated; their effectiveness is low. Use restrictions may require regulatory permitting and cooperation with state and local agencies, which may be troublesome to obtain, making them moderately implementable. On the other hand, establishing and enforcing such restrictions is only moderately expensive. Thus, use restrictions are retained as a process option, which may apply to a number of remedial technologies.

#### **Public Education**

Public education can be used to facilitate protection of human health. This requires educating the public about the potential risks associated with exposure to contaminated groundwater. Water quality information can be disseminated through fact sheets, public meetings, and local news media announcements.

Public education alone does not meet the RO that requires the sources of contaminants to be reduced or eliminated; therefore, the effectiveness is low. Public education via fact sheets and public meetings is easily coordinated and highly implementable. The cost for such actions is typically low to moderate compared to other response actions. Public education is retained as a process option due to the high implementability and low to moderate cost of this option, despite its limited effectiveness.

#### **5.1.3.4 Hydraulic Containment**

Of the various forms of hydraulic containment, a general response action, vertical barriers (slurry walls, grout curtains, and sheet piling) were eliminated from further consideration in Section 5.1.2. However, two other types of surface water infiltration reduction are retained and discussed below.

##### **Source Area Capping**

Infiltration of surface water into contaminated areas of the Campus Area contributes to contaminants leaching into groundwater as the contaminants are desorbed from soil and transported down into groundwater. Capping source areas will reduce this risk. In addition, some capping will result from development activities such as the placement of concrete, asphalt, building structures, or clay capping material over areas with soil contamination.

Source area capping is considered to be moderately effective because it is possible to meet the RO of reducing groundwater concentrations and contaminant migration; however, it does not reduce the presence of contaminant mass in the source areas. This process option is considered highly implementable because it can be completed as part of the Campus Area development and its costs are low with respect to other response actions. Potential source area capping is therefore retained as a process option.

##### **Storm Water Diversion/Control**

Storm water run-on near source areas may pond under conditions of high rainfall and percolate vertically through the soils, creating additional recharge that serves to increase the mobility of contaminants. Storm water diversion or control structures could serve to reduce the volume of water infiltration through source areas and reduce the vertical and lateral migration of VOCs.

Storm water diversion/control is considered to be moderately effective because it is possible to meet the RO of reducing groundwater concentrations by reducing migration of COCs from source areas to groundwater; however, it does not reduce the presence of contaminant mass in the source areas. This process option is considered highly implementable because it can be completed as part of the Campus Area development and its costs are low with respect to other response actions. Storm water diversion/control is therefore retained as a process option.

### 5.1.3.5 Groundwater Collection/Extraction

The principal means of recovering contaminated groundwater is through altering of the groundwater gradient to enhance and/or control contaminant movement. This response is typically accomplished by artificially influencing an existing gradient via groundwater extraction wells and/or by placing groundwater interceptor drains downgradient of the contaminated area, which options are discussed below.

#### Groundwater Extraction Wells

Groundwater extraction wells are commonly used as a method to influence groundwater flow and to recover contaminants. Extraction wells are used to contain the migration of a contaminant plume and/or reduce contaminant mass in groundwater. Such wells would be located within and/or downgradient of the source areas. In general, extraction wells are versatile under a variety of environmental conditions and have design and operating flexibility. Extraction wells may be used singly, or in multiples, to sufficiently contain the spread of a groundwater contaminant plume. Multiple wells should be positioned in such a way that their radii of influences overlap, thereby minimizing the potential for downgradient plume migration.

Groundwater extraction wells are considered to be moderately to highly effective because they potentially meet ROs of reducing groundwater contaminant concentrations. Extraction wells are highly implementable, and have relatively moderate capital and maintenance costs, although long-term operation may be expected. Extraction wells are retained as a process option.

#### Dual Phase Extraction

Dual phase extraction (DPE) is an *in situ* remediation technology that, for the purposes of this RP, is categorized under the groundwater collection/extraction general response action. DPE involves the extraction of groundwater and soil vapor at a common location, and typically consists of a “pipe within a pipe” configuration. Groundwater is extracted from a well screened across the water table using a submersible pump, while soil vapor is extracted by applying a vacuum to the wellhead. The groundwater flow to the DPE well results in removal of dissolved contaminant mass and helps to control or reverse the spread of dissolved contaminants from the source areas. Groundwater extraction also results in a cone of depression exposing additional vadose zone soil from which VOCs can be removed via soil vapor flow. Thus, the soil vapor flow results in remediation of vadose zone and exposed saturated zone soils through volatilization and removal of VOCs in extracted soil gas.

DPE is considered to be moderately to highly effective because it has the potential of meeting all of ROs for the shallow Bellflower aquitard, provided that the lithology of this unit is permeable enough to allow for an effective vapor extraction flow rate. The implementability of DPE is moderate, with the collection and treatment of off-gas

vapors and groundwater requiring treatment and regulatory permits. The cost of DPE is considered moderate. DPE is retained as a process option.

### **Interceptor Drains**

Groundwater can also be removed by the installation of subsurface drains to intercept groundwater as it migrates beneath the Campus Area. Such drains would consist of perforated pipe in trenches backfilled with porous media. Subsurface drains or interceptor trenches may be used as an effective containment remedy.

Interceptor drains would be moderately effective at meeting the ROs to reduce groundwater contaminant concentrations. Considering the depth and spatial distribution of contamination within the Campus Area, interceptor drains have only a low to moderate implementability. This process option is most cost-effective when implemented in conjunction with concurrent soil excavation activities. As such, costs are moderate to high, but may vary depending on whether excavation is concurrent. Interceptor drains are therefore screened from further consideration.

### **5.1.3.6 Treatment**

Treatment technologies include *in situ* and *ex situ* alternatives as described in the sections below.

#### **In Situ Treatment**

The three process options surviving the initial screening under *in situ* treatment alternatives are enhanced bioremediation, chemical oxidation, and air sparging.

#### **Enhanced Bioremediation**

Enhanced bioremediation is a groundwater technology that involves injection of an electron acceptor, electron donor, microorganisms, and/or nutrients to stimulate or enhance the biodegradation of VOCs. For chlorinated VOCs found within the Campus Area, the enhanced bioremediation technology typically involves induction of reduced groundwater environments. As such, biodegradable organic carbon (electron donor) would be injected in sufficient quantities to sufficiently lower the groundwater-reducing environment and stimulate the rapid, reductive dechlorination of VOCs. It is important to note that some of the chlorinated VOCs detected in the Campus Area (e.g., VC and cis-1,2-DCE), may also be biodegraded under oxidizing groundwater environments. Thus, injection of air into the subsurface or the application of oxygen releasing compounds may also be useful in the Campus Area, although such approaches may be complicated by the already reduced groundwater environment. Inherent challenges that may affect the feasibility of this process option include the ability to adequately deliver amendments to the subsurface; the presence of competing electron acceptors/donors; the presence of a microbial consortia capable of degrading the VOCs; and the possibility of forming additional toxic intermediates, such as VC.

Enhanced bioremediation is considered to be moderately to highly effective because it has the potential of meeting all ROs, provided that adequate delivery of amendments to the subsurface can be achieved. The implementability of enhanced bioremediation is moderate as it will require subsurface injection permits, and the costs are moderate. Enhanced bioremediation is retained as a process option.

### ***Chemical Oxidation***

*In situ* chemical oxidation involves the delivery of chemical oxidants to convert subsurface contaminants to innocuous end products (e.g., water, chloride ions, and carbon dioxide). The most common field application of chemical oxidation is based on Fenton's Reagent addition, whereby hydrogen peroxide is injected with an iron catalyst creating hydroxyl free radicals. These hydroxyl free radicals result in relatively non-specific chemical reactions that destroy organic compounds in the subsurface, including contaminants such as chlorinated solvents found at the Campus Area. Proprietary catalysts may also be used in the injection process to increase the efficiency of reactions; such reactions are referred to as Fenton's-Like Reactions. Permanganate is also a common chemical oxidant used in the application of chemical oxidation. Inherent challenges that may affect the feasibility of this process option include the ability to adequately deliver amendments to the subsurface (i.e., affected by permeability of soils); the presence of highly reduced subsurface conditions and high organic soils or naturally-occurring reduced metals that consume excessive amounts of chemical oxidant; and the potential mobilization of naturally-occurring metals in the subsurface.

Similar to enhanced biodegradation, the effectiveness of *in situ* chemical oxidation is considered to be highly variable, depending on the soil characteristics of the targeted treatment zone. For example, the effectiveness would be low in the native soils of the upper Bellflower aquitard as a result of presumably poor distribution of amendments and highly reduced subsurface conditions. The effectiveness of this process option may be moderate if applied to more permeable water-bearing zones, or in conjunction with infiltration galleries. The implementability of chemical oxidation is moderate as it would require subsurface injection permits, and the costs are moderate. Chemical oxidation is screened from further consideration, primarily due to the presence of highly reduced subsurface conditions that make this process option less desirable as compared with other *in situ* process options (e.g., enhanced bioremediation).

### ***Air Sparging***

Air sparging involves the installation of wells in contaminated groundwater areas to inject air into the saturated zone. The induced airflow enhances the volatilization of the VOC contaminants from groundwater into the vadose zone. Once in the vadose zone, the VOCs can be removed via soil vapor extraction (SVE). The application of this technology is highly dependent on the hydraulic conductivity, the zone of influence (ZOI) of the air injection and vapor extraction wells, and the airflow rate sustained through the contaminated zones. Preferential flow paths established for airflow have the potential for limiting the contaminant contact area and limiting the effectiveness of the sparging process. It should be noted that the injection of air may



alter the groundwater reducing environment, thereby limiting any further reductive dechlorination of chlorinated contaminants. However, such introduction of air may lead to an oxidizing environment, thereby creating conditions in which oxidative biodegradation of some chlorinated VOCs (e.g., VC and cis-1,2-DCE) may occur.

Similar to other *in situ* technologies, the effectiveness of air sparging is considered to be highly variable, depending on the soil characteristics of the targeted treatment zone. For example, the low permeable soils characteristic of the Bellflower aquitard are expected to complicate the recovery of volatilized contaminants, thereby limiting the effectiveness of this technology. Furthermore, the addition of air to the saturated zone will interfere with biological, reductive dechlorination processes. For these reasons, air sparging was screened from further consideration, even though it is considered to be low to moderate in implementability and have moderate costs.

### **Ex situ Treatment**

Inherent to all *ex situ* treatment options is that groundwater is removed from the subsurface to the surface for treatment. Groundwater collection/extraction is achieved through the use of either extraction wells or interceptor drains, or a combination of both. A review of the process options focused on determining the appropriate treatment process for the removal of chlorinated organic compounds in groundwater. The required treatment efficiency is dictated by limits on discharge to an on-Site water treatment facility, Public Owned Treatment Works (POTW), storm drain, and/or surface discharge.

#### ***Air Stripping***

Air stripping towers have been used effectively for removing numerous dissolved VOCs from groundwater waste streams. Contaminated water enters the stripping tower at the top and is evenly distributed across the internal packing media through distributor nozzles or weirs. Clean air is introduced into the bottom of the tower below the packing using a forced air blower, and flows upward through the packing. As the falling contaminated water flows countercurrent to the rising air stream, VOCs are stripped from the water and enter the air stream. Volatilized organics are then discharged to the atmosphere or an off-gas treatment system. The internal packing media acts to increase the total surface area available for mass transfer of the organic contaminants from the liquid to the vapor stream. Treated water falls from the packing into the stripper basin and exits the tower.

The extent of compound removal by air stripping is governed by many factors, including contaminant concentrations in groundwater, temperature of the air and water, the air-to-water ratio, and contaminant physical properties (e.g., Henry's Law constant). Air stripping tower performance may also be influenced by the presence or absence of various inorganic compounds and suspended solids in the groundwater. Groundwater with elevated hardness may result in calcium and magnesium salt deposits in the tower packing media. Elevated iron (concentrations over 5 mg/L) or

manganese concentrations, when oxidized in the air stripper, will result in metal hydroxide precipitation, which can severely foul the packing media and reduce its effectiveness to remove VOCs. In addition, elevated total suspended solids (TSS) concentrations in the groundwater can also result in solids deposition on the tower packing and reduce liquid-to-air mass transfer.

Groundwater within the Campus Area contains moderately high concentrations of iron and suspended solids that may require pretreatment. Pretreatment equipment could include multi-media filters to remove TSS, followed by greensand filters (if necessary) to remove iron. An alternative approach to pretreatment equipment may be the use of proprietary chemical complexing agents that prevent iron from precipitating in the air stripping tower. The need for pretreatment should be explored during the remedial design phase to identify the appropriate combination of pretreatment steps.

The majority of VOCs found within the Campus Area exhibit relatively high Henry's Law constants and, therefore, are expected to be effectively treated with air stripping. For this reason, air stripping is considered highly effective. The implementability of this technology is moderate. The cost of air stripping is moderate relative to other *ex situ* treatment options. Air stripping is retained as a process option.

#### ***Ultraviolet-Enhanced Chemical Oxidation***

The chemical destruction of organic compounds through oxidation is a common practice in many industrial processes. The process involves mixing the influent water with one or more chemical oxidizers, such as ozone and/or hydrogen peroxide, followed by irradiating the water with ultraviolet (UV) radiation. As a result of these reactions, the organic compounds are transformed to less harmful compounds. Advantages of this process are that the contaminants are destroyed rather than being transferred to another media and that it does not generate significant air emissions or other residual waste that will require further treatment. Furthermore, this technology is also applicable to highly soluble contaminants, which are not effectively treated with the carbon adsorption technologies. Potential disadvantages are high operating costs (electrical power and chemical oxidizers) and reduced effectiveness if ozone-demanding or hydroxyl radical-trapping substances occur in the water. In addition, post-treatment using carbon adsorption may be necessary to remove incomplete oxidation byproducts.

UV-enhanced chemical oxidation is a highly effective technology that is applicable for the treatment of all VOCs found in the Campus Area groundwater. This technology is considered low to moderately implementable and does not generate significant air emissions or residual wastes that will require substantial regulatory permitting. Although this process option has high costs relative to other process options, UV-enhanced chemical oxidation is retained as a potential polishing treatment technology.

### ***Biological Treatment***

As discussed in the enhanced bioremediation *in situ* treatment process option (Section 5.1.3.6), organic contaminants may be readily biodegraded to innocuous end products under the appropriate environmental conditions. The biological treatment of groundwater often involves the induction of oxidized or reduced groundwater conditions, or a combination of both in series, to achieve the desired removal efficiency. Biological treatment systems may be difficult to maintain relative to other treatment alternatives and require the collection and disposal of sludge materials (i.e., waste products).

Despite moderate effectiveness and implementability, biological treatment is characterized by high operational costs and, therefore, screened from further consideration as a process option.

### ***Activated Carbon Adsorption***

One process option for organics removal from both liquid and gaseous phases is activated carbon adsorption. Activated carbon adsorption is most often carried out in a pressurized vessel that contains a bed of granular activated carbon. Contaminated liquid or vapor enters a pressurized vessel and is evenly distributed over the granular activated carbon. As the contaminated stream flows through the activated carbon media, organic compounds are adsorbed onto the micro-porous surfaces of the activated carbon by an electrical attraction. When the porous surfaces of the carbon become saturated with adsorbed organic material, the carbon must be replaced with new or thermally regenerated carbon media. Activated carbon adsorption is a surface attraction phenomenon influenced by several factors including physical properties of the carbon and contaminant compounds, and system characteristics such as dissolved solids concentration, temperature, and pH. Depending on the composition of the waste stream, pretreatment steps such as multi-media filtration or clarification might be necessary to enhance the removal efficiency and life of activated carbon filters. Carbon adsorption is typically used for vapor waste streams when contaminant concentrations are less than 1,000 parts per million by volume (ppmv). Operating life before carbon exhaustion is primarily a function of the flow rate and the concentration of organic compounds in the influent stream.

The majority of VOCs found within the Campus Area exhibit relatively high adsorption capacities, and therefore will be effectively treated with activated carbon. However, the more soluble and volatile compounds such as VC will likely require other treatment technologies to achieve desired removal efficiencies. Furthermore, groundwater within the Campus Area contains several reduced metals (e.g., reduced iron and manganese) that, if not removed or complexed, may oxidize and plug the carbon media.

Overall, activated carbon is considered to be moderately to highly effective. This technology is highly implementable. The costs of carbon adsorption are moderate to high and depend on the frequency of carbon bed exhaustion, which require carbon

replacement or regeneration and disposal of spent carbon and concentrated wastes. Activated carbon adsorption is retained as a process option.

### ***Synthetic Resin Adsorption***

VOCs can be adsorbed using various synthetic resins in place of activated carbon. In contrast to activated carbon, which will adsorb a wide variety of chemicals, synthetic resins are designed to selectively adsorb particular chemicals or families of chemicals. In certain applications, this is advantageous because only chemicals of concern are removed. However, this selectivity may also result in synthetic resins being inappropriate or incapable of treating all contaminants in a waste stream, and overly expensive (because additional resins or treatment trains may be needed) for certain treatment applications where a wide variety of chemicals must be removed. Synthetic resin adsorption systems are typically constructed as on-Site regenerative systems because the resins may be regenerated more than 1,000 times without any loss of adsorptive capacity, and because limited infrastructure exists to perform off-Site recycling of the resins, as is the case with activated carbon. Thus, long-term liabilities common with off-Site disposal of carbon will be limited by using a synthetic resin adsorption system. Also, synthetic resins typically have a greater tolerance for high moisture content vapor streams than activated carbon systems.

Synthetic resin adsorption systems are considered to be only moderately effective and implementable, primarily due to the emerging status of this technology. Furthermore, the presence of elevated suspended solids or solids formed by the precipitation of reduced metals such as iron and manganese can foul the bed requiring possible pretreatment measures. Synthetic resin adsorption costs are considered moderate to high as on-Site regenerative systems generally have greater capital costs than typical carbon adsorption systems that employ off-Site regeneration or disposal, although the operating costs may be lower. Due to the emerging status and potentially high costs of this process option relative to other options, synthetic resin adsorption is screened from further consideration.

### ***Thermal Oxidation***

Thermal oxidation units destroy VOC vapors through thermal destruction mechanisms. In this process, VOC vapors are preheated, thoroughly mixed, and combusted at high temperatures (e.g., 1,200 to 1,600 °F), forming carbon dioxide and water. The primary advantage of thermal destruction is that the contaminant is chemically altered so that it is no longer toxic. Thermal oxidation units are most efficiently applied for treating off-gas containing 1,000 to 5,000 ppmv of combustibles. Thermal oxidation systems require auxiliary fuel (e.g., natural gas or propane) when treating low-concentration waste streams.

Thermal oxidation units are characterized by simple operation and high compound destruction efficiencies. However, it is unlikely that VOC concentrations in the vapor stream to be treated will remain high enough to make this a cost-competitive treatment approach. Furthermore, treated vapor streams will likely require scrubbing processes to remove hydrogen chloride, which makes this option more costly than

other alternatives. For these reasons, thermal oxidation is screened from further consideration as a process option.

### ***Catalytic Oxidation***

Catalytic oxidation is a process very similar to thermal oxidation; however, a catalyst module is attached to the combustion chamber exhaust. The VOC-laden vapor is directly preheated (electrically, or more frequently with natural gas or propane) to reach a temperature to initiate the catalytic oxidation of the VOCs. Then, the preheated vapor stream is passed through a bed of solid catalysts where the VOCs are rapidly oxidized. VOCs are thermally destroyed at temperatures typically ranging from 600 to 1,000 °F. Operating the combustion chamber at temperatures lower than required for thermal oxidation units improves fuel economy when treating dilute waste streams. Catalytic oxidation is best applied for treating off-gas containing 100 to 3,000 ppmv of contaminants.

Catalytic oxidation may be a highly effective technology for discrete vapor waste streams; however, it is unlikely that a catalyst capable of addressing all VOCs of concern for the anticipated waste streams is available. Furthermore, treated vapor streams will likely require scrubbing processes to remove hydrogen chloride, which makes this option more costly than other alternatives. For these reasons, catalytic oxidation is screened from further consideration as a process option.

### ***Vapor Condensation***

Vapor condensation units may be used when the contaminant concentrations are high and waste stream flow rates are low. Condensation is typically accomplished by refrigeration or with liquid nitrogen. The effectiveness of this technology is determined by the vapor pressure and temperature characteristics of the contaminants present. Because condensation of the contaminants is rarely complete, an additional method of treatment is typically required.

Vapor condensation is considered to be an ineffective treatment technology because long-term waste stream contaminant concentrations are expected to be low and flow rates are expected to be high. For these reasons, vapor condensation is screened from further consideration as a process option.

### ***Oxidant-Impregnated Materials***

High-surface-area materials impregnated with chemical oxidants such as permanganate may be used to treat VOC-laden vapor waste streams, especially those with VC. Examples of such materials impregnated with permanganate are zeolite and alumina. The VOC-laden waste streams are passed through canisters containing these materials, resulting in rapid oxidation of the VOC contaminants. The lifespan of a canister depends on both the concentration of VOCs and the flow rate of the waste stream. Once expended, the canisters will require replacement and disposal.

Oxidant-impregnated materials are considered to be moderately effective and implementable, primarily due to the emerging status of this technology. The costs of

this technology are considered moderate to high, depending on the required frequency of canister replacement. Oxidant-impregnated materials are therefore retained as a process option.

#### **5.1.3.7 Disposal**

Disposal technologies are subdivided into on-Site and off-Site discharge. Two On-Site discharge options were considered for the Campus Area: surface discharge of treated water, and discharge of treatment system off-gas to the atmosphere. Similarly, two off-Site discharge options were considered for the Campus Area: discharge of treated water to a storm sewer, and discharge of treated water to a local POTW via a sanitary sewer collection system.

#### **On-Site Disposal**

##### ***Surface Discharge***

This option discharges treated groundwater to a surface feature, such as the Riparian Corridor present at the Site. Effluent limits for surface discharge would be determined based on appropriate NPDES discharge permits. It is anticipated that secondary treatment would likely be required to improve the quality of discharge water. Such steps may require polishing to reduce TDS and sulfate concentrations that are elevated in portions of the Campus Area groundwater.

Surface discharge is considered to be a highly effective disposal alternative. This option is moderately implementable because it will require regulatory permitting. The cost of surface discharge could either be moderate to high relative to other discharge options, with the primary factor based on the degree of treatment required under the NPDES permit. Surface discharge is retained as a process option.

##### ***Atmospheric Emission***

Many of the treatment technologies presented previously in this section transfer contaminants from the liquid to the gas phase. It is possible that, without treatment, the discharge of these contaminants to the atmosphere will exceed state and federal air quality regulations, thereby requiring that the off-gas be treated prior to discharge to the atmosphere. Off-gas treatment is used to remove the contaminants from a vapor stream (e.g., air stripper off-gas) prior to discharge to the atmosphere. Technologies potentially applicable for treating vapors prior to atmospheric emissions were described in Section 5.1.3.6.

Atmospheric emission is considered to be a highly effective disposal alternative, provided that necessary pretreatment of vapors is performed. This option is moderately implementable, as it will require regulatory permitting. The cost of atmospheric emissions is moderate relative to other alternatives. Atmospheric emission is retained as a process option.

## **Off-Site Disposal**

### ***Storm Sewer Discharge***

This option discharges treated groundwater to a storm sewer present within or adjacent to the Campus Area. Discharge of treated groundwater would require an NPDES permit and local public works approval, and a sampling program to meet compliance with discharge permit requirements. As stated in Section 2, groundwater generated from construction activities and groundwater sampling efforts is currently discharged to Centinela Channel under NPDES permit #CAG834001. Groundwater generated from remedial actions may be discharged under the existing permit, provided that the treatment will be sufficient to comply with discharge requirements, and the upper limits of discharge flow are not exceeded. Alternatively, the existing NPDES permit may be modified, and/or additional permits may be requested to meet the demands of treated groundwater discharge generated by implementing remedial actions and future changes to construction dewatering, etc.

Storm sewer discharge is considered to be a highly effective disposal alternative. This option is moderately implementable, as it will require regulatory permitting. The cost of storm sewer discharge is moderate relative to other alternatives. Storm sewer discharge is retained as a process option.

### ***Publicly Owned Treatment Works Discharge***

Extracted groundwater may be discharged to a local POTW provided that the necessary permits may be obtained from the facility and regulatory agencies. Also, a piping network to such a facility must exist to handle the desired flows. The nearest POTW to the Campus Area is the Hyperion Treatment Plant, which is operated by the City of Los Angeles. The Hyperion Treatment Plant is located immediately southwest of the Los Angeles Airport. Pretreatment of groundwater would likely be required to meet applicable discharge requirements.

The implementability of this process option is quite variable and would depend largely on the feasibility of alternative discharge options (e.g., NPDES discharge), and the flows for which an industrial user's permit from the City of Los Angeles would be acceptable. For low flow rates (e.g., less than 50,000 gallons per day), the implementability would be considered moderate to high, while higher flow rates would be considered to have a low implementability. The discharge to a POTW has been retained for further consideration, pending further evaluation of the other discharge flows and alternative process options. This option, if allowed, would be highly effective with moderate to high costs depending on the level of pretreatment required.

## **5.1.3.8 Summary of Retained Technologies and Process Options for Groundwater**

The evaluation of retained technologies and process options is based on criteria including effectiveness, implementability, and cost. Table 5-3 summarizes the technologies and process options that were considered, the relative ranking for the three criteria, and whether the alternative was retained or screened from further

consideration. Each of the retained process options is considered for further evaluation in Section 6 as part of the development and description of remedial action alternatives.

## **5.2 Remedial Technologies and Process Options for Soil**

Typically, an evaluation of remedial technologies and process options is performed to identify the preferred remedial technology, as was done with groundwater in previous sections. However, because a majority of the known contaminants are VOCs, SVE is the most appropriate remedial technology. Excavating soil impacted by non-volatile contaminants, such as metals, is also applicable. In addition, excavation is also applicable for removing historical source area equipment (e.g. clarifiers). Excavation and SVE are remediation technologies with long and proven track records for addressing VOCs in soils. In addition, excavation is a proven technology for addressing non-volatile contaminants such as inorganic compounds.

This section describes the tasks associated with using excavation and/or SVE. Detailed explanations and plans for each source area requiring remediation of soil are presented in Section 8. In addition to the active soils remediation to be accomplished via excavation and/or SVE technologies, infiltration of direct precipitation and runoff will be impeded by a number of features of site development. Development features including buildings, asphalt roadways, and concrete areas all serve to restrict the percolation of water at the ground surface. In this manner, the potential for leaching of limited residual contamination that may remain after active remediation will be further reduced. Because these features of the Campus Area development are not explicit components of the soils or groundwater remediation, they are not quantitatively evaluated herein. Their contribution to the protection of the groundwater resource should be fully acknowledged, however.

### **5.2.1 Soil Vapor Extraction**

SVE removes VOCs from soil without excavation and will be used in situations where excavation of soil is insufficient or not feasible to meet ROs. SVE may be considered for use alone, or in conjunction with, excavation activities. DPE, which was considered in Section 5.1.3.5 and retained for further consideration, combines SVE with groundwater extraction at a single extraction well.

An SVE (and DPE) system typically consists of a blower, a control panel, an air-water separator, a particulate filter, valving, gauges, piping, and a vapor treatment system. The type of vapor treatment system selected is based on the nature and concentrations of the contaminants. Petroleum hydrocarbons can be treated with catalytic or thermal oxidizers or granular activated carbon (GAC) vapor treatment vessels. Chlorinated hydrocarbons may require additional off-gas treatment for hydrochloric acid with oxidizers, or additional treatment for VC, if present, with GAC and oxidant-impregnated material vessels (Section 5.1.3.6). A schematic of a typical DPE extraction system is provided in Figure 5-1, *Schematic of Dual Phase Extraction System*.



An SVE extraction system would be similar to that of a DPE extraction system, although the screened interval would be limited to the unsaturated zone soils and no groundwater extraction or treatment would be occur.

An SVE (and DPE) system requires the installation of extraction wells within or near the zone of contamination. SVE wells would be installed at each appropriate location, along with vadose zone monitoring points to measure the vadose zone area of influence.

SVE (and DPE) is considered to be moderately to highly effective because it has the potential of meeting all ROs for unsaturated portions of the upper Bellflower aquitard, provided that the lithology of this unit is permeable enough to allow for an effective vapor extraction flow rate. The implementability of SVE (and DPE) is moderate, with the collection and treatment of off-gas vapors and groundwater (DPE only) requiring treatment and regulatory permit. The cost of SVE is considered moderate.

The no-action response was retained as a baseline alternative.

## Section 6

# Development of Remedial Alternative

The purpose of this section is to develop remedial alternatives to address soil and groundwater contamination within the Campus Area. The remedial alternatives for groundwater are formed by using combinations of general response actions, remedial technologies, and process options that survived the screening processes in Section 5. Remedial alternatives for soil include either excavation or SVE, which were the two methods considered appropriate for active remediation of soils within the Campus Area. The description of the remedial alternatives presented in this section provides a conceptual-level understanding of each alternative, sufficient to allow comparison of the alternatives in Section 7. The selected remedial alternative is developed in more detail in Section 8.

### 6.1 Development of Remedial Alternatives for Groundwater

The retained general response actions, remedial technologies, and process options for groundwater from the screening processes in Section 5, (summarized in Table 5-3) are:

- No Further Action;
- Monitored Natural Attenuation (includes monitoring and evaluating a variety of naturally-occurring physical, chemical, and biological processes);
- Institutional Controls (includes use restrictions (e.g., use and deed restrictions) and public education to limit exposure to potentially impacted media);
- Hydraulic Containment (includes source area capping and stormwater diversion and control measures to limit surface water recharge and contaminant mobility);
- Groundwater Collection/Extraction (includes groundwater extraction wells and/or DPE wells to remove contaminant mass in groundwater and/or soils and control contaminant migration);
- Treatment (in situ treatment via enhanced biodegradation, and ex situ treatment of various wastes using air stripping, UV-enhanced chemical oxidation, activated carbon adsorption, and oxidant-impregnated materials); and
- Disposal (includes on-Site discharge of treated groundwater, and discharge of treatment system off-gas to the atmosphere, as well as off-Site discharge of treated water to a storm sewer, and discharge of groundwater to a local POTW).

These retained remedial technologies and process options were combined to create four remedial alternatives for the Campus Area groundwater:

1. No Further Action;
2. Monitored Natural Attenuation;
- 3A. Enhanced Biodegradation in Source Areas and Monitored Natural Attenuation Downgradient (Note the term "Downgradient" refers to those portions of the Campus Area that are hydraulically downgradient of the former Plant Site from where the source areas are located); and
- 3B. Groundwater Extraction in Source Areas and Monitored Natural Attenuation Downgradient

## 6.2 Description of Alternatives for Groundwater

Process options contained within each alternative are shown in Table 6-1, *Remedial Technologies and Process Options Comprising the Remedial Alternatives*. In some instances, the process options are common to all of the alternatives, while in other cases; the process options are common to only one or two alternatives. The process options included in the alternatives are described in the following sections.

### 6.2.1 Process Options Common to Each Alternative

#### 6.2.1.1 Use Restrictions

Use restrictions for the Campus Area exist, and are being updated currently to add explicit restrictions on groundwater use. For each alternative presented in this section, these use restrictions will explicitly restrict groundwater use within the Campus Area during and after construction and implementation of all components of the remedial alternative.

Prospectively, PCC anticipates that other deed restrictions, CC&Rs and/or or negative easements may be implemented that would apply to the ownership or use of the property and further restrict potential uses and activities on the Site to prevent potential exposure.

#### 6.2.1.2 Source Area Capping and Stormwater Diversion and Control

As part of the Campus Area development, a reduction in surface water infiltration is expected through various source area capping and storm water diversion and control measures. Capping will be accomplished through the construction of new buildings and infrastructure (e.g., parking structures, sidewalks, and roads). Similarly, construction of storm water drains and surface grading and other storm water management completed as part of the development will limit surface water run-on near source areas. Both measures will reduce surface water infiltration that during conditions of high rainfall otherwise accumulates and percolates through the soils, a circumstance which increases the mobility of contaminants. Thus, these measures

will limit the mobility of contaminants in source area soils and their vertical migration to groundwater.

### 6.2.2 Alternative 1 - No Further Action (Includes Monitoring)

The no further action alternative provides a baseline for comparison to other alternatives. In this alternative, by definition, no remedial actions are taken to control groundwater contaminant migration from or within the Campus Area, with the exception of capping and stormwater diversion and control measures which will occur as part of the Campus Area development.

### 6.2.3 Alternative 2 - Monitored Natural Attenuation

MNA is an *in situ* remedial technology that relies on the natural fate and transport, and attenuation, processes to mitigate contaminant concentrations. The effectiveness of the MNA technology is evaluated through groundwater monitoring of contaminant concentrations. Contaminant mass bound to saturated soils and in groundwater is expected to decrease with time under MNA.

A brief evaluation of the fate and transport of contaminants, including natural attenuation processes occurring within the Campus Area, is presented in Sections 2.4 and Appendix E. Because the fate and transport properties, and therefore the attenuation characteristics, of the two main water-bearing units (i.e., Bellflower aquitard and Ballona aquifer) are significantly different, the two units are described separately in the following subsections. Additional remedial actions for groundwater (e.g., groundwater extraction) are not considered under this alternative; however, remedial actions for soils would be addressed, as necessary, through excavation or SVE (Section 6.3).

#### 6.2.3.1 MNA in the Bellflower Aquitard

The primary mechanisms for natural attenuation within the Bellflower aquitard appear to be biodegradation and retardation. MNA would be an effective remedial technology provided that the integrated effects of natural attenuation mechanisms bring about a reduction in contaminant mass and attenuation of COC concentrations below levels of concern. Under this alternative, groundwater data would be collected to document the active processes in contaminant mass reduction/attenuation and to predict the future migration and concentrations of COCs in the groundwater.

As presented in Section 2, both a low flow setting and biotransformation of VOCs have contained the majority of the contaminant plume in close proximity to the source areas in the Bellflower aquitard. The generally high organic content (see data in Appendix C) and low permeability of the soils in this unit appear to have limited the contaminant plume from significant horizontal migration in this unit. However, the contaminant plume has moved vertically into the relatively more permeable Ballona aquifer, and subsequent lateral contaminant movement has occurred in this unit.

After collecting initial data required to predict future contaminant migration or attenuation, a long-term monitoring plan is required for MNA. The long-term monitoring would be used to document and verify the predictive results. Assuming a sufficient number of monitoring wells exist to document the migration and fate of the contaminant plume, Bellflower aquitard monitoring wells located between the Campus Area perimeter and the former Plant Site (e.g., wells C-80be through C-83be) would serve as sentinel wells to document that the limited horizontal contaminant plume in this water-bearing unit does not migrate to the property boundary. Sampling and groundwater analyses under an approved monitoring program would be conducted semi-annually. Because groundwater movement in this unit is expected to be only approximately 10 to 20 feet between sampling events (or approximately 20 to 40 feet/years) based on hydraulic conductivity data from Section 2, and the contaminants would be further retarded by the generally impermeable silty-sand and high organic soils. Monitoring would collect data for VOCs, electron acceptors, metabolic byproducts, and potential electron donating compounds.

#### 6.2.3.2 MNA in the Ballona Aquifer

Groundwater contamination from the Bellflower aquitard has also migrated vertically into the Ballona aquifer, where the primary mechanisms for natural attenuation are significantly different. By contrast, the soluble contaminants are not significantly retarded in the gravel-sand lithology of the Ballona aquifer. The comparatively lower organic carbon content of soils (generally an order of magnitude lower than found in the Bellflower aquitard – Appendix C) helps to explain the decreased retardation in the Ballona aquifer. In addition, preliminary evaluations (Section 2.4 and Appendix E) suggest that only limited biodegradation may be occurring once the contaminants enter the Ballona aquifer. This condition is likely due to the low concentration and rapid biological utilization of dissolved organic carbon (DOC) entering the Ballona aquifer simultaneously with the VOCs, as well as elevated concentrations of sulfate that interfere with reductive dechlorination reactions.

Although contaminants are not significantly retarded in the Ballona aquifer, the relatively low organic content and high permeability soils of the Ballona aquifer allow for rapid dispersion. VOCs are attenuated as the plume migrates downgradient in the Ballona aquifer, and have not migrated vertically below the Ballona aquifer to any significant extent.

Under this alternative, additional information would be collected to assess the level of natural attenuation that is occurring in the Ballona aquifer. The most significant attenuation mechanism in the Ballona aquifer appears to be dispersion through horizontal transport in this aquifer, and to a lesser extent, biodegradation and adsorption.

After establishing the rates of attenuation by the various mechanisms active within the Ballona aquifer, long-term monitoring will collect data to simulate the fate and transport of the contaminant plume and to predict the future extent of contaminants concentrations. Simple analytical models should be sufficient to predict the two-

dimensional transport of the contaminant plume in this semi-confined aquifer. Assuming a sufficient number of monitoring wells exist to document the migration and fate of the contaminant plume, perimeter wells in the Ballona aquifer would serve as sentinel wells. Sampling and groundwater analyses under an approved monitoring program would be conducted semi-annually and would include analyses for VOCs, electron acceptors, metabolic byproducts, and potential electron donating compounds. Groundwater movement in this zone is expected to be approximately 15 to 50 feet between sampling events (or approximately 35 to 100 feet/year), and because of lower retardation factors in this gravel and sand aquifer, higher advective movement of the contaminant plume is expected.

Results from this monitoring would be used to trigger contingency remedial evaluations or actions if elevated concentrations of VOCs than expected migrate into areas of lower VOC concentrations (see Section 9). Under this MNA alternative, if such a trigger threshold were exceeded, the remedial actions described below for Alternatives 3A and B would be implemented.

#### 6.2.4 Alternative 3A – Enhanced Biodegradation in Source Areas and MNA Downgradient

Alternative 3A includes all of the elements of Alternative 2 and adds EAB treatment to the source areas in the Bellflower aquitard and the areas of vertical migration in the Ballona aquifer. EAB is a groundwater remedial technology that requires injecting sufficient biodegradable organic carbon (electron donor) into an aquifer to stimulate the rapid reductive dechlorination of VOCs. By inducing highly reduced groundwater conditions, EAB may improve both the extent and rate of dechlorination reactions. The available data indicate a microbial community exists that is capable of dechlorinating COCs (e.g., TCE and 1,1,1-TCA) to innocuous end products such as ethene and ethane. A key assumption is that the Campus Area groundwater has relatively low levels of competing electron acceptors, such that only a minimal addition of organic compound is necessary to achieve and sustain a highly reduced groundwater environment. Otherwise, EAB may not be cost-effective.

This alternative focuses on the *in situ* reduction of contaminant mass in both aquifers to achieve ROs. EAB within source areas would reduce the contaminant mass in the Bellflower aquitard and consequently, reduce VOC mass migration into the Ballona aquifer. In the Ballona aquifer, EAB would reduce VOC migration downgradient by reducing the mass at locations where it enters from the overlying Bellflower aquitard. Thus, EAB would be implemented only at points where VOC mass migrates vertically into the Ballona aquifer. MNA would be implemented in downgradient areas of the contaminant plume.

The brief evaluation of biogeochemistry parameters presented in Section 2.4 and Appendix E has been used to assess the potential for implementing this alternative. As described for Alternative 2, the hydrogeology and biogeochemistry of the Bellflower aquitard and Ballona aquifer are significantly different and, therefore, the

rate and extent of enhanced reductive dechlorination would be different. Therefore, EAB for each of the two units is described separately in the following subsections.

#### **6.2.4.1 Enhanced Anaerobic Biodegradation in the Source Areas Bellflower Aquitard**

This alternative would include injection of a concentrated electron donor solution (e.g., sodium or ethyl lactate) in the generally silty-sand, high-organic content soils within the source areas. The conceptual design assumes a delivery radius of influence of approximately 10 feet using injection wells, or a larger treatment zone through the use of recirculation wells. The actual injection method would be determined during remedial design activities and would be dependent on the source area hydrogeologic conditions within the saturated regions of the upper and lower Bellflower aquitard. Sulfate concentrations in the Bellflower aquitard are generally in excess of 1,000 mg/L (see Appendix C); thus, it is anticipated that optimal treatment would take several months to sufficiently lower this competing electron acceptor to allow more rapid detoxification. Electron donor concentrations from a single injection are expected to persist in the Bellflower aquitard for several months due to low transport potential from the target area. The actual injection frequency and radius of influence would be determined during the remedial design. It is anticipated that enhanced biodegradation of VOCs would be evident within a 6-month period.

Evaluation of the effectiveness of EAB requires monitoring for declining sulfate and VOC concentrations to measure the shift of contaminant mass to the detoxification products, ethene and ethane. The conceptual design includes five new monitoring wells in the Ballona aquifer and five new wells in the Bellflower aquitard to monitor the reduction in contaminant mass, changes in biogeochemistry of the groundwater near the source areas, and distribution of the substrate over the contaminated area. Sampling and groundwater analyses would be conducted quarterly for the first year, then semi-annually until ROs are achieved. These analyses would include VOCs, electron acceptors, metabolic byproducts, and potential electron donating compounds under an approved monitoring program. In addition, MNA sampling would be conducted at monitoring wells in the downgradient plume, but not the source wells, as described under Alternative 2.

#### **6.2.4.2 Enhanced Anaerobic Biodegradation in the Source Area Ballona Aquifer**

EAB in the Ballona aquifer targets contaminant concentrations in the gravel/sand below the source areas in the Bellflower aquitard. This alternative includes an array of injection wells screened in the gravel/sand of the Ballona aquifer beneath the source areas, or the use of recirculation wells.

Under the injection array scenario, electron donor solution (e.g., sodium or ethyl lactate) would be injected with water to dilute the electron donor concentration and drive it from each injection point. Current estimated groundwater velocities in the Ballona aquifer range from 0.2 to 0.6 feet/day. Under this flow range, it is assumed that the dispersion and biotransformation of electron donor would require re-injection

of high strength lactate every 120 days. Electron donor solutions would be injected at concentrations not to exceed 2,000 mg/L *in situ*. The injection arrays would be plumbed in series to allow equal distribution of substrate by a pump from a holding tank. Periodic injections would not require a storage tank. The actual injection concentration and timeframe would be determined with data from pump tests performed during the remedial design.

An engineering design test would be required to determine the rate of substrate utilization and dispersion through the aquifer. This test would likely operate for a period of several months. Data collected would include sulfate reduction rate, substrate utilization rate, and production of detoxification products (e.g., ethene and ethane).

Evaluation of EAB for this alternative includes monitoring for declines in sulfate and VOC concentrations with a continual shift of contaminant mass to the detoxification products, ethene and ethane. The conceptual design includes five new downgradient monitoring wells in the Bellflower and five new wells in the Ballona to monitor for the reduction in contaminant mass, changes in biogeochemistry of the groundwater, and distribution of the substrate over the contaminated area. Sampling and groundwater analyses would be conducted quarterly for the first year and semi-annually until ROs are achieved. These analyses would include VOCs, electron acceptors, metabolic byproducts, and potential electron donating compounds under an approved monitoring program. In addition, MNA sampling would be conducted at monitoring wells in the downgradient plume, but not the source wells, as described under Alternative 2.

#### **6.2.4.2 Enhanced Anaerobic Biodegradation in Vadose Zone Soils**

Under this alternative, two approaches would be evaluated for remediating those source areas that have vadose zone soils above HBRGs. Preferably, EAB would be implemented in such a way as to target the vadose zone soils. This could be done by injecting the amendments above the targeted soils and allowing infiltration of the amendment to enhance biodegradation of the vadose zone contaminants *in situ*. Alternatively, SVE would be used for vadose zone treatment at these source areas. The selection of the most appropriate approach would be made during the RD.

### **6.2.5 Alternative 3B – Groundwater Extraction in Source Areas and MNA Downgradient**

Alternative 3B consists of the MNA elements described for Alternative 2 together with groundwater extraction in source areas.

#### ***Source Area Groundwater Extraction***

Groundwater extraction under this alternative is intended to remove VOC mass from groundwater associated with identified source areas. Although the extraction wells would be located primarily for mass removal purposes, they would also be sited to contain contaminant migration as a secondary objective. VOC mass removal has



distinct and quantifiable advantages to enhance VOC plume control by reducing high concentrations of VOCs within the source areas.

The final design for the extraction system would be determined through data collection, modeling, and evaluation efforts during the remedial design. A conceptual approach has been developed for a groundwater extraction and treatment program for this alternative evaluation. The conceptual extraction system consists of three types of extraction wells: one for the upper Bellflower aquitard, one for the lower Bellflower aquitard, and one for the Ballona aquifer. In some instances, DPE would be used to address vadose zone and saturated zone remediation concurrently with groundwater remediation.

#### *Upper Bellflower Aquitard*

DPE would be used to extract groundwater from the uppermost water-bearing unit. DPE has the advantage of not only extracting groundwater, but also further removing VOCs from previously saturated soils via volatilization within an induced cone of depression. In addition, if VOCs were present within the vadose zone in the vicinity of the DPE well, they would be removed via the vapor extraction effects of DPE. This remediation of vadose zone soils would protect further contamination from the underlying groundwater. To monitor performance of DPE, new monitoring wells screened in the upper Bellflower aquitard and a limited number of vapor monitoring points would be installed. The number and location of DPE wells, performance monitoring wells, and vapor monitoring points would be determined by the extent of soil contamination above remediation trigger values.

DPE engineering design testing would be required at the time of implementation to collect design data concerning the achievable ZOI at different extraction rates. For the purposes of this RP, it is assumed that a ZOI of 20 feet is achievable at a groundwater extraction rate of approximately 1 gpm and a vapor extraction rate of approximately 50 standard cubic feet per minute (scfm) per DPE well. The assumed drawdown of water table would be approximately 7 feet at the DPE well.

Several design assumptions have been made about the layout and size of the DPE system in order to evaluate the cost of this component of the alternative. The remedial design would revisit these assumptions subsequent to collecting additional groundwater data with considering Campus Area construction plans that would be available during design activities. Conceptually, there would be the option for a central vapor treatment unit housed within the groundwater treatment system or satellite treatment systems depending on technical feasibility, cost, and development needs. Extracted groundwater and vapors would be piped to treatment systems for processing. Blowers would be used for vapor extraction and be capable of inducing a vacuum of approximately 15 inches of mercury at the wellhead.

#### ***Lower Bellflower Aquitard***

It has been assumed that an extraction rate of 5 gpm is required to achieve a capture zone of approximately 100 feet per well within the lower Bellflower aquitard. Extracted groundwater would be conveyed in pipelines to a new treatment plant (described below). The location of wells and piping would take into account development plans and would be coordinated with the project developer.

#### ***Ballona Aquifer***

For this unit, it has been assumed that a pumping rate of 25 gpm is needed to produce a groundwater capture zone approximately 1,300 feet in diameter.

#### ***Groundwater and Vapor Treatment***

As discussed in Section 5.1, extracted groundwater would be discharged either for reuse in the Riparian Corridor, the current, permitted storm sewer discharge into Centinela Creek Channel (east of Centinela Avenue and south of Teale Street), or to a POTW. Additional analysis would be performed during remedial design to select the discharge option and to determine the type of treatment that would be required.

Currently, there is a groundwater treatment plant located to the north of Buildings 1 and 2 in the Campus Area. This plant is treating groundwater that is produced from construction dewatering and groundwater sampling activities. It is assumed, however, that this plant would not be available for use in this alternative. Instead a new treatment plant would be constructed in the Campus Area.

For alternative costing and evaluating purposes, it is assumed that extracted groundwater would be treated, as necessary depending on ultimate disposal requirements, for VOC removal using shallow tray air strippers with vapor treatment by activated carbon adsorption. Because VC is poorly adsorbed on carbon, the activated carbon unit vapor effluent would flow through a second unit containing zeolite coated with potassium permanganate. The permanganate units would remove VC in the vapor phase by chemical oxidation. It should be noted that some contaminants exist in groundwater that may not be effectively treated using air stripping technologies, such as 1,2-DCA and MC. However, these contaminants are only observed in localized areas and occur at low enough concentrations such that air stripping methods on a combined waste stream may be sufficient for treatment. If, however, air stripping is demonstrated to be not adequate, additional treatment may be required to address such contaminants (e.g., wellhead treatment at select locations using oxidative technologies).

For air stripper off-gas, two parallel vapor treatment units would be used. The vapor treatment units would be sized to treat vapors from both the DPE system and off-gassing from the air strippers (if centrally treated). The total vapor flow would be divided into two streams, each processed by activated carbon units in series and a single zeolite/potassium permanganate unit for VC polishing.

### 6.3 Development of Remedial Alternatives for Soil

As described earlier, the majority of the known contaminants are VOCs and would be addressed using SVE, or DPE, as the preferred remedial technology. However, soil impacted by non-volatile contaminants, such as inorganic compounds (e.g., metals), would be addressed using excavation. Excavation would also be performed, as appropriate, to remove any historical source area equipment (e.g., clarifiers). As noted previously in Section 5.1, the effectiveness of soil remediation will be further enhanced by various "capping" features of the Campus Area development, including buildings, roadways, and selected landscaped areas. Although not an actual component of the remedial measures discussed in this RP, the benefits of impeding the infiltration of precipitation or surface water are an important consideration in the overall protectiveness of the remedies.

Remedial actions for soil impacted with VOCs would be addressed using SVE (or DPE), as appropriate. SVE would be applied to the unsaturated portion of the upper Bellflower aquitard, while DPE would be applied to both the unsaturated and saturated portions of the upper Bellflower aquitard as described in Section 6.2. This remediation of vadose zone soils would be protective of further contamination of the underlying groundwater. To monitor performance of SVE, vapor monitoring points would be installed. If DPE were implemented, then additional monitoring wells screened in the upper Bellflower aquitard may be installed to monitor groundwater, as necessary. The number and location of SVE/DPE wells, vapor monitoring points, and performance monitoring wells would be determined by the extent of soil contamination above LSRT values.

SVE/DPE engineering design testing would be required during remedial design to collect design data concerning the achievable ZOI at different extraction rates. For the purposes of this RP, it is assumed that a ZOI of 20 feet for the SVE system, or vapor portion of the DPE system would be achieved. It is assumed that the vapor extraction rate would be approximately 50 scfm per DPE well.

The remedial design would revisit the above assumptions subsequent to the collection of additional data and with consideration of Campus Area construction plans that would be available during design activities. Conceptually, there would be either a central vapor treatment unit housed within the groundwater treatment system or satellite treatment systems (depending on cost and/or development needs). Extracted vapors (and groundwater) would be piped to treatment system(s) for processing. Blowers would be used for vapor extraction, each capable of inducing a vacuum of approximately 15 inches of mercury at the wellhead. Vapor treatment would be accomplished by the methods described in Section 6.2.5.

Excavation would be performed to address non-volatile contaminants (e.g., metals) or removal of source area equipment, as needed. The proposed areas of excavation would be based on the data obtained from the existing investigations. Additional information regarding the necessary depths and areal extents of excavations would be obtained during the implementation of the proposed remedial actions, which would

be used to supplement and guide the excavation activities, as appropriate (see Section 5.2). Based on field screening and confirmatory soil sampling results, the excavations may be extended laterally and vertically.

## Section 7

# Evaluation of Remedial Alternatives

This section evaluates remedial alternatives developed in Section 6 with regard to seven evaluation criteria based on similar criteria used for CERCLA remedial actions. Although CERCLA is not applicable to this Site these criteria provide a meaningful approach for evaluating the remedial alternatives developed in Section 6.

The seven criteria for comparing the developed alternatives are:

- Overall protection of human health and the environment;
- Compliance with ROs;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume through treatment;
- Short-term effectiveness;
- Implementability; and
- Cost

The seven evaluation criteria fall into two categories, namely threshold criteria and primary balancing criteria. Threshold criteria are requirements that each alternative must meet to be eligible for selection as the preferred alternative. Threshold criteria include overall protection of human health and the environment and compliance with ROs. Primary balancing criteria are used to weigh relative effectiveness and cost among alternatives. These balancing criteria are long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; and cost.

The application of all of the criteria to the four alternatives are discussed below and the results of this evaluation are summarized in Table 7-1, *Groundwater Remedial Alternatives Seven Criteria Evaluation Matrix*.

- Alternative 1 – No Further Action;
- Alternative 2 – Monitored Natural Attenuation;
- Alternative 3A – Enhanced Biodegradation in Source Areas and Monitored Natural Attenuation Downgradient;
- Alternative 3B – Groundwater Extraction in Source Areas and Monitored Natural Attenuation Downgradient;

## 7.1 Protection of Human Health and the Environment

This evaluation criterion addresses the ability of each alternative to adequately protect human health and the environment. The assessment of overall protection also draws on the assessments conducted using other evaluation criteria, especially long-term effectiveness and permanence, and short-term effectiveness.

Each alternative is evaluated against this criterion to determine whether specific elements of each alternative eliminate, reduce, or control risks posed by exposure via potential complete exposure pathways.

### Evaluation of Alternatives

Alternatives 1 and 2 provide the least protection for human health and the environment. Neither alternative has an active engineered component that provides source reduction nor migration control of contaminated groundwater. However, as long as institutional controls regarding groundwater use are in effect, there would not be an increase in the long-term potential for human exposure through groundwater use. Under these alternatives, groundwater contaminants would potentially be allowed to further migrate vertically and downgradient into the Ballona aquifer. However, Alternative 2 includes groundwater monitoring that would provide early warning of contaminant migration at downgradient monitoring wells. Alternative 2 would also fully quantify and document the reductions of VOC mass as a result of the various physical, chemical and biological processes that are inherent to MNA. Although such documentation may indicate significant mass reduction with time, Alternative 2 would rate lower than Alternatives 3A and 3B on a relative scale because it does not include an active engineered component. An advantage of Alternatives 1 and 2 is that there are no risks associated with treatment residuals, because none are created. The relative overall rating for protection of human health and the environment for Alternative 1 is low, and low to moderate for Alternative 2.

Compared to Alternatives 1 and 2, Alternatives 3A and 3B would provide significant reduction in long-term risks to human health and the environment by removing contaminant mass from the source areas, which will result in long-term decreases in VOC concentrations in downgradient areas. MNA would be applied at downgradient locations to fully quantify and document the reductions of VOC mass at downgradient locations and verify the overall protection of human health and the environment. The relative overall rating for protection of human health and the environment for Alternatives 3A and B is high.

## 7.2 Compliance with Remedial Objectives

This evaluation criterion addresses whether each alternative would meet ROs for soils or groundwater in the Campus Area. The ROs developed in Section 3 have two primary objectives: (1) protection of human health, and (2) protection of the groundwater resource. Because the ROs established for protection of human health have the same objective as the first evaluation criterion, the first and second

criteria are essentially the same. This second threshold criterion, therefore, is only meaningful with respect to the resource protection ROs.

### **Evaluation of Alternatives**

Alternatives 1 and 2 do the least to meet the ROs, because neither alternative has an active component to address source area remediation, and both alternatives would allow potential further migration of contaminants. The relative overall rating for compliance with ROs for Alternatives 1 and 2 is low.

Alternatives 3A and 3B have active components designed to meet ROs in source areas, with MNA applied to the downgradient portions of the Campus Area. The main difference between these alternatives is the technology used to reduce VOC mass at source locations (3A uses enhanced biodegradation and 3B uses groundwater extraction, and DPE if applicable). Under Alternative 3B, groundwater extraction at source locations with a DPE component would be accompanied with removal and treatment of soil vapors, which would provide an immediate and added level of conservatism for meeting ROs. Alternatives 3A and 3B would meet the ROs for protection of human health. The relative overall rating for compliance with ROs for Alternatives 3A and 3B is high.

## **7.3 Long-Term Effectiveness and Permanence**

The evaluation of alternatives under this criterion assesses the results of a remedial alternative in terms of the risk remaining within the Campus Area after ROs are met. The primary focus of this evaluation is the extent and effectiveness of the controls that may be required to manage the risk posed by treatment residuals and/or untreated wastes.

Untreated waste primarily refers to groundwater contaminants not removed from the aquifer. Treatment residuals would include spent carbon or oxidant-impregnated material canisters, if used for VOC removal. Remaining risk associated with VOC contaminants not removed from the aquifer relates to the effectiveness of each alternative at preventing or reducing contaminant migration and meeting ROs. Also considered in evaluating the performance of each alternative is the relative magnitude of treatment residuals. The actual types and magnitude of the treatment residuals would depend on the type of treatment technology used.

### **Evaluation of Alternatives**

Alternatives 1 and 2 are ranked lowest for this criterion because neither alternative has an active engineered component that provides migration control or VOC mass reduction at source locations. Although natural attenuation processes (e.g., adsorption, dispersion, and biodegradation) would continue to attenuate contaminant concentrations in the Bellflower aquitard, the rates of attenuation are likely too slow to fully prevent vertical migration and influx of contaminants into the Ballona aquifer without some form of active source control. Thus, contaminated groundwater would potentially continue to migrate vertically from the Bellflower

aquitard to the Ballona aquifer in source areas, and horizontally in the Ballona aquifer in downgradient areas. The potential for further downgradient contaminant migration in the Ballona aquifer exists, although this plume may be currently under steady-state conditions as the result of natural attenuation processes. One other factor: Alternatives 1 and 2 would not generate any treatment residuals. Nonetheless, the relative overall rating for long-term effectiveness and permanence for Alternatives 1 and 2 is low.

Alternative 3A employs enhanced biodegradation to provide VOC mass reduction at source locations. While enhanced biodegradation would result in lower mass of VOCs in the source areas, this alternative could potentially result in limited amounts of untreated mass migrating downgradient of the source areas. However, the risk associated with such migration would be minimal because groundwater contaminants do not exceed HBRG values in downgradient portions of the Campus Area. Regardless, MNA would be employed at downgradient locations to document the extent of VOC migration and mass removal. No treatment wastes would be generated under this alternative.

Under Alternative 3B, groundwater extraction at source locations would result in a reduction of VOC mass at source locations. Similar to Alternative 3A, Alternative 3B would employ natural attenuation processes at downgradient locations. Given the current understanding of MNA in the Campus Area, this would result in a limited amount of untreated mass migrating downgradient of the source areas. In either case (Alternative 3A or 3B), MNA would ensure that any untreated mass migration from source areas is being reduced by naturally occurring processes.

Under Alternative 3B, the primary residual waste generated would likely be spent GAC and zeolite/potassium permanganate from treatment of contaminated groundwater and extracted vapors. The spent GAC and zeolite could potentially be reactivated off-Site. The transportation and reactivation of this residual would be conducted in accordance with applicable regulations and would present minimal long-term risks because contaminants adsorbed to the GAC would be destroyed during the reactivation process. The amounts of treatment residuals produced would be proportional to the contaminant mass-loading rate (i.e., function of contaminant concentrations and flow rates).

The relative overall rating for long-term effectiveness and permanence for Alternatives 3A is high, and moderate to high for Alternative 3B. The difference in ratings reflect the absence of residual wastes generated under Alternative 3A as compared to 3B.

## 7.4 Reduction of Toxicity, Mobility or Volume Through Treatment

This evaluation criterion addresses the preference under CERCLA guidance for selecting remedial actions that employ treatment technologies that permanently and



substantially reduce toxicity, mobility or volume of the hazardous substances as their principal element. This preference is satisfied when treatment is used to reduce the principal threats at a site through destruction of toxic contaminants, irreversible reduction in contaminant mobility, or reduction of total volume of contaminated media.

This evaluation for each remedial alternative focuses on the following factors:

- The treatment processes and the materials to be treated;
- The degree of expected reduction in toxicity, mobility or volume;
- The degree to which treatment is irreversible;
- The type and quantity of treatment residuals that would remain following treatment;
- The amount of material that would be destroyed or treated.

#### Evaluation of Alternatives

Under Alternatives 1 and 2, standing alone, no active treatment would be employed to reduce the toxicity, mobility, or volume of contaminants, although naturally-occurring processes would continue to meet these objectives to a limited extent. The relative overall rating for long-term effectiveness and permanence for Alternatives 1 and 2 is low.

Enhanced biodegradation would be used to address VOC contamination at source locations under Alternative 3A, while Alternative 3B would employ groundwater extraction to accomplish the same goal. Both alternatives would incorporate MNA for downgradient treatment. If enhanced biodegradation were to perform optimally, biodegradation could potentially remove more contaminant mass than groundwater extraction technologies. If conditions for enhanced biodegradation could not be maintained properly, then groundwater extraction would most likely remove more VOC mass. It is important to note that incomplete biotransformation reactions could potentially increase the toxicity of contaminants (e.g., through accumulation of toxic intermediates such as VC). Complete biotransformation reactions, however, would result in the irreversible destruction of contaminants to innocuous end-products *in situ*, without the production of any residual wastes to dispose of at the surface. For comparison purposes, it has been estimated that enhanced biodegradation and groundwater extraction would result in a similar contaminant mass reduction.

The relative overall rating for this criterion is high for Alternatives 3A and 3B.

## 7.5 Short-Term Effectiveness

This evaluation criterion addresses the effects of the alternative during the construction and implementation phase until ROs are met. The following factors are addressed for each alternative:

- Protection of workers and the community. This factor examines risk that results from the construction and implementation of the proposed remedial action and the effectiveness and reliability of protective measures;
- Environmental impacts. This factor addresses potential adverse environmental impacts that may result from the construction and implementation of an alternative. This factor also evaluates the reliability of the available mitigation measures to prevent or reduce potential impacts; and
- Time until ROs are achieved. This factor estimates the time period that would be required to meet ROs.

### Evaluation of Alternatives

Alternatives 1 and 2 do not have significant proactive measures and therefore score low with respect to short-term effectiveness. Alternative 1 has no construction or implementation phase. Alternative 2 does pose slight risks to the workers during construction of new monitoring wells; however, these risks are easily addressed and are not beyond general construction hazards associated with construction projects, and other remedial alternatives considered in this evaluation. Because of the limited construction activities, no significant environmental impacts are expected from Alternatives 1 or 2. These two alternatives score low for short-term effectiveness.

Under Alternative 3A, enhanced biodegradation would be used to reduce VOC mass at source locations. Enhanced biodegradation of chlorinated VOCs requires an acclimation time to overcome the presence of alternative electron acceptors such as sulfate, and would require preliminary testing to provide a basis for design of this technology given the elevated sulfate concentrations. Therefore, the short-term effectiveness is ranked lower for this alternative than for Alternative 3B, which incorporates groundwater extraction and treatment in source areas. It should be noted that enhanced biodegradation may achieve a greater reduction of VOC mass than obtained by groundwater extraction in the long-term. The relative overall rating for short-term effectiveness is moderate to high for Alternative 3A.

Under Alternative 3B, groundwater extraction in addition to soil vapor extraction (through SVE and/or DPE) would occur at source locations. The immediate removal and treatment of soil vapors, in areas of both soil and groundwater concern, using DPE would likely provide an engineered component with short-term benefits in the vadose zone. While EBG would provide greater long-term benefits, the relative overall rating for short-term effectiveness is high for Alternative 3B largely because of the ability of DPE to remove contaminant mass immediately upon startup.

## 7.6 Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation. The evaluation of this criterion would consider the following factors:

- **Technical Feasibility**
  - Construction and Operation - This relates to the technical difficulties and unknowns associated with a technology;
  - Reliability of Technology - This focuses on the likelihood that technical problems associated with implementation would lead to schedule delays or render a selected technology inappropriate or ineffective;
  - Ease of Undertaking Additional Remedial Actions - This includes consideration of potential future additional remedial actions and whether the alternative would interfere or assist in the implementation of additional remedial actions; and
  - Monitoring Considerations - This addresses the ability to monitor the effectiveness of the remedial action and an evaluation of risks of exposure should monitoring be insufficient to detect a system failure.
- **Administrative Feasibility**
  - Coordination with other agencies, including the need for agreements with parties other than RWQCB for construction and operation of the remedy (e.g., grading permits).
- **Availability of Services and Materials**
  - Availability of necessary equipment, specialists, and provisions to ensure any necessary additional resources; and
  - Availability of services and materials plus the potential for obtaining competitive bids.

### Evaluation of Alternatives

#### *Technical Feasibility: Construction and Operation*

The groundwater extraction, treatment, and conveyance technologies included in Alternatives 3B, and the monitoring technologies included in Alternatives 2, 3A, and 3B are widely used. No significant difficulties are expected in construction and operation of these technologies. The enhanced biodegradation components of Alternative 3A would require preliminary *in situ* testing to determine whether conditions can be produced within the formations in a timely fashion to implement

enhanced biodegradation given the elevated concentrations of competing electron acceptors (e.g., sulfate).

***Technical Feasibility: Reliability of Technology***

The groundwater extraction, treatment, conveyance and monitoring technologies in Alternative 3B are generally known to be proven and reliable. For enhanced bioremediation, if preliminary testing results indicate that the delivery of amendments would be difficult; that the amount of required amendment is high; or that sulfate cannot be removed in a timely fashion, then the feasibility of the approach could be affected.

***Technical Feasibility: Ease of Undertaking Additional Remedial Actions***

None of the alternatives would interfere with the implementation of future response actions in the Campus Area.

***Technical Feasibility: Monitoring Considerations***

All alternatives except Alternative 1 include a monitoring program to provide early warning of changes in contaminant concentrations that could require modifications in extraction rates, amendment injection rates, monitoring well locations, or treatment methods to ensure attainment of ROs.

***Administrative Feasibility***

There are not likely to be any significant administrative feasibility issues associated with implementation of Alternatives 1 or 2, although Alternative 2 would require easily obtainable permits for monitoring well installation. Implementation of Alternatives 3A and 3B would require acquisition of permits including but not limited to the construction of extraction wells, treatment facilities, and conveyance piping. In addition, implementing Alternative 3B would require resolution of administrative issues associated with discharge of treated groundwater to the Riparian Corridor, a storm drain, or a POTW. Alternative 3A would require permits for injecting the amendments required for enhanced biodegradation.

***Availability of Services and Materials***

Implementation of Alternative 3B would require fabrication of treatment plant equipment and a treatment building. Required services and materials are available, including qualified contractors for construction and operation of the technologies under consideration. Similarly, services and materials necessary to implement enhanced biodegradation are readily available.

The relative overall rating for this criterion is high for Alternative 1 because there are no significant issues that could impact implementability of this alternative. Alternative 2 rates as moderate to high for implementability due to the need to obtain well installation permitting, and the MNA sampling and reporting that is required as part of this alternative. Alternative 3A is ranked low to moderate because it requires preliminary testing of enhanced bioremediation to evaluate the feasibility of this approach, as well as permits for subsurface injection of amendments. Alternative 3B is

assigned a moderate ranking because of the administrative issues associated with construction and disposal permitting.

## 7.7 Cost

This criterion addresses the total cost of each alternative. This considers likely capital, and Operations and Maintenance (O&M) expenditures. The following cost elements are considered for each alternative:

- Direct capital costs, which include the construction, labor, equipment, land, Site development, and utility service costs;
- Indirect capital costs, which include engineering fees, license and permit costs, startup costs, and contingencies; and
- O&M costs, which include operating labor, maintenance materials and labor, pumping and treatment energy, monitoring, and other post-construction costs necessary for the continuous effective operation of the alternative.

### Evaluation of Alternatives

Alternative 1 has no costs.

Alternative 2 capital costs include installation of new monitoring wells in the Ballona aquifer, development of an MNA sampling plan, and performing MNA modeling. O&M costs include: semi-annual sampling, water quality analysis for VOCs, purge water disposal, reporting, and groundwater modeling support.

Alternative 3A capital and O&M costs include all of the costs indicated above for Alternative 2 plus costs for an enhanced biodegradation system in the source areas. The system would include substrate injection points, additional performance monitoring wells, and injection equipment. The number of amendment injections and locations that would be needed would govern the capital and O&M costs. These costs would be best determined by preliminary testing results and performance monitoring results following the first injection.

Capital and O&M costs for Alternative 3B include all of the costs indicated above for Alternative 2 plus costs for a groundwater (and soil vapor) extraction and treatment system in the source areas. Treated water would be discharged to the Riparian Corridor, a storm drain, or a POTW. The system would include DPE extraction wells, lower Bellflower aquitard and Ballona aquifer extraction wells, performance monitoring wells, and a treatment plant which would likely utilize air stripping with GAC treatment of the off-gas and DPE vapor streams.

It is assumed that the source area extraction and DPE wells would operate for three years, at which time the concentrations of all COCs are assumed to have decreased to below HBRGs and mass removal rates have reached asymptotic levels.

To be consistent with the ratings used for other criteria in Table 7-1, this criterion is used as cost effectiveness rather than cost. For example, the alternative with the lowest cost rates as high for cost effectiveness. For this evaluation, Alternative 1 is ranked high (i.e., lowest cost); Alternative 2 is ranked moderate to high; and Alternatives 3A and 3B are ranked low (i.e., highest cost).

## 7.8 Overall Evaluation of Alternatives

A summary of this evaluation, which highlights differences among alternatives in meeting the seven criteria, is presented in Table 7-1. This table shows that alternatives 3A and 3B had very similar overall ratings. The differences are related primarily to two issues:

- The uncertainty regarding the effectiveness, design parameters, and acclimation times required for EAB implementation weighed against the absence of residual wastes generated at the surface (as compared with groundwater extraction);
- The advantages of EAB implementation in areas where low permeable materials limit the use of groundwater extraction technologies.

It is recognized that EAB in source areas could aid in achieving the ROs. It is necessary, however, to consider the uncertainty associated with this component when selecting the remedial approach. It is proposed that Alternative 3B be implemented as the preferred alternative in such a way as to benefit from supplemental EAB, were appropriate.

Based on the criteria evaluated in this section, Alternative 3B (Groundwater Extraction in Source Areas and Monitored Natural Attenuation Downgradient) is identified as the preferred remedial alternative. Since it is recognized that an EAB component could aid in achieving the ROs, it is proposed that Alternative 3B be implemented as the preferred alternative, with further consideration of the EAB during the early phases of remedial action implementation, as appropriate. This topic is further discussed in the detailed review of the proposed remedial action in the next section.

## Section 8

# Proposed Remedial Action

This section describes the proposed remedial plans for soil and groundwater contamination. It includes discussion of the approach used to select the appropriate remedial technologies for each SA. This section also describes the use and implementation of institutional controls in conjunction with the recommended remedial actions, finally, the approach for implementing the remedial actions.

### 8.1 Overview of Proposed Remedial Action

Remedial activities identified in this section address the areas and media where COC exceedances of the RGs (HBRGs, LSRTs, USRTs, and MCLs) occur, thereby assuring that both human health and the groundwater resource are protected. Exceedances of HBRGs and LSRTs will be the thresholds for selecting active remediation systems, while exceedances of USRTs and MCLs will generally be addressed through passive remedial technologies such as MNA.

As determined in the analyses presented in Sections 5, 6 and 7, the recommended active remedial technology for addressing COC-impacted groundwater is groundwater extraction or DPE/SVE at the source areas, with passive remediation (MNA) of the downgradient portion of the plume. Treatment at source areas will generally consist of groundwater extraction or DPE/SVE for the upper Bellflower aquitard, and groundwater extraction in both the lower Bellflower aquitard and Ballona aquifer. MNA will apply downgradient in the Ballona aquifer, which is the primary unit where low concentrations of COCs extend laterally downgradient from the source areas. Once active remedial measures are completed in source areas, residual concentrations of COCs in source areas are expected to be sufficiently low for application of MNA, consistent with achieving the ROs.

For impacted soil at source locations, vapor extraction (SVE or DPE) for volatile COCs will be the preferred active treatment technology. Excavation will be implemented in areas impacted by non-volatile COCs (e.g., metals). Furthermore, future migration of contaminants to groundwater is expected to be minimized as a result of the construction of impervious surfaces as part of the Campus Area development.

#### 8.1.1 Source Area Remedial Technology Selection

A summary of proposed remedial actions for both groundwater and soil contamination is provided in Table 8-1, *Proposed Remedial Action at Source Areas*. Table 8-1 identifies the specific remedial technologies selected for each source area (i.e., DPE, groundwater extraction, SVE, excavation, and MNA), as well as additional data collection activities required to refine the lateral extent of contamination and to optimize the proposed remedial action. The specific application of the preferred alternative for each source area is discussed below. Additional data collection activities are discussed briefly below and are outlined in Section 8.4, *Remedial*

**Implementation Plan.** A detailed description of additional data collection activities will be provided to the RWQCB prior to implementing the proposed remedial action.

Specific remedial technologies will be implemented within each source area based on a comparison of source area-specific soil and groundwater contamination with the appropriate HBRGs, LSRTs, USRTs, and MCLs.<sup>10</sup> Active remediation of soils is triggered through an exceedance of soil HBRGs or LSRTs, while active remediation of groundwater is triggered through an exceedance of HBRGs. MNA, a passive remedial technology, will be applied in some capacity to all source areas and will be the sole remediation technology for only a limited number of areas. Where the technology applied in one medium (e.g., groundwater) will address contamination in another medium (e.g., soil), the proposed remediation is limited to the most appropriate medium and justification for such action is provided.

The basic decision process is best illustrated by the following subsections which address the question of whether active remediation of soils is triggered (i.e., if soil contamination exceeds HBRGs or LSRTs) in the source areas.

#### **8.1.1.1 Soil Contamination Exceeds HBRGs or LSRTs (i.e., Requires Active Soils Remediation)**

If soil concentrations exceed either soil HBRGs or LSRTs (protection of lower Bellflower aquitard groundwater resource), remediation of the source areas will be accomplished using SVE or soil excavation. Furthermore, active groundwater remediation will be initiated where groundwater COCs exceed HBRGs, or where soils concentrations exceed LSRTs and either (1) the distribution of COCs in groundwater indicate a residual source exists in groundwater, or (2) technical evaluation demonstrates that soil remediation alone may not sufficiently reduce groundwater concentrations. The remedial technology(ies) will be selected from several possibilities including DPE and groundwater extraction. The selected technology(ies) will be used along with passive groundwater remediation (i.e., MNA), as appropriate. The basis for determining when the operation of active groundwater remedial technologies may be turned off in favor of passive remedial technologies, such as MNA, is presented in Section 9, *Monitoring and Contingency Plan*.

If active groundwater remediation is not triggered, MNA for groundwater may be applied in conjunction with either SVE or excavation to address the vadose zone soils that exceed HBRGs or LSRTs.

<sup>10</sup> The HBRGs and LSRTs presented in Section 3 are used to identify areas and media where residual contamination is sufficient to warrant remediation, and to guide the implementation of the most appropriate remedial technology(ies). As such, the HBRGs and LSRTs are used as remediation "trigger" criteria. However, as described previously, the HBRGs and SRTs may not be the final cleanup criteria. For example, if remediation efforts continue to be effective at reducing contaminant levels, remedial systems may continue to operate even after chemical concentrations drop below HBRGs and/or SRTs. The RWQCB will determine final cleanup goals as remediation is completed or further remediation becomes technically infeasible.



#### 8.1.1.2 Soil Contamination is Less Than HBRGs or LSRTs (i.e., No Active Soils Remediation)

Where concentrations of COCs in soils do not exceed soil HBRGs or LSRTs, no active remediation of soils is required. In this case, if underlying groundwater is contaminated above HBRGs for groundwater (suggesting an upgradient source), active groundwater remediation will be implemented, along with or followed by MNA, as appropriate.

Where concentrations of COCs in groundwater do not exceed HBRGs for groundwater, groundwater concentrations will be compared to MCLs and soil concentrations to USRTs. If MCLs are exceeded MNA will most likely be implemented. If USRTs (protection of upper Bellflower units) are exceeded and there are no indications of impacts to groundwater, MNA will most likely be implemented.<sup>11</sup> If neither MCLs nor USRTs are exceeded, no remediation is necessary and the source area can move to NFA status.

IESI estimated the amount of contaminant mass removal from soils that could potentially be accomplished by using the application of soil remedial triggers (i.e., remediation of vadose zone soils at concentrations greater than soil HBRGs and LSRTs). IESI's preliminary calculations are based on a simple radial diffusion model and Site-specific data regarding the lateral and vertical dimensions of impacted vadose zone soils. IESI's conclusions suggest that remediation of vadose zone soils to the HBRG and LSRT values would potentially address 80 to 90 percent of the VOC mass in the vadose zone. When one considers the typical over design of remedial systems (e.g., the addition of extra SVE wells to account for "dead zones" along the perimeter of the targeted remediation area), it is reasonable to expect that the "remediated mass" could potentially exceed the upper-bound mass removal calculated by IESI. IESI's preliminary calculation of VOC mass removed from the vadose zone is attached as Appendix G.

### 8.2 Source Area Specific Remedial Plans

The proposed remedial measures will be accomplished using one or more approaches. Impacted groundwater will be extracted and treated at a central water treatment plant (WTP). Figure 8-1, *Conceptual Layout of Source Area and Downgradient Groundwater Extraction and Treatment System*, provides the conceptual layout of the WTP and related interconnecting pipelines. The WTP will be designed to accommodate groundwater extracted from downgradient wells, if the criterion discussed in Section 8.1.1.2 demonstrates such wells are necessary. Where appropriate, DPE will be implemented to address VOC impacted soil at source locations. Treatment of vapors from DPE wells will occur either at a central treatment system or at strategically located satellite treatment units. Placement of the satellite treatment units will be determined based on a variety of criteria, including cost and development needs. For SA soils impacted by non-volatile contaminants (metals), surgical excavation of the impacted soil will be performed.

<sup>11</sup> MNA will also be used outside SAs identified in this RP where USRTs are exceeded.

A schedule for the remedial measures is proposed in Section 8.5. The following discussion describes remedial measures proposed for each identified source location.

### 8.2.1 SA No. 1 – Former UST South of Building 5

Figure 8-2, *Conceptual Layout of Remediation of Former UST South of Building 5 (SA-1)*, depicts the conceptual layout of one DPE well and two groundwater extraction wells at SA-1. Figure 8-3, *Conceptual Cross-Section for SA-1*, provides the complementary conceptual cross-section for this source area.

DPE will be implemented to address both groundwater and impacted soil such that the ZOI for vapor extraction will encompass locations where VOCs in the upper Bellflower aquitard soil (including existing fill material) exceed LSRTs.

Groundwater extraction from the lower Bellflower aquitard will be performed near former monitoring well C-64. Groundwater extraction in the Ballona aquifer will be performed approximately 50-feet downgradient from the former location of monitoring well C-64. Additional soil samples will be collected north of monitoring well C-64. Soils that exceed LSRTs will be addressed by implementing additional SVE or DPE. Excavation of soils is not anticipated to be necessary as all COCs in soil are volatile and DPE and/or SVE will likely achieve ROs.

### 8.2.2 SA No. 2 – Southwest Corner of Building 12

Figure 8-4, *Conceptual Layout for Remediation of Building 12 (SA-2 and SA-3)*, depicts the conceptual layout for multiple DPE wells and groundwater wells at the southwest corner of Building 12 (SA-2). Figure 8-5, *Conceptual Cross-Section for SA-2*, provides the complementary conceptual cross-section for this source area.

Soil impacted by metals above HBRGs (cadmium and total chromium) will be surgically excavated, while DPE and groundwater extraction will target VOC removal. DPE will be implemented such that the ZOI for vapor extraction encompasses locations where VOCs in upper Bellflower aquitard soils exceed LSRTs. Groundwater extraction will be implemented from the lower Bellflower aquitard and Ballona aquifer in the southwest corner of former Building 12, at locations upgradient of the C-76 monitoring wells.

Additional data collection will include obtaining a grab groundwater sample from the Ballona aquifer in the area downgradient of C-76 and upgradient of C-84. The results from the grab sample will be compared to the RGs (Section 3) and used to evaluate the need for additional groundwater extraction in the Ballona aquifer downgradient of C-76.

### 8.2.3 SA No. 3 – Central Area of Former Building 12

Figure 8-4, *Conceptual Layout for Remediation of Building 12 (SA-2 and SA-3)*, depicts the conceptual layout for DPE and groundwater extraction wells at the central portion of Building 12 (SA-3). Figure 8-6, *Conceptual Cross-Section for SA-3*, provides the complementary conceptual cross-section for this source area.

Surgical excavation of soils will be used to address soil impacted by metals above HBRGs (copper and total chromium), while DPE and groundwater extraction will target VOC removal. DPE will be implemented such that the ZOI for vapor extraction includes locations where VOCs in the upper Bellflower aquitard soils exceed LSRTs. Groundwater extraction will be implemented for the lower Bellflower aquitard at a point located upgradient of monitoring well C-89be.

In addition, a 4-inch diameter monitoring well will be installed downgradient of C-89be and screened in the Ballona aquifer. A grab sample of groundwater will be collected from this monitoring well and the analytical results will be used to evaluate the need for additional groundwater extraction in this area.

### 8.2.4 SA No. 4 – Former Drum Storage Area (near Building 34)

Figure 8-7, *Conceptual Layout for Remediation of the Former Drum Storage Area (near Building 34)*, depicts the conceptual layout for multiple DPE wells and groundwater extraction wells (one screened in the lower Bellflower and one screened in the Ballona aquifer) at SA-4. Figure 8-8, *Conceptual Cross-Section for SA-4*, provides the complementary conceptual cross-section for this source area.

DPE will be implemented such that the ZOI for vapor extraction encompasses soil in the upper Bellflower aquitard where VOC concentrations exceed LSRTs. LSRT exceedances have been observed in two areas: near monitoring well cluster C-74 (at the bottom and margins of the soil excavation performed in 2001 by EEC), and near former monitoring well C-45. Groundwater extraction in the lower Bellflower aquitard will occur immediately upgradient of monitoring well C-74, and near monitoring well C-45. Groundwater extraction in the Ballona aquifer will occur downgradient of these two locations, at a single location between monitoring well C-74 and monitoring well C-75.

### 8.2.5 SA No. 5 – Former UST and Degreaser Pit West of Building 11

Figure 8-9, *Conceptual Layout for Remediation for Former UST and Degreaser Pit West of Building 11 (SA-5)*, depicts the conceptual layout for three DPE wells to be located west of Building 11 (SA-5). Figure 8-10, *Conceptual Cross-Section for SA-5*, provides the complementary conceptual cross-section for this source area.

DPE will be implemented such that the ZOI for vapor extraction will address VOCs in the upper Bellflower aquitard soils that exceed LSRTs; where hydrocarbon sheen has been previously observed in monitoring wells (i.e., TB-04, TB-07, TB-11, and TB-12); and where the benzene HBRG for groundwater was exceeded (TB-12).

#### 8.2.6 SA No. 6 – Building 35

Figure 8-11, *Conceptual Layout for Remediation of Building 35 (SA-6)*, depicts the conceptual layout for seven DPE wells to be located within the northeast corner of former Building 35 (SA-6). Figure 8-12, *Conceptual Cross-Section for SA-6*, provides the complementary conceptual cross-section for this source area.

DPE at the northeast corner of the former Building 35 will be implemented such that the ZOI for vapor extraction will address areas in the upper Bellflower aquitard where soil is impacted by VOCs in excess of LSRTs. Additional soil matrix or soil vapor data may be acquired during the DPE pilot testing to ensure that the ZOI of extraction extends to all areas where soil concentrations exceed the LSRTs.

Groundwater extraction from the lower Bellflower aquitard will be implemented at the northeast corner of the former Building 35 (immediately west of the former chromate waste sump and former neutralization pit). An additional lower Bellflower aquitard groundwater extraction well will be installed, if necessary, to capture groundwater contamination under the northeast quadrant of the former Building 35. A 4-inch diameter Ballona aquifer monitoring well will be installed at the extreme northeast corner of the former building to assess conditions in the Ballona aquifer. If analytical results obtained from the monitoring well samples exceed the RGs presented in Section 3, then the 4-inch diameter Ballona aquifer monitoring well will be converted to an extraction well and groundwater extraction will be implemented at this location.

Application of DPE at the former organic sump (southwest corner of former Building 35) has not been proposed because the exceedance of soil LSRTs for the COC at this location (benzene) was observed below groundwater levels. Furthermore, the benzene observed in the soil samples likely did not originate from the organic sump, and is therefore not a likely source location for the COC observed. Groundwater extraction performed downgradient from this location is expected to address impacted groundwater associated with this location.

#### 8.2.7 SA No. 7 – Storm Drain Discharge Site

Figure 8-13, *Storm Drain Discharge Site (SA-7)*, depicts boring sampling data and associated data for the storm drain discharge site. Figure 8-14, *Conceptual Cross-Section for SA-7*, provides the complementary conceptual cross-section for this source area.

Data collected in 1987 by MEE at C-49 indicated exceedances of LSRTs by MC and benzene. More recently, soil borings advanced in 2001 by EEC at three locations in a radial pattern immediately around C-49 did not detect MC or benzene in soil. Therefore, MNA has been selected as the appropriate remediation method for this location. Monitoring well C-49 will be placed on the MNA sampling list.

#### 8.2.8 SA No. 8 – Sumps, Clarifiers, and Former Vapor Degreaser Northeast Corner of Building 14

Figure 8-15, *Conceptual Layout of Remediation for Building 15 (SA-8 and SA-9)*, depicts the conceptual layout for multiple DPE wells to be installed within the area of Building 15 to address SA-8 and SA-9. Figure 8-16, *Conceptual Cross-Section for SA-8*, provides the complementary conceptual cross-section for this source area.

Three DPE wells and one groundwater extraction well screened in the lower Bellflower are proposed for implementation to address source contamination at the northeast corner of Building 14 (SA-8). The DPE wells will be installed such that the ZOI for vapor extraction will encompass locations where VOCs exceed LSRTs in the upper Bellflower aquitard. Notably, LSRTs are exceeded in only two areas: 1) at former soil boring location 4-1 (near monitoring well C-78be), and 2) at monitoring well C-36.

Groundwater extraction will be implemented in the lower Bellflower aquitard downgradient of monitoring well C-78be. A 4-inch diameter monitoring well will be installed in the Ballona aquifer downgradient of C-78be. If analytical data obtained from the groundwater monitoring well samples exceed the criteria presented in Section 3, then the 4-inch diameter monitoring well will be converted to an extraction well.

#### 8.2.9 SA No. 9 – Existing Clarifier and Former Vapor Degreaser Pit Building 15 Center Bay

Figure 8-15, *Conceptual Layout of Remediation for Building 15 (SA-8 and SA-9)*, depicts the conceptual layout for multiple DPE wells to be installed within the area of Building 15 to address SA-8 and SA-9. Figure 8-17, *Conceptual Cross-Section for SA-9*, provides the complementary conceptual cross-section for this source area.

Four, or potentially five, DPE wells (or SVE wells, as appropriate) are proposed to address source area contamination in the center bay of Building 15 (SA-9). The existing clarifier will be removed. Surgical excavation of soils (in the vicinity of former soil boring 226-11) will be performed to remove soil impacted by PCE above soil LSRTs and/or HBRGs to the extent technically feasible, based on access restrictions. If soils exceeding LSRTs cannot be fully removed, DPE will be implemented such that the ZOI for vapor extraction will encompass soil in the upper Bellflower aquitard that exceed LSRTs. The potential implementation of DPE at this location represents the "fifth" DPE well for SA-9. To supplement existing data, soil

and groundwater samples may be collected in the vicinity of floor trenches. Locations where soil concentrations are found to exceed LSRTs will be addressed using DPE.

Groundwater extraction will be implemented in the lower Bellflower aquitard immediately downgradient of former soil boring 226-11. Groundwater extraction from the Ballona aquifer at a single location along the northern, downgradient edge, of Building 15 will also be implemented.

### 8.3 Downgradient Specific Remedial Plans

As determined in the analyses presented in Sections 5, 6 and 7, the recommended alternative for addressing impacted groundwater includes source area contaminant and MNA for the downgradient portions of the plume. MNA applied to the upper and lower Bellflower aquitard and Ballona aquifer should show a reduction in contaminant mass. As stated previously, the Ballona aquifer is the primary unit where low concentrations of COCs extend laterally downgradient from source areas. As such, implementation of the MNA technology within the downgradient areas of the Campus Area will focus primarily on the Ballona aquifer, although both upper and lower Bellflower aquitard monitoring locations will be included, as needed. The details of the MNA sampling and analyses will be submitted to the RWQCB prior to implementation of the remedial action.

### 8.4 Remedial Implementation Plan

A detailed remedial design (RD) will be prepared prior to complete implementation of the remedial action (RA). By way of example, flow diagrams of the proposed implementation activities for Alternative 3B are provided in Figure 8-18, *Remedial Design Activities*, and Figure 8-19, *Remedial Action Activities*.

#### 8.4.1 Remedial Design

The RD will include preparation of detailed engineering design documents, including plans, specifications, drawings and schedules for implementing each of the components of the remedy. An outline of the activities and data to be developed as part of the complete RD effort will be discussed with the RWQCB. The preliminary design will describe the conceptual design of the system, specify the additional data required to further refine the remedial concepts, and provide the appropriate level of engineering design specifications, construction schedule, and cost estimates to complete the RD. This phase will also include additional data collection required for final design (e.g., vapor permeability, physical parameters, hydraulic conductivity, etc.).

#### Groundwater Extraction in Source areas

Implementation of the DPE component of the remedy will install in phases. This approach will facilitate confirmation of design criteria, including extraction rates and ZOI. The conceptual number of DPE wells and their placement have been designed using a ZOI of approximately 20 feet. Initially, one DPE well will be installed at each of the source areas near the apparent center of contaminant mass based on historical

data. A series of tests will be conducted at this well to validate the appropriateness of the technology; obtain design criteria to ensure appropriate placement and adequate coverage of system; estimate initial VOC mass removal rates; and to size required equipment.

Two types of testing will be performed at the initial well, "quick tests" and "extended test(s)". Both of these tests will use portable DPE equipment and treatment systems. The quick tests will be 1-day test (maximum) and is expected to provide information on the permeability of soils surrounding the test well and on the approximate amount of contaminant mass that is in groundwater and vadose zone soils within the treatment zone of the well. A quick test will be performed at each of the source area locations. The quick test results will be used to determine the placement of additional DPE wells, and to make modifications to design specifications, if necessary. The quick test results will also be used to select one representative location for performing an extended DPE test. The extended test(s) will be conducted for a period of up to five days. Results of the extended test will be used to provide design information for the proposed treatment plant.

Monitoring wells will be installed to collect water level data to estimate the ZOI of the DPE wells during operation. Additionally, triple-depth piezometer clusters will be used for water level measurement. Water level monitoring will be conducted using data-loggers set to logarithmic frequency. Static pressures and groundwater elevations will be periodically checked at nearby monitoring wells.

Vapor monitoring probes will be installed into the vadose zone around the DPE wells. These probes will be used to collect subsurface static pressure and respiration gas data to estimate the ZOI of the vapor extraction portion of DPE.

The groundwater extraction systems in the lower Bellflower aquitard and Ballona aquifer source areas are intended to reduce contaminant mass and limit the migration of contaminants to downgradient areas. Contaminant removal and containment efficiency by these extraction systems require placement of wells based on an understanding of the hydraulic properties of the Campus Area. Existing hydraulic data from previously performed pumping tests will be used to complete the design of the source area groundwater extraction system in the lower Bellflower aquitard and in the Ballona aquifer. No additional aquifer tests in the lower Bellflower aquitard are necessary for the RD of the source area extraction systems. The assumed maximum capture zone width of the source area extraction wells designed for this hydrologic zone will be sufficiently large to contain the areas of concern. These assumptions will be verified, or modified as necessary, during the initial period of DPE operation.

To verify the hydraulic pumping characteristics of the Ballona aquifer and finalize the design of the source area extraction systems, a single groundwater extraction well screened in the Ballona aquifer will be installed in the source areas. This well will be used in step testing during RD to evaluate the relationship between groundwater

capture zone and extraction rates. The proposed step test will be completed for a minimum of three different pumping rates.

Regional hydrogeologic data for the Ballona aquifer have ranged from  $3.1 \times 10^{-3}$  feet per second to 7.7 to  $10^{-3}$  feet per second (DWR, 1961). The need for additional groundwater monitoring wells or piezometers to monitor hydraulic head during the step tests will be evaluated once the location of the extraction well is selected, and based on expected ZOI and the proximity of existing monitoring wells. Existing monitoring wells will be used during the proposed step test, as feasible.

## 8.4.2 Remedial Action Implementation

The RA implementation phase will include construction of the groundwater treatment plant, remaining source area extraction wells, downgradient extraction wells, and remaining portions of the DPE system.

### Groundwater Treatment Plant Construction

The extent of groundwater treatment construction required prior to discharge will be evaluated during RD and will be dependent upon the actual discharge option selected (e.g., reuse in the Riparian Corridor; discharge into Centinela Creek Channel, or to a POTW). It is likely, however, that the selected treatment process would include air-strippers, GAC, and oxidant-impregnated canisters for vapor streams. A conceptual flow diagram for the treatment of extracted groundwater and collected vapor is presented in Figure 8-20, *Groundwater/Vapor Treatment Flow Diagram*. Under this conceptual depiction, the vapor streams would be treated by activated carbon units (in series) and a single zeolite/potassium permanganate unit for VC polishing. The vapor treatment units would be sized to treat vapors from both DPE wells and the air stripping units. The central vapor treatment unit for vapor would consist of two parallel units. At satellite treatment locations specific factors such as anticipated adsorbent bed life may be used to justify a single unit at these locations. The actual treatment requirements and process details will be finalized during RD.

The location of the groundwater treatment plant was selected for this RP by considering several issues, including:

- Minimizing the total length of subsurface piping from the source areas to the treatment system;
- Proximity to treated groundwater discharge location (assumed to be the Riparian Corridor); and
- Minimizing visibility and blending treatment plant in with surrounding features.

The proposed treatment plant location is in the vicinity of former Building 35 and was shown previously in Section 8 (Figure 8-2)



Source area extraction systems will be turned on incrementally as all necessary equipment installation and piping to the treatment plant are complete.

### **DPE Implementation**

The results from the initial DPE well testing will be used to complete the RD for this component of the remedy, including number and location of the remaining DPE wells. The additional DPE wells, equipment and underground piping to the treatment plant will then be installed. DPE system operation will commence in a step-wise fashion when the treatment plant is ready to treat DPE-extracted groundwater and vapors.

### **Source Area Groundwater Extraction Implementation**

Source area groundwater extraction wells in the lower Bellflower aquitard, and those remaining for the Ballona aquifer, will be installed incrementally. Groundwater extraction at these locations will commence in a step-wise fashion when the treatment plant is ready to treat groundwater extracted from these systems, and all necessary piping to the treatment plant is in place.

### **Performance Monitoring Well Installation**

Groundwater monitoring wells will be installed to monitor extraction performance and source removal. These additional monitoring wells will supplement existing monitoring wells and will be used for the performance-monitoring program. The location, aquifer being monitored, groundwater analyses, and sampling frequency will be described in a separate submittal to the RWQCB.

## **8.5 Summary of Approach for Remedial Actions**

The foregoing proposed remedial action plan has been developed through a comprehensive set of steps, starting with identification of ROs and RGs for the Campus Area. Then, a set of remedial technologies and process options were developed that could address the nature and extent of known contamination in the Campus Area, and, in turn refined into a set of four potential remedial alternatives. Using widely-accepted evaluation criteria, a final alternative — 3B Groundwater Extraction in Source Areas and MNA Downgradient — was selected.

This 3B Alternative involves both source area and groundwater remediation. It will also involve active and passive components, as determined by which RGs need to be achieved. At this stage, conceptual layouts of the required remediation have been proposed, but many aspects of the final action will need to be refined during the RD phase. Additionally, as discussed in the next section, the proposed approach will have the flexibility to accommodate new data and other possible contingencies.

## Section 9

# Monitoring and Contingency Plan

This section establishes the basis for the future development of a Monitoring and Contingency Plan (MCP) for the proposed remedial action, Alternative 3B (Groundwater Extraction in Source Areas and MNA Downgradient). Information presented in this section will be expanded in the MCP document that will be submitted to the RWQCB after the completion of RD activities, and prior to RA implementation.

### 9.1 Description of Plan

The overall objectives of the MCP will be three-fold:

- Outline the procedures for establishing a database to optimize the performance and efficiency of the RA, and evaluate shut-down criteria for individual components of the RA;
- Ensure that human health and the environment remain protected during the implementation of the selected remedial alternative;
- Provide sufficient performance-monitoring data to adequately evaluate the ability of the remedial alternative to meet the ROs.

To meet these objectives, the MCP will have a groundwater monitoring program to evaluate the effectiveness of the preferred remedial alternative. Proposed groundwater monitoring activities identified in the MCP will be subject to revision based on a periodic evaluation of data collected during the early phases of RA implementation.

This plan will also describe actions to be taken (i.e., contingencies) in the event that the monitoring or other information reveals that additional steps should be undertaken to protect human health or the environment. The contingencies will be activated by "triggers" that are pre-determined action levels or conditions. Finally, the MCP will present the criteria by which the remedial systems will be shutdown.

### 9.2 Monitoring Program

The monitoring program will be used to monitor performance of the remedial systems in attaining the Campus Area ROs and RGs. The monitoring program component of the MCP will be developed as part of the RD; however, modifications to this program may be appropriate during the early phases of RA implementation based on actual conditions encountered.

The monitoring program data will be used to evaluate changes in the overall extent of the COCs in soils and groundwater in the Campus Area over time. In addition, the groundwater data will be used to:

- Evaluate the mass removal effectiveness of various components of the RA;
- Confirm that the RA is achieving the ROs set for the Campus Area;
- Evaluate the significance of natural attenuation processes throughout the operation of the RA; and
- Evaluate the need to implement contingency measures.

The MCP will include provisions for performance monitoring locations; analytical requirements; field methods; QA/QC guidelines; and reporting requirements.

With respect to monitoring wells, the locations will be selected considering (1) existing monitoring wells (2) the likely location of groundwater extraction wells that will be installed in the RA; and (3) the historical monitoring data results. The MCP will specify the water-bearing unit in which the monitoring wells will be screened, the proposed frequency of sampling, analytical target list, and intended purpose. All proposed monitoring and groundwater extraction wells required by the MCP will be installed during the RA phase.

### 9.3 Contingency Program

The purpose of any contingency program is to establish a mechanism by which meaningful changes in circumstances will be addressed in the design or operation of the remedial systems. Such a program will be structured around "triggers," the action levels or conditions that require a response, and "contingencies," the responsive actions to a trigger. Here, the point of the MCP contingency program is to allow contingency measures to be implemented where the triggers indicate that additional action is needed to protect human health or the groundwater resource. The contingency program that will be developed and submitted with the MCP will cover the following:

- The conditions that trigger a responsive action (i.e., triggers);
- The means of reviewing analytical data obtained from the monitoring program to determine if triggers are met;
- The contingency action to be taken in a response to a triggering event; and
- The reporting requirements when contingencies are triggered.

#### 9.3.1 Identification of Triggers

The types of information or events that would trigger the implementation of a contingency action may be analytical results, observations conducted during the monitoring program, or events like the drilling of a new supply well. Specific triggers will be developed and submitted with the MCP considering the following factors:

- VOC concentration trends;
- Migration of VOCs in groundwater;
- Potential for impact to water supply wells; and
- Natural attenuation.

### 9.3.2 Identification of Contingencies

Contingencies are defined as a systematic set of site-specific, pre-determined responses to triggers that may be encountered during the implementation of a selected remediation alternative. Contingencies will be implemented if data, observations or events indicate that additional action is needed to protect human health or the groundwater resource. In addition, some contingencies may be implemented to modify the scope of the monitoring program in response to changes in field conditions or groundwater quality, thus increasing the flexibility of the monitoring program based on an ongoing evaluation of the results of the monitoring program. Specific contingency measures will be developed and submitted as part of the Campus Area MCP.

At a minimum, the adequacy of ongoing remedial measures and the need for contingency measures will be considered on an annual basis as part of the groundwater monitoring program. Contingency measures will be implemented if groundwater monitoring indicates that additional action is needed to protect human health or the groundwater resource.

Any contingencies implemented and the corresponding triggers will be described in the data submittal or monitoring report prepared following that monitoring event. The MCP will identify any trigger conditions that would cause immediate agency notification upon discovery of the condition.

## 9.4 Shut-down Criteria and Post Shut-Down Monitoring

Performance monitoring data collected in accordance with the MCP will be evaluated to determine the effectiveness of individual components of the RA to meet the ROs, and for terminating portions of the remedial system, as appropriate. The primary performance monitoring data for source area systems are extracted contaminant concentrations and contaminant mass removal time trends. The MCP will contain proposed shut-down criteria for approval by the RWQCB. These criteria will be used to determine final cleanup levels as remediation is completed, or when further remediation becomes technically infeasible. As stated previously, HBRGs and SRTs will be used to identify and prioritize areas in the Campus Area that require remediation. However, the eventual cleanup goals are, to a significant extent, technology-based. Thus, the HBRGs and SRTs may not be the final clean up standards for the Campus Area. It is also expected that the RWQCB would also consider MNA data collected and evaluated

throughout the implementation of the RA. Where appropriate as a remedial response, MNA would continue until submittal of a Campus Area Closure Plan.

#### **9.4.1 Shut-Down of Source Area Extraction**

Source area extraction of both groundwater and vadose zone vapors (collected through the operation of DPE/SVE) would continue until reaching aquifer and media specific shut-down criteria approved by the RWQCB. The rationale that will guide the development of such criteria, which will be submitted in the MCP, is outlined below for each active component of the proposed remedial action:

##### **Shut-Down Criteria for Groundwater Extraction**

Consistent with the ROs, groundwater remediation in the source areas will be undertaken with the dual objectives of protecting human health and the groundwater resource. As such, groundwater extraction from the source area wells will continue, at a minimum, until performance-monitoring results indicate that all COC concentrations are below the RWQCB-approved HBRG values. To address the groundwater resource protection aspect of the ROs, the remediation will further seek to reduce Site COC concentrations to levels equal to MCLs, to the extent technically feasible. As noted previously, MCLs are standards that must be met before water can be supplied as drinking water. This is a highly unlikely scenario, since such water use from the Campus Area groundwater is restricted by CC&Rs and the water has other qualities (taste, color and smell) that make it an unlikely source of drinking water. Nonetheless, the groundwater extraction system will be run until it is no longer technically feasible to achieve MCLs by active remediation. The criteria for determining when this is so will be proposed in the MCP and will be assessed against the performance data that will be collected under the MCP monitoring program. It is also expected that the RWQCB would consider MNA data collected and evaluated throughout the implementation of the RA. Where appropriate as a remedial response that follows active remediation, MNA would continue until submittal of a Campus Area Closure Plan.

##### **Shut-Down Criteria for Vapor Phase Extraction Component of DPE**

Operation of the vapor extraction portion of the DPE or SVE remedy would continue until the effluent vapor concentrations and mass removal rates have reached asymptotic conditions. Rebound testing of the vapor extraction well(s) would be performed on a semi-annual basis for two years to verify that asymptotic conditions have been met.

##### **Post Groundwater and Vadose Zone Vapor Extraction**

It is expected that post-extraction groundwater monitoring of the upper Bellfower aquitard would continue on a semiannual basis for 2 years after the last DPE well has been shut down. If during the period of monitoring the concentration of a COC were found to rebound above the HBRGs, the affected extraction well would be operated until the conditions described above are met again. After 2 years of monitoring of the source area extraction wells, if no exceedances of HBRGs occur, the extraction wells would be permanently shut down. An evaluation of using MNA to address any

residual contamination would be performed prior to requesting closure of the Campus Area active remediation systems from the RWQCB.

## 9.5 Reporting Requirements

Following each monitoring event completed in accordance with the MCP, a data submittal or monitoring report, as appropriate, would be prepared and submitted to the RWQCB. The contents and schedule for these reports will be discussed in further detail upon submittal of the detailed scope of work for the groundwater-monitoring program, which will be submitted prior to the implementation of the RA. On an annual basis, an Annual Summary Report will be submitted to the RWQCB that includes data presented in each monitoring report along with an evaluation of remedial system performance.

The Annual Summary Report will include an evaluation of the potential effectiveness of MNA as compared to active groundwater extraction. Once MNA becomes an approved remedial approach to replace the active remedial components, it would continue until submittal of a Campus Area Closure Plan to the RWQCB.

This section establishes the basis for the future development of a Monitoring and Contingency Plan (MCP) for the proposed remedial action, Alternative 3B (Groundwater Extraction in Source Areas and MNA Downgradient). Information presented in this section will be expanded in the MCP document that will be submitted to the RWQCB after the completion of RD activities, and prior to RA implementation.

## 9.6 Description of Plan

The overall objectives of the MCP will be three-fold:

- Outline the procedures for establishing a database to optimize the performance and efficiency of the RA, and evaluate shut-down criteria for individual components of the RA;
- Ensure that human health and the environment remain protected during the implementation of the selected remedial alternative;
- Provide sufficient performance-monitoring data to adequately evaluate the ability of the remedial alternative to meet the ROs.

To meet these objectives, the MCP will have a groundwater monitoring program to evaluate the effectiveness of the preferred remedial alternative. Proposed groundwater monitoring activities identified in the MCP will be subject to revision based on a periodic evaluation of data collected during the early phases of RA implementation.

This plan will also describe actions to be taken (i.e., contingencies) in the event that the monitoring or other information reveals that additional steps should be undertaken to protect human health or the environment. The contingencies will be activated by "triggers" that are pre-determined action levels or conditions. Finally, the MCP will present the criteria by which the remedial systems will be shutdown.

## 9.7 Monitoring Program

The monitoring program will be used to monitor performance of the remedial systems in attaining the Campus Area ROs and RGs. The monitoring program component of the MCP will be developed as part of the RD; however, modifications to this program may be appropriate during the early phases of RA implementation based on actual conditions encountered.

The monitoring program data will be used to evaluate changes in the overall extent of the COCs in soils and groundwater in the Campus Area over time. In addition, the groundwater data will be used to:

- Evaluate the mass removal effectiveness of various components of the RA;
- Confirm that the RA is achieving the ROs set for the Campus Area;
- Evaluate the significance of natural attenuation processes throughout the operation of the RA; and
- Evaluate the need to implement contingency measures.

The MCP will include provisions for performance monitoring locations; analytical requirements; field methods; QA/QC guidelines; and reporting requirements.

With respect to monitoring wells, the locations will be selected considering (1) existing monitoring wells (2) the likely location of groundwater extraction wells that will be installed in the RA; and (3) the historical monitoring data results. The MCP will specify the water-bearing unit in which the monitoring wells will be screened, the proposed frequency of sampling, analytical target list, and intended purpose. All proposed monitoring and groundwater extraction wells required by the MCP will be installed during the RA phase.

## 9.8 Contingency Program

The purpose of any contingency program is to establish a mechanism by which meaningful changes in circumstances will be addressed in the design or operation of the remedial systems. Such a program will be structured around "triggers," the action levels or conditions that require a response, and "contingencies," the responsive actions to a trigger. Here, the point of the MCP contingency program is to allow contingency measures to be implemented where the triggers indicate that additional action is needed to protect human health or the groundwater resource. The contingency program that will be developed and submitted with the MCP will cover the following:

- The conditions that trigger a responsive action (i.e., triggers);
- The means of reviewing analytical data obtained from the monitoring program to determine if triggers are met;

- The contingency action to be taken in a response to a triggering event; and
- The reporting requirements when contingencies are triggered.

### 9.8.1 Identification of Triggers

The types of information or events that would trigger the implementation of a contingency action may be analytical results, observations conducted during the monitoring program, or events like the drilling of a new supply well. Specific triggers will be developed and submitted with the MCP considering the following factors:

- VOC concentration trends;
- Migration of VOCs in groundwater;
- Potential for impact to water supply wells; and
- Natural attenuation.

### 9.8.2 Identification of Contingencies

Contingencies are defined as a systematic set of site-specific, pre-determined responses to triggers that may be encountered during the implementation of a selected remediation alternative. Contingencies will be implemented if data, observations or events indicate that additional action is needed to protect human health or the groundwater resource. In addition, some contingencies may be implemented to modify the scope of the monitoring program in response to changes in field conditions or groundwater quality, thus increasing the flexibility of the monitoring program based on an ongoing evaluation of the results of the monitoring program. Specific contingency measures will be developed and submitted as part of the Campus Area MCP.

At a minimum, the adequacy of ongoing remedial measures and the need for contingency measures will be considered on an annual basis as part of the groundwater monitoring program. Contingency measures will be implemented if groundwater monitoring indicates that additional action is needed to protect human health or the groundwater resource.

Any contingencies implemented and the corresponding triggers will be described in the data submittal or monitoring report prepared following that monitoring event. The MCP will identify any trigger conditions that would cause immediate agency notification upon discovery of the condition.

## 9.9 Shut-down Criteria and Post Shut-Down Monitoring

Performance monitoring data collected in accordance with the MCP will be evaluated to determine the effectiveness of individual components of the RA to meet the ROs, and for terminating portions of the remedial system, as appropriate. The primary performance



monitoring data for source area systems are extracted contaminant concentrations and contaminant mass removal time trends. The MCP will contain proposed shut-down criteria for approval by the RWQCB. These criteria will be used to determine final cleanup levels as remediation is completed, or when further remediation becomes technically infeasible. As stated previously, HBRGs and SRTs will be used to identify and prioritize areas in the Campus Area that require remediation. However, the eventual cleanup goals are, to a significant extent, technology-based. Thus, the HBRGs and SRTs may not be the final clean up standards for the Campus Area. It is also expected that the RWQCB would also consider MNA data collected and evaluated throughout the implementation of the RA. Where appropriate as a remedial response, MNA would continue until submittal of a Campus Area Closure Plan.

### **9.9.1 Shut-Down of Source Area Extraction**

Source area extraction of both groundwater and vadose zone vapors (collected through the operation of DPE/SVE) would continue until reaching aquifer and media specific shut-down criteria approved by the RWQCB. The rationale that will guide the development of such criteria, which will be submitted in the MCP, is outlined below for each active component of the proposed remedial action:

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### **Post Groundwater and Vadose Zone Vapor Extraction**

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## **9.10 Reporting Requirements**

Following each monitoring event completed in accordance with the MCP, a data submittal or monitoring report, as appropriate, would be prepared and submitted to the RWQCB. The contents and schedule for these reports will be discussed in further detail upon submittal of the detailed scope of work for the groundwater-monitoring program, which will be submitted prior to the implementation of the RA. On an annual basis, an Annual Summary Report will be submitted to the RWQCB that includes data presented in each monitoring report along with an evaluation of remedial system performance.

The Annual Summary Report will include an evaluation of the potential effectiveness of MNA as compared to active groundwater extraction. Once MNA becomes an approved remedial approach to replace the active remedial components, it would continue until submittal of a Campus Area Closure Plan to the RWQCB.

## Section 10

### References

AquaScience Engineers, 1996. *Underground storage Storage tank Tank closures Closures at Maguire Thomas Partners - Playa Vista*. September.

Barrows, Alan G., 1974. *A Review of the Geology and Earthquake History of the Newport-Inglewood Structural Zone, Southern California*, California Division of Mines and Geology Special Report 114.

Blake, Gregg H., 1991. *Review of the Neogene Biostratigraphy of the Los Angeles Basin and Implications for Basin Evolution*, in Active Margin Basins, Kevin T. Biddle, Editor, American Association of Petroleum Geologist Memoir 52.

Brown and Caldwell (B&C), 1999a. *Closure Report, Underground Storage Tanks South of Bldg. 5, Playa Vista Site*, Sept. 2.

B&C, 1999b. *Cleanup plan for SKA Playa Vista Initial Acquired Parcels, Playa Vista Site*, January

B&C, 1998a. *Site Evaluation and Mitigation Workplan for Playa Vista Phase 1 EMTD, Various Demolition Site*, November.

B&C 1998b. *Supplemental Mitigation Workplan for Building 12, Playa Vista EMTD*, November 9.

California Department of Water Resources, Southern District (DWR), 1961. *Bulletin 104: Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County*, Appendix A: Groundwater Geology, Department of Water Resources, State of California.

California Regional Water Quality Control Board, Los Angeles Region (RWQCB), 2000. *Inclusion of Wastewater Generated from Construction Dewatering as an Influent Source to the Treatment System at the Playa Vista Development*. (NPDES No. CAG834001, CI-6839), July 31, 2000.

RWQCB, 1999. *Approval Proposal to Abandon Groundwater Monitoring Wells and Suspend Active Groundwater Remediation for Area D - Playa Vista Site*, July 14, 1999.

RWQCB, 1998. *Cleanup and Abatement Order No. 98-125, Playa Capital Company, LLC, and Playa Phase 1 Commercial Land Company, LLC, 6775 Centinela Avenue, Los Angeles (File No. 98-192)*, December 22, 1998.

RWQCB, 1994. *Water Quality Control Plan, Los Angeles Region (the "Basin Plan")*, June.

- Camp Dresser & McKee, Inc. (CDM), 2002. *First Quarter 2002 Groundwater Monitoring and Progress Report*, April 15.
- CDM, 2001a. *Report of Sampling and Analysis of Soil Gas or Methane within Eastern Portion of Area D at Playa Vista*. May 23.
- CDM, 2001b. *Addendum to the Soil and Groundwater Investigation Workplan Dream Works Project, Playa Vista Site*, April 24.
- CDM, 2000a. *Soil and Groundwater Investigation Report, Former Dream Works Project Area, Playa Vista Site [SGI 1]*, May 17.
- CDM, 2000b. *Soil and Groundwater Investigation Phase 1 Project (Excluding Former Dream Works Project) Report [SGI2]*, May 19.
- CDM, 1999a. *Soil and Groundwater Investigation Workplan, Phase 1 Project – Former Dream Works Project Area, Playa Vista Site*, June 30.
- CDM, 1999b. *Soil Remedial Action Plan, Former DreamWorks Parcel*, July 22, 1999.
- CDM, 1999c. *Soil and Groundwater Investigation Workplan, Phase 1 Project – Former Dream Works Project Area, Playa Vista Site, Response and Clarification to RWQCB Comments*, August 11.
- CDM, 1999d. *Soil and Groundwater Investigation Workplan, Phase 1 Project (Non-Dream Works Parcel) Playa Vista Site*, November 24, 1999.
- City of Los Angeles, Office of the Chief Legislative Analyst (CLA) 2001. *City Investigation of potential Issues of Concern for Community Facilities district No. 4, Playa Vista Development Project*, March, 2001.
- Davis and Namson Consulting Geologists (Davis and Namson), 2000. *An Evaluation of the Subsurface Structure of the Playa Vista Project Site and Adjacent Area*. November.
- Ecology and Environment (E&E), 1987. *CERCLA Site Inspection No. C987) C010* [for USEPA], January 8, 1987
- Environmental Engineering and Contracting Services (EEC), 2001a. *Soil Investigation and Remediation, Storm Drain Outlet and Catch Basin Removal, Playa Vista*, [See Appendix F].
- EEC, 2001b. *Summary of Additional Soil Investigation, Building 15 Former Clarifier and Degreaser Pit, Center Bay*, [See Appendix F].
- EEC, 2001c. *Summary of Soil Investigation and Remediation Activities Former Drum Storage Area, Playa Vista Property*, [See Appendix F].

EEC, 2001d. *Summary of Additional Soil Investigation, Northeast Area of Former Building 35, Playa Vista Property, Los Angeles* [See Appendix F].

ENSR Consulting and Engineering (ENSR), 1997. *Data Review and Limited Phase II Subsurface Site Assessment at Playa Vista Property*, October.

Geomatrix Consultants, Inc. (Geomatrix) 2001. *Geomatrix Data*, January.

Hargis & Associates (HA), 1986. *Investigation of Gasoline Contamination, Summa Corp. Facility*, April 15.

Hargis & Montgomery (HM), 1984. *Phase 1 Investigation of Groundwater Quality and Hydrogeologic Conditions, Summa Corporation Facility*, March 27.

Integrated Environmental Services, Inc. (IESI), 2002a. *Fourth Quarter 2001 NPDES Report, RWQCB Monitoring and Reporting Program CI 6839, General Permit No. CAG834001, Order 97-046*. January 15.

IESI, 2002b. *Annual 2001 NPDES Report, RWQCB Monitoring and Reporting Program CI 7648, General Permit No. CAG834001, Order 97-046*. March 1.

IESI, 2001a. *Addendum to Phase 1 Commercial Health Based Remediation Goals, Playa Vista, Los Angeles, California*. September 25, 2001.

IESI, 2001b. *Soil Remediation Triggers; Campus Area at the Playa Vista Property; 6775 Centinela Avenue, Los Angeles*. November.

IESI, 2001c. *Fourth Quarter 2000 National Pollutant Discharge Elimination System (NPDES) Report, Playa Vista Project, Los Angeles, California, RWQCB Monitoring and Reporting Program No. CI6839, General NPDES Permit No. CAG834001, Order No. 97-046*, IESI (January 12, 2001).

IESI, 2001c. *2000 Annual National Pollutant Discharge Elimination System (NPDES) Report, Playa Vista Project, Los Angeles, California, RWQCB Monitoring and Reporting Program No. CI6839, General NPDES Permit No. CAG834001, Order No. 97-046*, IESI (March 15, 2001).

IESI, 2001e. *First Quarter 2001 National Pollutant Discharge Elimination System (NPDES) Report, Playa Vista Project, Los Angeles, California, RWQCB Monitoring and Reporting Program No. CI6839, General NPDES Permit No. CAG834001, Order No. 97-046*, IESI (April 15, 2001).

IESI, 2001f. *Second Quarter 2001 National Pollutant Discharge Elimination System (NPDES) Report, Playa Vista Project, Los Angeles, California, RWQCB Monitoring and*

Reporting Program No. CI6839, General NPDES Permit No. CAG834001, Order No. 97-046, IESI (July 15, 2001).

IESI, 2001g. *Third Quarter 2001 National Pollutant Discharge Elimination System (NPDES) Report, Playa Vista Project, Los Angeles, California, RWQCB Monitoring and Reporting Program No. CI6839, General NPDES Permit No. CAG834001, Order No. 97-046, (October 15, 2001)*

IESI, 2000. *Health Based Remediation Goals, Playa Vista, Los Angeles, California. February 20, 2000.*

IESI, 1999a. *Groundwater Treatment System Evaluation – Playa Vista – Hughes Site, December.*

IESI, 1999b. *Draft Protocol for Health-Based Remediation Goals, Playa Vista Dreamworks Parcels, Los Angeles, CA, May 11.*

McLaren Environmental Engineering (MEE), 1987a, *Site Investigation and Evaluation of Remedial Measures Report, Howard Hughes Properties Plant Site, Los Angeles, California, May 8.*

MEE, 1989a. *Howard Hughes Properties - Annual Update Report on Plant Site Remediation, April 12.*

MEE, 1989b. *Report of Soil Remediation of Former Drum Storage Area, May 18.*

McLaren/Hart (McLaren). 1991, *Results of Second Schlumbeger Aquifer Tests, Appendix page 7, dated April 5, 1991, Appendix page 7.*

Playa Vista (PCC), 2000. *Soil Remedial Action Plan, Phase 1 Project Excluding the DreamWorks Project, Playa Vista Site, January 13.*

PCC, 2001. *Playa Vista Monitoring Program (Methane Gas Report).*

Poland, J.F., et. al., (Poland, et.al.) 1956. *Groundwater Geology of the Coastal Zone Long Beach-Santa Ana Area, California. Geological Survey Water Supply Paper 1109*

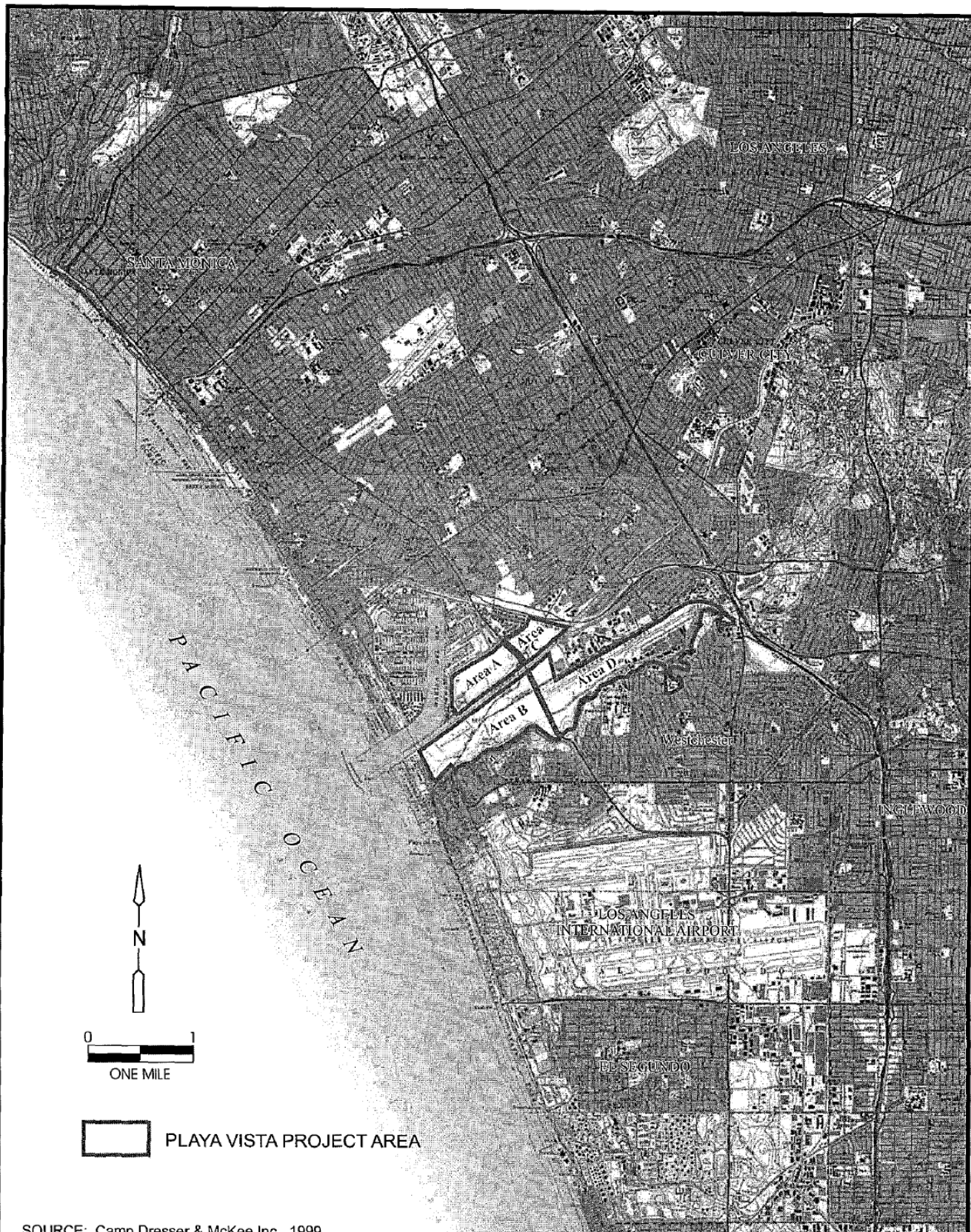
Poland, et. al., 1959. *Geology, Hydrology, and Chemical Character of Ground Waters in the Torrance-Santa Monica Area, California. U.S. Geological Survey Water-Supply Paper 1461*

Secor International Incorporated (SECOR) Secor, 2000. *Groundwater Treatment System Decommissioning Report, December 2000.*

Wright, Thomas L. 1991, *Structural Geology and Tectonic Evolution of the Los Angeles Basin, California; in Biddle, K.T., (editor), Active Margin Basins: American Association of Petroleum Geologists, Memoir No. 52, pp. 35-134.*

Yerkes, R.F., McCulloh, T.H. Schoellhamer, J.E., and Vedder, J.G., 1965. *Geology of the Los Angeles Basin – an Introduction*; U.S. Geology Survey Professional Paper 420-A, 57p.





SOURCE: Camp Dresser & McKee Inc., 1999

# PLAYA VISTA SOIL & GROUNDWATER REMEDIATION PLAN - CAMPUS AREA

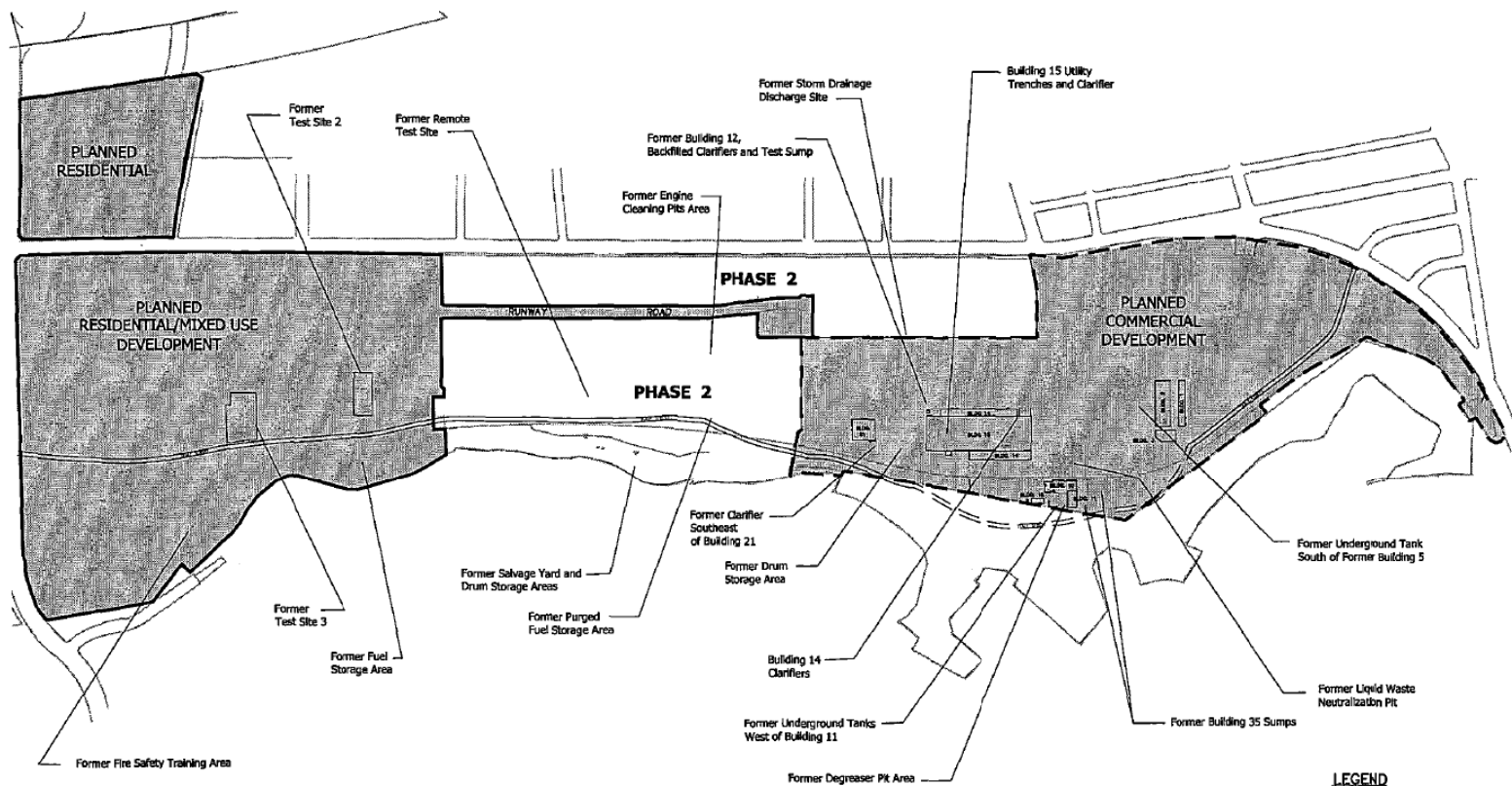
## Site Location Map

**CDM**

Figure 1-1



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Notes: Only the existing primary building structures and site features are shown. Some of the historic building structures and site features shown have been demolished or no longer exist.

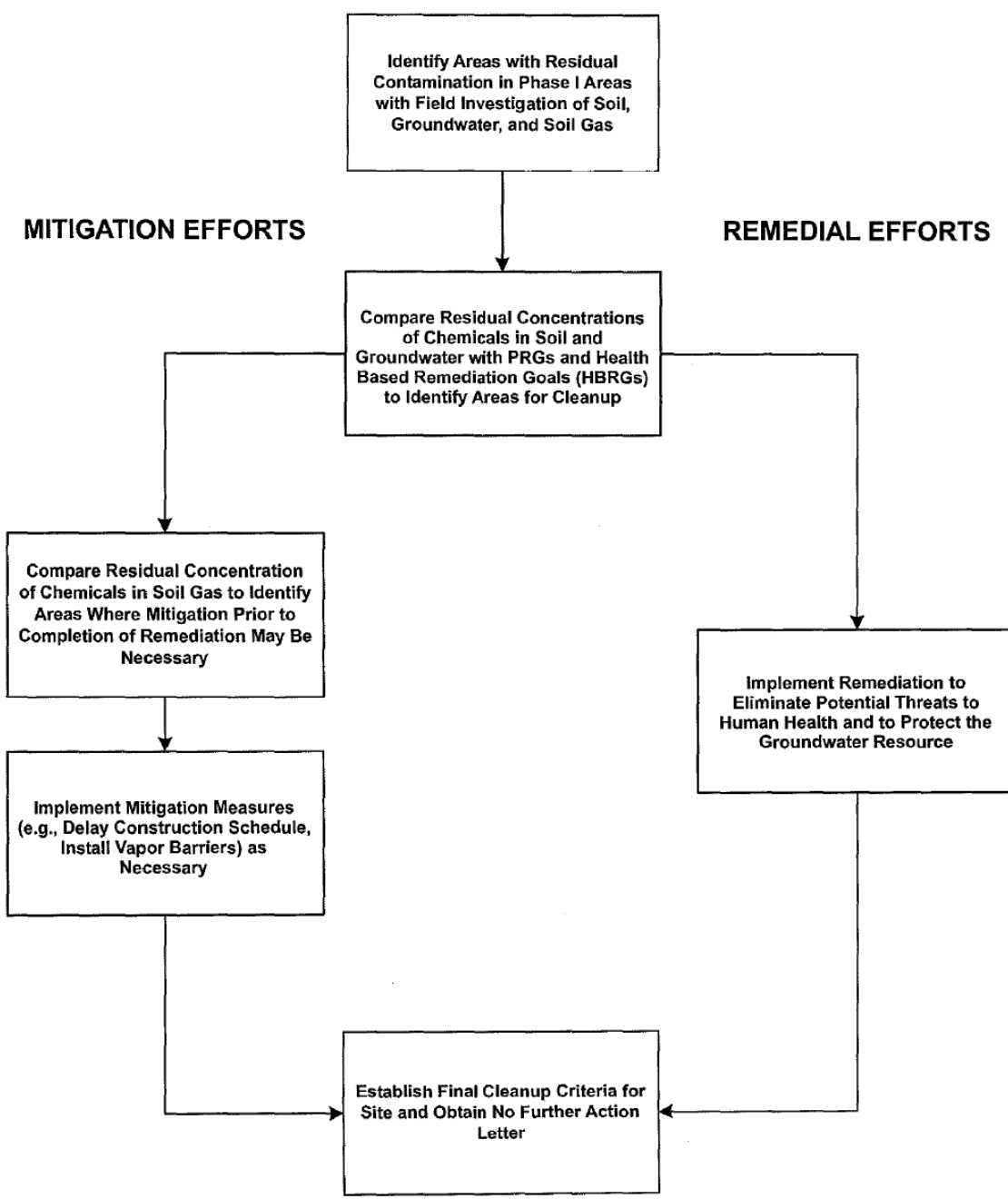
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 SOIL & GROUNDWATER REMEDIATION PLAN - CAMPUS AREA

Area D Features Map

Figure 1-2

CDM

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PLAYA VISTA  
SOIL & GROUNDWATER REMEDIATION PLAN - CAMPUS AREA

**Summary of Approach to Remediation for  
Phase I Site Development**



Figure 1-3

## DEVELOPMENT OF REMEDIALATION GOALS

Region 9 PRGs

### HBRGs

- ☐ HBRG Protocol
- ☐ Commercial HBRGs Report  
(soil, groundwater, soil gas)

### SRTs

- ☐ SRT Letters

## CHARACTERIZATION

### Site Characterization

- ☐ Monitoring Reports
- ☐ Soil & Groundwater  
Investigation Report
- ☐ Data Summary Reports
- ☐ Methane and H<sub>2</sub>S Investigation  
Reports
- ☐ Flux Chamber Analysis Report

## PLANNING

Soil and Groundwater  
Remediation Plan

## REMEDIAL ACTION

Remedial Design

Implement Remedial  
Action

Final Cleanup Criteria  
(RWQCB)

No Further Action  
Designations

PLAYA VISTA  
SOIL & GROUNDWATER REMEDIATION PLAN - CAMPUS AREA

Flow of Information Among  
Playa Vista Environmental Reports

**CDM**

Figure 1-4

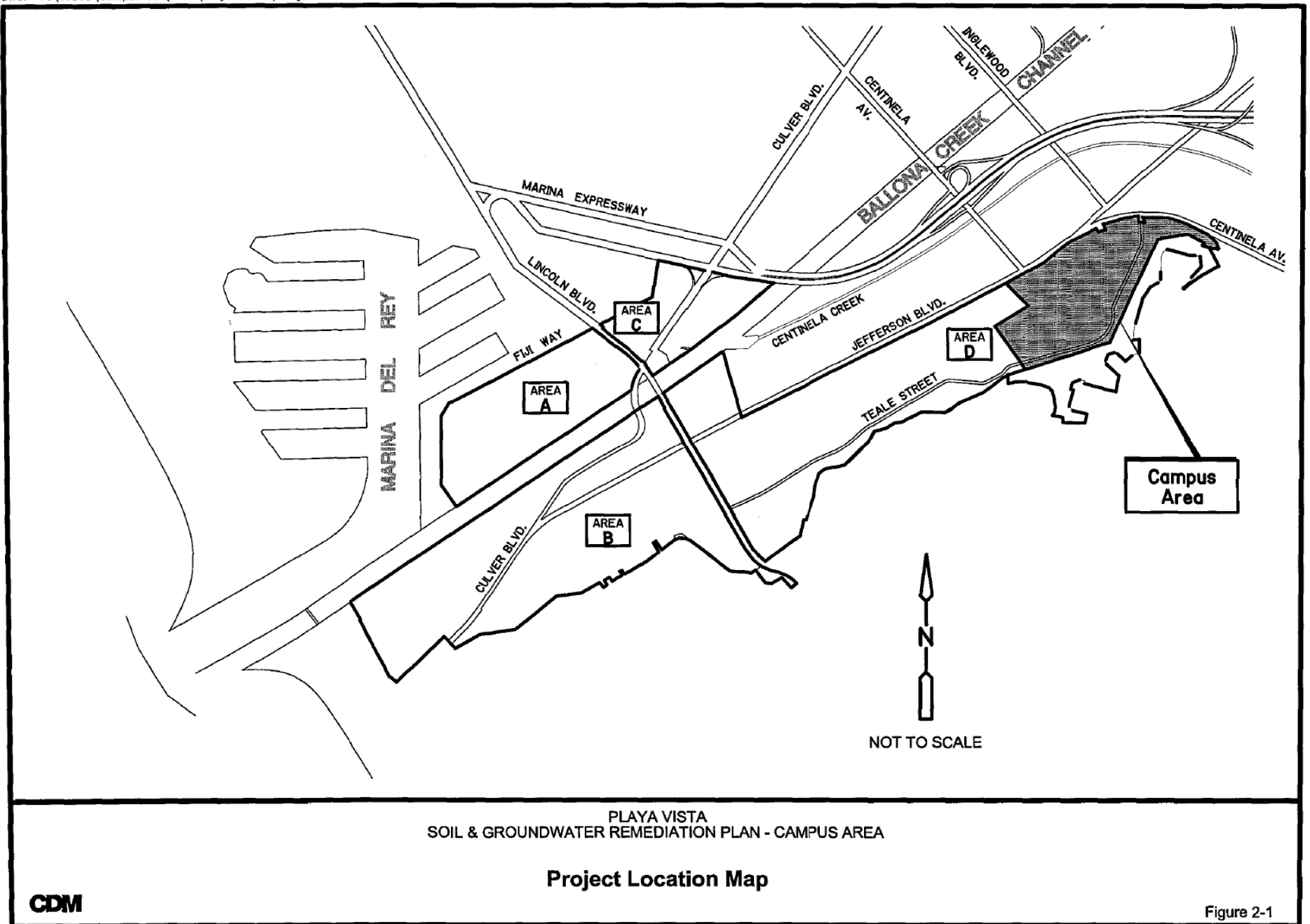
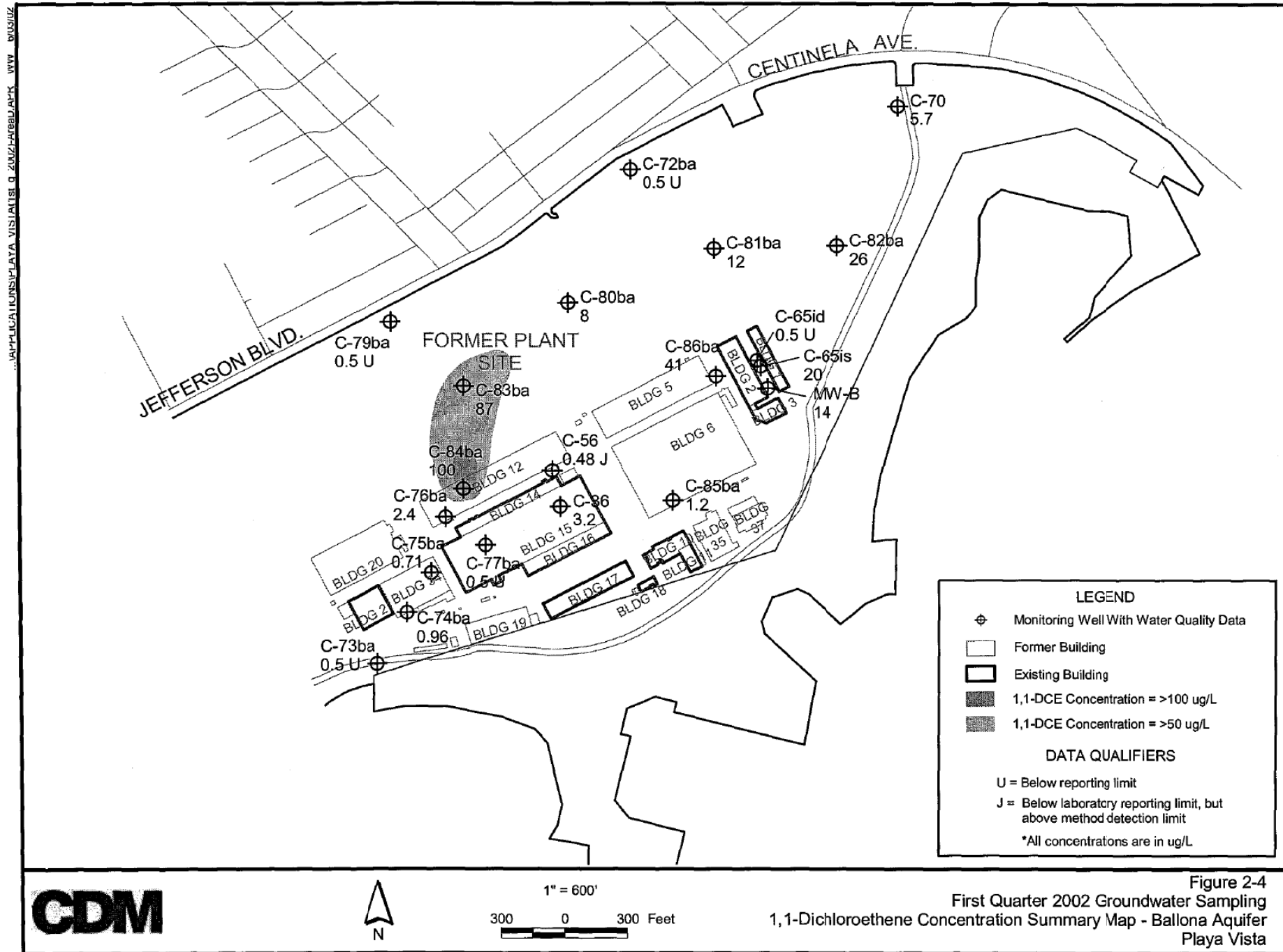
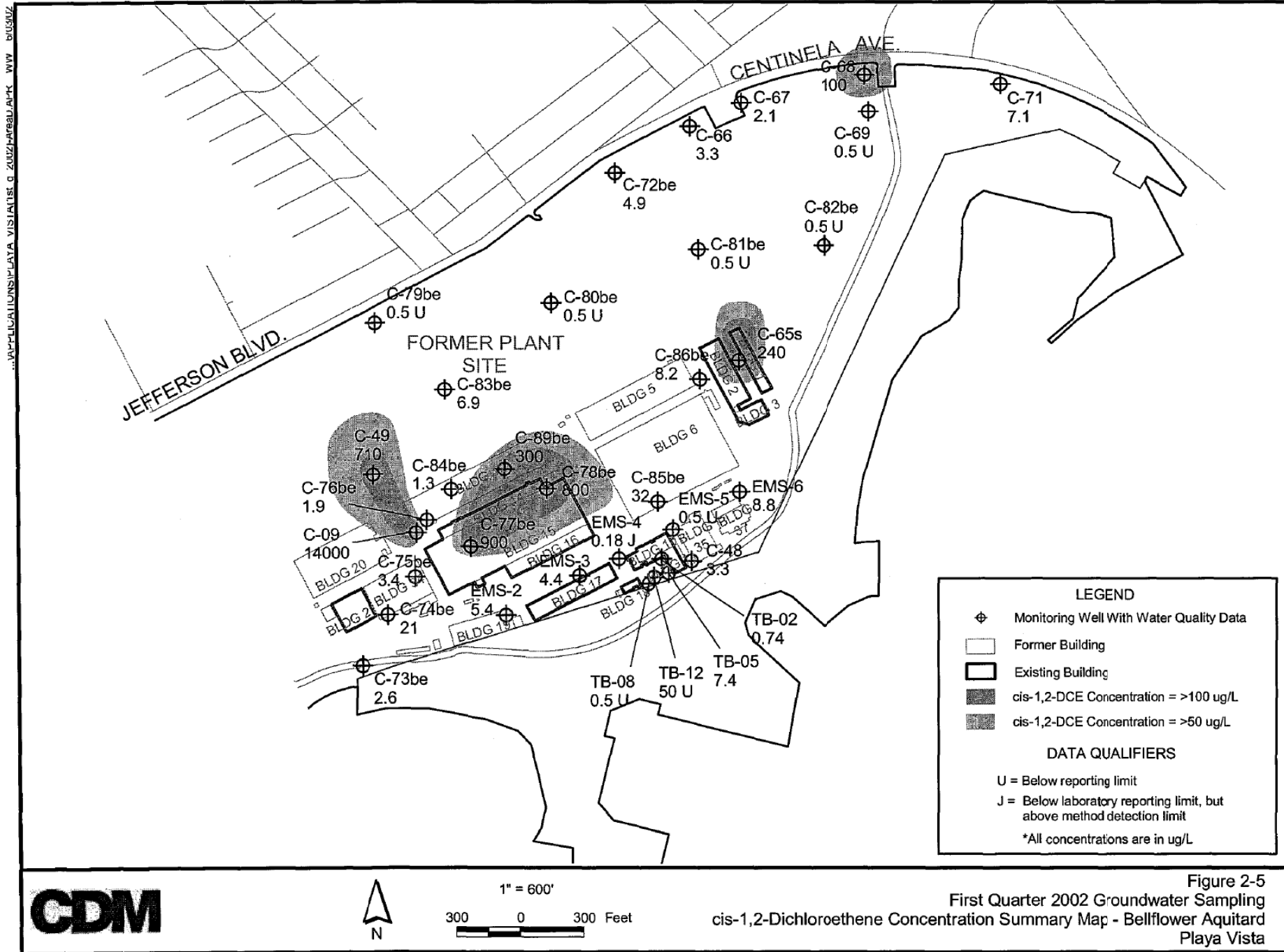


Figure 2-2  
First Quarter 2002 Groundwater Sampling  
VOC Concentration Summary Map  
Playa Vista











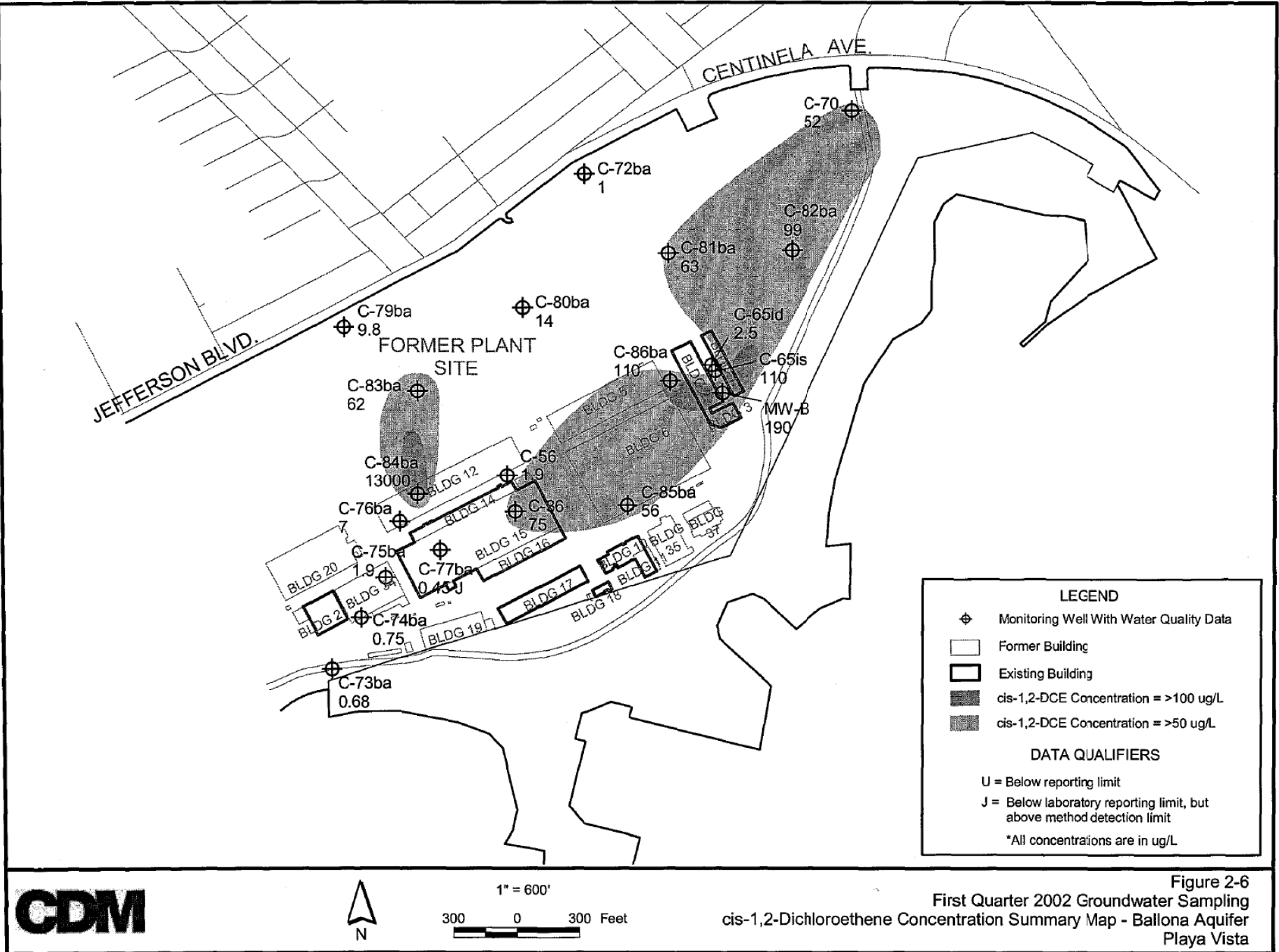


Figure 2-6  
First Quarter 2002 Groundwater Sampling  
cis-1,2-Dichloroethene Concentration Summary Map - Ballona Aquifer  
Playa Vista

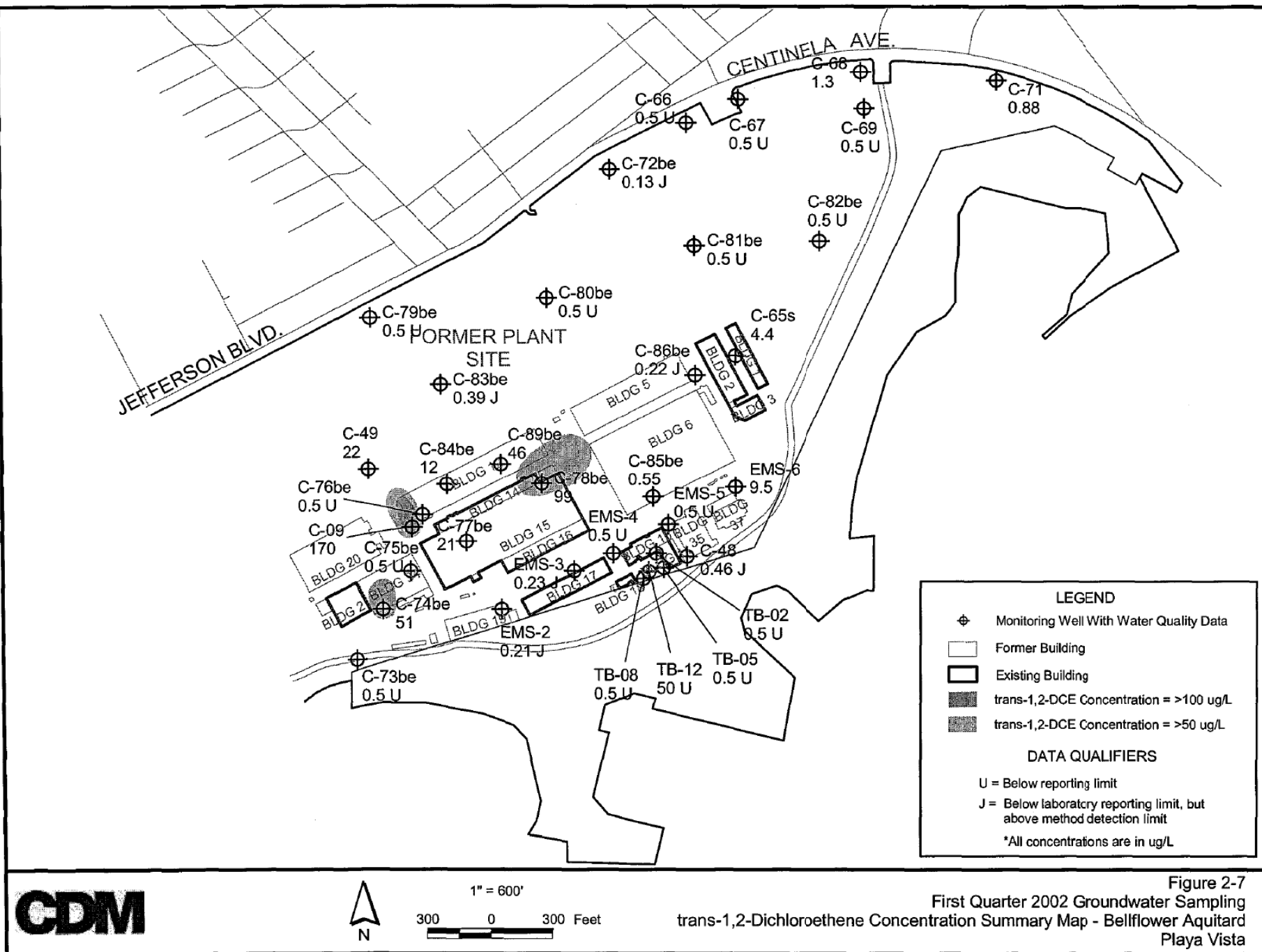


Figure 2-7  
First Quarter 2002 Groundwater Sampling  
trans-1,2-Dichloroethene Concentration Summary Map - Bellflower Aquitard  
Playa Vista



Camp Dresser & McKee Inc.

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November 21, 2001

Ms. Rebecca Nevarez  
California Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Subject: Former Fire Training Burn Pit Area - Phase 1 Project Area  
Additional Soil and Groundwater Characterization Activities  
Playa Vista Site, Los Angeles  
CDM Project No.: 10610-32621-DATA

Dear Ms. Nevarez:

Camp Dresser & McKee Inc. (CDM) is submitting this letter report for soil and in-situ groundwater sampling conducted at the former Fire Training Burn Pit (FTBP) within the Phase 1 Project Area of the Playa Vista Site (Figure 1). This work was completed at the request of Playa Capital Company, LLC (PCC) in preparation for further development plans in the vicinity of the former FTBP. On January 30, 2001, Integrated Environmental Services, Inc., (Integrated) submitted a work plan to the Los Angeles Regional Water Quality Control Board (LA-RWQCB) to conduct additional groundwater investigation activities at the FTBP area. The work plan was approved by LA-RWQCB on July 27, 2001.

This letter report describes the recent site characterization and sampling activities completed at the former FTBP area, including rationale, technical approach, and results. For ease of presentation, figures and tables related to these most recent activities are included at the end of this letter report in Attachments A and B, respectively.

## **1.0 BACKGROUND**

### **1.1 *Geologic and Hydrogeologic Conditions***

Two primary lithologic sequences exist in the shallow subsurface of the former FTBP, including a finer-grained unit of silty sand, silt and clay from ground surface to approximately 15 feet bgs (3 feet below mean seal level [msl]) and a coarser-grained sandy unit (including both poor- and well-graded sands) to an approximate depth of 40 feet bgs (30 feet below msl, the maximum depth investigated). Both lithologic sequences are part of the Bellflower aquitard, the uppermost hydrogeologic unit at the Site. A distinctive clay layer (3 to 10 feet thick) underlies the former FTBP area between depths of approximately 10 to 15 feet bgs (2 feet above msl to 3 feet below msl).

Ms. Rebecca Nevarez  
November 21, 2001  
Page 2

Groundwater is encountered at depths between 4 and 8 feet bgs (average elevation of 6.5 feet above msl measured in May 2001) in the former FTBP area. Groundwater flow for the Bellflower aquitard in this area is generally in a northerly direction at an approximate gradient of 0.004 feet/feet. Groundwater flow is generally perpendicular to and away from the Ballona Bluffs. The groundwater flow direction is depicted on Figure 2.

### **1.2 Summary of Historical Activities**

Based on available documentation, the former FTBP was used between the early 1960s and mid-1980s to train fire fighters to handle chemical and fuel fires. The pit was unlined and surrounded by a one-foot high berm. Based on soil boring analytical results from *Remediation Report, First Phase, West Side Soils* (McLaren Environmental Engineering [MEE], 1987), soils impacted with petroleum hydrocarbons and volatile organic compounds (VOCs) extended vertically to a depth of 19.5 feet below ground surface (bgs) in the center of the bermed area.

The 1987 MEE report recommended that the former FTBP be dewatered, excavated and backfilled. Remediation of the pit began in March 1988. Approximately 1,815 cubic yards of soil were excavated from within the bermed area to a depth of 17 feet bgs. Shallow groundwater was encountered during excavation. Based on the evaluation of 20 confirmation soil samples collected from within the excavation area, with results below the clean-up criteria approved by the LA-RWQCB in June 1987, the excavation was considered complete. The excavation was backfilled with 15 feet of gravel and capped with 2 feet of native soil (MEE, 1988).

Subsequent investigations and monitoring activities were conducted after excavation activities were complete, which are summarized in the following sections. Analytical results from soil and groundwater investigations in the former FTBP are illustrated on the figures included in Attachment C.

#### **1.2.1 Soil and Groundwater Investigation - January and February 2000**

Soil and groundwater samples were collected in January and February 2000 as part of the LA-RWQCB approved *Soil and Groundwater Investigation Work Plan (SGIWP II), Phase I Project Area* (CDM, November 1999) to assess the extent of any remaining VOCs and TPH in groundwater and soil. During the investigation, 13 shallow borings (D-65 through D-77) were advanced in the FTBP area and soil samples collected at depths of 6 and 12 feet bgs. Ground surface was 11 to 12 feet above msl and sample depths ranged from 0 to 6 feet above msl. Four cone penetrometer test (CPT) borings were advanced in the vicinity of the former FTBP area to depths ranging from 31 to 44 feet bgs (to elevations of approximately 30 feet below msl). Also, three groundwater monitoring wells (MW-1F, MW-2F and MW-3F) were installed south of the former FTBP. The depths of the wells ranged from 10 to 16 feet bgs (bottom of wells at approximately 3 feet above msl). In-situ groundwater samples were collected at eight locations: samples were collected from borings CPT-1A, CPT-2A, CPT-3, CPT-4A, FTBP-1-24, HP-67, HP-72 and HP-73.

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Results of the investigation were presented in the *Soil and Groundwater Investigation Report - Phase I Project* (CDM, May 2000). Soil and groundwater analytical results from historical investigations are illustrated on figures included in Attachment C (Figures C-1 and C-2, respectively). Significant findings are summarized as follows:

- Although chlorinated VOCs were detected in soil samples, concentrations were lower than the concentrations detected in confirmation samples collected in 1987 and lower than the approved 1987 clean-up levels (i.e., less than 1,000 times the corresponding maximum contaminant levels [MCLs]). Non-chlorinated VOCs were not detected in soil samples. TPH was detected in boring D-67; fuel fingerprinting indicated the detection was quantified in the motor oil range.
- Chlorinated VOCs were detected at concentrations greater than laboratory reporting limits in four (HP-67, HP-73, CPT-3 and CPT-4A) of the eight in-situ groundwater samples collected in the vicinity of the former FTBP. The highest concentrations were detected in the sample collected at 12 feet bgs (0 feet msl) in HP-73: cis-1,2-dichloroethene (cis-1,2-DCE) was detected at 760 micrograms per liter ( $\mu\text{g/L}$ ); 1,1-dichloroethane (1,1-DCA) at 51  $\mu\text{g/L}$ ; 1,1-dichloroethene (1,1-DCE) at 26  $\mu\text{g/L}$ ; trans-1,2-DCE at 28  $\mu\text{g/L}$ ; trichloroethene (TCE) at 8.6  $\mu\text{g/L}$ ; and vinyl chloride at 11  $\mu\text{g/L}$ . Tetrachloroethene (PCE) was detected in the sample collected at 12 feet bgs from HP-67 at a concentration of 71  $\mu\text{g/L}$ .
- Chlorinated VOCs were detected in the three newly installed shallow groundwater monitoring wells. The highest concentrations were detected in well MW-3F: TCE (940  $\mu\text{g/L}$ ), 1,1-DCE (130  $\mu\text{g/L}$ ), 1,1-DCA (100  $\mu\text{g/L}$ ), trans-1,2-DCE (110  $\mu\text{g/L}$ ), cis-1,2-DCE (1,500  $\mu\text{g/L}$ ), PCE (16  $\mu\text{g/L}$ ) and vinyl chloride (42  $\mu\text{g/L}$ ).
- Non-chlorinated VOCs were detected at concentrations greater than the respective laboratory reporting limits in four of the in-situ groundwater samples and in one of the shallow monitoring well samples. Detections of non-chlorinated VOCs, however, were limited to benzene and toluene. Benzene was detected at concentrations just slightly higher than the reporting limit of 0.50  $\mu\text{g/L}$  in samples collected from HP-72, HP-73, and CPT-4A, and in monitoring well sample MW-3F at a concentration of 1.4  $\mu\text{g/L}$ ; toluene was detected in sample CPT-2A at a concentration of 1.2  $\mu\text{g/L}$ .
- TPH concentrations were detected within the shallow in-situ groundwater samples in the former FTBP. Fuel fingerprinting indicated that the TPH consisted of heavier hydrocarbons quantified in crude oil/motor oil range. Lighter hydrocarbons were detected in monitoring well MW-3F at a concentration of 450  $\mu\text{g/L}$ .

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Based on the results of this soil and groundwater investigation, subsequent field activities were conducted in April and May 2000 to further assess the extent of VOC and TPH contamination in soil and groundwater in the vicinity of the former FTBP.

#### **1.2.2 Soil and Groundwater Investigation – April and May 2000**

On April 7, 2000, CDM submitted an addendum to SGIWP II to implement the additional investigation activities. Field activities were conducted in April and May 2000 and included the advancement of two borings (D-117 and D-118) to depths of 15 feet bgs (to 3 feet below msl), and installation and sampling of three additional groundwater monitoring wells (MW-4F, MW-5F and MW-6F). Soil samples were collected at the above five boreholes. Samples were collected at multiple depths from each borehole up to a maximum depth of approximately 11.5 feet (0.5 feet above msl) and analyzed for VOCs and TPH. Significant findings from this investigation include:

- VOC analyses indicated the presence of chlorinated compounds, primarily TCE and cis-1,2-DCE, in soil samples collected from borings D-117, D-118, MW-4F and MW-6F. The maximum VOC concentrations were detected in these borings at depths of approximately 10 feet bgs (2 feet above msl), which corresponds to the upper portion of the clay layer underlying the former FTBP. Non-chlorinated VOCs (acetone and methyl tert-butyl ether [MTBE]) were only detected in the sample collected from MW-5F at a depth of 9.5 feet bgs (0.5 feet above msl) and at relatively low concentrations. TPH compounds were detected in the shallowest samples (i.e., 3.5 feet bgs, or 7 feet above msl) collected from borings MW-5F and MW-6F at concentrations of 17 and 15 milligrams per kilogram (mg/kg), respectively.
- Chlorinated VOCs, predominantly cis-1,2-DCE, were detected in two (MW-4F and MW-6F) of the newly-installed groundwater monitoring wells. The highest concentrations were reported in well MW-4F. Cis-1,2-DCE, TCE and vinyl chloride were detected in groundwater at concentrations of 110, 1.6 and 11 µg/L, respectively. Non-chlorinated VOCs and TPH compounds were not detected in any of the three wells at concentrations greater than the laboratory reporting limits.

#### **1.2.3 Quarterly Groundwater Monitoring**

Six groundwater monitoring wells (EW-6A, MW-1F, MW-2F, MW-3F, MW-F and MW-M) located in the vicinity or down gradient of the former FTBP have been monitored at least twice during quarterly events since quarterly monitoring began in 1999. Of these six wells, two (MW-F and MW-M) are located down gradient of the former excavation and have slotted intervals beginning at depths of at least 30 feet bgs or deeper. Well MW-F has a slotted interval in both the Bellflower aquitard and Ballona aquifer (32.6 to 52.6 feet bgs) and MW-M is slotted within the Ballona aquifer (40 to 60 feet bgs). The other four wells screen the Bellflower aquitard at much shallower depths (bottom of slotted intervals

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are 16 feet bgs or shallower). Analytical results from quarterly groundwater monitoring events for wells located in the vicinity of the former FTBP are summarized on tables included in Attachment D.

Low concentrations of chlorinated compounds have been detected in the deep down gradient wells MW-F and MW-M; however, the detections have been limited to cis-1,2-DCE. The maximum cis-1,2-DCE concentrations have been detected in well MW-M. Between March 1999 and May 2001, cis-1,2-DCE concentrations have remained consistently less than 8.1 µg/L. Non-chlorinated VOCs have not historically been detected in either of these two deep wells. TPH compounds have not been detected above laboratory reporting limits in wells MW-F and MW-M.

With respect to the four shallow wells in the vicinity of the former FTBP, the maximum chlorinated VOC concentrations have been detected in well MW-3F, which is located at the southern edge of the former excavated area and screens the Bellflower aquitard between 3 and 10 feet bgs (2 to 9 feet above msl). In May 2001, concentrations of cis-1,2-DCE and TCE were reported at 750 and 170 µg/L, respectively. Vinyl chloride has also historically been detected in this well, with the most recent concentration at 9.3 µg/L (CDM, 2001).

The detection of non-chlorinated VOCs at concentrations greater than laboratory reporting limits in the shallower monitoring wells has been limited to benzene in wells EW-6A and MW-3F. The highest benzene concentration was reported in well EW-6A at 3.9 µg/L in January 2001. Non-chlorinated VOCs have not been detected in any of these wells at concentrations greater than laboratory reporting limits since January 2001. TPH has only been detected one time in any of the shallow wells; TPH was detected in well EW-6A at a concentration of 230 µg/L in January 2001.

## **2.0 SCOPE OF WORK**

This work was completed at the request of PCC in preparation for further development plans in the vicinity of the former FTBP. The work plan approved by the LA-RWQCB (Integrated, June 29, 2001) included the collection of three in-situ groundwater samples down gradient of the former FTBP excavation. These three samples were to be analyzed for TPH with carbon chain identification to assess TPH contamination down gradient of the former FTBP area. Subsequently the scope of work was expanded to include the following:

- At each of the three originally proposed sample locations, in-situ groundwater samples were collected at two depths to provide data on the vertical distribution of contamination. Target samples depths were determined using current water level data from nearby monitoring wells and historical lithologic information. The uppermost groundwater sample was collected at the first encountered groundwater (within coarser-grained materials); whereas the second sample was collected

## **ATTACHMENT C**

### **HISTORICAL SOIL AND GROUNDWATER CONCENTRATION FIGURES**



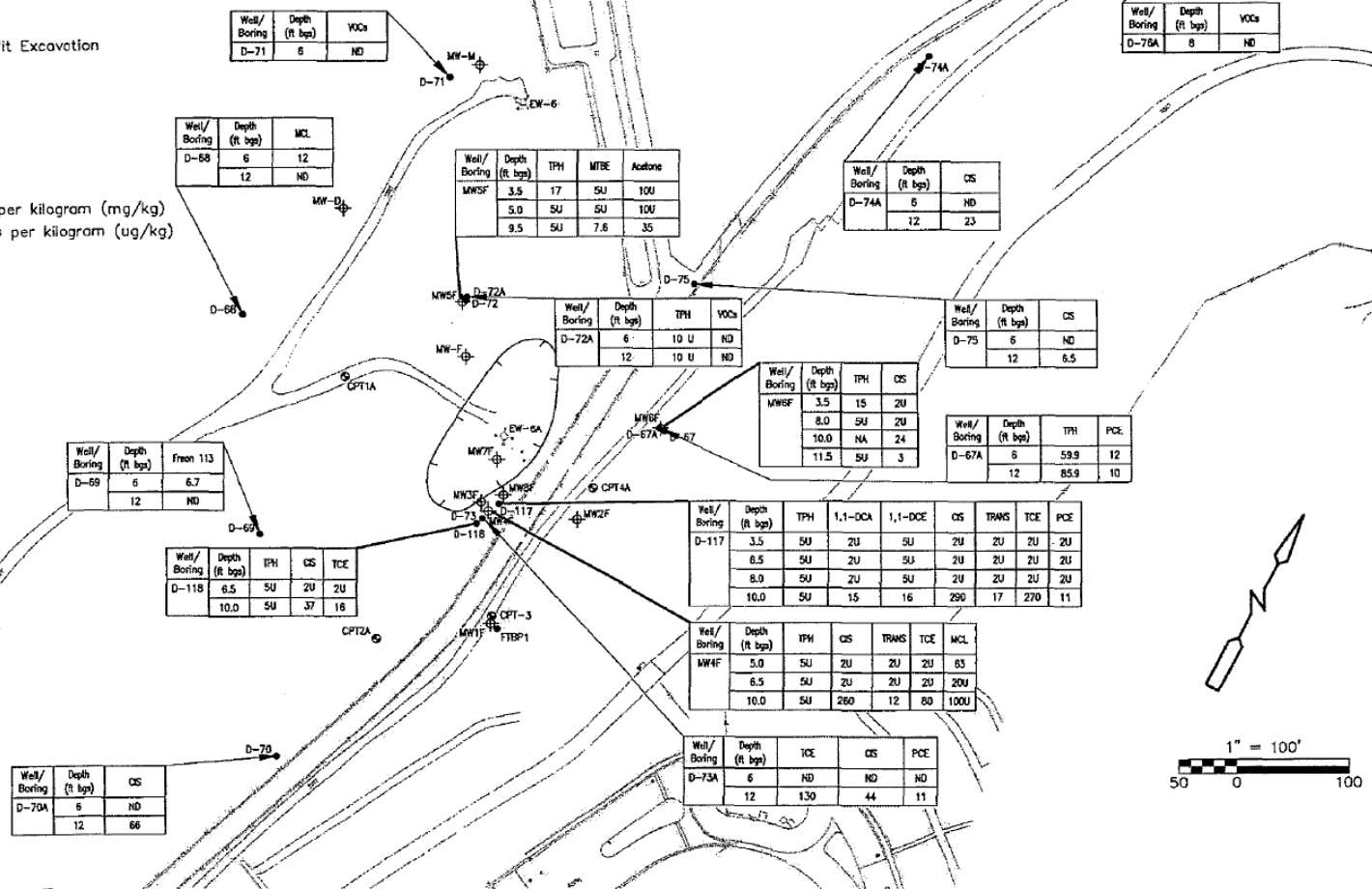
# LEGEND:

○ Approximate Extent of the Former Fire Training Burn Pit Excavation

- D-72 Geoprobe Boring
- CPT-3 CPT Boring
- ◆ MW1F Groundwater Monitoring Well
- ◆ EW-6A Extraction Well
- ◆ FTBP Fire Training Burn Pit
- ft bgs Feet Below Ground Surface

Soil TPH results presented in milligrams per kilogram (mg/kg)  
Soil VOC results presented in micrograms per kilogram (ug/kg)

| List of Acronyms |                                         |
|------------------|-----------------------------------------|
| VOC              | Volatile Organic Compound               |
| TPH              | Total Petroleum Hydrocarbons (CB - C40) |
| CB               | Chlorobenzene                           |
| DCB              | Dichlorobenzene                         |
| DCE              | Dichloroethene                          |
| DCA              | Dichloroacene                           |
| CS               | cis-1, 2-Dichloroethene                 |
| TRANS            | trans-1, 2-Dichloroethene               |
| MCL              | Methylene chloride                      |
| PCE              | Tetrachloroethene                       |
| 1, 1, 2-TCA      | 1, 1, 2-Trichloroethane                 |
| TCE              | Trichloroethene                         |
| VC               | Vinyl chloride                          |
| MTBE             | Methyl tert-butyl ether                 |
| ND               | Not detected                            |
| U                | Not detected                            |



# LEGEND:

Approximate Extent of the Former Fire-Training Burn Pit Excavation

- D-72 Geoprobe Boring
- CPT-3 CPT Boring
- MWIF Groundwater Monitoring Well
- EW-6A Extraction Well
- FTBP Fire Training Burn Pit

All sample depths and screen intervals are in feet below ground surface

| WELL    | DATE    | DEPTH | TPH  | Benzene |
|---------|---------|-------|------|---------|
| HP/D-72 | 1/10/00 | 12    | 7.31 | 0.53    |

| MW-5F | DATE    | TPH   | VOCs |
|-------|---------|-------|------|
| 4-9   | 4/25/00 | 0.2 U | ND   |

| MW-D     | DATE     | VOCs |
|----------|----------|------|
| 85-95 FT | 5/28/99  | ND   |
|          | 9/13/99  | ND   |
|          | 11/30/99 | ND   |
|          | 2/7/00   | ND   |
|          | 5/1/00   | ND   |

| MW-E  | DATE    | TPH   | CIS |
|-------|---------|-------|-----|
| 33-53 | 2/3/00  | 0.2 U | 3.9 |
|       | 5/10/00 | 0.2 U | 2.1 |

| WELL   | DATE    | DEPTH | VOCs |
|--------|---------|-------|------|
| CPT-1A | 1/21/00 | 8     | ND   |

| MW-4F | DATE    | TPH   | 2-Substance | 1,1-DCA | 1,1-DCE | CIS | TRANS | TCE | VC  |
|-------|---------|-------|-------------|---------|---------|-----|-------|-----|-----|
| 8-10  | 4/25/00 | 0.2 U | 11          | 5.6     | 3       | 110 | 5     | 1.6 | 11  |
|       | 5/21/00 | NA    | ND          | 24      | 21      | 490 | 24    | 25  | 6.4 |

| WELL   | DATE    | DEPTH | Toluene |
|--------|---------|-------|---------|
| CPT-2A | 1/21/00 | 10    | 1.2     |

| WELL  | DATE    | DEPTH | TPH  | VOCs |
|-------|---------|-------|------|------|
| FTBP1 | 1/27/00 | 24    | 0.80 | ND   |

| MW-1F | DATE    | TPH   | VOCs |
|-------|---------|-------|------|
| 7-14  | 2/7/00  | 0.2 U | ND   |
|       | 5/5/00  | 0.2 U | ND   |
|       | 11/8/00 | 0.23  | ND   |

| WELL  | DATE    | DEPTH | TPH | CIS |
|-------|---------|-------|-----|-----|
| CPT-3 | 1/21/00 | 10    | 4.9 | 1.9 |

| EW-6A   | DATE    | TPH   | PCE | TCE | 1,1,2-TCA | 1,1-DCE | 1,1-DCA | CIS  | TRANS | VC  | BENZENE | 1,2-DCP |
|---------|---------|-------|-----|-----|-----------|---------|---------|------|-------|-----|---------|---------|
| 3-14 FT | 2/2/00  | 0.2 U | ND  | 17  | ND        | 25      | 35      | 350  | 17    | 20  | ND      | 1.3     |
|         | 5/4/00  | 0.2 U | 2.1 | 160 | 1.0       | 95      | 55      | 1100 | 39    | 99  | 2.4     | 13      |
|         | 7/25/00 | 0.2 U | 1.5 | 140 | 0.66      | 79      | 47      | 980  | 35    | 90  | ND      | 7.5     |
|         | 11/8/00 | 0.2 U | 1.9 | 220 | 1.1       | 130     | 88      | 1400 | 64    | 170 | ND      | 11      |
|         | 1/29/01 | 0.23  | 2.0 | 250 | 1.5       | 150     | 84      | 1500 | 66    | 150 | 3.9     | 18      |
|         | 5/14/01 | 0.2 U | ND  | 18  | ND        | 13      | 7.7     | 130  | 6.7   | 14  | ND      | 3.5     |

| MW-3F   | DATE    | TPH   | PCE | TCE  | 1,1,2-TCA | 1,1-DCE | 1,1-DCA | CIS  | TRANS | VC  | BENZENE | 1,2-DCP |
|---------|---------|-------|-----|------|-----------|---------|---------|------|-------|-----|---------|---------|
| 3-10 FT | 2/7/00  | 0.2 U | 16  | 1000 | 1.7       | 130     | 100     | 1600 | 110   | 42  | 1.4     | ND      |
|         | 5/9/00  | 0.2 U | 7.6 | 470  | 0.19      | 76      | ND      | 530  | 66    | 15  | 0.84    | ND      |
|         | 7/24/00 | 0.2 U | 5   | 540  | ND        | 86      | 68      | 1300 | 74    | 20  | ND      | ND      |
|         | 11/8/00 | 0.2 U | 7.5 | 710  | ND        | 85      | 84      | 1200 | 81    | 16  | ND      | 2.6     |
|         | 2/12/01 | 0.2 U | 2.9 | 310  | ND        | 63      | 51      | 1100 | 52    | 10  | 0.85    | ND      |
|         | 5/14/01 | 0.2 U | 3.6 | 170  | ND        | 39      | 32      | 700  | 35    | 9.1 | ND      | ND      |

| WELL     | DATE    | DEPTH | TPH | 1,1,1-TCA | CIS | TCE | PCE |
|----------|---------|-------|-----|-----------|-----|-----|-----|
| HP/D-67A | 7/10/00 | 12    | 7.2 | 1.7       | 14  | 18  | 71  |

| MW-6F | DATE    | TPH   | Styrene | 1,1-DCA | CIS | TCE | PCE  | MCL |
|-------|---------|-------|---------|---------|-----|-----|------|-----|
| 7-12  | 4/25/00 | 0.2 U | 8.2     | 0.64    | 16  | 1.5 | 0.51 | 170 |
|       | 11/8/00 | 0.2   | ND      | ND      | 5.1 | 2.6 | 1.2  | ND  |

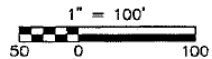
| WELL   | DATE    | DEPTH | TPH   | Benzene | 1,1-DCA | CIS | TRANS | VC  |
|--------|---------|-------|-------|---------|---------|-----|-------|-----|
| CPT-4A | 1/21/00 | 13    | 13.07 | 0.64    | 1.2     | 18  | 1.8   | 4.2 |

| MW-2F | DATE    | TPH   | CB   | 1,2-DCB | CIS | TCE |
|-------|---------|-------|------|---------|-----|-----|
| 9-16  | 2/7/00  | 0.2 U | 0.54 | 2.7     | 6.2 | 5.1 |
|       | 5/5/00  | 0.2 U | ND   | 1.3     | 3.5 | 2.7 |
|       | 11/8/00 | 0.2 U | 1    | 4.5     | 12  | 5.5 |

| WELL     | DATE    | DEPTH | TPH | Benzene | 1,1-DCA | 1,1-DCE | CIS | TRANS | TCE | VC |
|----------|---------|-------|-----|---------|---------|---------|-----|-------|-----|----|
| HP/D-73A | 1/10/00 | 12    | 2 U | 0.59    | 51      | 28      | 760 | 28    | 8.6 | 11 |

| List of Acronyms |                                         |
|------------------|-----------------------------------------|
| VOC              | Volatile Organic Compound               |
| TPH              | Total Petroleum Hydrocarbons (C8 - C40) |
| CB               | Chlorobenzene                           |
| DCB              | Dichlorobenzene                         |
| DCE              | Dichloroethene                          |
| DCA              | Dichloroethane                          |
| CIS              | cis-1, 2-Dichloroethene                 |
| TRANS            | trans-1, 2-Dichloroethene               |
| MCL              | Methylene chloride                      |
| PCE              | Tetrachloroethene                       |
| 1, 1, 2-YCA      | 1, 1, 2-Trichloroethane                 |
| TCE              | Trichloroethene                         |
| VC               | Vinyl chloride                          |
| 1,2-DCP          | 1,2-Dichloropropane                     |
| ND               | Not detected                            |
| U                | Not detected                            |

Groundwater VOC sample results presented in micrograms per liter (ug/L)  
Groundwater TPH sample results presented in milligrams per liter (mg/L)

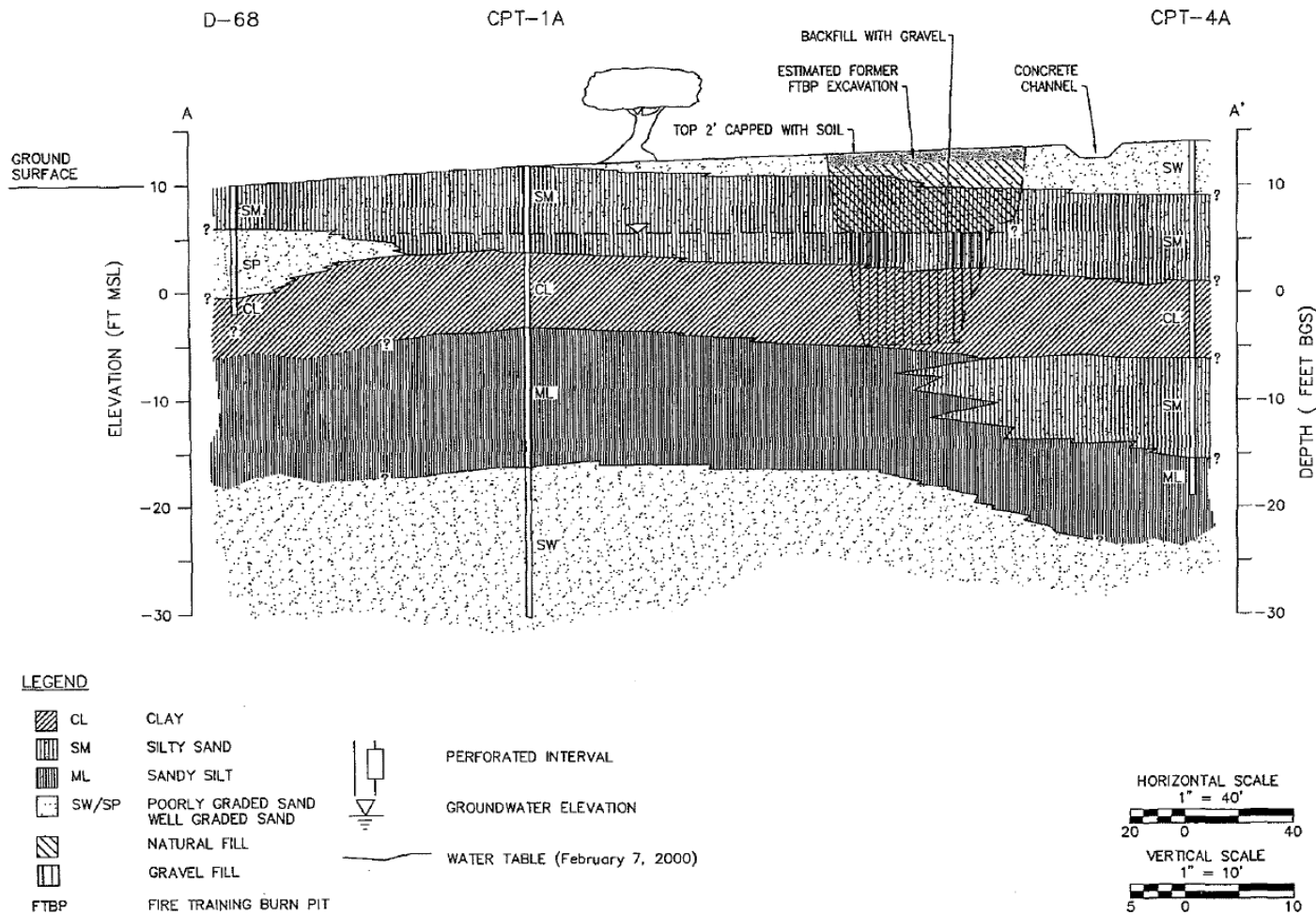


PLAYA VISTA  
FORMER FIRE TRAINING BURN PIT

## Historical Groundwater Concentration Map VOCs and TPH

Figure C-2

**CDM**  
environmental engineers, scientists,  
planners, & management consultants



PLAYA VISTA  
FORMER FIRE TRAINING BURN PIT  
**Geological Cross-Section A-A'**

Figure C-4

**ATTACHMENT D**

**SUMMARY OF QUARTERLY GROUNDWATER MONITORING  
RESULTS**

Attachment D  
Playa Vista- Former Fire Training Burn Pit  
Groundwater Analytical Results - Quarterly Sampling  
Chlorinated VOCs Analytical Summary

| Area/<br>Well ID                                 | Screened<br>Interval<br>(ft bgs) | Sample<br>Date | Sample<br>Type | PCE    | TCE   | 1,1,1-<br>TCA | 1,1,2-<br>TCA | 1,1-<br>DCE | 1,1-<br>DCA | 1,2-<br>DCA | cis-<br>1,2-DCE | trans-<br>1,2-DCE | CFM   | MCL      | CBN   | 1,2-<br>DCB | 1,3-<br>DCB | 1,4-<br>DCB | BDM   | CET   | CMT   | 1,2-<br>DCP | 1,2,3-<br>TCB | VC    |
|--------------------------------------------------|----------------------------------|----------------|----------------|--------|-------|---------------|---------------|-------------|-------------|-------------|-----------------|-------------------|-------|----------|-------|-------------|-------------|-------------|-------|-------|-------|-------------|---------------|-------|
| <b>AREA D      Former Fire Training Burn Pit</b> |                                  |                |                |        |       |               |               |             |             |             |                 |                   |       |          |       |             |             |             |       |       |       |             |               |       |
| C-01                                             | 30 - 40                          |                |                |        |       |               |               |             |             |             |                 |                   |       |          |       |             |             |             |       |       |       |             |               |       |
|                                                  | 3/29/1999                        |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 2.5 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       |               | 0.5 U |
|                                                  | 5/25/1999                        |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 2.5 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       |               | 0.5 U |
|                                                  | 9/2/1999                         |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 5 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 1 U           | 0.5 U |
|                                                  | 11/29/1999                       |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 1 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 0.5 U         | 0.5 U |
|                                                  | 2/2/2000                         |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 2 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                                                  | 5/1/2000                         |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 2 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
| EW-6A                                            | 3 - 14                           |                |                |        |       |               |               |             |             |             |                 |                   |       |          |       |             |             |             |       |       |       |             |               |       |
|                                                  | 9/9/1999                         |                |                | 0.6    | 16    | 0.5 U         | 0.5 U         | 12          | 12          | 0.5 U       | 180             | 8.6               | 0.5 U | 5 U      | 0.5 U | 0.7         | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 1 U           | 2.2   |
|                                                  | 12/1/1999                        |                |                | 0.5 U  | 8     | 0.5 U         | 0.5 U         | 8.6         | 10          | 0.5 U       | 140             | 6.9               | 0.5 U | 1 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 0.5 U         | 7.2   |
|                                                  | 12/1/1999                        | K              |                | 0.5 U  | 8.4   | 0.54          | 0.5 U         | 9.6         | 11          | 0.5 U       | 140             | 7.9               | 0.5 U | 1 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 0.5 U         | 7.6   |
|                                                  | 2/2/2000                         |                |                | 0.5 U  | 17    | 0.62          | 0.5 U         | 25          | 23          | 0.5 U       | 350             | 17                | 0.5 U | 2 U      | 0.5 U | 1.3         | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 20    |
|                                                  | 5/4/2000                         |                |                | 2.1    | 160   | 0.34 J        | 0.96          | 95          | 55          | 0.31 J      | 1100            | 39                | 0.5 U | 2 U      | 1.2   | 12          | 0.41 J      | 1.5         | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 97    |
|                                                  | 5/4/2000                         | K              |                | 2      | 160   | 0.33 J        | 1             | 95          | 55          | 0.33 J      | 1100            | 39                | 0.5 U | 2 U      | 1.2   | 13          | 0.41 J      | 1.5         | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 99    |
|                                                  | 7/25/2000                        |                |                | 1.4    | 130   | 0.24 J        | 0.66          | 71          | 42          | 0.29 J      | 960             | 32                | 0.5 U | 0.24 JUB | 0.74  | 6.9         | 0.26 J      | 0.88        | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 80    |
|                                                  | 7/25/2000                        | K              |                | 1.5    | 140   | 0.24 J        | 0.64          | 79          | 47          | 0.3 J       | 930             | 35                | 0.5 U | 2 U      | 0.84  | 7.5         | 0.29 J      | 0.96        | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 90    |
|                                                  | 11/8/2000                        |                |                | 1.9    | 220   | 0.26 J        | 1.1           | 120         | 81          | 0.56        | 1400            | 59                | 0.5 U | 0.42 JUB | 1.4   | 11          | 0.44 J      | 1.3         | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 150   |
|                                                  | 11/8/2000                        | K              |                | 1.7 J  | 200   | 2 U           | 2 U           | 130         | 88          | 2 U         | 1400            | 64                | 2 U   | 7.1 JUB  | 1.5 J | 11          | 0.44 J      | 1.4 J       | 2 U   | 4 U   | 4 U   | 2 U         | 4 U           | 170   |
|                                                  | 1/29/2001                        |                |                | 2      | 250   | 0.22 J        | 1.5           | 150         | 84          | 0.58        | 1500            | 66                | 0.5 U | 0.57 J   | 1.9   | 18          | 0.76        | 2.3         | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 150   |
|                                                  | 1/29/2001                        | K              |                | 1.8 J  | 230   | 2 U           | 1.3 J         | 130         | 78          | 2 U         | 1700            | 60                | 2 U   | 8 U      | 1.8 J | 17          | 0.6 J       | 2 U         | 2 U   | 4 U   | 4 U   | 2 U         | 4 U           | 110   |
|                                                  | 5/14/2001                        |                |                | 0.25 J | 18    | 0.5 U         | 0.5 U         | 13          | 7.7         | 0.5 U       | 130             | 6.7               | 0.5 U | 2 U      | 0.5 U | 3.5         | 0.24 J      | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 14    |
|                                                  | 5/14/2001                        | K              |                | 0.25 J | 17    | 0.5 U         | 0.5 U         | 11          | 6.8         | 0.5 U       | 110             | 5.8               | 0.5 U | 0.24 J   | 0.5 U | 3.2         | 0.19 J      | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 11    |
| MW-1F                                            | 7 - 14                           |                |                |        |       |               |               |             |             |             |                 |                   |       |          |       |             |             |             |       |       |       |             |               |       |
|                                                  | 2/7/2000                         |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.24 J          | 0.5 U             | 0.5 U | 2 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                                                  | 5/5/2000                         |                |                | 0.5 U  | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 2 U      | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |

**Attachment D**  
**Playa Vista- Former Fire Training Burn Pit**  
**Groundwater Analytical Results - Quarterly Sampling**  
**Chlorinated VOCs Analytical Summary**

| Area/<br>Well ID | Screened<br>Interval<br>(ft bgs) | Sample<br>Date | Sample<br>Type | PCE   | TCE   | 1,1,1-<br>TCA | 1,1,2-<br>TCA | 1,1-<br>DCE | 1,1-<br>DCA | 1,2-<br>DCA | cis-<br>1,2-DCE | trans-<br>1,2-DCE | CFM   | MCL     | CBN    | 1,2-<br>DCB | 1,3-<br>DCB | 1,4-<br>DCB | BDM   | CET   | CMT   | 1,2-<br>DCP | 1,2,3-<br>TCB | VC     |
|------------------|----------------------------------|----------------|----------------|-------|-------|---------------|---------------|-------------|-------------|-------------|-----------------|-------------------|-------|---------|--------|-------------|-------------|-------------|-------|-------|-------|-------------|---------------|--------|
| MW-2F            | 9 - 16                           |                |                |       |       |               |               |             |             |             |                 |                   |       |         |        |             |             |             |       |       |       |             |               |        |
|                  | 2/7/2000                         |                |                | 0.5 U | 5.1   | 0.5 U         | 0.5 U         | 0.16 J      | 0.41 J      | 0.5 U       | 6.2             | 0.3 J             | 0.5 U | 0.28 J  | 0.54   | 2.7         | 0.5 U       | 0.47 J      | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.43 J |
|                  | 5/5/2000                         |                |                | 0.5 U | 2.7   | 0.5 U         | 0.5 U         | 0.5 U       | 0.26 J      | 0.5 U       | 3.9             | 0.45 J            | 0.5 U | 2 U     | 0.34 J | 1.3         | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.48 J |
| MW-3F            | 3 - 10                           |                |                |       |       |               |               |             |             |             |                 |                   |       |         |        |             |             |             |       |       |       |             |               |        |
|                  | 2/7/2000                         |                |                | 16    | 940   | 0.5 U         | 1.7           | 130         | 100         | 0.5 U       | 1500            | 110               | 0.5 U | 2 U     | 0.4 J  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 42     |
|                  | 2/7/2000                         | K              |                | 16    | 1000  | 0.5 U         | 1.7           | 130         | 98          | 0.5 U       | 1600            | 110               | 0.5 U | 2 U     | .39 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 40     |
|                  | 5/9/2000                         |                |                | 7.3   | 450   | 0.5 U         | 0.84          | 77          | 60          | 0.5 U       | 920             | 66                | 0.5 U | 2 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 14     |
|                  | 5/9/2000                         | K              |                | 7.6   | 470   | 0.5 U         | 0.91          | 78          | 62          | 0.5 U       | 930             | 66                | 0.5 U | 2 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 15     |
|                  | 7/24/2000                        |                |                | 5     | 540   | 2 U           | 2 U           | 86          | 68          | 2 U         | 1300            | 74                | 2 U   | 3.2 JUB | 2 U    | 2 U         | 2 U         | 2 U         | 2 U   | 4 U   | 4 U   | 2 U         | 1.9 J         | 20     |
|                  | 11/8/2000                        |                |                | 7.6   | 710   | 2 U           | 2 U           | 85          | 84          | 2 U         | 1100            | 81                | 2 U   | 7.2 JUB | 2 U    | 2 U         | 2 U         | 2 U         | 2 U   | 4 U   | 4 U   | 2 U         | 4 U           | 16     |
|                  | 11/8/2000                        | K              |                | 7.2   | 670   | 2 U           | 2 U           | 84          | 82          | 2 U         | 1200            | 79                | 2 U   | 7.2 JUB | 2 U    | 2 U         | 2 U         | 2 U         | 2 U   | 4 U   | 4 U   | 2.6         | 4 U           | 16     |
|                  | 1/29/2001                        |                |                | 4.6   | 510   | 1 U           | 1 U           | 65          | 58          | 1 U         | 1300            | 58                | 1 U   | 4 U     | 0.2 J  | 1 U         | 1 U         | 1 U         | 1 U   | 2 U   | 2 U   | 1 U         | 2 U           | 9.7    |
|                  | 1/29/2001                        | K              |                | 2.4   | 310   | 1 U           | 1 U           | 48          | 53          | 1 U         | 1100            | 48                | 1 U   | 4 U     | 1 U    | 1 U         | 1 U         | 1 U         | 1 U   | 2 U   | 2 U   | 1 U         | 2 U           | 11     |
|                  | 5/14/2001                        |                |                | 3.6   | 170   | 1 U           | 1 U           | 39          | 32          | 1 U         | 700             | 35                | 1 U   | 4 U     | 1 U    | 1 U         | 1 U         | 1 U         | 1 U   | 2 U   | 2 U   | 1 U         | 2 U           | 9.1    |
|                  | 5/14/2001                        | K              |                | 3.7   | 170   | 1 U           | 1 U           | 39          | 32          | 1 U         | 750             | 36                | 1 U   | 4 U     | 1 U    | 1 U         | 1 U         | 1 U         | 1 U   | 2 U   | 2 U   | 1 U         | 2 U           | 9.3    |
| MW-F             | 33 - 52.6                        |                |                |       |       |               |               |             |             |             |                 |                   |       |         |        |             |             |             |       |       |       |             |               |        |
|                  | 3/29/1999                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 2.8             | 0.5 U             | 0.5 U | 5 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 1 U           | 0.5 U  |
|                  | 5/25/1999                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 2.3             | 0.5 U             | 0.5 U | 2.5 U   | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       |               | 0.5 U  |
|                  | 9/13/1999                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 0.5 U | 5 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 1 U           | 0.5 U  |
|                  | 11/29/1999                       |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U           | 0.5 U             | 3     | 1 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 0.5 U         | 0.5 U  |
|                  | 2/3/2000                         |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 3.9             | 0.41 J            | 0.5 U | 2 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U  |
|                  | 5/10/2000                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 2.1             | 0.2 J             | 0.5 U | 2 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U  |
| MW-M             | 40 - 60                          |                |                |       |       |               |               |             |             |             |                 |                   |       |         |        |             |             |             |       |       |       |             |               |        |
|                  | 3/29/1999                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 2.5             | 0.5 U             | 0.5 U | 2.5 U   | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       |               | 0.5 U  |
|                  | 5/25/1999                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 1.7             | 0.5 U             | 0.5 U | 2.5 U   | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       |               | 0.5 U  |
|                  | 9/2/1999                         |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 2.2             | 0.5 U             | 0.5 U | 5 U     | 0.5 U  | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 1 U           | 0.5 U  |

**Attachment D**  
**Playa Vista- Former Fire Training Burn Pit**  
**Groundwater Analytical Results - Quarterly Sampling**  
**Chlorinated VOCs Analytical Summary**

| Area/<br>Well ID | Screened<br>Interval<br>(ft bgs) | Sample<br>Date | Sample<br>Type | PCE   | TCE   | 1,1,1-<br>TCA | 1,1,2-<br>TCA | 1,1-<br>DCE | 1,1-<br>DCA | 1,2-<br>DCA | cis-<br>1,2-DCE | trans-<br>1,2-DCE | CFM   | MCL    | CBN   | 1,2-<br>DCB | 1,3-<br>DCB | 1,4-<br>DCB | BDM   | CET   | CMT   | 1,2-<br>DCP | 1,2,3-<br>TCB | VC    |
|------------------|----------------------------------|----------------|----------------|-------|-------|---------------|---------------|-------------|-------------|-------------|-----------------|-------------------|-------|--------|-------|-------------|-------------|-------------|-------|-------|-------|-------------|---------------|-------|
|                  | 11/29/1999                       |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 4.1             | 0.5 U             | 0.5 U | 1 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 0.5 U | 0.5 U | 0.5 U       | 0.5 U         | 0.5 U |
|                  | 2/4/2000                         |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 3.1             | 0.11 J            | 0.5 U | 0.23 J | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                  | 5/1/2000                         |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 1.6             | 0.5 U             | 0.5 U | 2 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                  | 7/25/2000                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 4.7             | 0.5 U             | 0.5 U | 2 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                  | 11/8/2000                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 8.1             | 0.5 U             | 0.5 U | 2 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                  | 1/29/2001                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 6.4             | 0.5 U             | 0.5 U | 2 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |
|                  | 5/14/2001                        |                |                | 0.5 U | 0.5 U | 0.5 U         | 0.5 U         | 0.5 U       | 0.5 U       | 0.5 U       | 6.2             | 0.17 J            | 0.5 U | 2 U    | 0.5 U | 0.5 U       | 0.5 U       | 0.5 U       | 0.5 U | 1 U   | 1 U   | 0.5 U       | 1 U           | 0.5 U |

**Notes:**

VOC = Volatile Organic Compound

PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = Trichloroethane; DCE = Dichloroethene; DCA = Dichloroethane; CFM = Chloroform; MCL = Methylene chloride; CBN = Chlorobenzene; DCB = Dichlorobenzene; BDM = Bromodichloromethane; CET = Chloroethane; CMT = Chloromethane; DCP = Dichloropropane; TCB = Trichlorobenzene; and VC = Vinyl chloride.

Samples analyzed by EPA Method 8260B.

Only analytes detected in one or more samples are listed.

All concentrations are reported in micrograms per liter (µg/L).

U = Not detected at a concentration greater than the reporting limit shown.

UB = Methylene chloride detected less than 5 times the concentration reported in the method blank.

J = Detected at an estimated concentration between method detection and laboratory reporting limits.

If left blank, analyte was either not analyzed or not reported.

Sample Type:

K = Split sample

## ATTACHMENT E

### WELL CONSTRUCTION PERMIT



## EXHIBIT 12

ENFORCEMENT UNIT  
FILE REVIEW FORM

App t : March 16, 2011  
1000 AM

I. TO BE FILLED OUT BY PERSON RECEIVING REQUEST

Request received by: DAI NGUYEN Date: 1/18/11

Person requesting file review: John Davis

Phone number: 310-795-9640

Representing: \_\_\_\_\_

File(s) to be reviewed: CI-1492

Inspection Reports - Hyperion NPDES Permit R4-2005-0020  
Purpose: \_\_\_\_\_ *gm*

II. TO BE FILLED OUT BY PERSON SETTING APPOINTMENT


Appointment date: 3/16/11 Time: 10<sup>00</sup>

Staff Contact: \_\_\_\_\_ Staff time expended: \_\_\_\_\_

Phone: \_\_\_\_\_

III. TO BE FILLED OUT AFTER FILE REVIEW HAS BEEN COMPLETED

If copies were made, the file(s) shall be returned in the same order and manner in which they were provided to you.

INITIAL IF COPIES MADE: 

COPY SERVICE USED: 

I CERTIFY THAT I HAVE/WILL NOT REMOVE ANY FILES FROM THE PREMISES, HAVE NOT ABUSED THE FILES, AND HAVE REPLACED THE FILES IN THE ORDER AND MANNER IN WHICH THEY WERE PROVIDED TO ME.

SIGNATURE OF REVIEWER: 

*John Davis*  
*March 18, 2011*

Reviewed by: (1) W (2) 9/2/05 (3)           **EPA Region IX and California Water Resources Control Board****NPDES Compliance Evaluation Inspection (CEI) Checklist**

|                                                                                                                                                                                                                                                                                                      |                                                                 |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------|
| Name and Location of Facility Inspected<br><b>City of Los Angeles, Bureau of Sanitation<br/>Hyperion Wastewater Treatment Plant<br/>12000 Vista Del Mar Blvd., Playa Del Rey, CA</b>                                                                                                                 | Entry Time/Date<br><b>10:10 AM / 05-25-05</b>                   | Permit Effective Date<br><b>2-28-94</b>    |
| NPDES Permit Number<br><b>CA0109991</b><br>Board Order Number<br><b>R4-2005-0020</b><br>Major or Minor (circle)                                                                                                                                                                                      | Exit Time/Date<br><b>Appx. 12:05 PM / 05-25-05</b>              | Permit Expiration Date<br><b>5-14-2010</b> |
| Names of On-Site Representative(s), Title(s), Phone, and Fax Number(s)<br><b>Steven Fan, Plant Manager, 310-648-5168<br/>Doug Bohlmann, Shift Supervisor II, 310-648-5680<br/>Ronald Bell, Operations Supervisor, 310-648-5250<br/>Susan Chang, Senior Chemist, 310-648-5607, 310-648-5828 (FAX)</b> | Notified of Inspection?<br><b>(Y - N)</b><br>When?              |                                            |
| Name and Address of Responsible Official, Title, Phone, and Fax Number<br><b>Rita L. Robinson, Director, City of Los Angeles Bureau of Sanitation, 213-473-7999</b>                                                                                                                                  | Official Contacted?<br><b>(Y - N)</b>                           |                                            |
| Inspectors(s) Primary and Back-up<br><b>Jose M. Morales, WRCE</b>                                                                                                                                                                                                                                    | Presented Credentials<br><b>(Y - N)</b>                         |                                            |
| Weather Conditions at the Time of the Inspection<br><b>overcast, cool</b>                                                                                                                                                                                                                            | Receiving Water Name<br><b>Santa Monica Bay (Pacific Ocean)</b> |                                            |
| Were Violations noted during the inspection?<br><b>(Y - N - Pending Sample Results)</b><br><b>NO</b>                                                                                                                                                                                                 | Was this a Quality Assurance-Based Inspection? <b>(Y-N)</b>     |                                            |
|                                                                                                                                                                                                                                                                                                      | Were bioassay samples taken? <b>(Y-N)</b>                       |                                            |

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2005**

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Reviewed by: (1) W (2) 4/10/07 (3)         **EPA Region IX and California Water Resources Control Board****NPDES Compliance Evaluation Inspection (CEI) Checklist**

|                                                                                                                                                                                                                                                                                                      |                                                                                                              |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Name and Location of Facility Inspected<br><b>City of Los Angeles, Bureau of Sanitation<br/>Hyperion Wastewater Treatment Plant<br/>12000 Vista Del Mar Blvd., Playa Del Rey, CA</b>                                                                                                                 | Entry Time/Date<br><b>10:10 AM / 05-25-05</b>                                                                | Permit Effective Date<br><b>2-28-94</b>    |
| NPDES Permit Number<br><b>CA0109991</b><br>Board Order Number<br><b>R4-2005-0020</b><br>Major or Minor (circle)                                                                                                                                                                                      | Exit Time/Date<br><b>Appx. 12:05 PM / 05-25-05</b>                                                           | Permit Expiration Date<br><b>5-14-2010</b> |
| Names of On-Site Representative(s), Title(s), Phone, and Fax Number(s)<br><b>Steven Fan, Plant Manager, 310-648-5168<br/>Doug Bohlmann, Shift Supervisor II, 310-648-5680<br/>Ronald Bell, Operations Supervisor, 310-648-5250<br/>Susan Chang, Senior Chemist, 310-648-5607, 310-648-5828 (FAX)</b> | Notified of Inspection?<br><b>(Y - N)</b><br>When?                                                           |                                            |
| Name and Address of Responsible Official, Title, Phone, and Fax Number<br><b>Rita L. Robinson, Director, City of Los Angeles Bureau of Sanitation, 213-473-7999</b>                                                                                                                                  | Official Contacted?<br><b>(Y - N)</b>                                                                        |                                            |
| Inspectors(s) Primary and Back-up<br><b>Jose M. Morales, WRCE</b>                                                                                                                                                                                                                                    | Presented Credentials<br><b>(Y - N)</b>                                                                      |                                            |
| Weather Conditions at the Time of the Inspection<br><b>overcast, cool</b>                                                                                                                                                                                                                            | Receiving Water Name<br><b>Santa Monica Bay (Pacific Ocean)</b>                                              |                                            |
| Were Violations noted during the inspection?<br><b>(Y - N - Pending Sample Results)</b><br><b>NO</b>                                                                                                                                                                                                 | Was this a Quality Assurance-Based Inspection? <b>(Y-N)</b><br><br>Were bioassay samples taken? <b>(Y-N)</b> |                                            |

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**PERMIT:****OVERALL RATING**   S  

|                                                                                                                                                                                                                                                                             |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. Current copy of facility NPDES permit available on-site.                                                                                                                                                                                                                 | S        |
| 2. Correct name and mailing address of permittee identified on NPDES permit.                                                                                                                                                                                                | S        |
| 3. Facility is as described in permit.                                                                                                                                                                                                                                      | S        |
| 4. a. Notification given to RWQCB of process/production modifications, collection system expansions, etc. that impacted quality/quantity of discharge or changes to the facility or increased discharge.<br>b. Permit modification received, if required, prior to changes. | N        |
| 5. Recent permit modifications, amendments or compliance orders on file.                                                                                                                                                                                                    | N        |
| 6. Number of discharge outfalls the same as listed in the permit.                                                                                                                                                                                                           | S        |
| 7. Name of receiving waters listed correctly in the permit.                                                                                                                                                                                                                 | S        |
| 8. Permit status (i.e., current, expired, or extended)                                                                                                                                                                                                                      | Extended |
| 9. Permit renewal application submitted to the RWQCB within 180 days of expiration date.                                                                                                                                                                                    | N        |
| 10. Other:                                                                                                                                                                                                                                                                  |          |
| Notes:                                                                                                                                                                                                                                                                      |          |

**RECORDS/REPORTS****OVERALL RATING**   S  

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1. NPDES records maintained for the time period required (3 years):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes |
| 2. a. Spills and bypasses reported and documented as required by the permit.<br>b. Follow-up written documentation given as required by the permit (within 5 days in most cases).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes |
| 3. Discharge Monitoring Report (DMR) evaluation:<br>a. The responsible person or designee signs and certifies the DMR. (Yes)<br>b. The facility monitors more frequently than required by the permit. (N)<br>c. All data collected are summarized on the DMR. (Yes)<br>d. Data reported on DMR consistent w/ analytical results. (Yes)<br>e. Coliform concentrations calculated as required by the permit (e.g., median, geometric mean). (Yes)<br>f. Numerical values for minimum detection limits are reported on DMR when laboratory reports "Not Detected" or "0" (for example, MDL= 3, Report: "<3" on DMR). (Yes)<br>g. "Less than values" properly carried through loading calculations. (Yes)<br>h. Flow measurement period used for loading calculations brackets the sampling period. (Yes)<br>i. Influent and effluent loading rates properly calculated, if required. (Yes)<br>j. Number Exceeding (N.E.) properly reported on all DMRs and annual reports. (Yes) | S   |
| 4. Reports completed in time frame and frequency as required by the permit (not all reports required for all facilities):<br>a. Discharge Monitoring Reports (Yes)<br>b. Biosolids Monitoring Reports (Yes)<br>c. Biosolids Management Reports (Yes)<br>d. CSO/ I&I Reports (N)<br>e. Compliance Schedule Reports (N)<br>f. Pretreatment Reports (N)<br>g. Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | S   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 5. Sampling and analytical records (for water and biosolids) include:<br>a. Dates, times, and location of sampling (Yes)<br>b. Names of individuals performing sampling (Yes)<br>c. Analytical methods (Yes)<br>d. Results of analyses (Yes)<br>e. Dates of analyses (Yes)<br>f. Time of analyses, as necessary to verify holding times (Yes)<br>g. Analysts' names or initials (Yes)<br>h. Instantaneous flow at grab sample stations, if required (Yes)          | S |
| 6. Plant records include:<br>a. Daily plant operational records or log book (Yes)<br>b. Equipment maintenance records and schedules (Yes)<br>c. CSO/lift station check records or log book (N)<br>d. Records of auxiliary power checks (N)<br>e. Spill Prevention Control and Countermeasure (SPCC) plan (N)<br>f. Pollution Prevention Plan (P3) (Yes)<br>g. Influent and Effluent flow measurement records maintained for the past three years (Yes)<br>h. Other | S |
| 7. All records and reports required by the permit appear to be organized and available for inspection.                                                                                                                                                                                                                                                                                                                                                             | S |
| 8. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |

**FACILITY SITE REVIEW:****OVERALL RATING\_ S**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. All treatment units and supporting equipment are in service and mechanically functioning properly.                                                                                                                                                                                                                                                                                                                                                                                             | S |
| 2. Hydraulic and organic loadings are consistent with the fact sheet and plant design criteria.<br>a. Are there signs of overloading to the facility and collection system, including I&I and septage loading?                                                                                                                                                                                                                                                                                    | S |
| 3. Peak flows remain within the established plant capacity.<br>a. If flows have exceeded capacity, has the RWQCB been notified?                                                                                                                                                                                                                                                                                                                                                                   | N |
| 4. Lift stations are properly monitored, maintained, have a back-up power source and are not subject to chronic spills and/or overflows.                                                                                                                                                                                                                                                                                                                                                          | N |
| 5. Odors are adequately controlled, resulting in limited complaints.                                                                                                                                                                                                                                                                                                                                                                                                                              | S |
| 6. Residual chlorine monitoring is well documented and sampling/monitoring is representative of the discharge.<br>a. If a UV system is used, the dosage intensity, tubes, and alarms are adequate, maintained and documented.                                                                                                                                                                                                                                                                     | S |
| 7. Housekeeping procedures are adequate to prevent release of pollutants to environment:<br>a. Adequate dikes and secondary containment<br>b. Spill containment and clean-up<br>c. Signs of spillage to soil, groundwater, or surface water<br>d. Storm water and leachate management from storage piles<br>e. Leaking pipes, pumps, etc.<br>f. Drum and chemical storage areas<br>g. Minimization of pollutants entering storm water outfalls<br>h. Other open dumps or debris piles<br>i. Other | S |
| 8. Signs of tank deterioration and/or settlement.                                                                                                                                                                                                                                                                                                                                                                                                                                                 | N |
| 9. Safety concerns may interfere with proper operation, maintenance, and/or monitoring.                                                                                                                                                                                                                                                                                                                                                                                                           | N |
| 10. Material Safety Data Sheets (MSDS) are available for stored chemicals.                                                                                                                                                                                                                                                                                                                                                                                                                        | S |

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**FACILITY SITE REVIEW:****OVERALL RATING** S

|                                                            |   |
|------------------------------------------------------------|---|
| 11. Equipment available for spill cleanup and containment. | N |
| 12. Other:                                                 |   |
| Notes:                                                     |   |

**EFFLUENT/RECEIVING WATERS:****OVERALL RATING** S

|                                                                                                                                                                                                                                                                                                                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1. Recent DMR history () (outfall number(s) <b>002</b> ):<br>a. Violations of discharge limits (N)<br>b. Spills/bypasses (N)<br>c. Fish kills or other receiving water impacts (N)<br>d. WET results are in accordance with the permit (N)<br>e. If effluent limit violations have been identified, what actions has the facility taken to eliminate or reduce their reoccurrence?                                 | S   |
| 2. DMR spot check conducted for the months of<br>a. Internal lab sheets and contract lab results properly transferred to DMRs<br>b. Monthly average, weekly, maximum, etc. values calculated per the permit and are correct<br>c. Influent and effluent loadings reported<br>d. DMR is accurate and complete for each outfall                                                                                      | N/A |
| 3. Appearance of effluent during inspection:<br>a. The effluent(s) was viewed during the inspection.<br>b. Excessive foam, scum, or sheens present: <b>None</b><br>c. Cloudy and/or color: <b>Slightly turbid</b><br>d. Excessive solids: <b>None</b><br>e. Other:                                                                                                                                                 | S   |
| 4. Appearance of receiving water(s) during inspection:<br>a. The receiving water(s) was viewed during the inspection<br>b. Distinctly visible foam or sheens on receiving water<br>c. Biosolids accumulation or deposits of solids below discharge point(s)<br>d. Distinctly visible plume from discharge(s) to receiving water<br>e. Discharge creates objectionable odor at or near receiving water<br>f. Other: | N/A |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                                             |     |

**FLOW MEASUREMENT:****OVERALL RATING** S

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. Flow Measurement devices and methods:<br><b>Influent Measurement</b><br>Primary Device (e.g., Parshall flume, weir, etc.): <b>Venturi meter (flume)</b><br>Secondary Device (e.g., transducer, float, strip gauge, etc.):<br><b>Effluent Measurement</b><br>Primary Device: <b>None</b><br>Secondary Device:<br>Other method of estimating flow: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | S |
| 2. Flow measurement devices designed to meet permit requirements ("continuous measured," "continuous record," etc.).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N |
| 3. Flow measurement location is representative of the actual discharge (considering return and bypass lines, etc.).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | N |
| 4. Flumes<br>a. Approach channel straight for at least 10 times the maximum head height in flume.<br>b. Flow enters flume evenly distributed across the channel and free of turbulence, boils, or other disturbances.<br>c. The flume is clean and free of debris or deposits.<br>d. All flume dimensions appear accurate, level, and plumb.<br>e. Flume head being measured properly.<br>f. Flume is appropriately sized to measure the existing range of flows.<br>g. No obstructions downstream causing inaccurate flow measurement due to excessive "submergence" in flume.<br>h. Proper flow tables being used.                                                                                                                                                                                                                                                                                                        | N |
| 5. Weirs<br>a. Approach channel straight for at least 10 times the maximum head height.<br>b. Flow in the approach channel is evenly distributed and free of turbulence, boils, or other disturbances.<br>c. No solids accumulation in the bottom of the approach channel.<br>d. Weir crest is located at least two times the maximum head height off the floor of the flow channel.<br>e. The weir plate is level, plumb and without distortions.<br>f. Weir is beveled on downstream side if plate is >1/8 inch thick.<br>g. No leakage around the weir plate.<br>h. Measuring point located at least 3 times the maximum head height behind (upstream of) the weir.<br>i. There is free-fall and access for air below the nappe of the weir (i.e., water doesn't cling to the weir plate).<br>j. Weir sized properly to measure the existing range of flows.<br>k. Proper flow tables being used for weir type and size. | N |
| 6. Secondary flow device properly installed and maintained, and operating without interference from foam, turbulence, webs, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N |
| 7. Date of last flow meter calibration:<br>Performed by: <b>Mike Allen (Instrumentation Supervisor) and/or other staff</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | S |
| 8. Calibration checks by plant personnel routinely performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | S |
| 9. Calibration records (external and internal checks) maintained.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N |
| 10. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| Notes:<br><b>Final effluent flow is determined from the venturi meter readings of the influent flow. By approximately October of 2005, a flow meter will be installed at the end of each clarifier for effluent measurement.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |



**SAMPLING (SELF-MONITORING PROGRAM):****OVERALL RATING** S

|                                                                                                                                                                                                                                                                |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1. Sampling locations, type, methods, and frequencies conform to the NPDES permit for all required samples (including influent, effluent, biosolids, receiving stream, etc.).                                                                                  | S*   |
| 2. Sampling locations and methods provide representative samples.<br>a. Grab samples are collected during peak flow conditions rather than low-stress conditions.<br>b. Composite sampling procedures comply with the permit (time vs. flow weighted).         | S111 |
| 3. Automatic samplers and other sampling equipment are properly cleaned.                                                                                                                                                                                       | N    |
| 4. Samples are preserved using methods listed in 40 CFR, Part 136 (e.g., chilled, acidified, etc.).                                                                                                                                                            | N    |
| 5. Sample containers are as listed in 40 CFR, Part 136.                                                                                                                                                                                                        | N    |
| 6. Chain-of-custody is maintained and documented.                                                                                                                                                                                                              | S    |
| 7. Samples are collected using approved protocols:<br>a. Coliform sample taken directly into sterilized container.<br>b. BOD samples are taken prior to disinfection or reseeded.<br>c. Oil and grease collected directly into a glass container.<br>d. Other: | S    |
| 8. Other:                                                                                                                                                                                                                                                      |      |
| <b>Notes:</b><br><b>I collected final effluent samples at the Outfall 002 station. The samples were stored in ice-chests prior to submittal to the State Laboratory. Analysis results were in compliance with their respective discharge limitations.</b>      |      |

**LABORATORY:****OVERALL RATING** S

|                                                                                                                                                                                                                                                                                                                                                              |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1. On-site lab is certified?<br>a. List parameters analyzed on-site that are used for DMR reporting: <b>See MRP No. 1492 (not including parameters listed in item 8 of the following page)</b><br>b. List additional parameters analyzed for internal monitoring and process control: <b>TSS, VSS, DO, nitrite, ammonia, pH, BOD, COD, settleable Solids</b> | Yes          |
| 2. EPA-approved analytical procedures are used in the on-site laboratory                                                                                                                                                                                                                                                                                     | S            |
| 3. Adequate equipment and procedures used for on-site analyses:<br>a. BOD and CBOD<br>b. TSS<br>c. pH<br>d. Dissolved Oxygen<br>e. Residual Chlorine<br>f. Temperature<br>g. Other                                                                                                                                                                           | N            |
| 4. On-site laboratory records include:<br>a. Calibration and maintenance of equipment<br>b. Equipment operating instructions and manuals                                                                                                                                                                                                                     | S            |
| 5. Adequate spare parts and supplies for on-site analyses.                                                                                                                                                                                                                                                                                                   | N            |
| 6. Results of latest external DMR QA study are available and are acceptable.<br>Date of last review: _____                                                                                                                                                                                                                                                   | N            |
| 7. Satisfactory refrigeration in use.                                                                                                                                                                                                                                                                                                                        | S            |
| 8. Certified contract laboratory being used:<br>Laboratory name: <b>Fruit Growers Laboratory</b><br>Address: <b>853 Corporation Street, Santa Paula, CA</b>                                                                                                                                                                                                  | Visited (no) |

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**LABORATORY:****OVERALL RATING** S

|                                                                                                                                                                                                                                                                                                                                     |  |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|
| Phone: 805-392-2000                                                                                                                                                                                                                                                                                                                 |  |   |
| Parameters: Radioactivity                                                                                                                                                                                                                                                                                                           |  |   |
| 9. EPA-approved analytical procedures are identified on contract lab report.                                                                                                                                                                                                                                                        |  | N |
| 10. Holding times being met by on-site and/or contract laboratory.                                                                                                                                                                                                                                                                  |  | N |
| 11. Other:                                                                                                                                                                                                                                                                                                                          |  |   |
| Notes:                                                                                                                                                                                                                                                                                                                              |  |   |
| <b>Dioxin:</b><br>Severn Trent Laboratories Inc.<br>880 Riverside Parkway, West Sacramento CA 95605<br><b>Tributyltin:</b><br>Battelle Incorporated, Duxbury, Massachusetts, performed analyses from January to September 2003.<br>CRG Marine Laboratory Torrance, California performed the analyses from October to December 2003. |  |   |

**OPERATIONS AND MAINTENANCE:****OVERALL RATING** S

|                                                                                                                                                                                                                                                          |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. Preliminary treatment units (bar screens, comminutors, grit channels, etc.) properly maintained with wastes properly disposed.                                                                                                                        | S |
| 2. Adequate oxygen maintained in aerated treatment systems.                                                                                                                                                                                              | S |
| 3. No operational problems caused by hydraulic "short-circuiting" in treatment units.                                                                                                                                                                    | N |
| 4. Biosolids wasting/return rates adequate to maintain system equilibrium.                                                                                                                                                                               | S |
| 5. O&M Manuals and supporting information organized and maintained for use:<br>a. Plant O&M Manual<br>b. Equipment manuals<br>c. Plant engineering drawings<br>d. Collection system drawings available or in development<br>e. Maintenance records/costs | S |
| 6. Routine and preventive maintenance items are scheduled and performed on time.                                                                                                                                                                         | N |
| 7. The amount of maintenance activities and parts in back-log is acceptable.                                                                                                                                                                             | N |
| 8. Operational problems contributing to plant upset, excessive odors, effluent violations, etc.                                                                                                                                                          | S |
| 9. Level of operator certification as required by the permit and staffing level as specified in O&M Manual.                                                                                                                                              | S |
| 10. Auxiliary power available as required by the permit and operates the necessary treatment units.                                                                                                                                                      | S |
| 11. Alarm systems for power and equipment failure.                                                                                                                                                                                                       | S |
| 12. Treatment control procedures are established for emergencies.                                                                                                                                                                                        | N |
| 13. Hydraulic surges are handled without excessive solids wash-out or bypasses.                                                                                                                                                                          | N |
| 14. Spare pumps and parts readily available.                                                                                                                                                                                                             | N |
| 15. Facility appears to be well operated and maintained.                                                                                                                                                                                                 | S |
| 16. Other:                                                                                                                                                                                                                                               |   |
| Notes:                                                                                                                                                                                                                                                   |   |

**BIOSOLIDS/SOLID WASTE HANDLING AND DISPOSAL:****OVERALL RATING** N

|                                                                                                                                                                                                                                                                                   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. Biosolids/solid waste disposal/reuse method (e.g., land application, landfill, etc.):                                                                                                                                                                                          | N |
| 2. Biosolids/solid waste disposal/reuse location(s) (provide name or other identifier for disposal location):                                                                                                                                                                     | N |
| 3. The above processes are in accordance with the permit.                                                                                                                                                                                                                         | N |
| 4. Storage at facility:<br>a. Adequately sized for periods of inclement weather<br>b. Controls leachate, runoff, and public access                                                                                                                                                | N |
| 5. Recent analytical results for metals (biosolids) are within permit limits.                                                                                                                                                                                                     | N |
| 6. Biosolids land application records include:<br>a. Farm maps and land owner agreements<br>b. Soil nutrient analyses done within the last year for active sites<br>c. Records showing loading rate to each site<br>d. Pathogen/Vector reduction records (pH or temp. logs, etc.) | N |
| 7. Other:                                                                                                                                                                                                                                                                         |   |
| Notes:                                                                                                                                                                                                                                                                            |   |

**COMPLIANCE SCHEDULES:****OVERALL RATING** N

|                                                                                                                                             |          |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. Facility is subject to a compliance schedule in either its permit or in an order.                                                        | Yes / No |
| 2. Items in the compliance schedule, which are currently due, have been completed (includes both the permit and orders).                    | N        |
| 3. The permittee has a plan to comply with items in the compliance schedule coming due in the future (includes both the permit and orders). | N        |
| 4. Written notification to RWQCB of compliance with scheduled items as required by the permit.                                              |          |
| 5. Other:                                                                                                                                   |          |
| Notes:                                                                                                                                      |          |

**PRETREATMENT:****OVERALL RATING** N

|                                                                                                                                                                                                                                                                                   |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1. The facility has/participates in an approved pretreatment program.<br>a. POTW has approved pretreatment program?<br>b. Name of POTW running industrial facility's pretreatment program: <u>Hyperion Wastewater Treatment Plant</u>                                             | Yes / No<br>Yes / No |
| 2. The latest annual report is available for review.                                                                                                                                                                                                                              | N                    |
| 3. Procedures are sufficient to ensure that all required industrial users are subject to POTW pretreatment permits.                                                                                                                                                               | N                    |
| 4. Effluent toxicity has not been identified as a result of WET testing.                                                                                                                                                                                                          | N                    |
| 5. Environmental and/or operational problems caused by:<br>a. Restaurant cooking grease discharged into system<br>b. Commercial discharges (e.g., mobile detailers, carpet cleaners)<br>c. Food processing waste<br>d. Industrial toxics<br>e. Other industrial discharges: _____ | N                    |
| Notes:                                                                                                                                                                                                                                                                            |                      |

**STORM WATER:****OVERALL RATING** S

|                                                                                                                                                                                                                                                                                                                                                                                                              |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1. a. Facility storm water discharges are covered under the facility's individual NPDES permit or the California General Permit for Storm Water Discharges Associated with Industrial Activity (NOI is available).<br>b. If no, should the facility have submitted an NOI for coverage under the California General Permit for Storm Water Discharges Associated with Industrial Activity (NPDES CAS000001). | Yes |
| 2. The facility had a storm water pollution prevention plan (SWPPP) available for on-site review.                                                                                                                                                                                                                                                                                                            | S   |
| 3. Pollutant sources (materials and practices) are adequately controlled (inside, undercover).                                                                                                                                                                                                                                                                                                               | S   |
| 4. Appropriate BMPs deployed.                                                                                                                                                                                                                                                                                                                                                                                | N   |
| 5. BMPs are being maintained (e.g., waddles and hay bales are intact).                                                                                                                                                                                                                                                                                                                                       | S   |
| 6. Designated outfalls and sampling locations are identified.                                                                                                                                                                                                                                                                                                                                                | S   |
| 7. Other:                                                                                                                                                                                                                                                                                                                                                                                                    |     |
| Notes:<br>Staff can access an electronic copy of the SWPPP with an intranet connection. The hard copy is kept at their administration offices in downtown Los Angeles. Housekeeping near stormwater sampling sites appeared satisfactory.                                                                                                                                                                    |     |

**CEI Photo Log**

Form Last Updated – 3/02/04

**Facility Name: Hyperion Wastewater Treatment Plant, CI-1492****Date of Inspection: 05/25/2005****Inspector: Jose M. Morales**

| Photo # | Description                                  |
|---------|----------------------------------------------|
| 1       | No photos were taken during this inspection. |
| 2       |                                              |
| 3       |                                              |
| 4       |                                              |
| 5       |                                              |

SUMMARY OF ANALYSIS RESULTS FROM THE SRL BRANCH  
HYPERION WWTP, CI-1492  
05/25/05

| Bottle ID No. | Constituent         | Analysis Result | Permit Limit  | Violation? (Yes or No) | Percent in Violation |
|---------------|---------------------|-----------------|---------------|------------------------|----------------------|
|               | <i>Grab Samples</i> |                 |               |                        |                      |
| 1H            | Settleable solids   | <.1 ml/L        | 3 ml/L        | No                     |                      |
|               |                     |                 |               |                        |                      |
| 1H            | pH                  | 6.98            | 6.0 to 9.0    | No                     |                      |
|               |                     |                 |               |                        |                      |
|               |                     |                 |               |                        |                      |
| 3H            | Oil and grease      | < RL            | 75 mg/L       | No                     |                      |
|               |                     |                 |               |                        |                      |
| 4H            | Residual chlorine   | 0.58 mg/L       | No Limit      | No                     |                      |
|               |                     |                 |               |                        |                      |
| 5H            | VOC                 | <RL             | See permit    | No                     |                      |
|               |                     |                 |               |                        |                      |
|               |                     |                 |               |                        |                      |
| 6H            | Cyanide             | <RL             | 8.3 µg/L (PG) | No                     |                      |

California State Department of Health Services  
Division of Drinking Water and Environmental Management—SRL (South)

Analysis Request Form

|                                                                                                                                                                     |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Name of Sampler: <u>José M. Morales</u>                                                                                                                             | Phone No:<br>(    ) _____<br><u>(213) 620-2273</u> |
| Sampler employed by: <input type="checkbox"/> ODW<br>R.W.Q.C. Board No: <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 7 <input type="checkbox"/> 8 |                                                    |
| Sample source: <u>Hyperion Waste Water Treatment Plant</u> (CI-1492)                                                                                                |                                                    |
| Date collected: <u>05/25/05</u>                                                                                                                                     | Analysis Task No. _____                            |

Sample Type:    ☐ Drinking Water    :    ☐ Ground water    ☐ Surface water  
                   ☒ Waste water        :    Chlorinated                ☒ Yes                ☐ No  
                   ☐ Solid sample        :    ☐ Soil                        ☐ Sludge            ☐ Sediment  
                   ☐ Other \_\_\_\_\_

Use your own bottle ID number for each bottle.

| For Lab Use<br>Log Number | Bottle<br>ID No. | Sampling<br>Point      | Time<br>Collected | Type of Analysis Required<br>(Be specific)   |
|---------------------------|------------------|------------------------|-------------------|----------------------------------------------|
| <u>05-3125-01</u>         | 1H               | Effluent - Grab        | <u>10:45AM</u>    | Settleable solids; pH (G2)                   |
| <u>X</u>                  | <u>2H</u>        | <u>Effluent - Grab</u> | <u>X</u>          | Coliform (total)/fecal: bottle No. _____ (B) |
| <u>-02</u>                | 3H               | Effluent - Grab        | <u>10:45AM</u>    | Oil and Grease (O)                           |
| <u>-03</u>                | 4H               | Effluent - Grab        | <u>10:45AM</u>    | Residual Chlorine (R)                        |
| <u>-04</u>                | 5H               | Effluent - Grab        | <u>10:45AM</u>    | Volatile Organics (vc)                       |
| <u>053125-05</u>          | 6H               | Effluent - Grab        | <u>10:45AM</u>    | Cyanide (C)                                  |
|                           |                  |                        |                   |                                              |
|                           |                  |                        |                   |                                              |
|                           |                  |                        |                   |                                              |
|                           |                  |                        |                   |                                              |

Warning or special instruction on samples:

|                                                                                                      |            |                |
|------------------------------------------------------------------------------------------------------|------------|----------------|
| Seals: <input type="checkbox"/> Intact <input type="checkbox"/> None <input type="checkbox"/> Broken | Date       | Time           |
| Samples relinquished by <u>José M. Morales</u>                                                       | 05/25/2005 | <u>2:40 PM</u> |
| Samples relinquished by _____                                                                        |            |                |
| Received for Lab by <u>Rubén M. Sosa</u>                                                             | 5-25-05    | 2:41 PM        |

(For Lab use only) Total cost for laboratory analyses:

# 2409554  
C11492

# EPA Region IX and California Water Resources Control Board

## NPDES Compliance Evaluation Inspection (CEI) Report

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                            |                                                                                                                        |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------|---------------------|------------------------------------|--|----------------------|----------------------------|-------------------------|--|-------------------------|---------------|------------------------------|--|--------------------------------|-----------------------------|----------------|--|
| <b>Name and Location of Facility Inspected</b><br>City of Los Angeles - Hyperion Treatment Plant<br>12000 Vista Del Mar Boulevard<br>Playa Del Rey, CA 90293                                                                                                                                                                                                                                                                                                                                                                              |                                                                            | <b>Entry Date</b><br>4/7/2009<br><br><b>Entry Time</b><br>8:00 AM                                                      | <b>Permit Effective Date</b><br>4/7/2005                                                                              |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>NPDES Permit Number</b><br>CA0109991                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Order Number</b><br>R4-2005-0020                                        | <input checked="" type="checkbox"/> <b>Major</b><br><input type="checkbox"/> <b>Minor</b>                              | <b>Permit Expiration Date</b><br>5/14/2010                                                                            |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>Name(s) &amp; Title(s) of On-Site Representative(s)</b><br>Ron Bell (Shift Supervisor)<br>Jeff Beller (Laboratory Manager II)                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Contact Information</b><br>Phone: (310) 648-5680<br>Fax: (310) 648-5612 | <b>Notified of Inspection?</b><br><input checked="" type="checkbox"/> <b>Yes</b><br><input type="checkbox"/> <b>No</b> |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>Name, Title &amp; Address of Responsible Official</b><br>Enrique C. Zaldiv (Director, Bureau of Sanitation)<br>433 S. Spring Street, 4 <sup>th</sup> Floor<br>Los Angeles, CA 90013                                                                                                                                                                                                                                                                                                                                                    | <b>Contact Information</b><br>Phone: (213) 978-0261<br>Fax: (213) 485-2210 | <b>Official Contacted?</b><br><input type="checkbox"/> <b>Yes</b><br><input checked="" type="checkbox"/> <b>No</b>     |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>Inspector(s)</b><br><b>Primary:</b> Danny O'Connell (PG Environmental, LLC)<br><b>Other(s):</b> Bobby Jacobsen, Brenner Perryman (PG Environmental, LLC)                                                                                                                                                                                                                                                                                                                                                                               |                                                                            |                                                                                                                        | <b>Presented Credentials?</b><br><input checked="" type="checkbox"/> <b>Yes</b><br><input type="checkbox"/> <b>No</b> |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>Weather Conditions at the Time of the Inspection:</b><br>Sunny; no signs of recent precipitation                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                            | <b>Facility Receiving Water Name:</b><br>Pacific Ocean within the Santa Monica Bay                                     |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <b>Overview of Areas Evaluated During Inspection</b><br><i>S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated</i>                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                            |                                                                                                                        |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| <table border="0"> <tr> <td>Permit: S</td> <td>Flow Measurement: S</td> <td colspan="2">Solid Waste Handling &amp; Disposal: S</td> </tr> <tr> <td>Records &amp; Reports: S</td> <td>Self-Monitoring Program: U</td> <td colspan="2">Compliance Schedules: N</td> </tr> <tr> <td>Facility Site Review: S</td> <td>Laboratory: S</td> <td colspan="2">Pretreatment (POTWs Only): N</td> </tr> <tr> <td>Effluent &amp; Receiving Waters: U</td> <td>Operations &amp; Maintenance: S</td> <td colspan="2">Storm Water: N</td> </tr> </table> |                                                                            |                                                                                                                        |                                                                                                                       | Permit: S | Flow Measurement: S | Solid Waste Handling & Disposal: S |  | Records & Reports: S | Self-Monitoring Program: U | Compliance Schedules: N |  | Facility Site Review: S | Laboratory: S | Pretreatment (POTWs Only): N |  | Effluent & Receiving Waters: U | Operations & Maintenance: S | Storm Water: N |  |
| Permit: S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Flow Measurement: S                                                        | Solid Waste Handling & Disposal: S                                                                                     |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| Records & Reports: S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Self-Monitoring Program: U                                                 | Compliance Schedules: N                                                                                                |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| Facility Site Review: S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Laboratory: S                                                              | Pretreatment (POTWs Only): N                                                                                           |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| Effluent & Receiving Waters: U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Operations & Maintenance: S                                                | Storm Water: N                                                                                                         |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |
| Prepared By: Brenner Perryman (PG Environmental, LLC) on 4/14/2009<br>Reviewed By: Craig Chomiak (PG Environmental, LLC) on 4/23/2009                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                            |                                                                                                                        |                                                                                                                       |           |                     |                                    |  |                      |                            |                         |  |                         |               |                              |  |                                |                             |                |  |

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# 2409554  
C11492

EPA Region IX and California Water Resources Control Board

NPDES Compliance Evaluation Inspection (CEI) Report

|                                                                                                                                                                                                                                                                                                                                                                                 |                                                                            |                                                                                                          |                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Name and Location of Facility Inspected</b><br>City of Los Angeles - Hyperion Treatment Plant<br>12000 Vista Del Mar Boulevard<br>Playa Del Rey, CA 90293                                                                                                                                                                                                                    |                                                                            | <b>Entry Date</b><br>4/7/2009<br><br><b>Entry Time</b><br>8:00 AM                                        | <b>Permit Effective Date</b><br>4/7/2005   |
| <b>NPDES Permit Number</b><br>CA0109991                                                                                                                                                                                                                                                                                                                                         | <b>Order Number</b><br>R4-2005-0020                                        | <input checked="" type="checkbox"/> <b>Major</b><br><input type="checkbox"/> <b>Minor</b>                | <b>Permit Expiration Date</b><br>5/14/2010 |
| <b>Name(s) &amp; Title(s) of On-Site Representative(s)</b><br>Ron Bell (Shift Supervisor)<br>Jeff Beller (Laboratory Manager II)                                                                                                                                                                                                                                                | <b>Contact Information</b><br>Phone: (310) 648-5680<br>Fax: (310) 648-5612 | <b>Notified of Inspection?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No |                                            |
| <b>Name, Title &amp; Address of Responsible Official</b><br>Enrique C. Zaldiv (Director, Bureau of Sanitation)<br>433 S. Spring Street, 4 <sup>th</sup> Floor<br>Los Angeles, CA 90013                                                                                                                                                                                          | <b>Contact Information</b><br>Phone: (213) 978-0261<br>Fax: (213) 485-2210 | <b>Official Contacted?</b><br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No     |                                            |
| <b>Inspector(s)</b><br><b>Primary:</b> Danny O'Connell (PG Environmental, LLC)<br><b>Other(s):</b> Bobby Jacobsen, Brenner Perryman (PG Environmental, LLC)                                                                                                                                                                                                                     |                                                                            | <b>Presented Credentials?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No  |                                            |
| <b>Weather Conditions at the Time of the Inspection:</b><br>Sunny; no signs of recent precipitation                                                                                                                                                                                                                                                                             |                                                                            | <b>Facility Receiving Water Name:</b><br>Pacific Ocean within the Santa Monica Bay                       |                                            |
| <b>Overview of Areas Evaluated During Inspection</b><br>S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated<br>Permit: S      Flow Measurement: S      Solid Waste Handling & Disposal: S<br>Records & Reports: S      Self-Monitoring Program: U      Compliance Schedules: N<br>Facility Site Review: S      Pretreatment (POTWs Only): N<br>Storm Water: N |                                                                            |                                                                                                          |                                            |

INSPECTION REPORT

A-1650

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LOS ANGELES REGION

## **Facility Narrative**

On April 7, 2009 a USEPA contractor inspected the City of Los Angeles – Hyperion Treatment Plant in Playa Del Rey, CA. Discharges from the facility are regulated by Regional Water Board Order No. R4-2005-0020 (NPDES Permit No. CA0109991). The primary purpose of the inspection was to determine the accuracy and reliability of the Discharger's self-monitoring and reporting program. The primary on-site facility representatives were Ron Bell (Shift Supervisor) and Jeff Beller (Laboratory Manager II). The weather at the time of inspection was sunny with no signs of recent precipitation.

The City of Los Angeles (City or Discharger) owns and operates the Hyperion Treatment Plant (Facility) which discharges disinfected (through Outfall 001) / non-disinfected (through Outfall 002) secondary treated municipal wastewater to the Pacific Ocean within Santa Monica Bay. The Facility is part of a joint outfall system commonly known as the Hyperion Treatment System which consists of the wastewater collection system, the Hyperion Treatment Plant, and three upstream wastewater treatment plants: Donald C. Tillman Water Reclamation Plant (Tillman WRP), Los Angeles-Glendale Water Reclamation Plant (LAGWRP), and Burbank Water Reclamation Plant (Burbank WRP) (owned and operated by the City of Burbank). The Hyperion Treatment System collects, treats, and disposes of sewage from the entire City (except the Wilmington - San Pedro Area, the strip north of San Pedro, and Watts) and from a number of cities and agencies under contractual agreements. Approximately 85% of the sewage and commercial/industrial wastewater comes from the City. The remaining 15% comes from the contract cities, business zones and agencies. There are approximately four million people in the Hyperion Treatment System Service Area.

The Hyperion Treatment System is an interconnected system and includes approximately 6,500 miles of sewer lines located within the City (including trunk sewers in contract cities, business zones and agencies) and additional sewer lines under the control of the contract cities and agencies. The contract cities and agencies operate their respective collection systems that are tributary to the City's main trunk lines. Sludge from the City's two upstream plants is returned to the wastewater collection system and flows to the Facility for treatment. Discharges from Tillman WRP and LAGWRP are regulated by NPDES Permit Numbers CA0056227 and CA0053953, respectively. In addition, sludge generated from the Burbank WRP is also returned to the City of Burbank sewer system for discharge to the Hyperion Treatment System for treatment at the Hyperion Treatment Plant. The influent to the Burbank WRP can be diverted to the Hyperion Treatment System during periods of emergency. The operations of the Burbank WRP are regulated under NPDES Permit No. CA0055531.

The Facility has two ocean outfalls. Outfall 001 is commonly referred to as the "one-mile outfall". It is a 12-foot diameter outfall terminating approximately 5,364 feet west-southwest of the Facility at a depth of approximately 50 feet below the ocean surface. This outfall is permitted for emergency discharge of chlorinated secondary treated effluent during extremely high flows, power failures, and preventive maintenance, such as routine opening and closing the outfall gate valve(s) for exercising and lubrication (occurred twice since the last inspection). However, during intense storms or storms associated with Facility power outages, direct discharge of nondisinfected storm water overflow is also permitted at this outfall. This Order requires the City to notify the Regional Water Board and USEPA in advance of any planned preventive maintenance that results in discharges through Outfall 001 (the Regional Water Board was informed prior to the two scheduled preventive maintenance activities that occurred since the last inspection). Outfall 002 is commonly referred to as the "five-mile outfall". It is a 12-foot diameter outfall terminating approximately 26,525 feet (8.1 km) west-southwest of the Facility at a depth of approximately 187 feet (57 m) below the ocean surface. This outfall is located North of Outfall 001 and ends in a "Y" shaped diffuser consisting of

two 3,840-foot legs. This is the only outfall permitted for the routine discharge of nondisinfected secondary treated effluent.

The Facility has a dry weather average design treatment capacity of 450.0 million gallons per day (mgd) and a wet weather peak hydraulic capacity of approximately 850.0 mgd. The instantaneous influent flow was 311.0 mgd at 10:30 AM.

The Facility also accepts dry weather urban runoff that is diverted from storm drains into the City's collection system from April 1 to October 31. The City plans to extend this diversion operation from the dry summer months to year-round in order to conform to the six-year compliance schedule for bacteria concentration during winter dry weather, contained in the Santa Monica Bay Beach Dry-weather Bacteria TMDL regulation (Resolution No. 02-004 and Resolution No. 2002-022) adopted by the Regional Water Board.

Discharge monitoring reports (DMRs) for Outfall 002 for the months of November and December 2008, and January 2009 were reviewed as a component of this inspection. The review included a comparison of reported monitoring results versus requirements and limitations contained within the permit. The Discharger had three consecutive months of ammonia performance goal exceedances from November 2008 to January 2009. The facility's effluent quality is discussed in the 'Major Findings' and 'Effluent and Receiving Waters' section of this report.

Members from the Discharger's laboratory conduct the self-monitoring activities. Effluent samples for Outfall 002 are collected from a sink off of the discharge line (refer to Photo 4). Sample collection location and methods appeared to provide representative samples. All samples are analyzed at the on-site laboratory.

## **Major Findings**

### ***Effluent and Receiving Waters***

1. Regional Water Board Order No. R4-2005-0020, Section I.A.2 of the permit requires the Discharger to "submit a written report to the Regional Board and USEPA on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation" if there are three consecutive months of performance goal exceedances. The Discharger had three consecutive months of ammonia exceedances from November 2008 to January 2009. The Discharger's January 2009 monthly monitoring report discusses the nature of the exceedances and the potential cause, but does not discuss corrective actions or associated timetables.

### ***Self-Monitoring Program***

1. Regional Water Board Order No. R4-2005-0020, Monitoring and Reporting Program (MRP) 1492 (Attachment T) III.B/C require that "Pollutants shall be analyzed using the analytical methods described in 40 CFR 136". Some of the parameters analyzed from composite samples require a preservation temperature at or below 6 degrees F, as specified by the sample preservation requirements in 40 CFR 136. The Facility did not maintain thermometers installed in the influent and effluent composite samplers (refer to Photos 3 and 5). Therefore, the Discharger cannot demonstrate compliance with the sample preservation requirements specified in 40 CFR Part 136.

**PERMIT:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                             | EVAL    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1. Current copy of facility NPDES permit available on-site.                                                                                                                                                                                                                                | S       |
| 2. Correct name and mailing address of permittee identified on NPDES permit.                                                                                                                                                                                                               | S       |
| 3. Facility is as described in permit.                                                                                                                                                                                                                                                     | S       |
| 4. a. Notification given to Regional Water Board of process/production modifications, collection system expansions, etc. that impacted quality/quantity of discharge or changes to the facility or increased discharge.<br>b. Permit modification received, if required, prior to changes. | N<br>N  |
| 5. Recent permit modifications, amendments or compliance orders on file.                                                                                                                                                                                                                   | N       |
| 6. Number of discharge outfalls the same as listed in the permit.                                                                                                                                                                                                                          | S       |
| 7. Name of receiving waters listed correctly in the permit.                                                                                                                                                                                                                                | S       |
| 8. Permit status (i.e., Current, Expired, or Extended)                                                                                                                                                                                                                                     | Current |
| 9. Permit renewal application submitted to the Regional Water Board at least 180 days prior to the expiration date.                                                                                                                                                                        | N       |
| 10. Other:                                                                                                                                                                                                                                                                                 | N       |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                                          |         |

RECORDS/REPORTS:

OVERALL RATING: S

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EVAL                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1. NPDES records maintained for the time period required (5 years):<br><br>The following records and reports were requested and observed:<br><ul style="list-style-type: none"> <li>- <b>Machinery Calibration Logs</b></li> <li>- <b>Work Orders</b></li> <li>- <b>November 2008, December 2008, and January 2008 DMRs</b></li> <li>- <b>Operation and Maintenance Reports (i.e. for the One Mile Outfall)</b></li> <li>- <b>2008 Biosolid Annual Report</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                                      |
| 2. a. Did the facility document any spills or bypasses during the period reviewed?<br>b. Spills and bypasses reported and documented as required by the permit (i.e.- as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances).<br>c. Follow-up written documentation given as required by the permit (within 5 days in most cases).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>N<br><br>N                                         |
| 3. Discharge Monitoring Report (DMR) and/or Self Monitoring Report (SMR) evaluation:<br>a. The responsible person or designee signs and certifies the DMRs/SMRs.<br>b. The facility monitors more frequently than required by the permit.<br>c. All data collected are summarized on the DMRs/SMRs.<br>d. Data reported on DMRs/SMRs is consistent w/ analytical results.<br>e. Coliform concentrations calculated as required by the permit (e.g., median, geometric mean).<br>f. Numerical values for minimum detection limits are reported on DMRs/SMRs when laboratory reports "Not Detected" or "0" (for example, MDL= 3, Report: "<3" on DMR).<br>g. "Less than values" properly carried through loading calculations.<br>h. Flow measurement period used for loading calculations brackets the sampling period.<br>i. Influent and effluent loading rates properly calculated, if required.<br>j. Number Exceeding (N.E.) properly reported on all DMRs and annual reports. | S<br>Yes<br>S<br>N<br>N<br><br>S<br><br>N<br>N<br>N<br>N |
| 4. Reports completed in the time frame and frequency as required by the permit (not all reports required for all facilities):<br>a. Discharge Monitoring Reports/Self-Monitoring Reports<br>b. Biosolids Monitoring Reports<br>c. Biosolids Management Reports<br>d. CSO/ I&I Reports<br>e. Compliance Schedule Reports<br>f. Pretreatment Reports<br>g. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S<br>N<br>S<br>N<br>N<br>S<br>N                          |
| 5. Sampling and analytical records (for water and biosolids) include:<br>a. Dates, times, and location of sampling<br>b. Names of individuals performing sampling<br>c. Analytical methods<br>d. Results of analyses<br>e. Dates of analyses<br>f. Time of analyses, as necessary to verify holding times<br>g. Analysts' names or initials<br>h. Instantaneous flow at grab sample stations, if required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | S<br>S<br>S<br>S<br>S<br>S<br>S<br>S                     |

**RECORDS/REPORTS:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                  | EVAL                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 6. Plant records include:<br>a. Daily plant operational records or log book<br>b. Equipment maintenance records and schedules<br>c. CSO/lift station check records or log book<br>d. Records of auxiliary power checks<br>e. Spill Prevention Control and Countermeasure (SPCC) plan<br>f. Pollution Prevention Plan (P3)<br>g. Influent and Effluent flow measurement records maintained for the past three years<br>h. Other: | S<br>S<br>N<br>S<br>S<br>N<br>S<br>N |
| 7. All records and reports required by the permit appear to be organized and available for inspection.                                                                                                                                                                                                                                                                                                                          | S                                    |
| 8. Other:                                                                                                                                                                                                                                                                                                                                                                                                                       | N                                    |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                                                                                                                                                                               |                                      |

**FACILITY SITE REVIEW:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EVAL   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <p>1. All treatment units and supporting equipment are in service and mechanically functioning properly.</p> <p><i>The Plant provides full secondary treatment for the wastewaters received. Preliminary and primary wastewater treatment consists of screening, grit removal, and primary sedimentation with coagulation and flocculation. In secondary treatment, the primary effluent is biologically treated in a high purity oxygen activated sludge process comprised of a cryogenic oxygen plant, 9 secondary reactor modules and 36 secondary clarifiers. Each secondary reactor module is designed to handle 50 mgd of flow which results in a total treatment capacity of 450 mgd of primary effluent. After clarification, non-disinfected secondary effluent is discharged into Santa Monica Bay through a five mile submerged outfall pipe. A discharge of up to 325 mgd flows by gravity to the outfall, or is pumped at the Effluent Pumping Plant when flows exceed 325 mgd.</i></p> <p><i>Solid fractions recovered from wastewater treatment processes include grit, primary screenings, primary sludge and skimmings, thickened waste activated sludge, digested sludge screenings and digester cleaning solids. The fine solids (grit, primary screenings, digested sludge screenings, digester cleaning solids) that consist of primarily inorganic materials are hauled away to landfills. The remaining solid fractions (primary sludge, skimmings, and thickened waste activated sludge) are anaerobically digested onsite. The digested solids are screened and dewatered using centrifuges. The biosolids are beneficially reused offsite for land application and composting projects. The digester gas is cleaned and piped to the Los Angeles Department of Water and Power's Scattergood Steam Generating Plant, located immediately adjacent to the plant. The exported digester gas is used as fuel in the generation of electricity. In return, the generating plant provides steam for digester heating. During interruptions in the export of steam from the DWP Scattergood Steam Generation Plant, digester gas can be used as fuel for in-plant boilers that provide steam to heat the anaerobic digesters.</i></p> | S      |
| <p>2. Hydraulic and organic loadings are consistent with the fact sheet and plant design criteria.</p> <p>a. Are there signs of overloading to the facility and collection system, including I&amp;I and septage loading?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | S<br>S |
| <p>3. Peak flows remain within the established plant capacity.</p> <p>a. If flows have exceeded capacity, has the Regional Water Board been notified?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | S<br>N |
| <p>4. Lift stations are properly monitored, maintained, have a back-up power source and are not subject to chronic spills and/or overflows.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N      |
| <p>5. Odors are adequately controlled, resulting in limited complaints.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | S      |
| <p>6. Residual chlorine monitoring is well documented and sampling/monitoring is representative of the discharge.</p> <p>a. If a UV system is used, the dosage intensity, tubes, and alarms are adequate, maintained and documented.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | S<br>N |

**FACILITY SITE REVIEW:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EVAL                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 7. Housekeeping procedures are adequate to prevent release of pollutants to the environment:<br>a. Adequate dikes and secondary containment<br>b. Spill containment and clean-up<br>c. Signs of spillage to soil, groundwater, or surface water<br>d. Storm water and leachate management from storage piles<br>e. Leaking pipes, pumps, etc.<br>f. Drum and chemical storage areas<br>g. Minimization of pollutants entering storm water outfalls<br>h. Other open dumps or debris piles<br>i. Other: | S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>N |
| 8. Signs of tank deterioration and/or settlement.                                                                                                                                                                                                                                                                                                                                                                                                                                                      | S                                         |
| 9. Safety concerns are present that may interfere with proper operation, maintenance, and/or monitoring.                                                                                                                                                                                                                                                                                                                                                                                               | S                                         |
| 10. Material Safety Data Sheets (MSDS) are available for stored chemicals.                                                                                                                                                                                                                                                                                                                                                                                                                             | S                                         |
| 11. Equipment available for spill clean-up and containment.                                                                                                                                                                                                                                                                                                                                                                                                                                            | S                                         |
| 12. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N                                         |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                                                                                                                                                                                                                                                      |                                           |



**EFFLUENT AND RECEIVING WATERS:**

**OVERALL RATING: U**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EVAL                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <p>1. Recent DMR history (last <u>3</u> months) (outfall number(s) <u>002</u>):</p> <ul style="list-style-type: none"> <li>a. Violations of discharge limits</li> <li>b. Spills/bypasses</li> <li>c. Fish kills or other receiving water impacts</li> <li>d. WET testing results are in accordance with the permit</li> <li>e. If effluent limit violations have been identified, what actions has the facility taken to eliminate or reduce their recurrence?</li> </ul> <p><b><i>The Facility had three consecutive months of ammonia performance goal exceedances (November 2008, December 2008 and January 2009). The Facility's January 2009 DMR discusses the nature of the exceedances and the potential cause, but does not discuss corrective actions or associated timetables. See 'Major Findings - Effluent and Receiving Waters' for additional information.</i></b></p> | <p>U</p> <p>S</p> <p>S</p> <p>S</p> <p>U</p>            |
| <p>2. DMR spot check conducted for the months of:<br/><b><u>November 2008, December 2008, and January 2009</u></b></p> <ul style="list-style-type: none"> <li>a. Internal lab sheets and contract lab results properly transferred to DMRs</li> <li>b. Monthly average, weekly, maximum, etc., values correctly calculated per the permit</li> <li>c. Influent and effluent loadings reported</li> <li>d. DMR is accurate and complete for each outfall</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>N</p> <p>S</p> <p>S</p> <p>S</p>                     |
| <p>3. Appearance of effluent during inspection:</p> <ul style="list-style-type: none"> <li>a. The effluent(s) was viewed during the inspection</li> <li>b. Excessive foam, scum, or sheens present</li> <li>c. Cloudy and/or color</li> <li>d. Excessive solids</li> <li>e. Other:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Yes</p> <p>S</p> <p>S</p> <p>S</p> <p>N</p>          |
| <p>4. Appearance of receiving water(s) during inspection:</p> <ul style="list-style-type: none"> <li>a. The receiving water(s) was viewed during the inspection</li> <li>b. Distinctly visible foam or sheens on receiving water</li> <li>c. Biosolids accumulation or deposits of solids below discharge point(s)</li> <li>d. Distinctly visible plume from discharge(s) to receiving water</li> <li>e. Discharge creates objectionable odor at or near receiving water(s)</li> <li>f. Other:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | <p>Yes</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>N</p> |
| <p>5. Other:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>N</p>                                                |
| <p><b>Notes:</b><br/><b><i>This section was rated "unsatisfactory" due to checklist items 1a. and 1e.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         |

**FLOW MEASUREMENT:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EVAL                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <p>1. Flow Measurement devices and methods:</p> <p><b>Influent Measurement:</b></p> <p>Primary Device: <u>Parshall flumes</u></p> <p>Secondary Device: <u>N/A</u></p> <p><b>Effluent Measurement:</b></p> <p>Primary Device: <u>Calculated</u></p> <p>Secondary Device: <u>N/A</u></p> <p>Other method of estimating flow: <u>N/A</u></p> <p><b><i>Effluent flow is calculated by summing the influent flows, then subtracting the flow that is diverted to the West Basin Facility.</i></b></p>                                                                                                                                                        | <p>S</p> <p>N</p> <p>S</p> <p>N</p> <p>N</p>                            |
| 2. Flow measurement devices designed to meet permit requirements ("continuous measured," "continuous record," etc.).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S                                                                       |
| 3. Flow measurement location is representative of the actual discharge (considering return and bypass lines, etc.).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | S                                                                       |
| <p>4. Flumes:</p> <p>a. Approach channel straight for at least 10 times the maximum head height in flume</p> <p>b. Flow enters flume evenly distributed across the channel and free of turbulence, boils, or other disturbances</p> <p>c. The flume is clean and free of debris or deposits</p> <p>d. All flume dimensions appear accurate, level, and plumb</p> <p>e. Flume head is being measured properly</p> <p>f. Flume is appropriately sized to measure the existing range of flows</p> <p>g. No obstructions downstream causing inaccurate flow measurement due to excessive "submergence" in flume</p> <p>h. Proper flow tables being used</p> | <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> |

**FLOW MEASUREMENT:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EVAL                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <p>5. Weirs:</p> <ul style="list-style-type: none"> <li>a. Approach channel straight for at least 10 times the maximum head height</li> <li>b. Flow in the approach channel is evenly distributed and free of turbulence, boils, or other disturbances</li> <li>c. No solids accumulation in the bottom of the approach channel</li> <li>d. Weir crest is located at least two times the maximum head height off the floor of the flow channel</li> <li>e. The weir plate is level, plumb and without distortions</li> <li>f. Weir is beveled on downstream side if plate is &gt;1/8 inch thick</li> <li>g. No leakage around the weir plate</li> <li>h. Measuring point located at least 3 times the maximum head height behind (upstream of) the weir</li> <li>i. There is free-fall and access for air below the nappe of the weir (i.e., water doesn't cling to the weir plate)</li> <li>j. Weir sized properly to measure the existing range of flows</li> <li>k. Proper flow tables being used for weir type and size</li> </ul> | <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> <p>N</p> |
| <p>6. Secondary flow device properly installed and maintained, and operating without interference from foam, turbulence, webs, etc.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>S</p>                                                                                           |
| <p>7. Date of last flow meter calibrations:</p> <p><b>Influent:</b>            <u>3/25/2009</u></p> <p>Performed by:       <u>John Fees</u></p> <p><b>Effluent:</b>           <u>Calculated</u></p> <p>Performed by:       <u>N/A</u></p> <p><b><i>The Facility's effluent is calculated by an equation that sums the influent flows, then subtracts the flow that is sent to the West Basin Facility for recycling.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>S</p> <p>S</p>                                                                                  |
| <p>8. Calibration checks by plant personnel routinely performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>S</p>                                                                                           |
| <p>9. Calibration records (external and internal checks) maintained.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>S</p>                                                                                           |
| <p>10. Other:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>N</p>                                                                                           |
| <p><b>Notes:</b><br/><b><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                    |

**SELF-MONITORING PROGRAM:**

**OVERALL RATING: U**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                 | EVAL                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 1. Sampling locations, type, methods, and frequencies conform to the NPDES permit for all required samples (including influent, effluent, biosolids, receiving stream, etc.).<br><i>See 'Facility Narrative' for a description of self-monitoring activities.</i>                                                                                                                                                              | S                       |
| 2. Sampling locations and methods provide representative samples.<br>a. Grab samples are collected during peak flow conditions rather than low-stress conditions<br>b. Composite sampling procedures comply with the permit (time vs. flow weighted)<br>c. Other:                                                                                                                                                              | S<br>S<br>N             |
| 3. Automatic samplers and other sampling equipment are properly cleaned.                                                                                                                                                                                                                                                                                                                                                       | S                       |
| 4. Samples are preserved using methods listed in 40 CFR, Part 136 (e.g., chilled, acidified).<br><i>Thermometers were not maintained within the refrigerators where influent and effluent composite wastewater samples were collected and stored (refer to Photos 3 and 5). Therefore, sample preservation temperature could not be determined. See 'Major Findings - Self-Monitoring Program' for additional information.</i> | U                       |
| 5. Sample containers are as listed in 40 CFR, Part 136.                                                                                                                                                                                                                                                                                                                                                                        | S                       |
| 6. Chain-of-custody is maintained and documented.                                                                                                                                                                                                                                                                                                                                                                              | S                       |
| 7. Samples are collected using approved protocols:<br>a. Coliform sample taken directly into sterilized container<br>b. BOD samples are taken prior to disinfection or reseeded<br>c. Oil and grease collected directly into a glass container<br>d. Other:                                                                                                                                                                    | Yes<br>N<br>N<br>N<br>N |
| 8. Other:                                                                                                                                                                                                                                                                                                                                                                                                                      | N                       |
| <b>Notes:</b><br><i>This section was rated "unsatisfactory" due to checklist item 4.</i>                                                                                                                                                                                                                                                                                                                                       |                         |

LABORATORY:

OVERALL RATING: S

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EVAL                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 1. On-site lab is ELAP-certified?<br>a. List parameters analyzed on-site that are used for DMR reporting:<br><u>The Facility performs analysis on-site for all parameters reported on its DMRs.</u><br>b. List additional parameters analyzed for internal monitoring and process control:<br><u>Dissolved phosphorus and chemical oxygen demand.</u><br><b>The on-site laboratory ELAP Certification Number is 1723 and expires on January 31, 2010. The lab was awarded a certificate of environmental accreditation from ELAP in February 2008. Groups of analysis (i.e., metals, organics, etc.) are conducted at several specialized on-site labs.</b> | Yes                             |
| 2. EPA-approved analytical procedures are used in the on-site laboratory?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | S                               |
| 3. Adequate equipment and procedures used for on-site analyses:<br>a. BOD and CBOD<br>b. TSS<br>c. pH<br>d. Dissolved Oxygen<br>e. Residual Chlorine<br>f. Temperature<br>g. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | N<br>N<br>S<br>N<br>N<br>S<br>N |
| 4. On-site laboratory records include:<br>a. Laboratory SOPs<br>b. Calibration and maintenance of equipment<br>c. Equipment operating instructions and manuals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | S<br>S<br>S                     |
| 5. Adequate spare parts and supplies for on-site analyses.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | S                               |
| 6. Results of latest external DMR QA study are available and are acceptable.<br>Date of last report:        /        /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N                               |
| 7. Satisfactory refrigeration in use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | S                               |
| 8. Certified contract laboratory(s) being used:<br><b>All parameters are analyzed on-site.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N                               |
| 9. EPA-approved analytical procedures are identified on contract lab report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N                               |
| 10. Holding times being met by on-site and/or contract laboratory.<br>a. pH measured in situ or within 15 minutes of sample collection.<br>b. Residual chlorine measured in situ or within 15 minutes of sample collection.                                                                                                                                                                                                                                                                                                                                                                                                                                 | N<br>N                          |

LABORATORY:

OVERALL RATING: S

| INSPECTED ITEM                                                                                                                                                                                                    | EVAL |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 11. Other:                                                                                                                                                                                                        | N    |
| <b>Notes:</b><br><i>The lab utilizes the Laboratory Information System (LIMS) to maintain and track data.</i><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i> |      |

**OPERATIONS AND MAINTENANCE:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                          | EVAL                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1. Preliminary treatment units (bar screens, comminuters, grit channels, etc.) properly maintained with wastes properly disposed.                                                                                                                                                                                                       | S                     |
| 2. Adequate oxygen maintained in aerated treatment systems.                                                                                                                                                                                                                                                                             | S                     |
| 3. No operational problems caused by hydraulic "short-circuiting" in treatment units.                                                                                                                                                                                                                                                   | S                     |
| 4. Biosolids wasting/return rates adequate to maintain system equilibrium.                                                                                                                                                                                                                                                              | S                     |
| 5. Operation and Maintenance (O&M) Manuals and supporting information organized and maintained for use:<br>a. Plant O&M Manual<br>b. Equipment manuals<br>c. Plant engineering drawings<br>d. Collection system drawings available or in development<br>e. Maintenance records/costs                                                    | N<br>N<br>N<br>N<br>N |
| 6. Routine and preventive maintenance items are scheduled and performed on time.<br><i>On January 13, 2009 and August 20, 2008, the Facility tested the operation of the valving gear to discharge effluent via the 1-mile outfall. The Regional Water Board was notified prior to the events as required by the Facility's permit.</i> | S                     |
| 7. The amount of maintenance activities and parts in back-log is acceptable.                                                                                                                                                                                                                                                            | S                     |
| 8. Operational problems contributing to plant upset, excessive odors, effluent violations, etc.                                                                                                                                                                                                                                         | S                     |
| 9. Level of operator certification as required by the permit and staffing level as specified in O&M Manual.                                                                                                                                                                                                                             | S                     |
| 10. Auxiliary power available as required by the permit and operates the necessary treatment units.                                                                                                                                                                                                                                     | S                     |
| 11. Alarm systems for power and equipment failure.                                                                                                                                                                                                                                                                                      | S                     |
| 12. Treatment control procedures are established for emergencies.                                                                                                                                                                                                                                                                       | S                     |
| 13. Hydraulic surges are handled without excessive solids wash-out or bypasses.                                                                                                                                                                                                                                                         | S                     |
| 14. Spare pumps and parts readily available.                                                                                                                                                                                                                                                                                            | S                     |
| 15. Facility appears to be well operated and maintained.                                                                                                                                                                                                                                                                                | S                     |

**OPERATIONS AND MAINTENANCE:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                          | EVAL |
|---------------------------------------------------------------------------------------------------------|------|
| 16. Other:                                                                                              | N    |
| Notes: <i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i> |      |



**BIOSOLIDS/SOLID WASTE HANDLING AND DISPOSAL:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                          | EVAL             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. Biosolids/solid waste disposal/reuse method(s) (e.g., land application, landfill, etc.):<br><u>Compost, landfill, and land application</u>                                                                                                                                           | S                |
| 2. Biosolids/solid waste disposal/reuse location(s):<br><u>The 2008 Biosolids Annual Report states that biosolids were disposed of in the southern and central areas of California.</u>                                                                                                 | N                |
| 3. The above processes are in accordance with the permit.                                                                                                                                                                                                                               | N                |
| 4. Storage at facility:<br>a. Adequately sized for periods of inclement weather<br>b. Controls leachate, runoff, and public access                                                                                                                                                      | S<br>N           |
| 5. Recent analytical results for metals (biosolids) are within permit limits.                                                                                                                                                                                                           | N                |
| 6. Biosolids land application records include:<br>a. Farm maps and land owner agreements<br>b. Soil nutrient analyses done within the last year for active sites<br>c. Records showing loading rate to each site<br>d. Pathogen/Vector reduction records (pH or temperature logs, etc.) | N<br>N<br>N<br>N |
| 7. Other:                                                                                                                                                                                                                                                                               | N                |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                                       |                  |

**City of Los Angeles – Hyperion Treatment Plant (NPDES No. CA0109991) Photo Log**  
Inspected by: Danny O'Connell, Bobby Jacobsen, and Brenner Perryman (PG Environmental, LLC)



Photo 1: Facility entrance sign

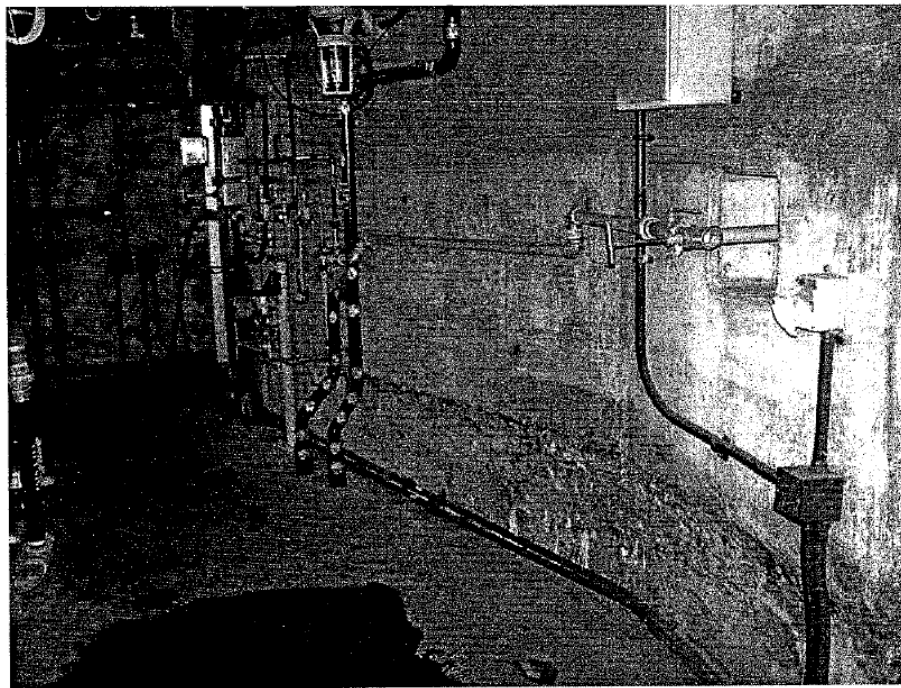


Photo 2: Side of flume measuring the Facility's influent



**City of Los Angeles – Hyperion Treatment Plant (NPDES No. CA0109991) Photo Log**  
Inspected by: Danny O'Connell, Bobby Jacobsen, and Brenner Perryman (PG Environmental, LLC)



Photo 3: Example of influent composite sample storage without a thermometer

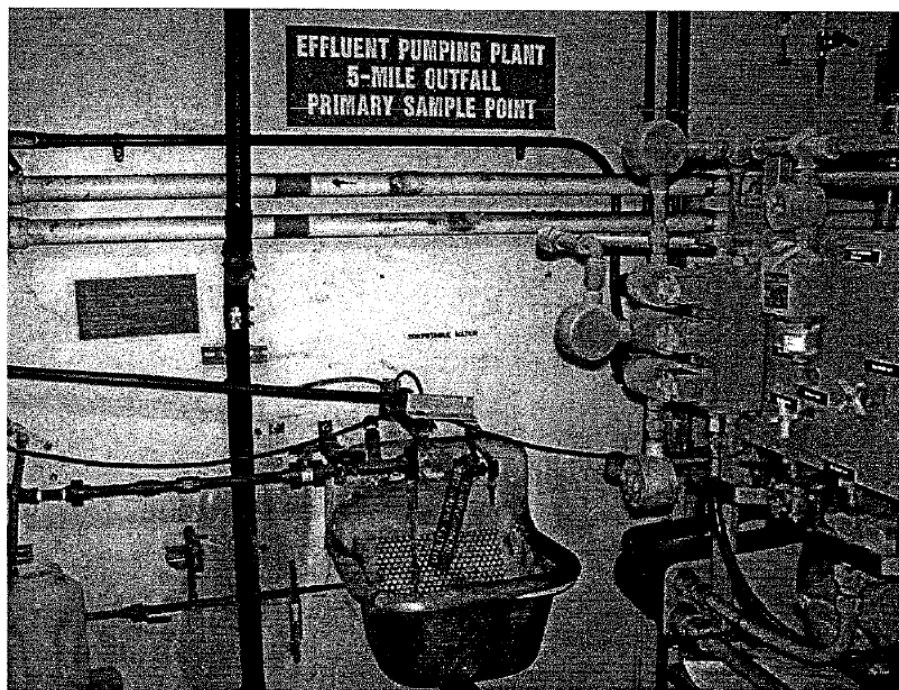


Photo 4: The sink serves as the grab sample location for the effluent through the 5-mile outfall

**City of Los Angeles – Hyperion Treatment Plant (NPDES No. CA0109991) Photo Log**  
Inspected by: Danny O'Connell, Bobby Jacobsen, and Brenner Perryman (PG Environmental, LLC)



Photo 5: Sample storage from the 5-mile outfall without a thermometer

ID: 2021614

## EPA Region IX and California Water Resources Control Board

## NPDES Compliance Evaluation Inspection (CEI) Report

|                                                                                                                                                                                        |                                     |                                                                                           |                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Name and Location of Facility Inspected</b><br>City of Los Angeles - Hyperion Treatment Plant (CI - 1492)<br>12000 Vista Del Mar Boulevard<br>Playa Del Rey, CA 90293               |                                     | <b>Entry Date</b><br>10/6-7/2009<br><b>Entry Time</b><br>12:00 PM                         | <b>Permit Effective Date</b><br>4/7/2005                                                                               |
| <b>NPDES Permit Number</b><br>CA0109991                                                                                                                                                | <b>Order Number</b><br>R4-2005-0020 | <input checked="" type="checkbox"/> <b>Major</b><br><input type="checkbox"/> <b>Minor</b> | <b>Permit Expiration Date</b><br>5/14/2010                                                                             |
| <b>Name(s) &amp; Title(s) of On-Site Representative(s)</b><br>Mike Ruiz (Shift Supervisor II)<br>Mahesh Pujari (Senior Chemist)                                                        |                                     | <b>Contact Information</b><br>Phone: (310) 648-5328<br>Fax: (310) 648-5612                | <b>Notified of Inspection?</b><br><input checked="" type="checkbox"/> <b>Yes</b><br><input type="checkbox"/> <b>No</b> |
| <b>Name, Title &amp; Address of Responsible Official</b><br>Enrique C. Zaldiv (Director, Bureau of Sanitation)<br>433 S. Spring Street, 4 <sup>th</sup> Floor<br>Los Angeles, CA 90013 |                                     | <b>Contact Information</b><br>Phone: (213) 978-0261<br>Fax: (213) 485-2210                | <b>Official Contacted?</b><br><input type="checkbox"/> <b>Yes</b><br><input checked="" type="checkbox"/> <b>No</b>     |
| <b>Inspector(s)</b><br><b>Primary:</b> Danny O'Connell (PG Environmental, LLC)<br><b>Other(s):</b> Robyn Stuber and Jamie Marincola (EPA Region 9)                                     |                                     |                                                                                           | <b>Presented Credentials?</b><br><input checked="" type="checkbox"/> <b>Yes</b><br><input type="checkbox"/> <b>No</b>  |
| <b>Weather Conditions at the Time of the Inspection:</b><br>Sunny; no signs of recent precipitation                                                                                    |                                     | <b>Facility Receiving Water Name:</b><br>Pacific Ocean within the Santa Monica Bay        |                                                                                                                        |
| <b>Overview of Areas Evaluated During Inspection</b><br><i>S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated</i>                                                   |                                     |                                                                                           |                                                                                                                        |
| Permit: S                                                                                                                                                                              |                                     | Flow Measurement: S                                                                       | Solid Waste Handling & Disposal: S                                                                                     |
| Records & Reports: S                                                                                                                                                                   | Self-Monitoring Program: U          |                                                                                           | Compliance Schedules: N                                                                                                |
| Facility Site Review: S                                                                                                                                                                | Laboratory: S                       |                                                                                           | Pretreatment (POTWs Only): N                                                                                           |
| Effluent & Receiving Waters: U                                                                                                                                                         | Operations & Maintenance: U         |                                                                                           | Storm Water: N                                                                                                         |
| Prepared By: Danny O'Connell (PG Environmental, LLC) on 10/15/2009<br>Reviewed By: Craig Chomiak (PG Environmental, LLC) on 10/29/2009                                                 |                                     |                                                                                           |                                                                                                                        |



## **Facility Narrative**

On October 6 and 7, 2009 a USEPA contractor inspected the City of Los Angeles – Hyperion Treatment Plant in Playa Del Rey, CA. Discharges from the facility are regulated by Regional Water Board Order No. R4-2005-0020 (NPDES Permit No. CA0109991). The primary purpose of the inspection was to determine the accuracy and reliability of the Discharger's self-monitoring and reporting program. The primary on-site facility representatives were Mike Ruiz (Shift Supervisor II) and Mahesh Pujari (Senior Chemist). The weather at the time of inspection was sunny with no signs of recent precipitation.

The City of Los Angeles (City or Discharger) owns and operates the Hyperion Treatment Plant (Facility). The Facility provides secondary level treatment in a process train which consists of screening, grit removal, primary sedimentation with coagulation and flocculation, activated sludge biological treatment, and secondary clarification. Sludge processing includes anaerobic digestion prior to disposal in a landfill or reuse by land application.

The Facility discharges secondary treated municipal wastewater through two outfalls to the Pacific Ocean within Santa Monica Bay. Outfall 001 discharges disinfected secondary effluent while Outfall 002 discharges nondisinfected secondary effluent, the outfalls are discussed in more detail later in this 'Facility Narrative' section. The City's Hyperion Treatment System, which includes both the sewer system and the Facility, is designed to collect and treat wastewaters generated within the City. The City sewer system services approximately 600 square miles. The system consists of approximately 15 interceptor sewer lines servicing four wastewater treatment plants including the Facility, and three upstream wastewater treatment plants: Donald C. Tillman Water Reclamation Plant (Tillman WRP), Los Angeles-Glendale Water Reclamation Plant (LAGWRP), and Burbank Water Reclamation Plant (Burbank WRP) (owned and operated by the City of Burbank). The Hyperion Treatment System collects, treats, and disposes of sewage from the entire City (except the Wilmington - San Pedro Area, the strip north of San Pedro, and Watts) and from 29 cities and agencies under contractual agreements. Approximately 85% of the sewage and commercial/industrial wastewater comes from the City. The remaining 15% comes from the contract cities, business zones and agencies. There are approximately four million people in the Hyperion Treatment System service area.

The Hyperion Treatment System is an interconnected system which supports approximately 6,500 miles of sewer lines located within the City (including trunk and interceptor sewers in contract cities, business zones and agencies) and additional sewer lines under the control of the contract cities and agencies. The contract cities and agencies operate their respective local collection systems that are tributary to the City's trunk and interceptor lines. Sludge from two of the City's two upstream plants is returned to the wastewater collection system and flows to the Facility for processing. Discharges from Tillman WRP and LAGWRP are regulated by NPDES Permit Numbers CA0056227 and CA0053953, respectively. Sludge generated from the Burbank WRP is discharged to the Hyperion Treatment System's North Outfall Sewer for processing at the Facility. In addition, the influent to the Burbank WRP can be diverted to the Hyperion Treatment System during periods of emergency. The operations of the Burbank WRP are regulated under NPDES Permit No. CA0055531.

As previously stated, the Facility has two ocean outfalls. Outfall 001 is commonly referred to as the "one-mile outfall". It is a 12-foot diameter outfall terminating approximately 5,364 feet west-southwest of the Facility at a depth of approximately 50 feet below the ocean surface. This outfall is permitted for emergency discharge of chlorinated secondary treated effluent during extremely high flows, power failures, and preventive maintenance, such as routine opening and closing (exercising) the outfall gate valve(s) and for lubrication. Regional Water Board Order No. R4-2005-0020

requires the City to notify the Regional Water Board and USEPA in advance of any planned preventive maintenance that results in discharges through Outfall 001. The City provides prior written notice to the Regional Water Board when preventive maintenance has been scheduled, typically once a quarter. Outfall 002 is commonly referred to as the "five-mile outfall". It is a 12-foot diameter outfall terminating approximately 26,525 feet (8.1 km) west-southwest of the Facility at a depth of approximately 187 feet (57 m) below the ocean surface. This outfall is located north of Outfall 001 and ends in a "Y" shaped diffuser consisting of two 3,840-foot legs. This outfall is permitted for routine discharge of non-disinfected secondary treated effluent.

Hyperion also provides the West Basin Municipal Water District (West Basin) with secondary effluent for additional treatment and sale to various clients. West Basin operates a Water Recycling Facility in El Segundo and has a contract to receive up to 70 mgd of secondary effluent from Hyperion Treatment Plant for advanced treatment. The secondary effluent is pumped from the southwest corner of the Plant to the West Basin Facility via a West Basin operated pump station. West Basin Facility provides tertiary treatment and/or advanced treatments such as microfiltration and reverse osmosis (RO) to the Hyperion secondary effluent to produce Title 22 and high purity recycled water. The Title 22 recycled water is used for beneficial irrigation and industrial applications (which included cooling water and boiler feed water). The RO treated recycled water is injected into the West Coast Basin Barrier Project to control seawater intrusion. The waste brine from West Basin Facility is discharged to the ocean through Hyperion's five-mile outfall via a waste brine line from West Basin Facility. Although the waste brine is discharged through Hyperion's outfall, it is regulated under separate waste discharge requirements and NPDES permit.

The Facility has a dry weather average design treatment capacity of 450.0 million gallons per day (mgd) and a wet weather peak hydraulic capacity of approximately 850.0 mgd. The instantaneous influent flow was 349.7 mgd at 11:05 AM on October 7, 2009.

The Facility continues to accept and treat dry weather urban runoff that is diverted from storm drains into the City's collection system from April 1 to October 31. The City plans to extend this diversion operation from the dry summer months to year-round in order to conform to the six-year compliance schedule for bacteria concentration during winter dry weather, contained in the Santa Monica Bay Beach Dry-weather Bacteria TMDL regulation (Resolution No. 02-004 and Resolution No. 2002-022) adopted by the Regional Water Board.

Members from the Discharger's operations and laboratory teams conduct self-monitoring activities. Effluent samples for Outfall 002 are collected from a sink that pulls effluent from the discharge line. Sample collection location and methods appeared to provide representative samples. All samples are analyzed at the on-site laboratory.

Discharge monitoring reports (DMRs) for Outfall 002 for the months of May, June, and July 2009 were reviewed as a component of this inspection. The review included a comparison of reported monitoring results versus requirements and limitations contained within the permit. Permit limit exceedances were identified and are presented in the 'Major Findings – Effluent and Receiving Waters' component of this report.

The Major Findings stated in the previous inspection report have not been corrected. The Discharger continues to exceed and report ammonia performance goals as previously documented; however the Discharger has not provided a corrective action plan or timetable for compliance. In addition, the Discharger's composite samplers still do not have thermometers to document that sample temperatures are at or below 6 degrees F as required by 40 CFR 136.

## **Major Findings**

### ***Effluent and Receiving Waters***

1. Regional Water Board Order No. R4-2005-0020, Section I.A.2 requires the Discharger to comply with a Settleable Solids Daily Maximum concentration of 3.0 ml/L. On July 16, 2009 at 1:00 PM the Settleable Solids Daily Maximum concentration was 25.0 ml/L (refer to Exhibit 1).
2. Regional Water Board Order No. R4-2005-0020, Section I.A.2 requires the Discharger to "submit a written report to the Regional Board and USEPA on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation" if there are three consecutive months of performance goal exceedances. The Discharger had nine consecutive months of ammonia exceedances from November 2008 to July 2009. The Discharger's July 2009 DMR discusses the nature of the exceedances and the potential cause, but does not discuss corrective actions or associated timetables.

### ***Self-Monitoring Program***

1. Regional Water Board Order No. R4-2005-0020, Monitoring and Reporting Program (MRP) 1492 (Attachment T), III.B requires that "Pollutants shall be analyzed using the analytical methods described in 40 CFR 136". Some of the parameters analyzed from composite samples require a preservation temperature at or below 6 degrees C, as specified by the sample preservation requirements in 40 CFR 136. The Facility did not maintain thermometers in the influent and effluent composite samplers. Therefore, based on these findings, the Discharger cannot demonstrate compliance with the sample preservation requirements specified in 40 CFR Part 136.
2. Regional Water Board Order No. R4-2005-0020, Monitoring and Reporting Program (MRP) 1492 (Attachment T), III. C requires that "Proper chain of custody procedures must be followed". Sample chain of custody could be questioned due to the transfer of samples between the operations and laboratory teams. The current operational practice is for influent and effluent samples to be placed by the operations team in an unsecure refrigerator located in the loading dock area of the laboratory/administration building with sample collection data and signed chain of custody. The laboratory team eventually removes the samples, data, and chain of custody from the unsecure refrigerator and delivers them to the on-site laboratory. Therefore, based on these findings, the Discharger cannot demonstrate compliance with valid chain of custody protocols.

### ***Operations and Maintenance***

1. Regional Water Board Order No. R4-2005-0020, Standard Provisions (Attachment S), Provision C requires that the "discharger shall, at all times, properly operate and maintain all facilities and systems of treatment". On July 14, 2009 the Facility shut down solids wasting operations to accommodate some scheduled preventive maintenance activities. Those preventive maintenance activities had an unscheduled delay of 16 hours and created a situation in which some solids were washed out of the secondary clarifiers. At 1:00 PM on July 16, 2009 the Facility's effluent exceeded its settleable solids daily maximum concentration limit (25.0 ml/L vs



permitted 3.0 ml/L). Therefore, based on these findings, the Discharger failed to properly operate and maintain all facilities and systems of treatment.

**PERMIT:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                             | EVAL    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1. Current copy of facility NPDES permit available on-site.                                                                                                                                                                                                                                | S       |
| 2. Correct name and mailing address of permittee identified on NPDES permit.                                                                                                                                                                                                               | S       |
| 3. Facility is as described in permit.                                                                                                                                                                                                                                                     | S       |
| 4. a. Notification given to Regional Water Board of process/production modifications, collection system expansions, etc. that impacted quality/quantity of discharge or changes to the facility or increased discharge.<br>b. Permit modification received, if required, prior to changes. | N<br>N  |
| 5. Recent permit modifications, amendments or compliance orders on file.                                                                                                                                                                                                                   | N       |
| 6. Number of discharge outfalls the same as listed in the permit.                                                                                                                                                                                                                          | S       |
| 7. Name of receiving waters listed correctly in the permit.                                                                                                                                                                                                                                | S       |
| 8. Permit status (i.e., Current, Expired, or Extended)                                                                                                                                                                                                                                     | Current |
| 9. Permit renewal application submitted to the Regional Water Board at least 180 days prior to the expiration date.                                                                                                                                                                        | N       |
| 10. Other:                                                                                                                                                                                                                                                                                 | N       |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                                          |         |

RECORDS/REPORTS:

OVERALL RATING: S

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EVAL                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1. NPDES records maintained for the time period required (5 years):<br><br>The following records and reports were requested and observed:<br>- <b>Machinery Calibration Logs</b><br>- <b>Work Orders</b><br>- <b>May 2009, June 2009, and July 2009 DMRs</b><br>- <b>Operation and Maintenance Reports (i.e., for the One Mile Outfall)</b><br>- <b>2008 Biosolids Annual Report</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes                                                      |
| 2. a. Did the facility document any spills or bypasses during the period reviewed?<br>b. Spills and bypasses reported and documented as required by the permit (i.e.- as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances).<br>c. Follow-up written documentation given as required by the permit (within 5 days in most cases).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>N<br><br>N                                         |
| 3. Discharge Monitoring Report (DMR) and/or Self Monitoring Report (SMR) evaluation:<br>a. The responsible person or designee signs and certifies the DMRs/SMRs.<br>b. The facility monitors more frequently than required by the permit.<br>c. All data collected are summarized on the DMRs/SMRs.<br>d. Data reported on DMRs/SMRs is consistent w/ analytical results.<br>e. Coliform concentrations calculated as required by the permit (e.g., median, geometric mean).<br>f. Numerical values for minimum detection limits are reported on DMRs/SMRs when laboratory reports "Not Detected" or "0" (for example, MDL= 3, Report: "<3" on DMR).<br>g. "Less than values" properly carried through loading calculations.<br>h. Flow measurement period used for loading calculations brackets the sampling period.<br>i. Influent and effluent loading rates properly calculated, if required.<br>j. Number Exceeding (N.E.) properly reported on all DMRs and annual reports. | S<br>Yes<br>S<br>S<br>S<br><br>S<br><br>N<br>N<br>N<br>S |
| 4. Reports completed in the time frame and frequency as required by the permit (not all reports required for all facilities):<br>a. Discharge Monitoring Reports/Self-Monitoring Reports<br>b. Biosolids Monitoring Reports<br>c. Biosolids Management Reports<br>d. CSO/ I&I Reports<br>e. Compliance Schedule Reports<br>f. Pretreatment Reports<br>g. Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S<br>S<br>S<br>N<br>N<br>S<br>N                          |
| 5. Sampling and analytical records (for water and biosolids) include:<br>a. Dates, times, and location of sampling<br>b. Names of individuals performing sampling<br>c. Analytical methods<br>d. Results of analyses<br>e. Dates of analyses<br>f. Time of analyses, as necessary to verify holding times<br>g. Analysts' names or initials<br>h. Instantaneous flow at grab sample stations, if required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | S<br>S<br>S<br>S<br>S<br>S<br>S<br>S                     |

**RECORDS/REPORTS:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EVAL                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <p>6. Plant records include:</p> <ul style="list-style-type: none"> <li>a. Daily plant operational records or log book</li> <li>b. Equipment maintenance records and schedules</li> <li>c. CSO/lift station check records or log book</li> <li>d. Records of auxiliary power checks</li> <li>e. Spill Prevention Control and Countermeasure (SPCC) plan</li> <li>f. Pollution Prevention Plan (P3)</li> <li>g. Influent and Effluent flow measurement records maintained for the past three years</li> <li>h. Other:</li> </ul> <p><b><i>Wet Weather Preparedness and Operations Plan 2008-2009</i></b></p> <p><b><i>2008-2009 Annual Report for Storm Water Discharges</i></b></p> <p><b><i>Operations &amp; Maintenance Manuals:</i></b></p> <ul style="list-style-type: none"> <li>- <b><i>Biosolids Dewatering Facility - February 2007</i></b></li> <li>- <b><i>Gas Compressor Facility - February 2007</i></b></li> <li>- <b><i>Gas Handling Flares - June 2003</i></b></li> <li>- <b><i>Digester Screening Facility - August 2005</i></b></li> <li>- <b><i>Intermediate Pumping Station - March 2002</i></b></li> <li>- <b><i>Air Pollution Control - March 2002</i></b></li> <li>- <b><i>Preliminary Treatment - May 2006</i></b></li> <li>- <b><i>Primary Treatment - March 2006</i></b></li> <li>- <b><i>Effluent Pumping Plant - October 2005</i></b></li> </ul> | <p>S</p> <p>S</p> <p>N</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> |
| <p>7. All records and reports required by the permit appear to be organized and available for inspection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>S</p>                                                                |
| <p>8. Other:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>N</p>                                                                |
| <p><b>Notes:</b><br/><b><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                         |

**FACILITY SITE REVIEW:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EVAL                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <p>1. All treatment units and supporting equipment are in service and mechanically functioning properly.</p> <p><b><i>The Facility provides full secondary treatment for the wastewaters received. Preliminary and primary wastewater treatment consists of screening, grit removal, and primary sedimentation with coagulation and flocculation. In secondary treatment, the primary effluent is biologically treated in a high purity oxygen activated sludge process comprised of a cryogenic oxygen plant, nine secondary reactor modules and 36 secondary clarifiers. Each secondary reactor module is designed to handle 50 mgd of flow which results in a total treatment capacity of 450 mgd of primary effluent. After clarification, non-disinfected secondary effluent is discharged into Santa Monica Bay through a five mile submerged outfall pipe. A discharge of up to 325 mgd flows by gravity to the outfall, or is pumped at the Effluent Pumping Plant when flows exceed 325 mgd.</i></b></p> <p><b><i>The solids management operations were not inspected as a component of this inspection. The Facility hauls grit, primary screenings, skimmings, and other inorganic materials offsite for disposal at landfills. Biosolids are processed on-site by means of anaerobic digestion and beneficially reused for land application and composting.</i></b></p> | S                                                                                |
| <p>2. Hydraulic and organic loadings are consistent with the fact sheet and plant design criteria.</p> <p>a. Are there signs of overloading to the facility and collection system, including I&amp;I and septage loading?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>S</p> <p>S</p>                                                                |
| <p>3. Peak flows remain within the established plant capacity.</p> <p>a. If flows have exceeded capacity, has the Regional Water Board been notified?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>S</p> <p>N</p>                                                                |
| <p>4. Lift stations are properly monitored, maintained, have a back-up power source and are not subject to chronic spills and/or overflows.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | N                                                                                |
| <p>5. Odors are adequately controlled, resulting in limited complaints.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | S                                                                                |
| <p>6. Residual chlorine monitoring is well documented and sampling/monitoring is representative of the discharge.</p> <p>a. If a UV system is used, the dosage intensity, tubes, and alarms are adequate, maintained and documented.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>S</p> <p>N</p>                                                                |
| <p>7. Housekeeping procedures are adequate to prevent release of pollutants to the environment:</p> <p>a. Adequate dikes and secondary containment</p> <p>b. Spill containment and clean-up</p> <p>c. Signs of spillage to soil, groundwater, or surface water</p> <p>d. Storm water and leachate management from storage piles</p> <p>e. Leaking pipes, pumps, etc.</p> <p>f. Drum and chemical storage areas</p> <p>g. Minimization of pollutants entering storm water outfalls</p> <p>h. Other open dumps or debris piles</p> <p>i. Other:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>N</p> |

**FACILITY SITE REVIEW:**

**OVERALL RATING: S**

| INSPECTED ITEM                                                                                                                                                                                                                                                            | EVAL |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 8. Signs of tank deterioration and/or settlement.                                                                                                                                                                                                                         | S    |
| 9. Safety concerns are present that may interfere with proper operation, maintenance, and/or monitoring.                                                                                                                                                                  | S    |
| 10. Material Safety Data Sheets (MSDS) are available for stored chemicals.                                                                                                                                                                                                | S    |
| 11. Equipment available for spill clean-up and containment.                                                                                                                                                                                                               | S    |
| 12. Other: <b>Flow Rates</b><br><i>Facility representatives stated that influent flow rates appear to decreasing. It was explained by the representatives that the decrease is assumed to be associated with water conservation efforts and slow down in the economy.</i> | S    |
| <b>Notes:</b><br><i>This section was rated "satisfactory" because all items reviewed were rated satisfactory.</i>                                                                                                                                                         |      |

**EFFLUENT AND RECEIVING WATERS:**

**OVERALL RATING: U**

| INSPECTED ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EVAL                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <p>1. Recent DMR history (last <u>3</u> months) (outfall number(s) <u>002</u>):</p> <ul style="list-style-type: none"> <li>a. Violations of discharge limits</li> <li>b. Spills/bypasses</li> <li>c. Fish kills or other receiving water impacts</li> <li>d. WET testing results are in accordance with the permit</li> <li>e. If effluent limit violations have been identified, what actions has the facility taken to eliminate or reduce their recurrence?</li> </ul> <p><b><i>The Facility had a settleable solids permit exceedance on July 16, 2009 (refer to Exhibit 1). In addition, the Facility has had nine consecutive months of ammonia performance goal exceedances (November 2008 through July 2009). The Facility's July 2009 DMR discusses the nature of the exceedances, the cause of the settleable solids exceedance, and the potential cause, but does not discuss corrective actions or associated timetables for the elimination of the ammonia performance goal exceedances. See 'Major Findings - Effluent and Receiving Waters' for additional information.</i></b></p> | <p>U</p> <p>S</p> <p>S</p> <p>S</p> <p>U</p>            |
| <p>2. DMR spot check conducted for the months of: <u>May, June, and July 2009</u></p> <ul style="list-style-type: none"> <li>a. Internal lab sheets and contract lab results properly transferred to DMRs</li> <li>b. Monthly average, weekly, maximum, etc., values correctly calculated per the permit</li> <li>c. Influent and effluent loadings reported</li> <li>d. DMR is accurate and complete for each outfall</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>N</p> <p>S</p> <p>S</p> <p>S</p>                     |
| <p>3. Appearance of effluent during inspection:</p> <ul style="list-style-type: none"> <li>a. The effluent(s) was viewed during the inspection</li> <li>b. Excessive foam, scum, or sheens present</li> <li>c. Cloudy and/or color</li> <li>d. Excessive solids</li> <li>e. Other:</li> </ul> <p><b><i>Effluent quality observed from secondary clarifier weirs (refer to Photo 2).</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Yes</p> <p>S</p> <p>S</p> <p>S</p> <p>N</p>          |
| <p>4. Appearance of receiving water(s) during inspection:</p> <ul style="list-style-type: none"> <li>a. The receiving water(s) was viewed during the inspection</li> <li>b. Distinctly visible foam or sheens on receiving water</li> <li>c. Biosolids accumulation or deposits of solids below discharge point(s)</li> <li>d. Distinctly visible plume from discharge(s) to receiving water</li> <li>e. Discharge creates objectionable odor at or near receiving water(s)</li> <li>f. Other:</li> </ul> <p><b><i>The Santa Monica Bay was observed from the Facilities entrance and beach area approximately two miles south of the Facility.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>Yes</p> <p>S</p> <p>S</p> <p>S</p> <p>S</p> <p>N</p> |
| <p>5. Other:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>N</p>                                                |
| <p><b>Notes:</b><br/><b><i>This section was rated "unsatisfactory" due to checklist items 1a. and 1e.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                         |



**City of Los Angeles – Hyperion Treatment Plant  
(NPDES No. CA0109991) Photo Log**  
Inspected by: Robyn Stuber and Jamie Marincola (EPA) and  
Danny O'Connell (PG Environmental, LLC)

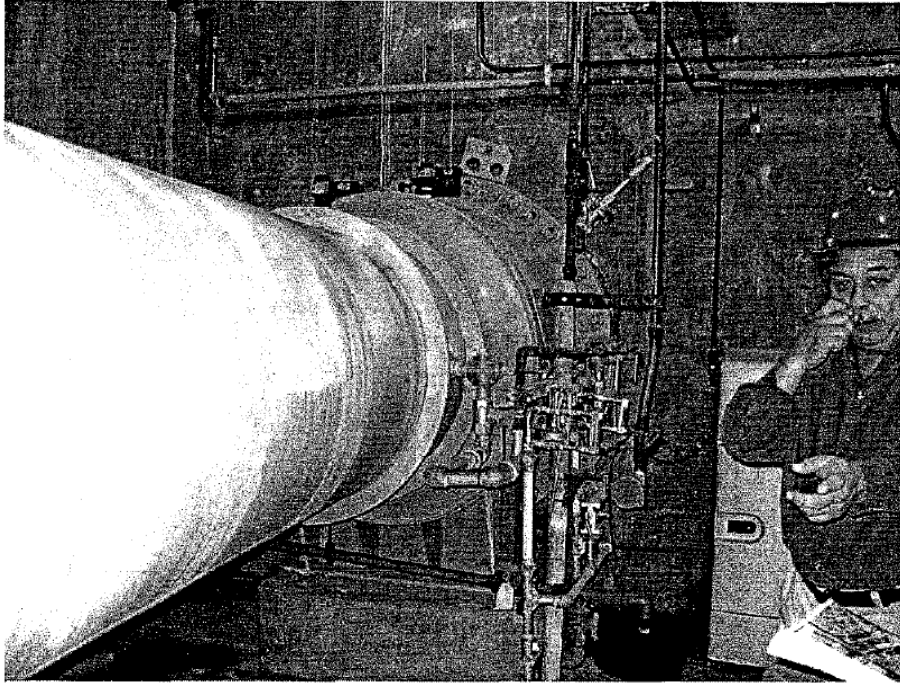


Photo 3: Venturi flow meter measuring the combined flows from the NCOS and COS lines.



Photo 4: Influent composite sample storage without a thermometer.



**City of Los Angeles – Hyperion Treatment Plant  
(NPDES No. CA0109991) Photo Log**  
Inspected by: Robyn Stuber and Jamie Marincola (EPA) and  
Danny O'Connell (PG Environmental, LLC)

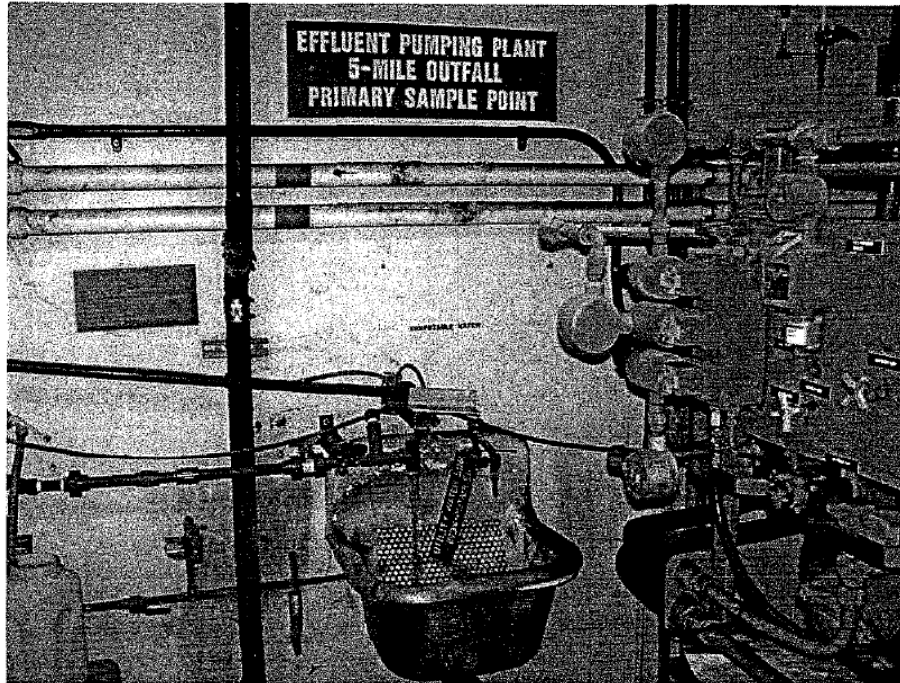


Photo 5: The sink serves as the grab sample location for the effluent through the 5-mile outfall.

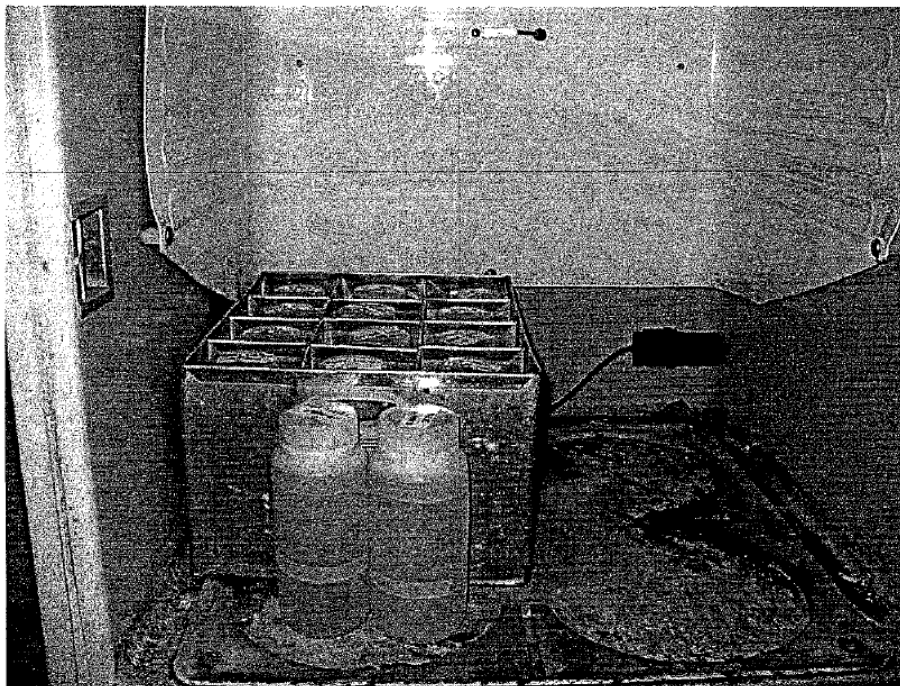


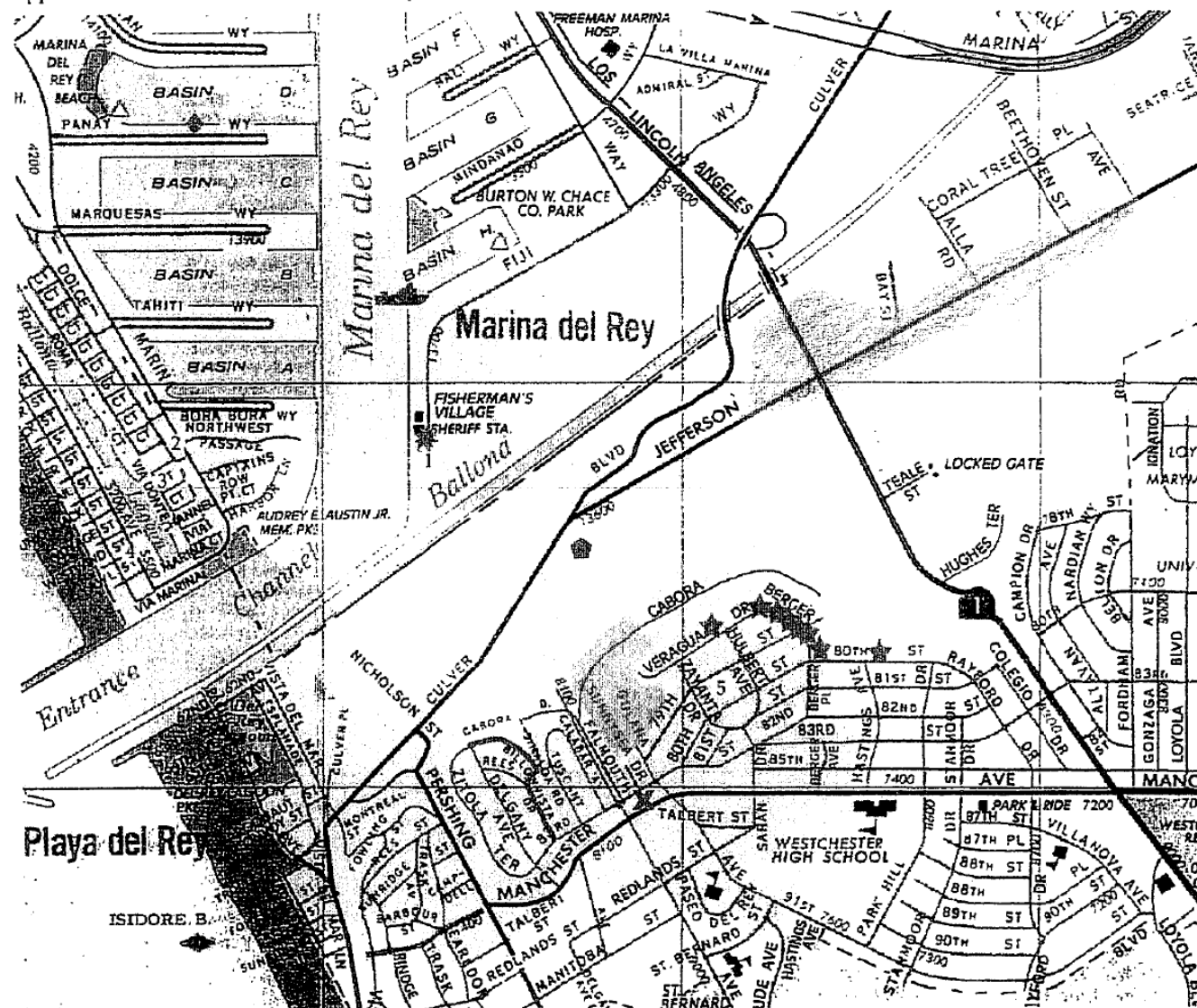
Photo 6: Sample storage from the 5-mile outfall without a thermometer.

## EXHIBIT 13



# Source: The California Public Utilities Commission – Safety Branch Investigation

Playa del Rey 851 Application and Complaint Case  
Approximate Locations of Facilities and Complaints



## Legend

- SCG Facility
- Gas Storage
- Playa Vista

- ★ Odor, health and cancer complaints as a result of emissions from the gas facility
- ◆ H<sub>2</sub>S cloud exposure, health complaint
- ☼ Cancer, health complaints as a result of emissions from a well
- ✕ Subsidence complaint
- 🏠 Odor, respiratory complaints from emissions in the wetlands
- Reported cancer cluster on Billowvista

### Problematic wells

- 1 Playa del Rey 18
- 2 Townsite 2
- 3 Townsite 3
- 4 Block 11
- 5 Big Ben 1

1000 ft



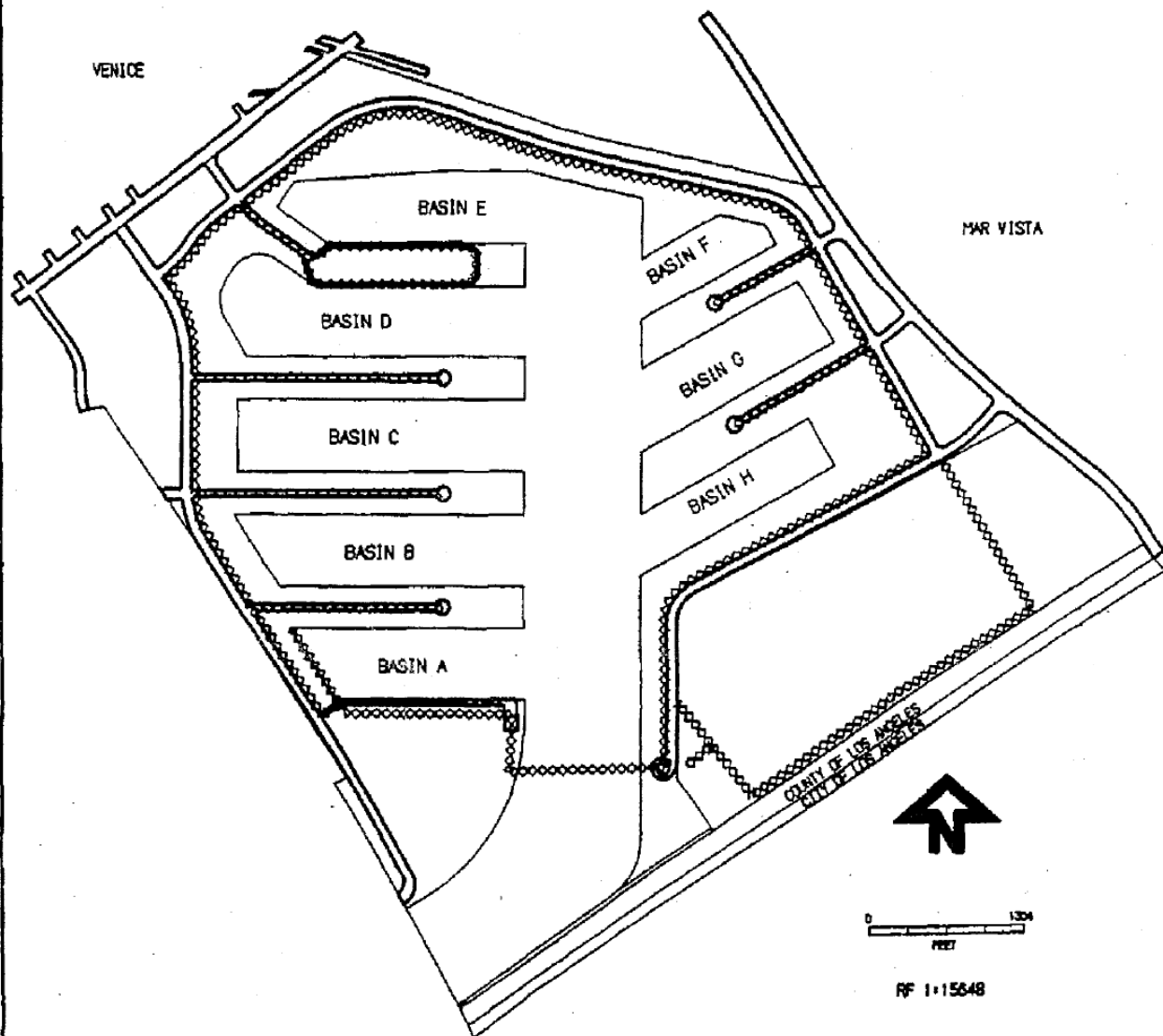
SOURCE: Automobile Club of Southern California 1997 and MHA Environmental Consulting, Inc.

# GAS UTILITY EASEMENTS

MAP 27



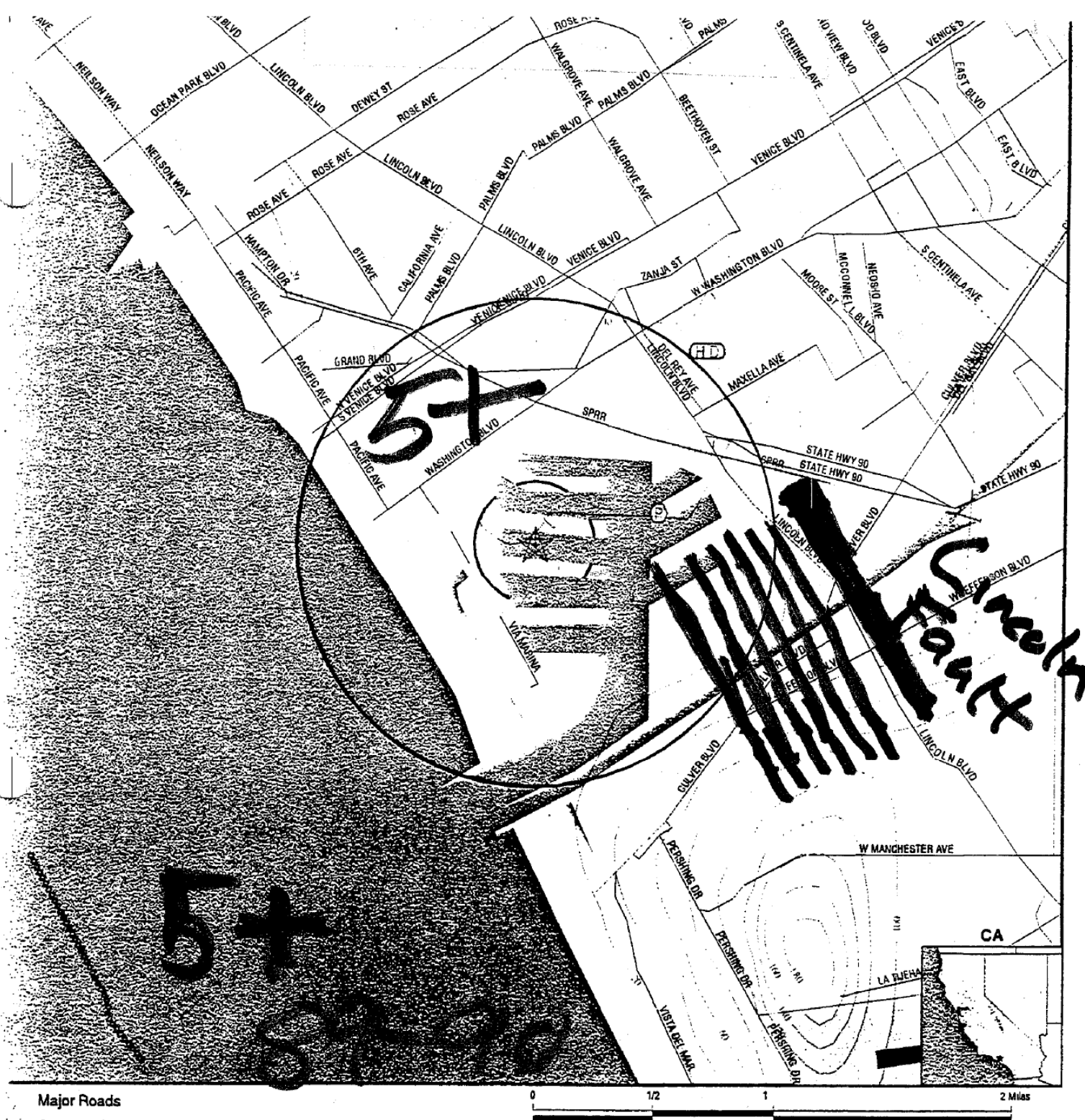
EASEMENT OF SOUTHERN CALIFORNIA GAS COMPANY



MARINA DEL REY

LOCAL COASTAL PROGRAM



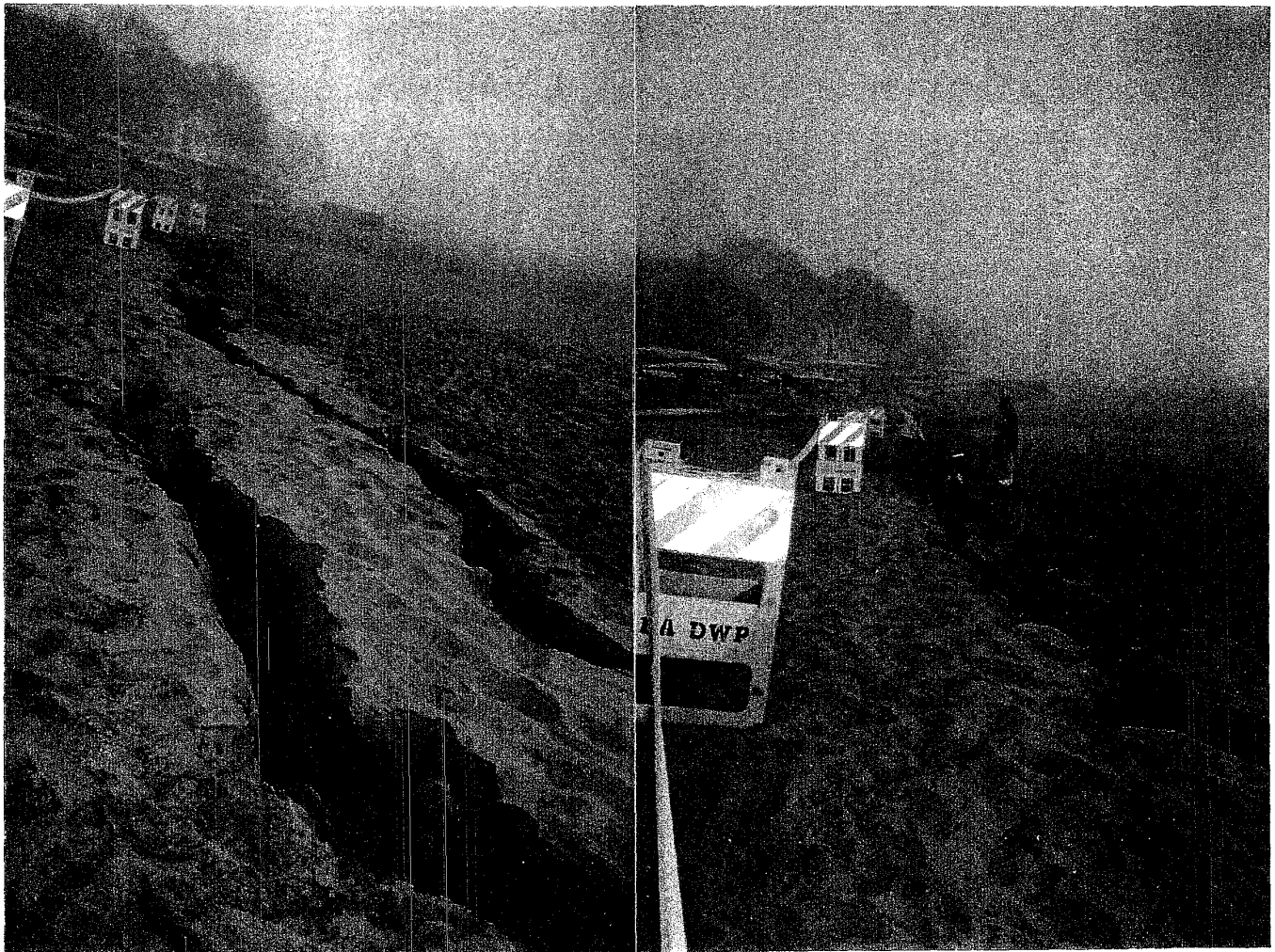
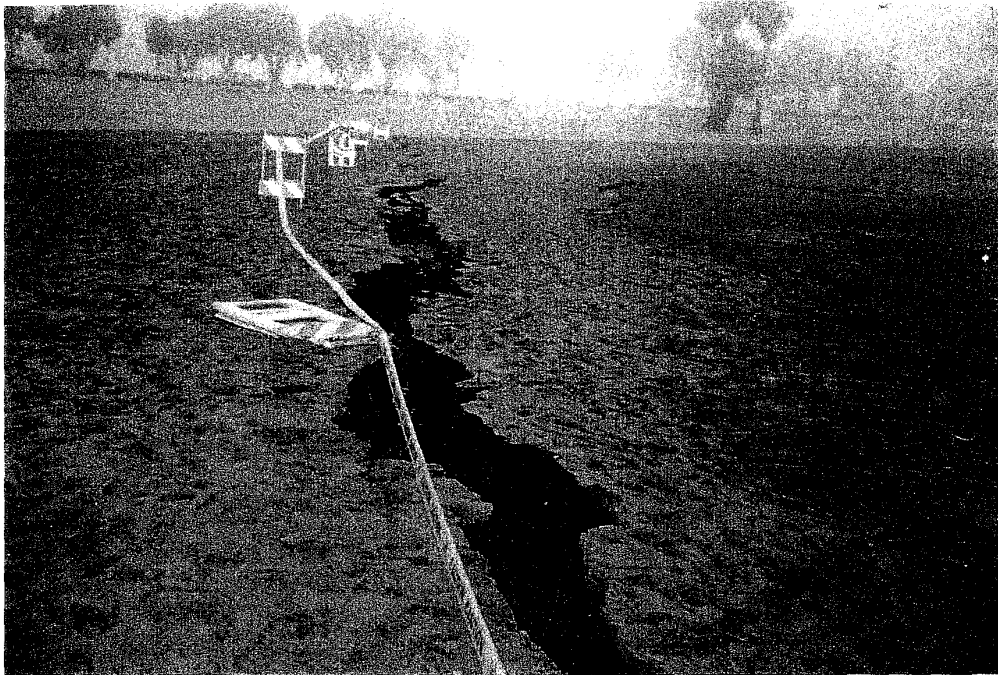


- Major Roads
- Contour Lines
- Waterways
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Closest Federal Well in quadrant
- Closest State Well in quadrant
- Closest Public Water Supply Well

 Closest Hydrogeological Data

**TARGET PROPERTY:** Marina Del Rey  
**ADDRESS:** Via Marina + Panay Way  
**CITY/STATE/ZIP:** Marina Del Rey CA 90292  
**LAT/LONG:** 33 9781 / 118 4540

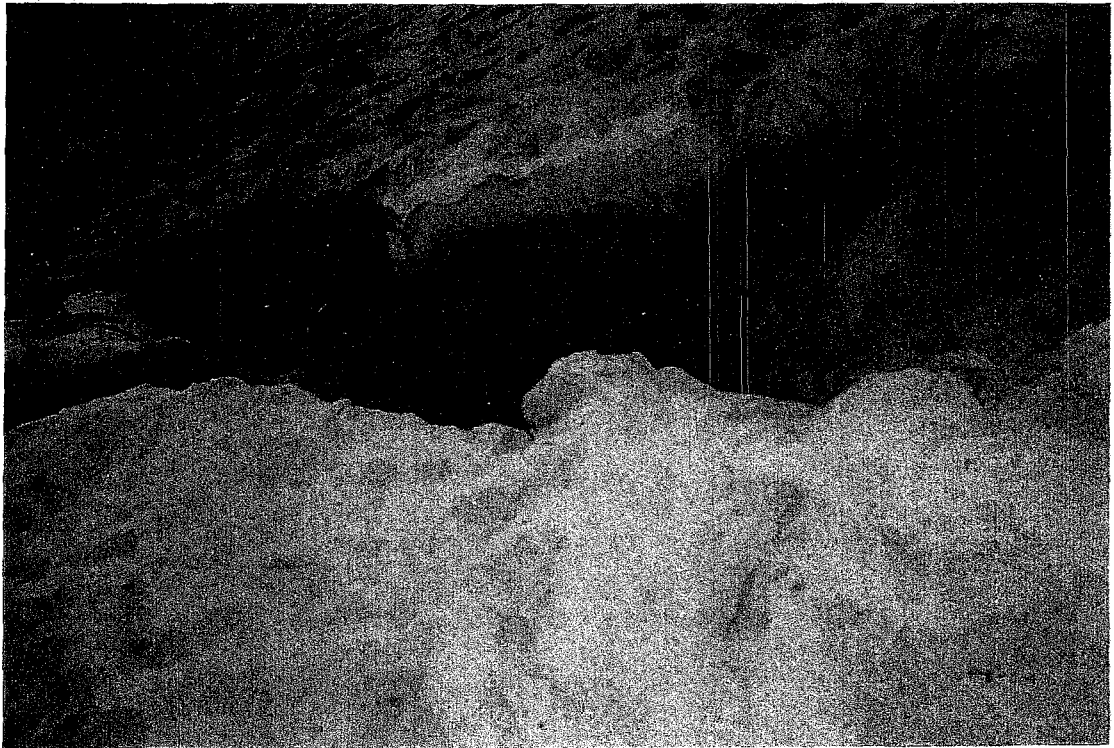
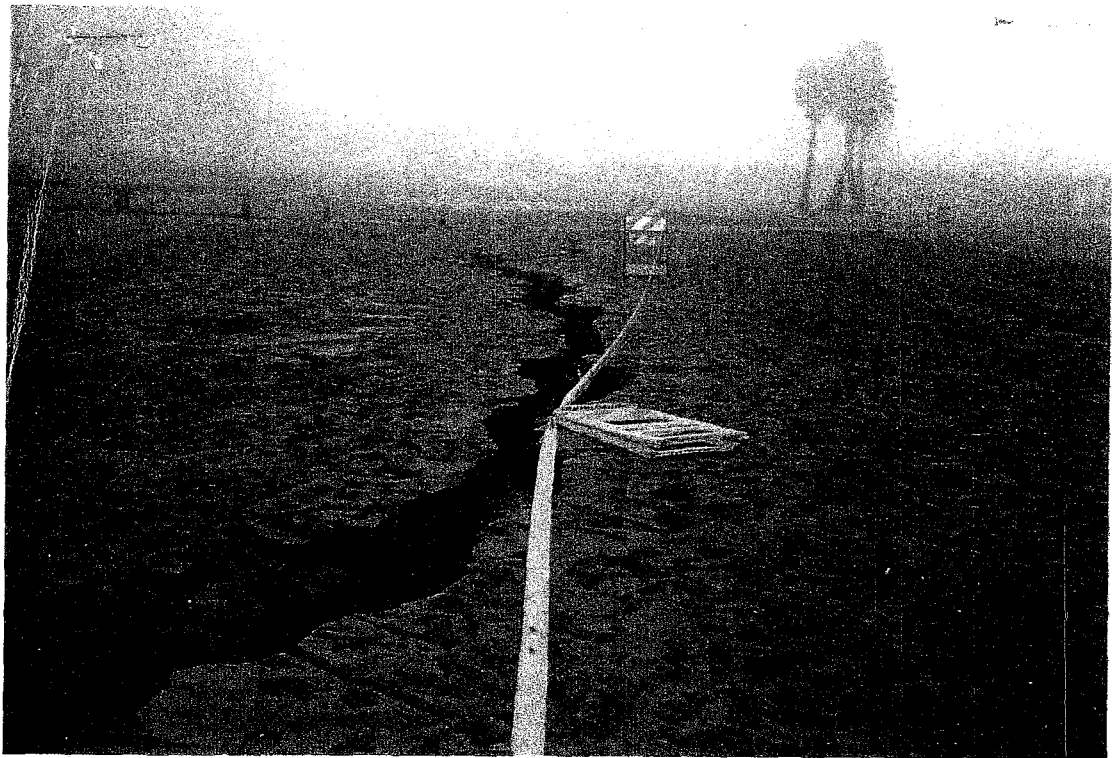
**CUSTOMER:** Earth Systems Consultants  
**CONTACT:** Amy McCain  
**INQUIRY #:** 264237.3s  
**DATE:** June 16 1998 6:51 pm



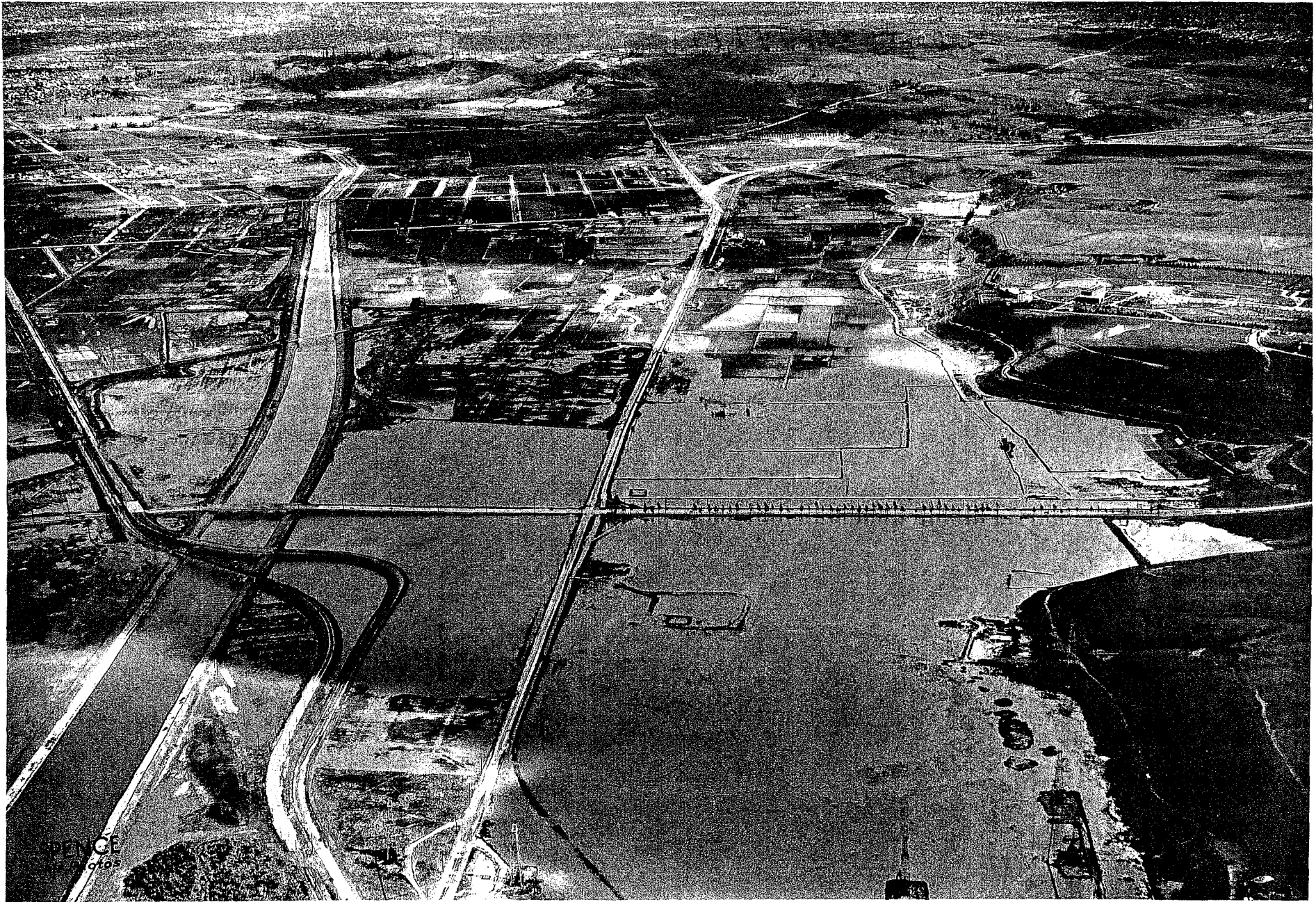
*Mother's Beach, Marina Del Rey, CA  
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Mother's Beach, Marina Del Rey, CA  
Day of Northridge Earthquake  
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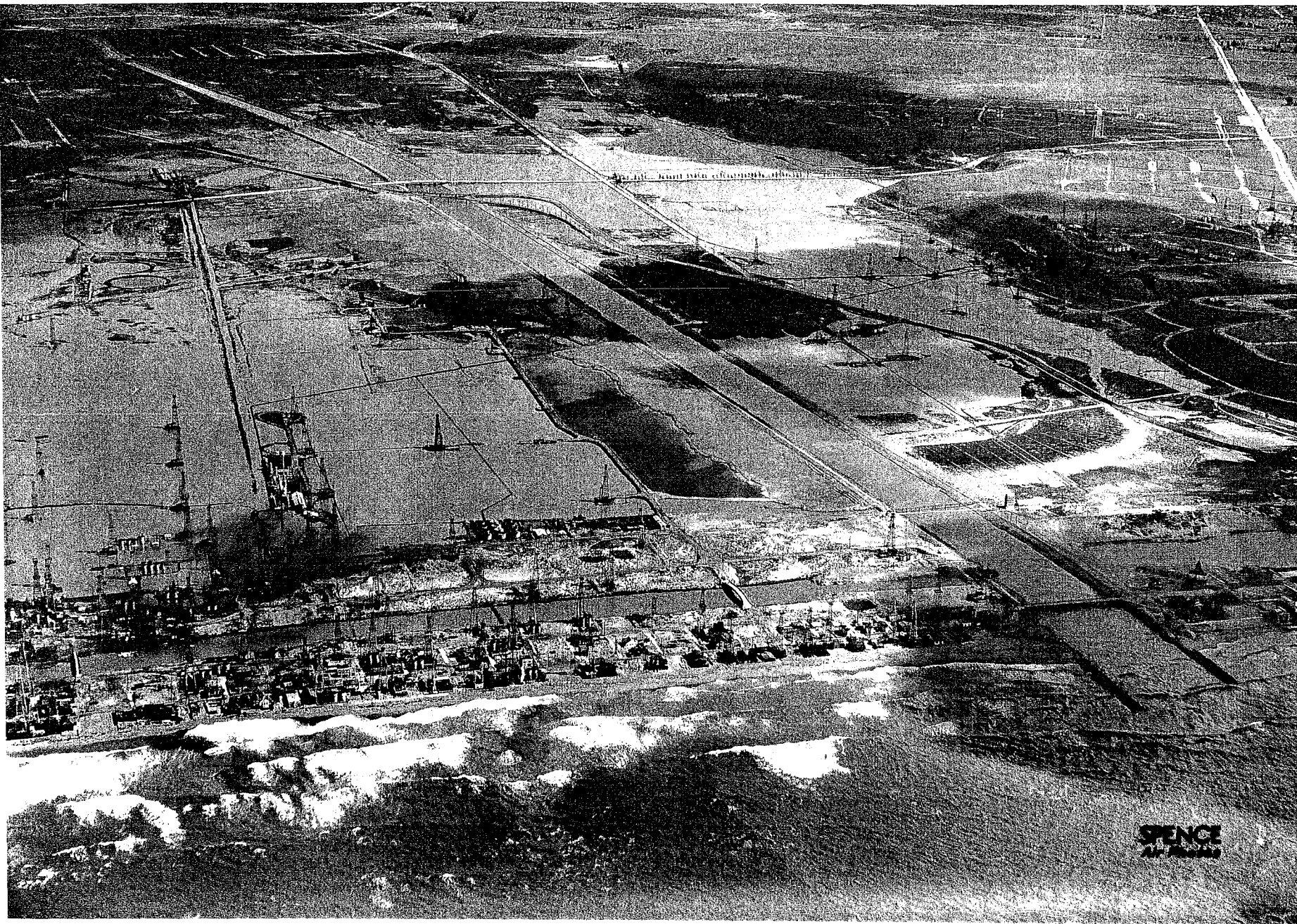
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## EXHIBIT 14

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## The Virtual Estuary

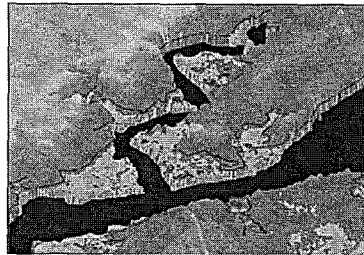
### New GIS tool for exploration and analysis

By Sandra Fox, St. Johns River Water Management District, and Stephen Bourne, PBS&J

This article as a [PDF](#).

A GIS tool developed by a team of experts is helping scientists more effectively study complex coastal and estuary systems.

Coastal flooding from extreme weather events threatens millions of lives and properties along U.S. coastlines every year. Especially hard hit are areas along the Atlantic Ocean and the Gulf of Mexico where over 60 percent of homes and businesses are within 500 feet of the shoreline. Yet, the ability to explore and study complex coastal environments with accuracy and speed has been limited, if not impossible. Affordable hydrologic models that work well on inland studies simply don't translate to coastal applications. However, more sophisticated supercomputer-based modeling techniques are cost prohibitive.



In this portion of the estuary displayed in ArcScene, the high tide polygon (red line) and low tide polygon (solid dark blue) along with a digital elevation model (DEM) of the area

In a pioneering effort, the St. Johns River Water Management District (SJRWMD) led a team of experts from academia, government, and industry in the development of the Analytical Framework for Coastal and Estuarine Studies (ACES) GIS tool, one of the first comprehensive coastal and estuarine tools. Still under development, ACES is designed to help scientists accurately monitor and manage the health of a complex estuary from within the Arc Hydro hydrologic environment. *[Arc Hydro is a data model template for use with water resources applications that has been developed by Esri in collaboration with key state, national, and international contributors.]*

This tool has been used to support estuarine and coastal studies for the Guana/Tolomato/Matanzas Estuary, also a National Estuarine Research Reserve for SJRWMD, as well as water quality studies in the Gulf of Mexico. *[The National Estuarine Research Reserves are "living laboratories" that help researchers better understand coastal communities and find methods for dealing with the challenges these areas face.]*

### Cooperative Development

SJRWMD is responsible for regulating water use and protecting wetlands, waterways, and drinking water supplies along Florida's sensitive eastern coastline from Fernandina Beach to Vero Beach. The agency's Surface Water Quality Monitoring (SWQM) has used Arc Hydro to develop specialized hydrologic tools such as an automated pollution load screening model and a drainage area spatial data summary tool.

Yet, while greatly beneficial, these hydrologic tools were unable to account for tidal influences, which directly impact water quality in estuarine waters. This limited the agency's ability to accurately manage water quality throughout the region.

SJRWMD put together a technical team to develop ACES that included experts from SJRWMD, University of Florida, The Nature Conservancy, U.S. Geological Survey, and PBS&J, a consulting firm. The agency also put in place an expert review team that would be responsible for evaluating the end product developed by the technical team. The review team included the members from the Center for Research in Water Resources at the University of Texas, Austin; U.S. Army Corps of Engineers' Engineer Research and Development Center; and PBS&J.

The technical team's first task was to establish a master plan for the tool development from proof of concept to production. SJRWMD stipulated that the tool must be applicable to all SJRWMD estuaries and include existing GIS-based tools and enhanced Arc Hydro geodatabases developed by SWQM. Goal-driven brainstorming sessions helped keep the technical team on track throughout the development process. The initial brainstorming sessions and literature review focused on the nature of



an estuary, estuarine hydrodynamics, estuarine classification, existing GIS-based modeling technologies for estuaries, and synthetic modeling of water quality in estuaries.

The team found that the first step in approaching the study of estuaries was the creation of a GIS-based workbench tool that could integrate multiple sources. Water in coastal areas frequently comes from multiple sources. These might include surface water flow, incoming tides, manmade waterways, and even in some cases groundwater. The tool had to allow for the creation of virtual estuaries and estimation of bulk parameters of the estuaries and facilitate development and integration of other models into the same framework.

### Conceptual Controls

In the initial development phase of the ACES project, the technical team developed an estuary control volume conceptual model that connects features in the estuary physical model with elements contributing to the control volumes such as waters from coastal bases, oceanic constituents, riverines, and intracoastal waterways. Groundwater influence was not considered in this initial application since the influence is likely small as compared to the other elements.

The team relied on a simple multiple linear regression (MLR) tool for evaluating relationships between constituents emanating from drainage areas and the measured values of water quality in the control volume. A more robust estimate of contributing areas may be obtained by using an iterative process that compared predicted and measured values while modifying the drainage area contribution. Throughout the effort, the team communicated extensively regarding various topics ranging from the deceptively simple, such as the definition of an estuary, to the complex and controversial modeling approach.

### Coastal Possibilities

The ACES prototype tool is composed of a GIS-based database of spatial and temporal data that describes the environment and an accompanying ArcMap-based toolset. Using ACES, scientists can essentially build a virtual model of the estuary they are interested in using topographic, bathymetric, and tidal datum data.

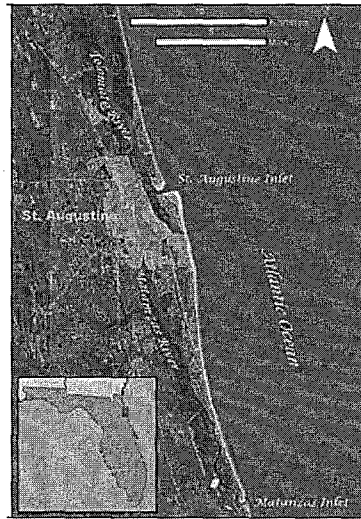
Within an Arc Hydro model, ACES can be used to determine estuarine bulk parameters (such as total area, high and low tide, volume, depth, and tidal flow) related to the shape of the estuary. With data related to flow rates into and out of the estuary, more complex parameters can be derived, such as residence time (the time water stays within a system) and flushing potential (an estuary's ability to flush a harmful substance).

Using this information, the relative importance of tidal versus land-based flow on estuarine hydrodynamics can be assessed. Relationships between estuary water quality and flow rates can also be investigated. Using the ACES regression model capabilities, scientists can find the correlative relationships between the influential factors of upstream riverine drainage, coastal drainage, and estuarine non-point source pollution.

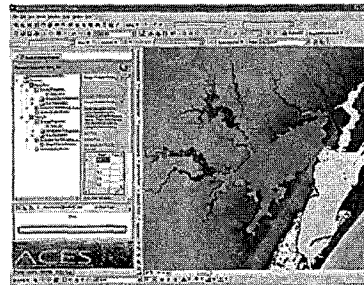
### Prototype in Action

An ACES prototype was used to support estuarine and coastal studies for the Guana/Tolomato/Matanzas Estuary, which is also a National Estuary Research Reserve for SJRWMD. Guana/Tolomato/Matanzas encompasses approximately 73,000 acres of salt marsh and mangrove tidal wetlands, oyster bars, estuarine lagoons, upland habitat, and offshore seas in northeast Florida. Along the northern section of the reserve, the Tolomato and Guana rivers meet the waters of the Atlantic Ocean. The southern section follows the Matanzas River, which extends from Moses Creek south of Pellicer Creek.

The ACES tool was also used to support a water quality study of Copano Bay in south Texas, a project sponsored by the Texas Commission on Environmental Quality. A popular fishing and recreation site, Copano Bay is a large watershed with source waters from Aransas Bay and several rivers. Dr.



The St. Augustine Inlet to the Guana/Tolomato/Matanzas Estuary is a barrier that was accurately characterized with the ACES tool. The Matanzas Inlet is one of Florida's few remaining natural, unmanaged inlets.



ACES was used to find the volume of Copano Bay in Texas at several tidal levels to estimate pollutant loadings in the bay. Each colored polygon shows the shoreline for a different water level.

Stephanie Johnson, then a doctoral student in the Center for Research in Water Resources at the University of Texas under Dr. David Maidment, wanted to develop an accurate water quality model for the bay. Johnson had already acquired estuary depth measurements, which she converted to volumes to model the processes within the bay.

"To complete this study, I needed basic information, such as the bay volume and symmetry, which I could have calculated by hand using available contour maps, though it would have been a tedious process," said Johnson. Working with the ACES development team, Johnson used the ACES program to automatically develop the necessary estuary volume versus depth curve for use when computing the total maximum daily load of pollutants. "Through the ACES program, I was also able to create highly visual images that I incorporated into my larger water quality model and used to communicate with various nontechnical stakeholders," added Johnson.

In the near future, environmental scientists at SJRWMD will use ACES to explore the estuaries along the northeastern coast of Florida, including the mouth of the St. Johns River, the Indian River Lagoon, and the Nassau and St. Marys rivers. ACES presents a wealth of possibilities for the exploration and analysis of estuaries at universities and within water management districts. This tool will continue to evolve in functionality and application to help coastal experts more easily explore and understand complex coastal environments.

#### About the Authors

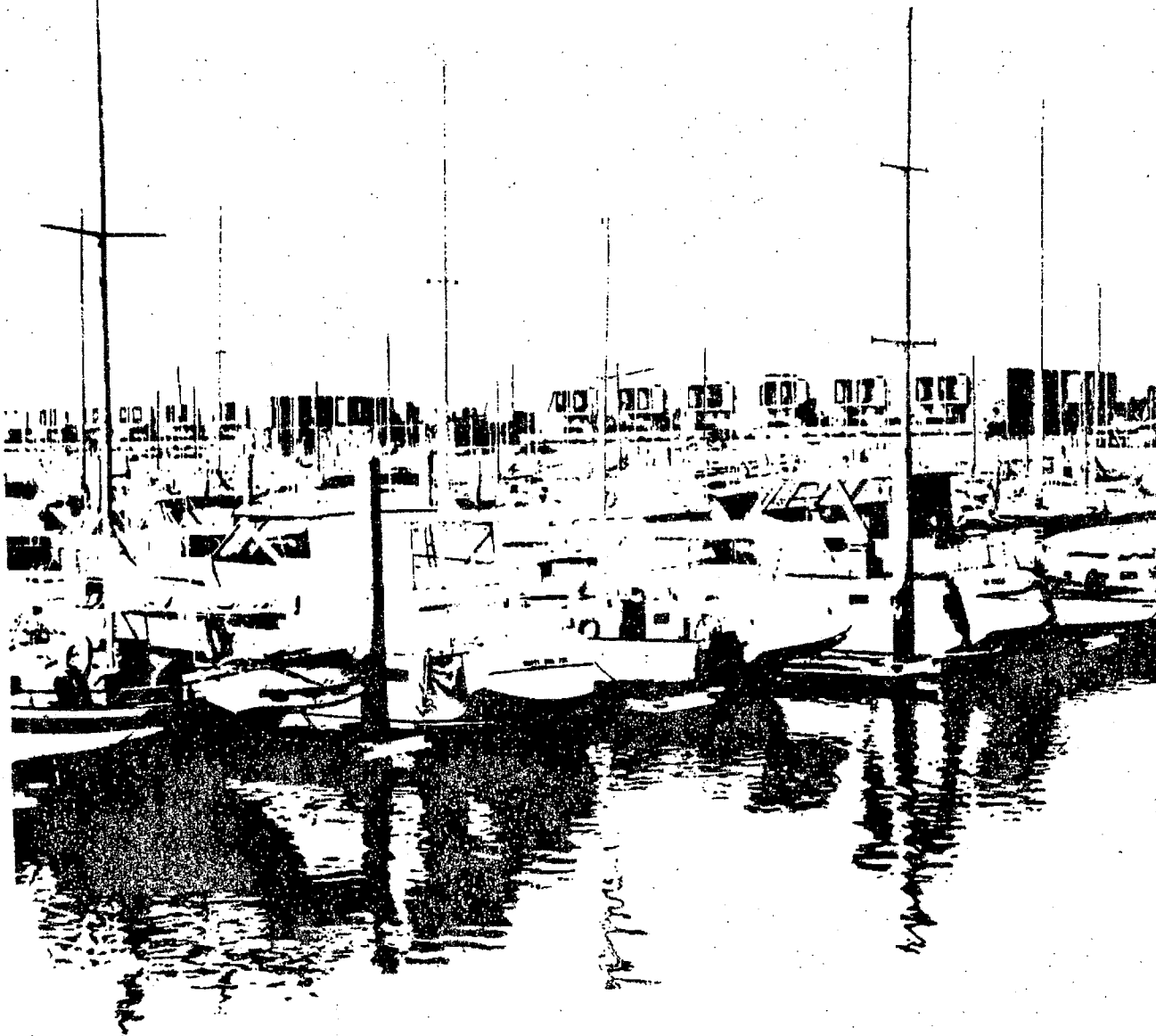
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## EXHIBIT 15

# MARINA DEL REY STUDY

WORKING PAPER 1B THE DEVELOPMENT OF THE MARINA



COASTAL ZONE PLANNING AND MANAGEMENT PROJECT  
UNIVERSITY OF SOUTHERN CALIFORNIA SEA GRANT PROGRAM • LOS ANGELES, CALIFORNIA



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# THE DEVELOPMENT OF MARINA DEL REY

Marina del Rey Study  
Coastal Zone Planning and Management Project  
University of Southern California  
Sea Grant Program

Prepared by  
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Cover photograph by Gwen Halvorson

This work was supported by a Grant No. 2-35227  
from the National Sea Grant Program, U.S. Department of Commerce, to the University of Southern California.

Sea Grant Publication No. USC-SG-5-72

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## PREFACE

This working paper is one of a series focused on the Marina del Rey being prepared as part of the Coastal Zone Planning and Management Project at the University of Southern California. The overall project has been conducted jointly by the Center for Urban Affairs and the Graduate Program of Urban and Regional Planning under a grant from the U.S. Department of Commerce to the U.S.C. Sea Grant Program. This paper was undertaken to provide an orderly, accurate presentation of the decision process which has led to the Marina's present status.

We believe that the study will be of value to the Los Angeles County Department of Small Craft Harbors in its future Marina development activities. Although the department has been our principal source of information, an outsider's view of past events is sometimes useful. The principal value, however, will accrue to other coastal communities which are considering marina development but do not have the experience which Los Angeles has gained.

Obviously, there are many aspects of the Marina which we have not investigated in depth here. Among these are current activity patterns, developer behavior, environmental conditions, effects on surrounding areas, and the internal governance of the Marina. Furthermore, it has not been our intention to identify individuals who have advocated various

policies. Other papers in the series will deal with many of these factors.

We would like to thank the following people at the Los Angeles County Department of Small Craft Harbors for their cooperation in providing reference documents and for the time they spent with us in interviews:

Victor Adorian, Director; Donald Deise, Assistant Director; James Quinn, Chief of Operations and Development; Leo Bialis, Harbor Controller; and Richard Landon, Property Manager. Ben H. Southland, of Gruen Associates, who represented this consulting firm in their land use planning for the Marina, offered a number of valuable insights concerning its development.

We also recognize the important roles played by Ronald Linsky, Director of Sea Grant Programs at U.S.C.; Jerome Milliman, Director of the Center for Urban Affairs; and Professor Robert Warren in making the initial contacts which allowed us to proceed on this study.

## CHAPTER I. INTRODUCTION

The Marina del Rey, on Santa Monica Bay in Los Angeles County, is one of the largest man-made small craft harbors in the world, containing 375 acres of land and 405 acres of water. It is expected to have about 6,000 boats in slips and hundreds more in dry storage. Beyond this, it is a small community in itself with a resident population of 10,000 and a seasonal daytime population of about 30,000. The residential accommodations are supplemented by extensive commercial facilities including a shopping center, office buildings, and many restaurants. Public investment to date has been over \$36,000,000 which has been funded by federal and county contributions as well as a revenue bond issue of \$13,000,000. Total private investment is expected to reach \$160,000,000 or more. Today the project is clearly a financial success for the County, both in terms of internal revenues and increased tax income.

The site of the Marina is totally owned by Los Angeles County but most of the land and some of the water area is leased to private developers. The County Department of Small Craft Harbors, the Small Craft Harbor Commission and the Marina Design Control Board regulate both the form of development and the operations of the lessees.

Obviously, this financially successful project has required extensive and continuous planning effort. The pattern of decisions must be seen as a dynamic process. Plans have been modified considerably over a

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long period of time and will continue to change. Each action taken by the County and by developers was a response to possibilities and constraints at a specific point in time, as they were perceived by particular groups. Some comments will be made here concerning the significance of Marina development decisions for its users, the surrounding area, and the community as a whole. However, a more complete critique of the decision process will appear in a later working paper.

#### Stages of development

The stages of Marina development and planning will be presented in a roughly chronological sequence. The first stage, up to 1956, covers early schemes for use of the Marina site and the planning which led up to a tentative decision for extensive public investment in a small craft harbor there.

During the second stage, 1956-62, detailed economic studies were conducted to estimate the costs and revenues from the Marina. Arrangements for the use of general fund and revenue bonds were established for financing public expenditures. The land needed for Marina development was acquired by the County and construction of the basic form of the Marina was undertaken. In 1960, the first complete land use plan was prepared. Procedures for leasing land and water parcels were defined. Finally, the first lessees built their own structures and began to operate.

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A third stage began in 1962 with a period of great difficulty brought on by storm damage and problems with financing. Up to 1967, every decision concerning the Marina had to be made with the goal of increasing revenues in order to meet debt service requirements. At present, many private structures and their arrangement reflect the market and financing conditions existing during this critical period which made low cost development necessary. More recent projects are of higher quality and higher cost. A revised land use plan was prepared in 1967 which updated the original plan. The new plan took account of experience gained during the intervening period, as well as the rapidly changing market conditions.

Currently the County contracts, when necessary, with economic and land use planning consultants who undertake studies and make recommendations to ensure that the continuing development of the Marina will be effective.

#### Important Public Issues

The Marina today appears to be a remarkably successful operation. However, from the point of view of public policy, a number of issues should be considered which will be relevant to decision-making concerning other marinas. While we will not attempt to answer these questions in this descriptive paper, they have guided the selection of information to be presented.

The first issue is whether the Marina del Rey site should have been used

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for a small craft harbor or for some other purpose. It can be assumed that local governments today must be constantly searching for revenue producing development. Rarely is a project carefully analyzed to determine whether its overall effect on the community will be the most favorable of all possible uses. Apparently, little consideration was given to uses other than a small craft harbor for this site and the possibilities for alternative uses were discarded long ago. Some other uses which might have been considered are industry, low density residence, a more or less natural estuary and park, and a recreation area like Marineland or even Disneyland. We are not necessarily suggesting that these uses are more suitable for the Marina site, but that a wide range of possibilities should be examined for all coastal zone sites.

Given that a marina has been assigned to the site, it should be considered whether the overall layout and the land use pattern have been handled well. For example, could the surge problem during the 1962-63 period have been avoided by better channel planning? Does the channel and basin arrangement result in acceptable water quality? Is the percent of the site filled as land appropriate? Have internal roads, links to external streets, and parking been well organized? Are high and low rise buildings properly balanced and arranged? Are residential and transient population densities too high or too low?

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Another category of issues concerns the financial and operating arrangements of the Marina. Were the public subsidies from the Federal government and the County general fund appropriate? Were the revenue bond issue and state loan handled well? Have leasing arrangements been fair and in the best interest of the County? Are public services adequate? Are Marina users paying their share of service costs?

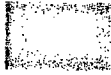
Finally we come to the question of who should have the ultimate decision-making responsibility for marinas and other coastal zone development. If, as in the present case, the Department of Small Craft Harbors is given a major role in planning one would expect that water recreation uses, especially pleasure boating facilities, would be<sup>1</sup> given precedence whenever possible. However if an agency with responsibility for all activities in the coastal zone were making decisions, perhaps a different land use scheme would have resulted.

In the remaining chapters of this report, we will turn to the chronolgy of Marina development.

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## FOOTNOTES

- 1 Note that boating dominated the early plans, but as time has passed, residential and other "landside" development have been allowed to expand considerably because of the need to pay back the revenue bonds. Apparently boat slips alone would not support the cost of the Marina.



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## CHAPTER II. THE PRE-DEVELOPMENT ERA

### Natural Topography

Marina del Rey is located at the southern end of an area of beachfront lowlands which extend south from Pacific Palisades to the bluffs of Playa del Rey. Toward the east, the land slopes gradually upward to the Baldwin Hills, four miles inland. Until recently, the Marina area was known as Playa del Rey Inlet. Early in the 1800's the inlet had formed the mouth of the Los Angeles River but later the river rerouted itself so that it now enters the sea at Long Beach.

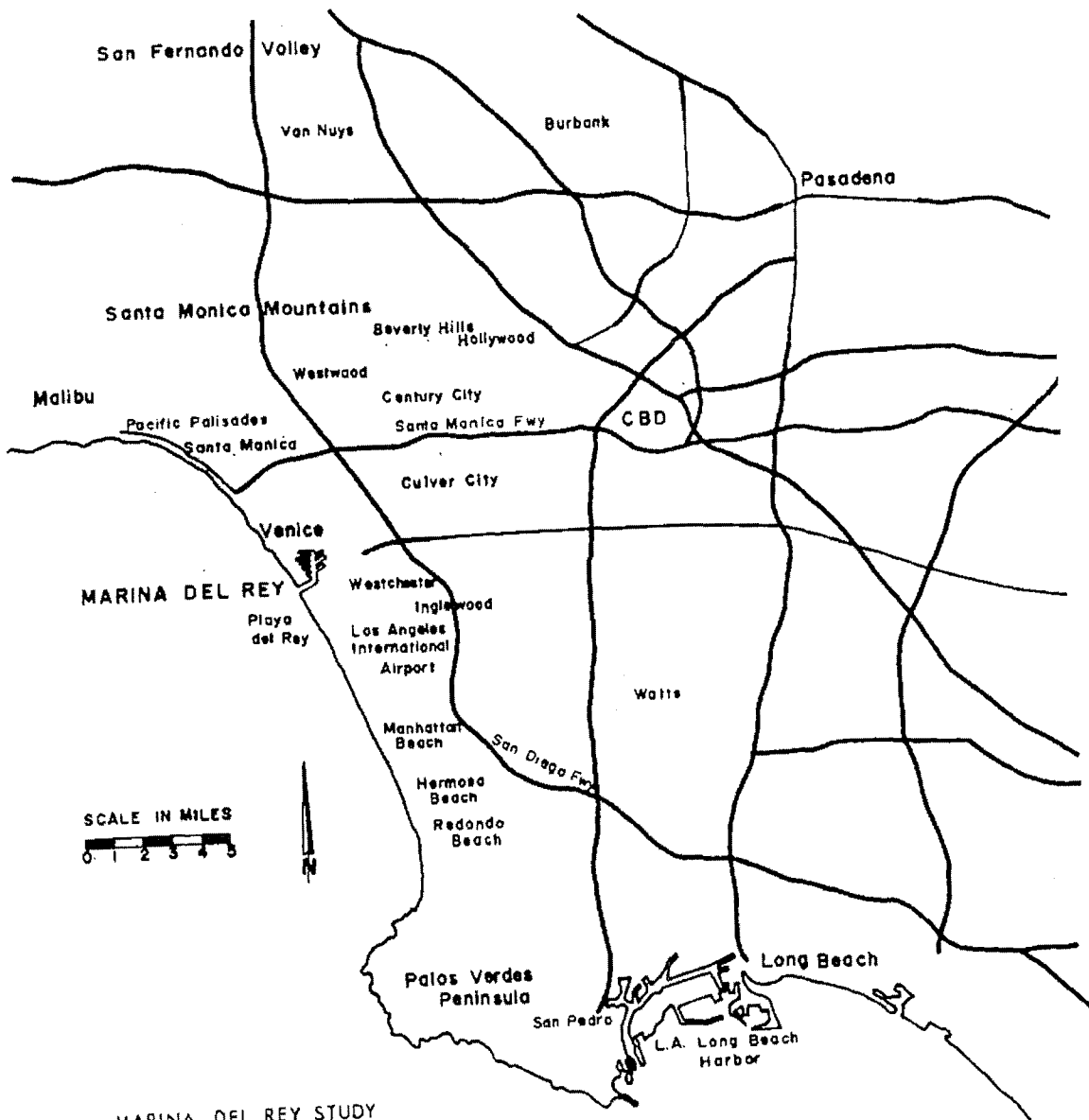
The concrete lined Ballona Creek Flood Control Channel, just south of the Marina site, was constructed in 1938. After the construction of the flood control channel, the Marina area was described as "1513 acres of salt marsh and low farm and residential lands." Residences were clustered along the shore since the area inland was subject to flooding<sup>1</sup> by even moderate rainfall.

### Early Development Schemes

Indians once inhabited the area of the present Marina. There was fresh water from Ballona Creek, hunting and fishing were good, and there were clams in the lagoon. When Southern California came under the jurisdiction of the Spanish, the area was part of a large rancho used for raising cattle. The Rancho la Ballona, named for the town of Bayona in Spain, gave its name to Ballona Creek.

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## GENERAL LOCATION MAP



MARINA DEL REY STUDY  
COASTAL ZONE PLANNING  
AND MANAGEMENT PROJECT  
UNIVERSITY OF SOUTHERN CALIFORNIA

Source: California State Division of Highways

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Moses Wicks, a real estate speculator began construction of a commercial harbor on the site in 1887. Although only 35, Wicks had been successful in land dealings after his graduation from law school and was able to capitalize \$300,000 for the venture. The Santa Fe Railroad built a rail line to service the port and a pile-lined channel was begun. Construction proceeded to the point of creating a basin suitable for small boats before a collapse of the real estate market left the speculators without customers and stopped the construction. <sup>2</sup> The channel quickly deteriorated and the basin filled in until it was no longer navigable.

In 1892 Abbot Kinney began developing the Venice area, complete with canals with the intention of replicating the character of Venice, Italy. This transformed what had been an ownerless beach into a vacation resort. Kinney remained active in the development of Venice throughout his life and was one of the successors to Wicks in encouraging the development of a harbor at Playa del Rey Inlet. His exact role here is not known, but in 1916 he made a statement of support and encouragement of the construction of a harbor in the House Document No. 1880 of the 64th Congress. This document reported the findings of the Corps of Engineers in studying the feasibility of such a commercial harbor. <sup>3</sup> The Corps' preliminary examination determined there was no justification for such a major undertaking. The commerce projected for such a harbor was uncertain since the site of the present area harbor at San Pedro and

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Long Beach was considered far superior. Although it was thought that a small craft harbor might be useful, there was no provision for federal participation in such a project at that time.<sup>4</sup> Abbot Kinney's son, Thornton, tried to encourage the construction of a naval base at Playa del Rey in 1921<sup>5</sup> but failed to gain recognition for the project.

The Venice canals connected with the sea at Playa del Rey Inlet. After the construction of the Ballona Creek Flood Control Channel, tide gates into the channel became the only opening from the canals to the sea. The marshes drained into the canals and the canals into the channel.

As Venice grew, development crept southward towards Ballona Creek. Houses were built along the beach in the area known as the peninsula, so named because of the salt marshes behind the beach. A bridge over Ballona Creek at Pacific Avenue connected the peninsula with Playa del Rey. In 1930, a profitable oil well was discovered and soon 151 oil wells dotted the peninsula and the western side of the marshlands. The production of these wells decreased from a peak of 40,000 barrels a day in 1930 to 2,300 barrels a day in 1946 and their existence at that time was not seen as a serious obstacle to the construction of the marina.<sup>6</sup>

A proposal for a harbor was again raised in 1937 when Congress approved the Rivers and Harbors Act, Public Law 75-392, which "authorized and directed to cause a preliminary survey to be made ..." at Playa del Rey

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Inlet. Before the Corps of Engineers undertook the study, they requested that a certain amount of information be provided by the community. Accordingly, the Los Angeles County Regional Planning Commission was authorized to provide the information. For the first time, the proposal was for the construction of a recreational harbor, a concept which was made possible by Public Law 72-16 which had defined the term commerce to include "the use of waterways by seasonal passenger craft, yachts, houseboats, fishing boats, motor boats and other similar water craft whether or not operated for hire."

It is not known who inspired the inclusion of Playa del Rey Inlet in the 1937 Law. By this time, however, the perceived local need for recreational facilities, coupled with the unusual suitability of the area for small craft harbor development seems to have created a predisposition for the harbor among many groups.

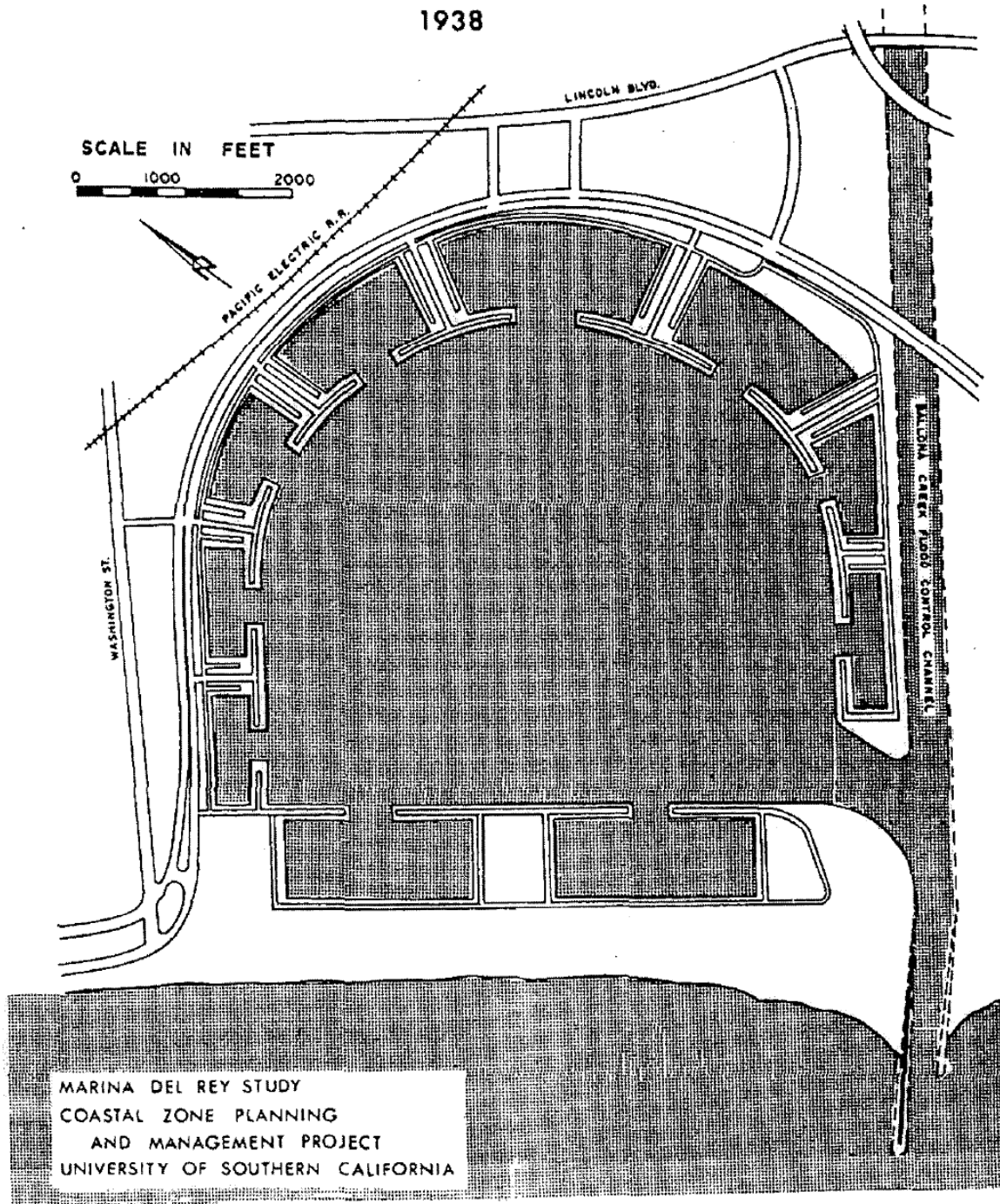
#### Basic Marina Plans

The Regional Planning Commission produced a report in 1938 which envisioned a large open body of water (435 acres) surrounded by ten smaller berthing areas created by mole type piers jutting into the central basin. It's estimated cost was \$9,750,000. The harbor was to accommodate 5,000 boats and include automobile garages, parking spaces, water and electrical outlets, restrooms, yacht clubs, boat repair

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# REGIONAL PLANNING COMMISSION PLAN 1938



Adapted from: L.A. County Regional Planning Commission, Report on Proposed Recreation Harbor at Playa del Rey, 1938.

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facilities, sport fishing boats, administration buildings, and possibly<sup>8</sup> civic buildings such as a post office or library. The physical plan was not based on thorough analysis, but was thought to be reasonable in light of the needs of the boating public. The amount of business assumed for the Marina was based on extrapolations from the demand for services at existing harbors. The final report, accompanied by a review of the findings of George F. Nicholson, consulting engineer, was completed<sup>9</sup> in August 1938. At this time, the Corps of Engineers was expected to begin their survey. World War II, however, delayed their action and<sup>10</sup> the survey was not authorized until April 6, 1944.

#### County plans and Corps of Engineers plans

The early plans for the marina at Playa del Rey Inlet were as speculative as the Marina itself. The plan developed by the Regional Planning Commission in 1938 and updated later as part of the Master Plan of Shoreline Development, was designed to provide needed information for the Corps of Engineers. The Corps wanted to know what kind of harbor the local community wanted. They wanted to know what activities would take place in the Marina and what interests would be served. The Corps of Engineers was unfamiliar with evaluating a recreational harbor proposal since they had been previously involved only in commercial harbor construction. Similarly, the Regional Planning Commission was not accustomed to dealing with the issues peculiar to a recreational harbor. At any rate,

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they were reacting to a particular request for information on a project which could be fit into county plans but which was not yet adopted or thought to be imminent. Their plan drawings show little regard for property lines or city boundaries. The planners seem to have assumed that much more planning would be done before any marina would be built.

The action of the Regional Planning Commission and the pending action by the Corps of Engineers probably increased in people's minds the likelihood of a marina at Playa del Rey Inlet. The Shoreline Planning Association of California urged preliminary studies for such a marina. In response, the City of Los Angeles commissioned a study of the recreational development of the Los Angeles shoreline to be done by a private consultant, Madigan-Hyland. 11

The consultant postulated the future existence of the Marina del Rey to the point of saying that it would probably be open in 1953. Again the planners assumed that someone else would do more detailed plans for the Marina. Madigan-Hyland apparently based its projections on the plan developed by the Corps of Engineers. The Corps had not published its report yet but the general plan which accompanied the Corps' findings had been drawn in 1946, so that it was available to the consultants.

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The Corps of Engineers report was finally completed in 1949. The major purpose of this study was to determine whether or not the federal government would participate in the construction of the Marina. For this reason its plans

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were more specific than any others had been. The plans, however, covered only the construction of the waterways and left land use and accompanying facilities out of their considerations. Only as it affected channel design did the Corps indicate the existence of boat repair yards, administration buildings and boating clubs.

The harbor designed by the Corps of Engineers was similar to that envisioned by the Regional Planning Commission. There was to be a large central basin connected to the sea by a single channel. Twelve side basins with a capacity of 8000 boats would be twenty feet deep and be served by a twenty foot deep interior channel from the entrance. The rest of the water area was to be ten feet deep. The deeper areas were to be for boat repair, perhaps to accomodate larger commercial boats which would be harbored elsewhere.

#### Madigan-Hyland Plan.

The Madigan-Hyland plan for the coastline also was finished in 1949. Since theirs was a study of the entire Los Angeles County coast, Madigan-Hyland described the facilities to be included in the Marina primarily in relation to the entire County's coastal recreational facilities. It is not known if the consultant had been asked to determine what type of facilities should be specifically included in the Marina, or if they merely wished to influence the eventual planners of the Marina to give consideration to regional recreational needs.

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Madigan-Hyland determined the number of parking spaces needed for a marina would be 1.5 spaces for each of 80% of the boat slips plus 1400 parking spaces for the general public. They apparently felt the public should have access to the Marina even if only for sight seeing. They suggested, however, that the way to pay for such public parking would be to collect a fee at the Marina entrance. No one but a boat owner with a pass would get into the Marina without paying.

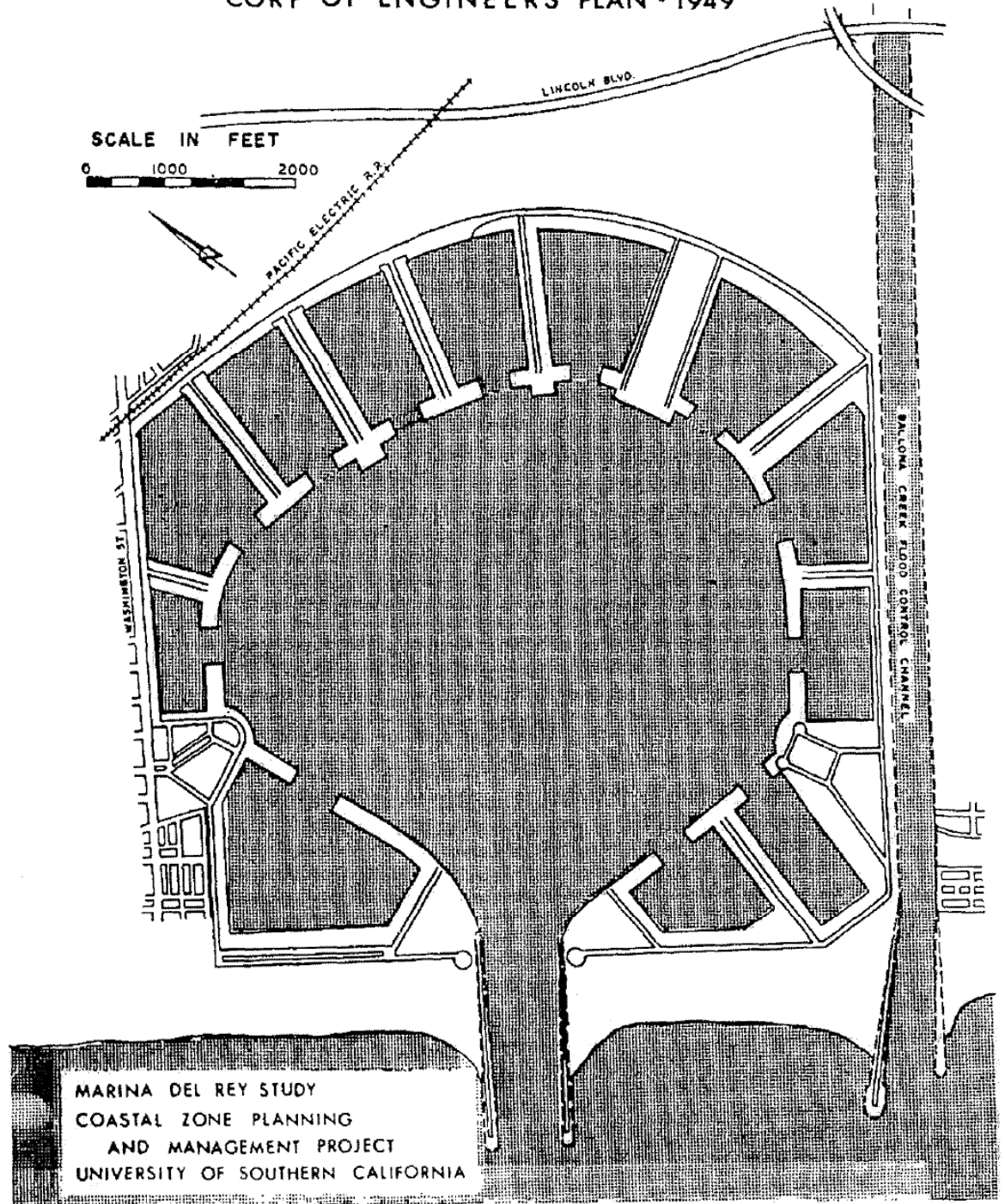
While Madigan-Hyland probably based their recommendations for land and water use on a plan similar to that shown in the Corps of Engineers Plan of 1949, it is difficult to reconcile the activities and facilities they specify with the areas provided in the plan.

The major emphasis in the report is on the 8,000 small craft to be docked in slips located within bays built around the periphery of the circular harbor. Two additional bays are planned for marine related commercial and recreational use. The support facilities thought to be required for 8,000 craft are described, but no indication is given of the space allocated for these facilities. Two of the bays shown on the plans are adjacent to Washington Street, two to Ballona Creek Flood Control Channel, three back on to the ocean beach, and only four of the remaining five bays have any contiguous land area available for the location of the 11,000 parking spaces, the marine supply stores, restaurants, bars, and retail commercial facilities which are noted as

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## CORP OF ENGINEERS PLAN - 1949



Adapted from: U.S. Engineer Office, "General Plan of Improvement, Playa del Rey Harbor" Los Angeles, 1949.

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necessary. The area which lies between Lincoln Boulevard and the marina's circumferential road is approximately 125 acres and would be inadequate for even a small share of the facilities described.

Four of the thirteen moles shown are large enough to accomodate harbor administration and maintenance operations as well as marine repair yards, but the remaining moles are only large enough to provide for a minimal number of the storage lockers to be rented to boat owners. Space on the moles is not sufficient for the garages recommended for rental to boat owners for their cars and paraphernalia, nor is it possible to find such space within feasible distance from the slips.

Numerous other discrepancies between narrative and plan are apparent, so that it is obvious that Madigan-Hyland's textual report on the Marina, considered by itself or in conjunction with the Corps of Engineers plan for the area, cannot be regarded as a complete land use plan. Again, it must have been assumed that other agencies would complete the planning work necessary before actual construction of the Marina.

While Madigan-Hyland's report had been addressed to County coastal recreational needs, the Corps of Engineers Plan, developed at the same time, concerned only the Marina. The major purpose of the report was to present a benefit-cost analysis to justify the federal government's participation in the Marina's construction. Considering tangible benefits only, they

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estimated that the benefit-cost ratio resulting from the proposed marina development would be 1.4 to 1. Along with this figure it is mentioned that federal participation is further legitimized by a higher percentage of marina costs to be borne by local interests, rather than by the federal government. The amount necessary to construct half of the main navigational features was finally recommended as the federal government share.<sup>14</sup>

In 1954, Congress passed Public Law 83-780 which "adopted and authorized to be prosecuted" the recreational harbor at Playa del Rey Inlet.<sup>15</sup> This decision had been recommended by the Secretary of the Army on the basis of the 1949 report by the Corps of Engineers. The legislation approved federal participation in the project in the event that the local authorities decided to go ahead with it.

#### Nicholson's Plans

In response to the federal support provided by Public Law 83-780 the Los Angeles County Board of Supervisors hired George F. Nicholson, consulting engineer, to prepare a schematic plan for a marina accompanied by an economic feasibility study. The Nicholson plan was a radical departure from the Corps of Engineers Plan of 1949. The Nicholson Plan eliminated the large central basin which characterized the earlier plans. The basin, it was reported was not required for navigation nor would it

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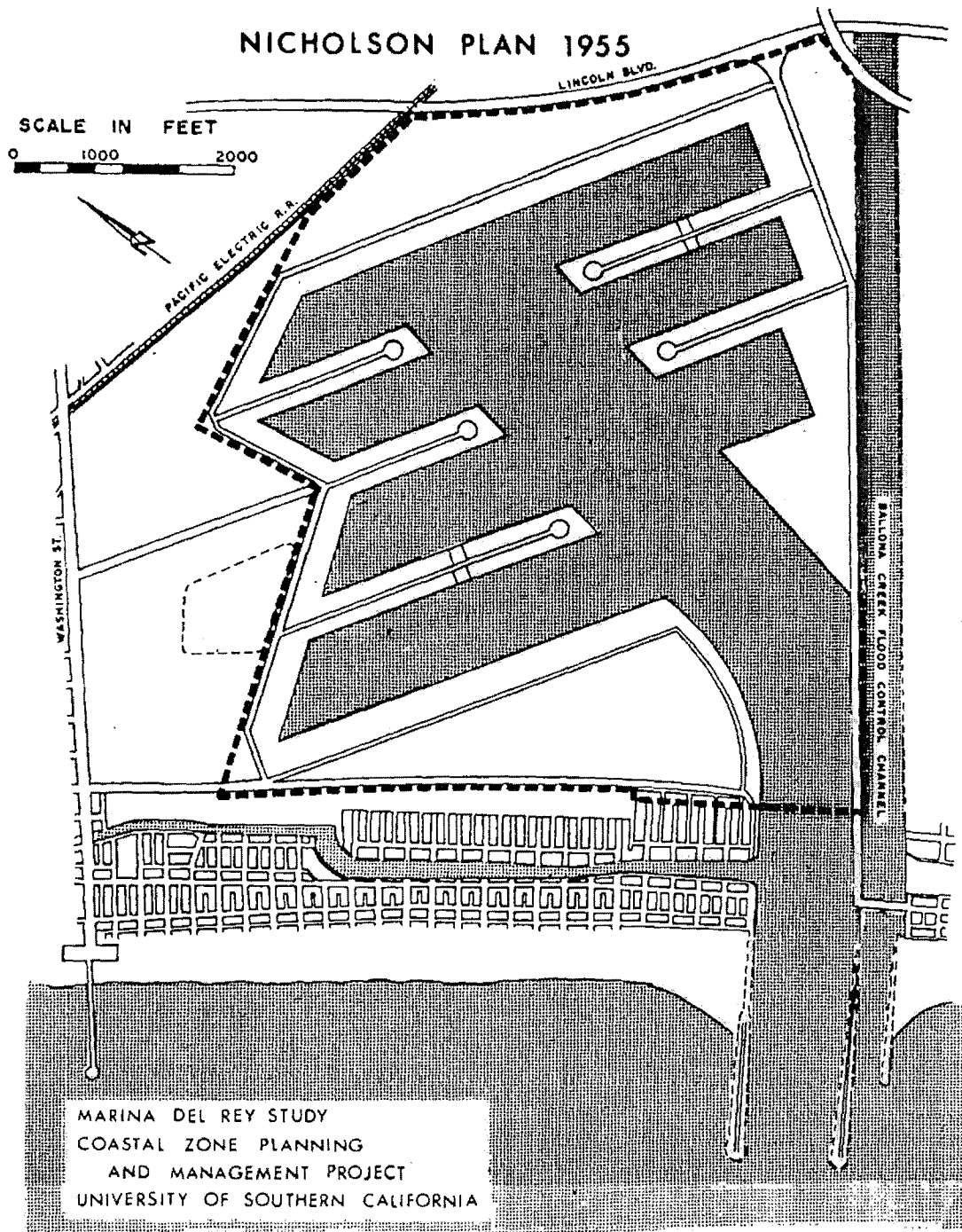


be appropriate to the area the Marina was planned to occupy, a much smaller area than was previously contemplated. Also, it was thought that the mole design in the Corps of Engineers Plan would constrict the flow of water within the mooring basins.<sup>16</sup> Nicholson's Plan therefore, employed a straight main channel 1,000 feet wide with six side basins each 600 feet wide and one 625 feet wide. The plan was to accomodate 6000 boats in the water with dry storage for 2000. The entrance channel was moved so as to be directly adjacent to, but separate from Ballona Creek. This was done to avoid isolating a stretch of beach between Ballona Creek and the entrance channel. Ballona Creek was kept separate from the channel in order to avoid the difficult task of dismantling the existing jetty and to avoid the debris that the flood control channel carries.<sup>17</sup>

Beaches were planned at the end of four of the mooring basins with substantial parking areas for the public using the beaches.<sup>18</sup> Boat launching and boat repair also figured in the design. It was intended that motels would be located near the beaches on sites leased to private interests. Restaurants, yacht clubs, gas stations (auto and boat) and a large salt water lagoon and beach sand stockpile area completed the plan.

The radically different configuration of Nicholson's first plan for the harbor was decided upon, then, in order to provide: 1) protection against silting, 2) convenient land access, 3) reduced water contamination and 4) lower land acquisition costs.

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Adapted from: George F. Nicholson, Schematic Plan, Long Beach, Calif. 1955

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This plan was based on the assumption that the County could acquire all the land adjacent to and north of Ballona Creek from the ocean east to Lincoln Boulevard. A triangular parcel of land in the northeast section of the present marina which contained a salt pond was not included. The proposed boundary on the north side of the marina conformed partially to the boundary of the County of Los Angeles. The land with the salt pond, Lake Los Angeles, was within the City of Los Angeles and was used for recreation. Its cost was <sup>19</sup> considered excessive and therefore it was excluded from the project area.

The orientation of the side basins was determined in large part by the Venice Interceptor Sewer which ran directly across the middle of the Marina. It was planned to build the Marina in stages so that the first phase would include dredging the waterways up to the point at which the sewer line crossed the main channel. The sewer line thus ran along what was to become a mole on either side of the main channel.

The change in the basic round form of the Marina to Nicholson's design proposal did more than merely make for more efficient use of land and water area. The new design precluded the use of the Marina by small boats seeking protected waters for recreational boating. This greatly changed the character of the Marina from the traditional recreational harbor, to a berthing harbor whose waters are used only for entrance and exit. The Corps of Engineers commented on this loss of a sailing basin but said that the plan was acceptable

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if cost had to be the governing factor.

This was perhaps the first example in Marina del Rey planning in which a policy decision for the public recreation facility imitated the private market: it is expensive to build a marina, therefore it should be designed only for those who can afford such expense. The change by Nicholson's plan eliminated a large part of the boating public--those who owned small boats which are unsuited for use in the open sea. By making the Marina primarily a berthing harbor, the Plan in effect limited its use to sea-going and therefore larger, more expensive boats.

The change in the character of the Marina is never acknowledged in any Marina plan documents. No consideration is given to the fact that the change would alter the demand for launching facilities, or that it might affect the optimal boat capacity for which the Marina should be planned. Looking back, it is believed that demand for slips for large boats was being expressed then and that small boats could be accommodated at inland lakes.

This is not meant to imply that land and cost construction are not valid, but only to say that within those constraints, certain harbors are possible, other are not. If the harbor is changed, the goals and the client which the harbor is to serve should be re-evaluated in these terms. If the goals and clients change, it should be the result of a conscious

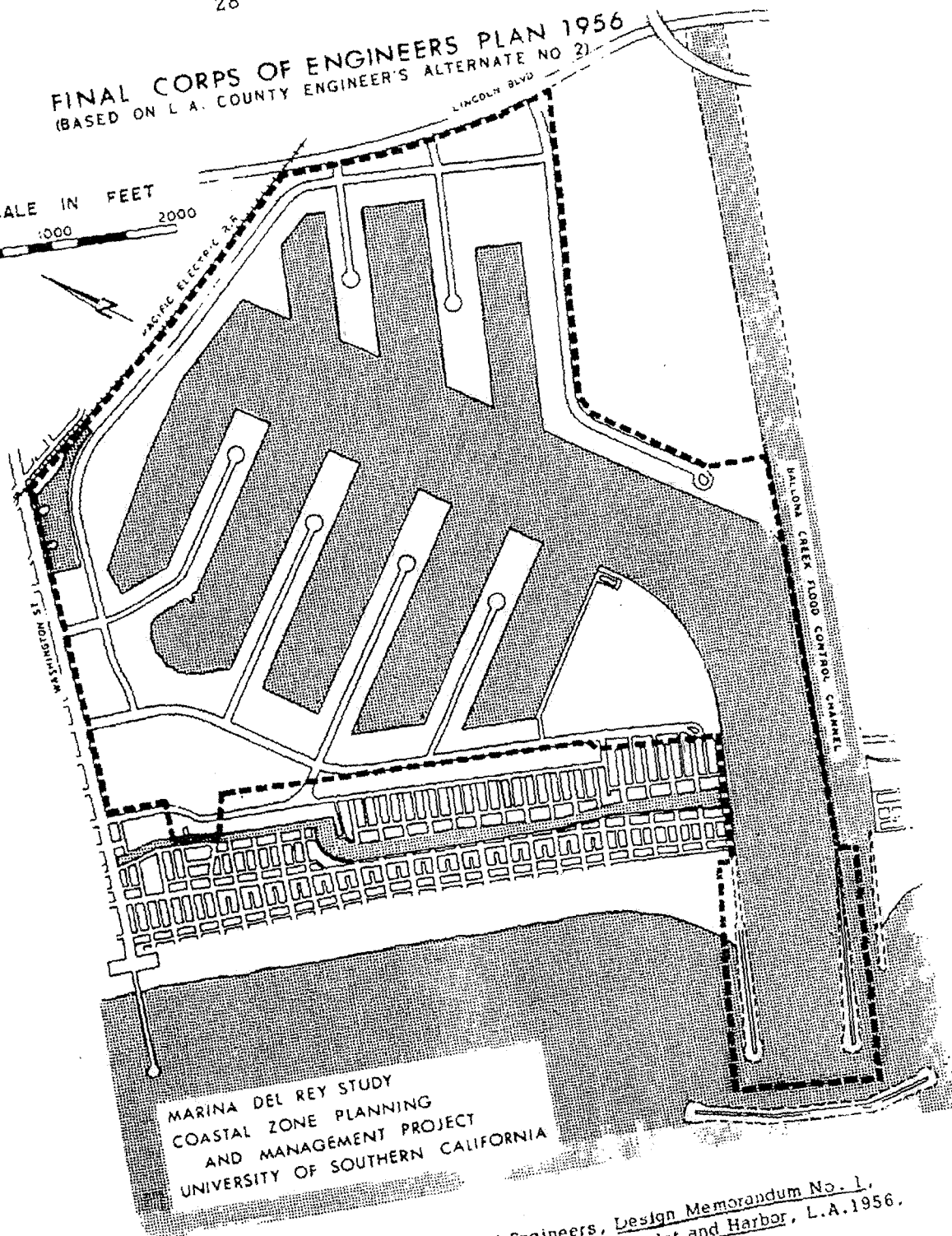
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# FINAL CORPS OF ENGINEERS PLAN 1956

(BASED ON L. A. COUNTY ENGINEER'S ALTERNATE NO. 2)

SCALE IN FEET  
0 1000 2000



Adapted from: U.S. Army Corps of Engineers, Design Memorandum No. 1,  
General Design for Playa del Rey Inlet and Harbor, L.A. 1956.

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policy decision rather than as an accident of design.

Nicholson submitted his plan to the County Engineers on October 23, 1955.

Almost immediately the plan was revised. The Engineer's office made up three alternative plans. Alternate No. 1 was apparently very similar to Nicholson's original; Alternate No. 2 was drawn to appraise the use of additional land in the marina plan, and it conforms closely to the plan of the Marina today; Alternate No. 3 showed only two mooring basins

20

on the east side of the main channel. Nicholson was asked to render an opinion on the alternatives. He stated that he preferred his original scheme as modified by Alternate No. 1, but that Alternate No. 2 "should be given consideration if the additional land in the City of Los Angeles south of Washington Street and the Pacific Railway is added to the

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site." He did say, however, that Alternate No. 2 would: 1) permit advantage in making street connections with Washington Street, 2) be better for boat races because the main channel is longer, 3) be added protection from southwest storms, and 4) take advantage of the salt water pond on the property on the north side of the marina.

Alternate No. 2 moved the north end of the main channel westward so that there was a sharper turn to the left when entering the marina from the sea. The channel was made wider and the side basins were changed so as to fit better in the new area. More water area was created in

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the larger plan and therefore more cost for dredging was expected. The drawing of the new plan showed no industrial area and little commercial area. Instead, the larger areas on the perimeter of the marina were designated as future residential development.

On February 21, 1956 the Los Angeles County Board of Supervisors adopted Alternate No. 2 as the plan the county intended to use. The projected public and private cost of the Marina were estimated by Nicholson to be \$24,351,000 for Nicholson's Plan of 1955 and \$26,188,000 for Alternate No. 2. <sup>22,23</sup>

The increase in cost was due mainly to the greater water area and the consequently lengthened bulkheads etc. Also the increased capacity caused higher costs allotted to mooring facilities and restrooms.

<sup>24</sup>  
Alternate No. 2 was then sent to the Corps of Engineers for approval. Simultaneously a revenue bond proposal was prepared for the November 1956 ballot which would give the County the authority to issue bonds to pay for its share of the cost of the marina.

Corps of Engineers: Design Memorandum No. 1.

In 1956, the Corps of Engineers, using the County's Alternate No. 2 pro-<sup>25</sup>duced their Design Memorandum No. 1. This document defined the parts of the project for which the federal government was to be responsible. It set the engineering specifications for the exact outline of the water area, the depth of the water, the type of jetty to be built, etc.

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The Memorandum reviews the discussions of cooperative arrangements between the federal and county governments which appear in House Document 389, 1954; in Public Law 83-780, 1954; and in the supporting text for Alternate No. 2. The document then defines more precisely the particular responsibilities each party would have. It also states that the federal government would pay for fifty percent of the main navigational features i.e. the main channel and entrance jetties.

The Corps of Engineers was in communication with the County government so that the County Board of Supervisors was able to adopt a resolution on October 23, 1956 (before Design Memorandum No. 1 was published in November 1956) which agreed to the terms of participation and the responsibilities which the County would have.

On November 6, 1956, the voters of Los Angeles County passed a proposition allowing the County to issue revenue bonds for the construction of the Marina. The bonds were not issued until 1959, but acquisition of property and actual construction began before that. The date of the start of construction of the entrance jetties was December 1957.

Before much progress on jetty construction had been made, the Corps of Engineers prepared Addendum No. 1 to their General Design Memorandum. The addendum made changes stemming from Corps observations and requests by local interests and consultants. Boat launching

*CHS*

*B-160*



facilities were moved to the basin closest to the entrance on the east side of the main channel which necessitated making that basin narrower and shorter. The basin originally intended for boat launching was made wider. No reason is given for this change. The entrance channel was made deeper to minimize the wave effect caused by shallower water near the bend in the channel. The northern edge of the water area was moved slightly to make it conform to the city-county boundary line which passed through the Marina. The road system was changed so that better use could be made of the land area in the marina. The section of the perimeter road, which ran along the southern entrance jetty and crossed Ballona Creek at Pacific Avenue was eliminated from the plan.

As construction progressed the City of Los Angeles and the County of Los Angeles cooperated to make all the land within the Marina fall under County jurisdiction. The County adopted a resolution requesting that the area at the north end of the Marina adjacent to Washington Street be put under County jurisdiction while the City passed an ordinance to remove that land from within the boundaries of the city. <sup>29</sup> The ownership of the land was held by the County during this entire process.

Another section adjacent to the Marina remains within the City of Los Angeles. The beachfront property all along the west side of the Marina, known as the Venice "peninsula" is within the City. The portion of the entrance channel which passes through this strip also lies within city boundaries. In this

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area, the city has adopted a special ordinance which allows the County  
Harbor Patrol to handle law enforcement in the channel.

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## FOOTNOTES

- 1 House Document 389, 83rd Congress, 2nd Session. Playa del Rey Inlet and Basin, Venice, California (May 1954).
- 2 Department of City Planning, Los Angeles, California, A History of the Venice Area, (Oct. 1969) p. 6.
- 3 House Document No. 1880, 64th Congress, Preliminary Examination of Playa del Rey Inlet and Basin, Venice, California, (1916).
- 4 House Document 389, p. 5.
- 5 A History of the Venice Area, p. 19.
- 6 House Document 389, p. 26, 27.
- 7 P.L. 75-392, 75th Congress, 1st Session, (August 1937).
- 8 Regional Planning Commission, Report on Proposed Recreational Harbor at Playa del Rey, (June 1938).
- 9 Venice Evening Vanguard, "The Story of a Harbor Told Chronologically," (Venice, Calif.: April 26, 1957).
- 10 House Document 389, p. 4, 20.
- 11 Madigan-Hyland, Recreational Development of the Los Angeles Area Shoreline, (New York: 1949), pp. 95-97.
- 12 House Document 389.
- 13 Ibid., Plan.
- 14 House Document 389 p. 6.
- 15 Public Law 83-780, 83rd Congress (1954).
- 16 George F. Nicholson, Schematic Plan, Small Boat Harbor Development, Marina del Rey (Long Beach, California: Oct. 1955) p. 2.
- 17 Ibid., p. 23.

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- 18 Ibid., p. 4.
- 19 George F. Nicholson, Letter evaluating Alternate Plan No. 2 (Long Beach: December 12, 1955).
- 20 Ibid., p. 1.
- 21 Ibid., p. 2.
- 22 Nicholson, (Oct. 1955) Schematic Plan, p. 30-32.
- 23 Nicholson, (Oct. 1955) Alternate Plan No. 2, p. 6.
- 24 Corps of Engineers, Design Memorandum No. 1, (Los Angeles: November 1956) p. 5.
- 25 Ibid.
- 26 Venice Evening Vanguard.
- 27 Gruen Associates, Marina del Rey: Land Use Study (Los Angeles: March 1967) mimeo 59 pp. Part I, p. 4.
- 28 Corps of Engineers, Addendum No. 1 to Design Memorandum No. 1 (Los Angeles: January 1957).
- 29 Los Angeles City Ordinance 11973 (August 7, 1961).
- 30 Los Angeles City Ordinance 139, 030 (September 19, 1969).

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### CHAPTER III. INITIAL DEVELOPMENT (1956-1962)

#### Economic Studies

Along with the plans for the physical development of the Marina del Rey site, Los Angeles County asked its consultants to determine whether the project would be economically feasible and desirable for the County.<sup>1</sup> The major questions apparently were:

- 1) Is it suitable for the County to purchase land and carry out the basic public works needed for a marina at this site?
- 2) If the County can do this, what should its further role be in development and operation of the Marina?
- 3) What pattern of land and water use would be most desirable for County government and for the community as a whole?
- 4) Presuming that some of the funds needed for capital investment would be borrowed, how much would be required and what is the most appropriate mechanism for borrowing?

The answers to such questions depend largely on estimates made concerning capital costs, operating costs, revenues, and benefits to the community resulting from the Marina. The "opportunity costs" of benefits foregone from other projects which might have been undertaken in lieu of the Marina and from other possible internal arrangements of the Marina should also be considered.

The first detailed economic study was conducted by George F. Nicholson,<sup>2</sup> Consulting Engineer, in 1956 for the County Engineer. This study displays two schematic plans, Alternate No. 2, based on a County Engineer's proposal, is much like the form of the Marina as it exists today. Costs, revenues, and benefits were estimated for a thirty year period. Two years later, Coverdale and Colpitts, Consulting Engineers, prepared a report for the Board of Supervisors. They took as given the plan presented as Alternate No. 2 in Nicholson's report and his cost estimates for it.<sup>3</sup> They also introduced some refinements into the long-run financial analysis. In 1959, Coverdale and Colpitts rechecked the principle data and modified some of their estimates. This later report was submitted to Stone and Youngberg,<sup>4</sup> Municipal Financing Consultants in San Francisco.

In 1960, Gruen Associates, Architects, Engineers, and Planners produced land use studies based on updated information concerning costs and revenues, which strongly influenced the County's leasing program.

#### Analysis Methods.

There are two basic ways of structuring the analysis of the desirability of any public investment. Cost-revenue analysis considers estimates of the dollar expenditures and revenues for a particular governmental unit to see if the project is financially feasible. A governmental unit often feels it can justify certain projects only if they pay for themselves. This was<sup>5</sup> apparently true for Marina del Rey.

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Cost-benefit analysis takes into account all of the gains and losses, intangible as well as tangible, sustained by a defined population group, such as the population of Los Angeles County. Much of the criticism of public projects such as urban renewal, highway construction, etc. results from governmental use of costs and revenues while citizens are looking at costs and benefits.

The Nicholson and Coverdale-Colpitts studies use the cost-revenue framework almost exclusively. There were attempts, in the Nicholson and the Corps of Engineers reports to identify benefits and to compute an annual <sup>6</sup> benefit-cost ratio. These do not appear to be serious studies. No information is provided about the methods for benefit estimation, the list of intangible benefits is obviously incomplete, and intangible costs are not discussed. Furthermore, an increase in tax revenue is listed as the major local benefit--\$1,417,810 out of \$1,997,886 total local benefits. But most of these taxes are merely a transfer, for County residents, from the private to the public sector. Since such a transfer does not add anything to the community well-being, it cannot be called a benefit to the County. Only taxes from visitors residing outside the County are a benefit even in this limited sense.

Unfortunately, even after it is clear that a project is financially feasible, i.e., that it will more than break even in the long run, government often

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continues to make decisions about the project as if profit maximization were the only goal. It would seem more reasonable to set reaching the break-even point as a necessary condition for undertaking some projects. Beyond this point, the criteria should shift to costs and benefits for the community as a whole. The distribution of benefits among population subgroups should also be examined.

Of course we cannot ignore the difficulty of getting some projects to the break-even point. Marina del Rey was such a project. For example, in 1956 it was necessary for the Small Craft Harbor Commission to obtain a loan from the County general fund to meet cost of operations after bond requirements were met. Until 1966 it was not clear that private investors would be able to get financing for their proposed development. Today, however, the project is clearly a financial success.

#### Development Costs

The overall development costs for a marina depend on the size of the project and the extent to which new waterways, landforms, and structures vary from previously existing conditions. Capital costs can be divided into six categories: planning, site acquisition, basic structures, secondary structures and landscaping, buildings, and interest. The following information about the costs in these categories is taken from the Nicholson and Coverdale-Colpitts reports, the "Marina del Rey Reporter," and the "Marina del Rey Fact Sheet." Some figures are consultants' estimates and

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some are actual costs. The latter were used when available since early estimates are likely to be inaccurate.

Planning. This includes all engineering, economic, and land use studies done up to 1959. Actual expenditure: \$543,000.<sup>7</sup> The cost of later land use plans are not known.

Site acquisition. Nicholson used the County Engineer's estimate of 1954 which indicated a total land cost of \$2,000,000.<sup>8</sup> In 1959, after acquisition, actual land acquisition costs were found to be \$9,286,834 with clearance costs an additional \$2,433,000.<sup>9</sup> Of this total, the State of California provided a loan of \$2,000,000.<sup>10</sup> Los Angeles County paid the remainder out of its general fund. The great discrepancy between estimated and actual costs was apparently due to inflation and the growing awareness of the site's potential value between 1954 and the time of purchase in 1958-1960.

Basic structures. The dredging of channels and basins, the construction of jetties, rip-rap, and mole bulkheads were estimated by Nicholson to cost \$9,697,000.<sup>11</sup> The actual cost is not available.

A breakwater was added to the project after storms caused extensive damage to boats and slips in the winter of 1962-63. This resulted in an additional cost of \$4,200,000.

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The Federal government paid a total of \$4,600,000 toward dredging, construction of the main navigational features, and construction of the breakwater. <sup>12</sup>

Secondary structures. The estimate made by Nicholson for roads, walkways, parking areas, the boat launching facility, sewers, utilities and landscaping was \$3,361,000. <sup>13</sup> The actual cost is not available. These publicly owned structures were paid for by County government and the revenue bond issue. The perimeter road system was paid for out of County Road funds in the amount of \$775,000.

Buildings and slips. Most buildings in the Marina are owned by lessees-- --apartments, restaurants, stores, etc. as are all privately used boat slips. Public buildings include the administration building, Coast Guard Station and restrooms.

Up to July 1971, \$105,000,000 had been invested by private developers. The County expects total private investment to reach \$160,000,000 or more when all sites are being used. <sup>14</sup> This is vastly greater than Nicholson's 1956 estimate for private investment which was \$11,747,000. <sup>15</sup>

Interest during construction. The Nicholson study did not include any amount for interest due on loans during the period of construction when no revenues are being received. This is properly a capital cost, as the Coverdale and Colpitts study points out. <sup>16</sup> They proposed that five years

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interest be included in the bond issue which is intended to cover capital costs. This amounted to \$3,437,500.

Capital cost summary. It is difficult to compare categories within the cost estimates with actual costs since they have not been aggregated in a consistent manner. However we can display the total capital costs, estimated and actual, for the Federal government, the County Road Fund and Los Angeles County.

|                                               | Federal   | County<br>Road Fund | County      | Total      |
|-----------------------------------------------|-----------|---------------------|-------------|------------|
| Nicholson<br>(1956 estimate)                  | 2,177,000 |                     | 12,264,000  | 14,441,000 |
| Coverdale & Colpitts<br>(1959 estimate)       | 2,320,000 |                     | 17,120,000  | 19,440,000 |
| Dept. of Small Craft<br>Harbors (1971 actual) | 4,600,000 | 775,000             | 30,875,000* | 36,250,000 |

\*These "County costs" include the \$13,000,000 in revenue bonds which is really a private investment in the Marina.

Obviously, the actual public costs are greater than early estimates. A large part of this is due to inflation but another part is the result of increased intensity of development beyond early expectations. The cost of private development, as mentioned earlier, may be 15 times as much as originally predicted. A higher investment of private funds requires a higher investment of public funds for support facilities.

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Operating costs. The annual costs to be borne by the County in operating Marina del Rey are a function of the scale and intensity of development, the range of activities occurring there, and the degree of involvement by County agencies.

Coverdale and Colpitts suggested that the Department of Small Craft Harbors limit its role to "...the administration of leases and the collection of rents, supervision of the aquatic activities, and maintenance of utilities, and that with one exception (public parking), the County will not be involved in any operation of facilities producing revenues." <sup>18</sup> Apparently this is the County's policy today. Therefore, public operating costs should be relatively low.

The Nicholson study listed the following annual operating costs for County government. <sup>19</sup>

|                |                  |
|----------------|------------------|
| Maintenance    | 39,144           |
| Utilities      | 5,000            |
| Depreciation   | 56,820           |
| Administration | 87,000           |
|                | <u>\$187,964</u> |

Coverdale and Colpitts' report states that the Department of Small Craft Harbors expected to spend the following amounts annually: <sup>20</sup>

|                                          |                |
|------------------------------------------|----------------|
| Salaries and Wages                       | 285,000        |
| Other Maintenance and<br>Operation Costs | <u>121,000</u> |
|                                          | \$406,000      |

This is in addition to a sum of \$24,000 per year which would be used for new capital improvements.

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Coverdale and Colpitts also suggested that total capital expenditures should be increased to \$450,000 to cover the cost of additional ground maintenance and the salaries of traveling auditors who would periodically  
21  
examine the books of lessees.

Revenues. The Marina was to receive from lessees either a minimum land rent or payment of a percentage of their gross income, which ever  
22  
was greater. Some direct income from parking lots, etc. would also accrue to the Marina. The County as a whole would receive sales taxes and property taxes on the "possessory interest" of the lessees. Obviously the amount of these revenues will depend on the types of enterprise which have been developed and their financial success.

The Nicholson report provides the estimates shown in the table on the  
23  
next page for the Marina after all development is complete.

Coverdale and Colpitts used a similar system for categorizing revenues. They did a much more thorough job of explaining how estimates were made. Their estimates for complete development, expected by 1964  
24  
are shown in the table on page 46. To reduce risk to the County, Coverdale and Colpitts suggested a minimum annual rental for each lessee  
25  
to be set at \$.06 per s.f. of land regardless of his gross income. This would at least meet the County's annual operating and interest charges.

According to a recent report of the Department of Small Craft Harbors,

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| Activity                          | Units                                  | Gross<br>Income | Rate       | County<br>Revenue |
|-----------------------------------|----------------------------------------|-----------------|------------|-------------------|
| Mooring slips                     | 5,400 slips                            | \$1,944,000     | 25%        | \$501,000         |
| Boat storage and<br>launching     | 2,000 boats stored<br>10,000 launching | 120,000         | 25%        | 30,000            |
| Marina chandlers                  |                                        | 2,700,000       | 4%         | 120,000           |
| Restaurants                       |                                        | 2,000,000       | 4%         | 80,000            |
| Motels                            | 510,000 s.f.                           |                 | \$.15/s.f. | 76,500            |
| Boat repair                       | 250,000 s.f.                           |                 | \$.10/s.f. | 25,000            |
| Sport fishing                     | 115,000 passengers                     | 400,000         | 10%        | 40,000            |
| Industrial and<br>commercial uses | 2,500,000 s.f.                         |                 | \$.10/s.f. | 250,000           |
| Clubs                             | 64,000 s.f.                            |                 | \$.10/s.f. | 64,000            |
| Trailer courts                    | 400,000 s.f.                           |                 | \$.10/s.f. | 40,000            |
| Fuel sales                        | 2,520 motor boats                      | 252,000         |            | 12,000            |
| Boat sales                        |                                        | 2,000,000       | 3%         | 60,000            |
| Permits                           |                                        |                 |            | 15,000            |
| Public telephones                 |                                        |                 | 9½%        | 30,000            |
| Parking                           | 2,167 meters                           |                 | \$24/meter | 52,000            |
| Total annual county revenue       |                                        |                 |            | \$1,338,500       |

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| Activity                      | Units                                     | Gross<br>Income          | Rate       | County<br>Revenue |
|-------------------------------|-------------------------------------------|--------------------------|------------|-------------------|
| Anchorage-slips               | 6,100 slips                               | \$1,976,400              | 25%        | 494,100           |
| Boat storage and<br>launching | 3,000 boats stored<br>72,000 launchings   | 324,000                  | 25%        | 81,000            |
| Marine chandlers              |                                           | 1,825,000                | 6%         | 109,500           |
| Restaurants                   | 2 independent<br>4 club<br>20 snack bars  | 4,000,000                | 5%         | 200,000           |
| Boat repair                   |                                           | 2,000,000                | 6%         | 120,000           |
| Boat sales                    | \$5,700,000 sales                         | 460,000<br>(commissions) | 20%        | 92,200            |
| Fuel sales                    | 4,000,000 gallons                         |                          | \$.03/gal. | 120,000           |
| Clubs                         | 3,200 members                             | 576,000                  | 15%        | 86,400            |
| Cabanas                       | 1,000 units                               | 2,700,000                | 15%        | 405,000           |
| Cabana-trailers               | 650 units                                 | 592,000                  | 20%        | 120,000           |
| Parking                       |                                           |                          |            | 304,000           |
| Miscellaneous                 | 39 sport fishing boats<br>10 stores, etc. |                          |            | 135,000           |
| Total annual county revenues  |                                           |                          |            | \$2,267,200       |

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revenues now exceed \$3 million annually and are increasing. <sup>26</sup> It is interesting to note that estimates for revenues did not change as much due to the effects of inflation as did the estimates for costs. Some of this stability is due to fixed lease conditions.

Economic justification. For a project such as Marina del Rey to be financially feasible to the County on a cost-revenue basis, the sum of discounted future net revenues must exceed total expenditures. <sup>27</sup> This is roughly equivalent to the basic model used by Coverdale-Colpitts with respect to the bond issue. It shows that the estimated revenues for 15 years will more than repay a bond issue of \$12,500,000 and compound interest of <sup>28</sup> 5½% each year on the outstanding bonds. At the same time a reserve fund could be accumulated from excess revenues in the amount of \$1,877,000. Using another repayment scheme, if total debt service payments, interest and principle were kept level for thirty years, a reserve <sup>29</sup> fund in excess of \$40,000,000 could accumulate. The major differences (1) between pure cost-revenue analysis and the Coverdale and Colpitts approach are the cash-flow problem which became extremely important in this case and (2) the fact that only a limited part of the costs and revenues are considered.

Coverdale and Colpitts point out that their study is based on a conservative estimate of revenues. By 1959 they had revised their revenue estimates upward so that the 15 year scheme showed payment of a \$13,000,000 bond

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issue with a \$4,479,000 reserve fund accumulation.

### Public and Private Roles

In this section, we will bring together information about public and private support of Marina del Rey development.

Federal. The U.S. Army Corps of Engineers paid for 50% of the cost of design and construction of the Marina's general navigational facilities. This includes channel dredging, jetties, and the breakwater. In addition the Corps contributes to the maintenance of these features.

The U.S. Coast Guard installed and maintains aids-to-navigation outside the channels. The Coast Guard also operates a rescue station at the Marina.

State. The State of California has supported the Marina in several ways. The first is through planning done by the Small Craft Harbors Commission and the Division of Small Craft Harbors. In 1962, they commissioned a state-wide master plan for boating facilities, which was completed in 1964.<sup>31</sup> Basically it is a long-range plan for Marinas as "harbors of refuge." The document also includes a survey of present and projected boat ownership and a description of existing facilities. The State also provided a loan of \$2,000,000 to the County to pay part of the cost of land acquisition. These funds were provided from the State Lands Act

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Fund, which was essentially General Fund money. The loan was authorized by State Assembly Bill 1784 in 1957. The loan period is 35 years after the first payment with an interest rate of 3 percent on the unpaid balance from the time of the loan. The first payment is expected before July 1972.

At least one-half of the Marina's net revenues, after revenue bond requirements are met, must be applied to this loan.

County. The total share of Marina capital costs to be paid by Los Angeles County amounts to \$17,875,000.<sup>32</sup> Of this, \$15,875,000 apparently came entirely from the County general fund. The \$2,000,000 State loan is included in the amount. An additional \$13,000,000 was derived from the sale of revenue bonds in 1959. A large part of the general funds were needed to cover the cost of land acquisition and clearance beyond \$2,000,000. In addition, some general fund money was loaned to the Marina to meet maintenance and operating expenses when revenues were not sufficient. This amount has since been paid back. Special State legislation and a resolution of bondholders was necessary to allow the latter expenditures.<sup>33</sup>

The construction of the peripheral road system, which cost \$775,000 was paid for out of the County Road Fund.

In addition to the capital investments listed above, the County obviously has continuing costs associated with internal operations of the

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Marina such as the provision of public services. The need for improvement of major streets near the Marina is also due in part to traffic generated by it. All such costs, whether paid by the State, County, or City must be considered in estimating the overall effect of Marina development.

The revenue bond principal and interest are to be paid off no later than October, 1999. The loan from the County general fund was to be repaid next in priority after operating and maintenance costs and bond interest payments. Presumably there is no obligation to repay the remaining County investment directly. However the estimated net increase in County taxes due to the development of the Marina may cover past and future general fund contributions by 1999. Property taxes for 1970-71 were \$4,100,000 with an additional \$330,000 in sales taxes and \$55,000 in motel bed taxes.

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The revenue bond approach was approved by Los Angeles County in 1956 when two-thirds of the voters accepted a proposition stating: "Shall the Board of Supervisors of the County of Los Angeles be authorized to adopt the revenue bond method of financing small boat harbor improvements and facilities for public convenience in conjunction therewith, as provided by in Chapter 14, Part 2, Division 2, Title III of the Governmental Code of the State of California?"

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This allows the County, after the approval of the Board of Supervisors, to sell bonds for the construction of additional marinas. The amount of indebtedness is limited only by bond buyers' willingness to invest, which is in turn dependent on the expected demand for marina facilities, the soundness of the County's proposal, and the interest rate offered.

However, the County can be expected to be conservative since it must be concerned with its financial rating.

Bonds for the Marina del Rey were each of \$1000 denominations, carrying an interest rate of 5.6 percent. They are to be redeemed according to an increasing schedule beginning with \$130,000 in 1965 and ending with \$810,000 in 1999.

A number of accounts were established by the Bond Resolution to assure proper financial behavior from year to year. For example, the Bond Interest Reserve Account must contain an amount "...equal to the greater of (a) \$250,000 or (b) the aggregate amount of interest due and payable on all bonds at the time outstanding on the next three succeeding interest payment dates." Other accounts are Bond Interest, Bond Redemption, Maintenance and Operation Reserve, Construction, State Payment, County Rental, Replacement, and Improvement accounts. In total, these requirements amounted to about \$3,000,000. Funds in these accounts may be invested in general obligation bonds of the United States government.

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The County may not incur additional indebtedness for development of the Marina del Rey except under specified conditions. No part of the Marina may be used by any public or private organization without compensation to the County.

Private. Developers of Marina land and water facilities must obtain private financing for their projects. Some large developers may use their own resources but ordinarily they rely on lending institutions. This means that the projects must be well justified financially.

Each prime lessee obtains the use of a land and/or water parcel by competitive bid, usually for 60 years. His project must meet requirements established by the Director of the County Department of Small Craft Harbors, the County Engineer and the Marina Design Control Board. Minimum rental rates vary with the type of land or water use, but ordinarily the rate is a percent of gross receipts of the lessee.

Subleases are allowed with the approval of the Director, and are quite common. All leases contain provisions for periodic renegotiation in order to make adjustments for changing economic conditions.

The Department of Small Craft Harbors regularly audits the accounts of the lessees to see that proper payment is being made to the County. Prices charged by lessees must be approved by the Director as being "...fair and reasonable, based on the following considerations. First,

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that the property...is intended to serve a public use and to provide needed facilities to the public at a fair and reasonable cost; second that Lessee is entitled to fair and reasonable return upon his investment..."<sup>43</sup>

Improvements and personal property of lessees are subject to property taxation, as is possessory interest in leases.<sup>44</sup>

#### Land Acquisition

It was mentioned earlier that the area north of the Ballona Creek Flood Control Channel was low enough so that it was susceptible to periodic flooding.

For this reason much of the land there was devoted to low intensity uses such as agriculture, oil fields, and gun club hunting preserves. In addition there were many large parcels which would simplify acquisition. It is not surprising therefore that this area was often considered for a large, ocean-oriented development. Originally, the proposed small craft harbor was to have been a City and County of Los Angeles project. The Los Angeles City Council adopted a report declaring that in the public's interest the City and Council required provision of additional small craft facilities. In 1948, the County Board of Supervisors adopted a similar resolution. It was suggested that the County proceed with initial acquisition and development of the pilot phase, within County territory. If this initial work proved successful, then a harbor authority would be created under a joint powers agreement to carry out development of the remainder of the proposed development.

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In 1949, the County began to withhold from sale all property within the  
proposed Marina site which was taken by it because of tax delinquency. 45

It was hoped that the State would purchase the required land and lease it  
to the County but the State Attorney General ruled that this was not  
possible. In 1958, the County was able to obtain the \$2,000,000 State  
loan for land acquisition, to augment the County's investment.

On October 23, 1956, the Los Angeles County Board of Supervisors  
issued a formal order instructing the County Counsel to file condemnation  
action on all private property rights within the approved site of the  
proposed Playa del Rey Inlet and Harbor. 46

Between March 1957 and January 1963 several hundred parcels were  
purchased by the County. Many of these parcels were on land near the  
beach which had been subdivided for residential use. The larger  
parcels were further inland and were often owned by corporations or  
clubs. The latter comprise most of the total of about 800 acres.

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### Land Use Plans, 1960

On May 1, 1960 Gruen Associates submitted A Development Plan for Marina del Rey Small Craft Harbor to Los Angeles County. Some revisions were made<sup>47</sup> on September 15, 1960. The introduction to the development plan states that, "The basic land use plan, the technical details and economic aspects of the Marina del Rey project have already been studied by the Department of Small Craft Harbors, Coverdale and Colpitts, George F. Nicholson and Associates, and the U.S. Corps of Engineers."<sup>48</sup> The Gruen work, therefore,<sup>49</sup> is based on a study and review of previous efforts. Although it is true that the outlines of the Marina, both exterior boundaries and land/water lines, were set at the time that the Gruen development plan was undertaken, and that several important land and water use policies seem to have been agreed upon by the County and previous consultants prior to Gruen's work, it remained for this plan to allocate recommended uses to specific areas; to detail the parcelling of land; to relate activities, facilities, revenue potentials, densities and circulation within the Marina; and finally, to consider the whole in relation to the surrounding area. Thus the Gruen plan is the first comprehensive land use planning effort applied to the Marina, and undoubtedly the major planning influence on its eventual development.

Leasable areas. In considering the Gruen plan, parallels naturally appear between its recommendations and those made in previous studies, referred to above. The parallels must not be drawn too closely with regard to the areas

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allocated for specific uses, since the gross areas assumed by the consultants varied somewhat.

Gross Area in Marina del Rey (square feet)

|                                                |                   |    |
|------------------------------------------------|-------------------|----|
| Nicholson Plan                                 | 33,715,440        | 50 |
| Alternate Plan No. 2                           | 39,988,080        | 51 |
| Corps of Engineers, Design<br>Memorandum No. 1 | 35,893,440        | 52 |
| Gruen Associates                               | <u>33,976,800</u> | 53 |

In their economic feasibility study, Coverdale and Colpitts did not provide a figure for gross area, but use instead figures for square feet of leasable areas.

Leasable Area in Marina del Rey (square feet)

|                        | Land              | Water            | Total             |    |
|------------------------|-------------------|------------------|-------------------|----|
| Coverdale and Colpitts | 12,908,000        | 6,106,000        | 19,014,000        | 54 |
| Gruen Associates       | <u>17,472,723</u> | <u>6,337,766</u> | <u>23,810,489</u> | 55 |

Based on a figure of 35,893,440 square feet, Coverdale and Colpitts estimated approximately 16,969,440 square feet in non-leasable area such as roads, public parking lots, public recreational areas, administration centers, etc. Gruen Associates allowed only 10,166,311 square feet to be non-leasable out of 33,976,800 square feet gross area. A few

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of the reasons that Gruen was able to reduce non-leasable area in comparison with the Coverdale and Colpitts estimate are as follows:

1. The area actually acquired was almost 2,000 square feet less than the 1958 estimate of area to be acquired.
2. Elimination of two of the three public beaches proposed in Alternate No. 2 on which Coverdale and Colpitts' recommendations are based. 56
3. Elimination of three recreational areas proposed in Alternate No. 2. 57
4. Reduction in acreage allotted to administration facilities. 58
5. A more efficient internal circulation plan which is estimated to have eliminated approximately a mile of roads.

A single factor increasing non-leasable area is public parking, for which 1,349,300 square feet is provided in the Gruen Revised Development Plan and only 1,006,000 square feet in Coverdale and Colpitts recommendation.

Thus, working with a gross area smaller by 1,916,000 square feet than the area of Alternate No. 2, Gruen Associates achieved a leasable, or revenue-producing area larger by approximately 4,791,000 square feet than that estimated by Coverdale and Colpitts, based on the Alternate No. 2.

While part of this increase may be attributable in increased efficiency of the site arrangement, a major part must be considered the result of a change in policy regarding the ratio of revenue producing use to non-revenue producing use of Marina acreage. The need to meet development

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and financing charges may have dictated this altered policy, which required the elimination of two public beaches and three recreational areas.

The Gruen land use plan. In general, the Gruen Plan is based on the standard planning policy of separation of uses. The west side of the Marina was planned for boat anchorages and related residential uses, the east side for marine-related and general commercial areas: boat launching facilities, sports fishing, piers and hotels and motels, with marine-related industrial uses located along a section of the south-eastern boundary. The plan, with the single exception of the remaining public beach, thus separated the activity patterns of the boat-owning and resident users of the Marina from the more casual boaters, visitors and shoppers.

Protection of slip renters and residents in the Marina from the general public was a matter of concern to several of the consultants. Madigan-Hyland recommended toll gates at Marina entrances, for which renters would have a pass. Coverdale and Colpitts suggested that a curfew on the use of public parking, and thus on nonrenting members of the public in the Marina was "essential (so) that such activities of the public should not interfere with the comfort and convenience of those on leased property, especially those in cabanas and cabana-trailers, and others living on the site." The Gruen approach, that of separating activities

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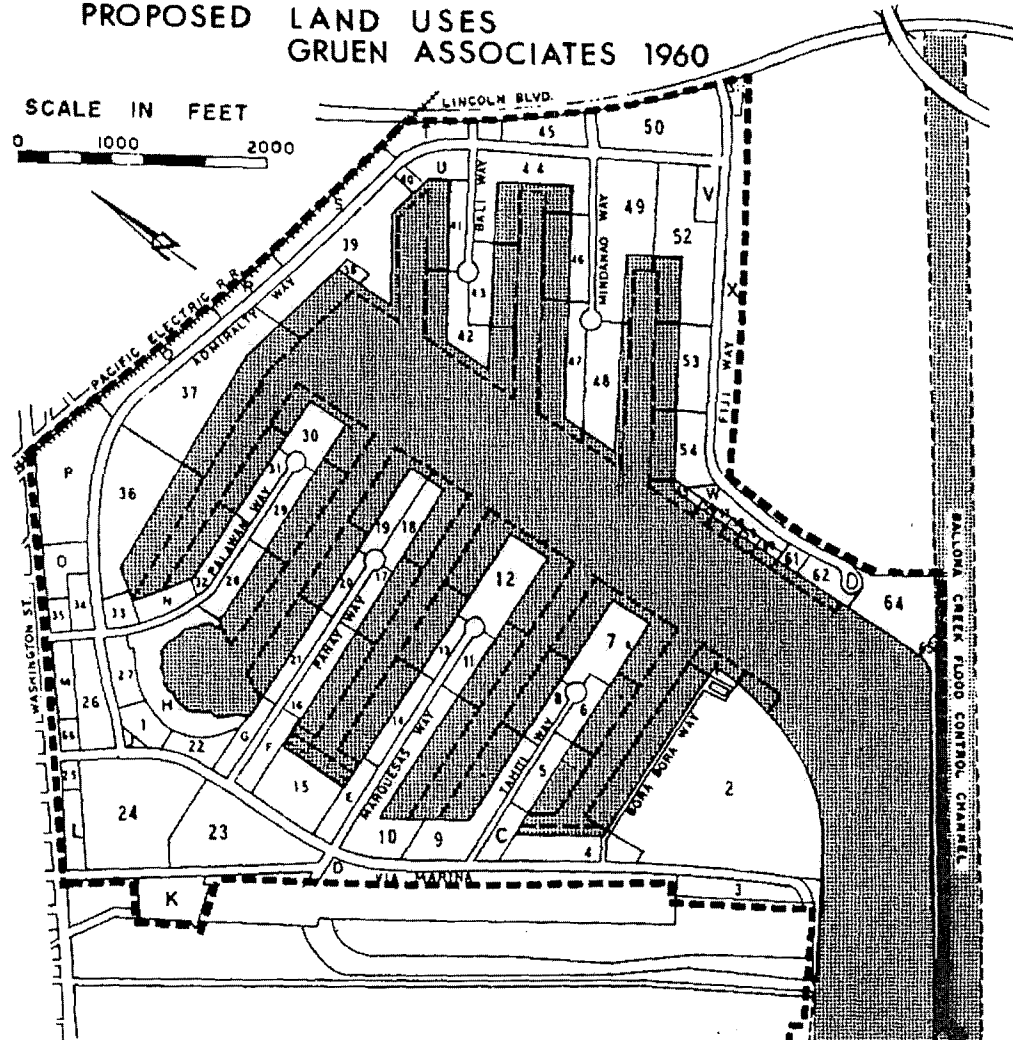
is less rigid than either toll gates or a curfew hour, and is far more sensitive to the implications of publicly owned property.

Specific allocations of use to land and water parcels is shown on the plan, and in the accompanying tables. Some sectors of the Development Plan of more than routine interest to this study will be considered below.

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# PROPOSED LAND USES GRUEN ASSOCIATES 1960

SCALE IN FEET  
0 1000 2000



MARINA DEL REY STUDY  
COASTAL ZONE PLANNING  
AND MANAGEMENT PROJECT  
UNIVERSITY OF SOUTHERN CALIFORNIA

SOURCE: VICTOR GRUEN ASSOCIATES

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Proposed Land Uses - Gruen Associates 1960

| <u>Parcel Number</u> | <u>Land Use</u>                                                | <u>Parcel Number</u> | <u>Land Use</u>                                                   |
|----------------------|----------------------------------------------------------------|----------------------|-------------------------------------------------------------------|
| 1                    | Fuel Dock-Related Uses                                         | 2                    | Hotel-Motel-Restaurant-Club-Related Use<br>Anchorage-Related Uses |
| 3                    | Cabanas-Apartments                                             | 4                    | Boatel-Cabanas-Apartments<br>Anchorage-Related Uses               |
| 5                    | Anchorage-Related Uses                                         | 6                    | Anchorage-Related Uses                                            |
| 7                    | Cabanas-Restaurant-Club<br>Anchorage-Related Uses              | 8                    | Anchorage-Related Uses                                            |
| 9                    | Boatel-Cabanas<br>Anchorage-Related Uses                       | 10                   | Boatel-Cabanas<br>Anchorage-Related Uses                          |
| 11                   | Anchorage-Related Uses                                         | 12                   | Cabanas-Restaurant-Club<br>Anchorage-Related Uses                 |
| 13                   | Anchorage-Related Uses                                         | 14                   | Anchorage-Related Uses                                            |
| 15                   | Boatel-Cabanas<br>Anchorage-Related Uses                       | 16                   | Anchorage-Related Uses                                            |
| 17                   | Anchorage-Related Uses                                         | 18                   | Cabanas-Restaurant-Club<br>Anchorage-Related Uses                 |
| 19                   | Cabanas-Restaurant-Club<br>Anchorage-Related Uses              | 20                   | Anchorage-Related Uses                                            |
| 21                   | Anchorage-Related Uses                                         | 22                   | Misc. Retail-Concessions                                          |
| 23                   | Motel-Hotel-Restaurant<br>Trailer-Cabanas if Zoning<br>Permits | 24                   | Hotel-Motel-Restaurant<br>Trailer-Cabanas if Zoning<br>Permits    |
| 25                   | Gasoline Station                                               | 26                   | Hotel-Motel-Restaurant                                            |

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| <u>Parcel Number</u> | <u>Land Use</u>                                                                        | <u>Parcel Number</u> | <u>Land Use</u>                                                                          |
|----------------------|----------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------|
| 27                   | Cabanas-Coffee Shop-Misc.<br>Retail-Concessions                                        | 28                   | Anchorage-Related Uses                                                                   |
| 29                   | Anchorage-Related Uses                                                                 | 30                   | Cabanas-Restaurant-Club<br>Anchorage-Related Uses                                        |
| 31                   | Anchorage-Related Uses                                                                 | 32                   | Anchorage-Related Uses                                                                   |
| 33                   | Restaurant                                                                             | 34                   | Drive-In Restaurant, Etc.                                                                |
| 35                   | Gasoline Station                                                                       | 36                   | Cabanas-Apartments-Motel<br>Coffee Shop-Anchorage<br>Related Uses                        |
| 37                   | Cabanas-Apartments-Motel<br>Coffee Shop-Anchorage<br>Related Uses                      | "0"                  | (Add to Parcel 37)                                                                       |
| 38                   | Fuel Dock-Related Uses                                                                 | 39                   | Hotel-Apartment-Restaurant<br>Marina Sales-Related Uses<br>Anchorage-Related Uses        |
| "S"                  | (Add to Parcel 39)                                                                     | 40                   | (Reserved for Fire Station)                                                              |
| 41                   | Anchorage-Related Uses                                                                 | 42                   | Boatel-Cabanas-Restaurant<br>Clubs-Anchorage-Related<br>Uses                             |
| 43                   | Anchorage-Related Uses                                                                 | 44                   | Portable Boats and/or<br>Marine Sales-Related Uses<br>Portable Boats and/or<br>Anchorage |
| 45                   | Motel-Commercial-Related<br>Uses                                                       | 46                   | Anchorage-Related Uses                                                                   |
| 47                   | Anchorage-Related Uses                                                                 | 48                   | Portable Boats (Storage<br>& Launching) Related Uses                                     |
| 49                   | Portable Boats (Storage &<br>Launching) Related Uses<br>Portable Boats (Trailer Boats) | 50                   | Shopping Center-Office<br>Building                                                       |

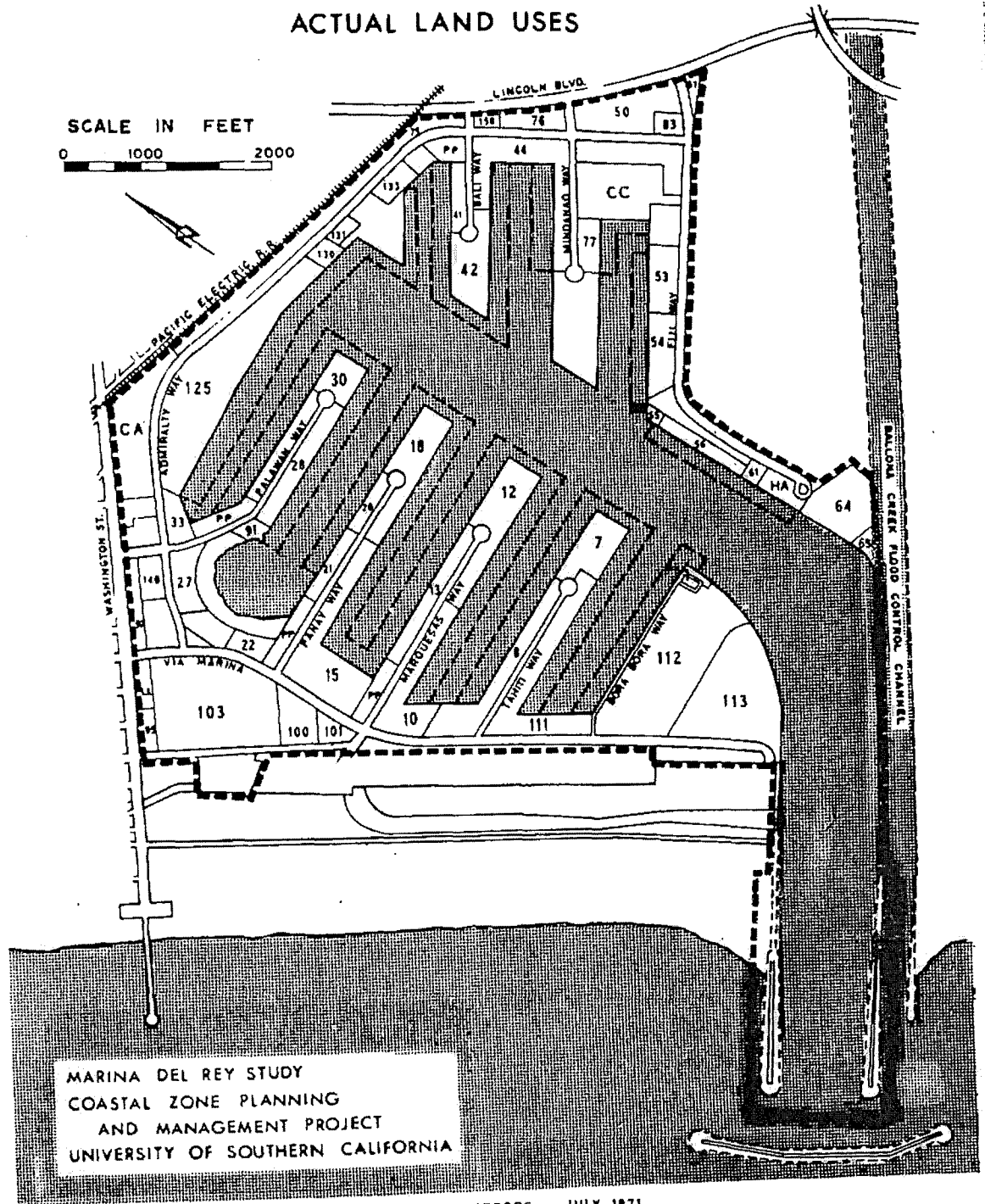
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| <u>Parcel Number</u> | <u>Land Use</u>                           | <u>Parcel Number</u> | <u>Land Use</u>                                                                              |
|----------------------|-------------------------------------------|----------------------|----------------------------------------------------------------------------------------------|
| 51                   | Gasoline Station-Carwash Repairs-etc.     | 52                   | Portable Boats (Storage & Launching) Trailer Boats and/or Boat Repair-Anchorage Related Uses |
| 53                   | Boat Repair-Anchorage Related Uses        | 54                   | Boat Repair-Anchorage-Related Uses                                                           |
| 55                   | Fuel Dock-Related Uses                    | 56                   | Sports Fishing-Related Uses                                                                  |
| 57                   | Sports Fishing-Related Uses               | 58                   | Sports Fishing-Related Uses                                                                  |
| 59                   | Sport Fishing-Related Uses                | 60                   | Sport Fishing-Related Uses                                                                   |
| 61                   | Restaurant & Guest Docks                  | 62                   | Administration Building                                                                      |
| 64                   | Trailer-Cabanas-Apartments & Related Uses | 65                   | University Boat House                                                                        |
| 66                   | Gasoline Station                          | 67                   | Medical Building                                                                             |
| A                    | Public Parking                            | B                    | Park Site                                                                                    |
| C                    | Public Parking                            | D                    | Buffer Strip                                                                                 |
| E                    | Public Parking                            | F                    | Public Parking                                                                               |
| G                    | Public Parking                            | H                    | Public Beach                                                                                 |
| I                    | Public Parking                            | J                    | Park Site                                                                                    |
| K                    | Experimental Garden & Maintenance         | L                    | Public Parking                                                                               |
| M                    | Public Parking                            | N                    | Public Parking                                                                               |
| O                    | Public Parking                            | P                    | Drainage Basin                                                                               |
| Q                    | See Parcel "37"                           | R                    | Public Parking                                                                               |
| S                    | See Parcel "39"                           | T                    | Public Parking                                                                               |
| U                    | Public Parking                            | V                    | Public Parking                                                                               |
| W                    | Public Parking                            | X                    | Buffer Strip                                                                                 |

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## ACTUAL LAND USES



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ACTUAL LAND USE 1971

| <u>PARCEL NUMBER</u> | <u>LAND USE</u>                                                                            | <u>PARCEL NUMBER</u> | <u>LAND USE</u>                                                                          |
|----------------------|--------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------|
| 1                    | Union Oil Marine Fuel Dock                                                                 | 7                    | Tahiti Marina                                                                            |
| 8                    | Islander Marina                                                                            | 10                   | Neptune Marina<br>Donkin's Restaurant                                                    |
| 12                   | Deauville Marina<br>Captain's Wharf Restaurant                                             | 13                   | Villa Del Mar Marina                                                                     |
| 15                   | Bar Harbor Marina                                                                          | 18                   | Dolphin Marina<br>Randy Tar Restaurant                                                   |
| 20                   | Trade Winds Marina<br>Pacific Mariners Yacht Club                                          | 21                   | Holiday Del Rey Marina                                                                   |
| 22                   | Foghorn Harbor Inn<br>Chuck's Steak House                                                  | 27                   | Jamica Bay Inn<br>Kelley's Steak House<br>Marina Area Chamber of<br>Commerce             |
| 28                   | Mariners Bay Slip Rental<br>Venice Yacht Club                                              | 30                   | Del Rey Yacht Club                                                                       |
| 33                   | Lobster House Restaurant                                                                   | 41                   | Del Amo Marine Center                                                                    |
| 42                   | Marina Del Rey Hotel<br>Windjammer Restaurant<br>Don the Beachcomber                       | 44                   | Cyrano's Restaurant<br>Corinthian & Windjammers<br>Yacht Club<br>Santa Monica Yacht Club |
| 50                   | Marina Shopping Center<br>U.S. Post Office<br>Mr. "D" Restaurant<br>Marina Del Rey Theater | 51                   | Union Oil Service Station                                                                |
| 53                   | Chris Craft Pacific                                                                        | 54                   | Windward Yacht & Repair                                                                  |
| 55                   | Union Oil Marine Fuel Dock                                                                 | 56                   | Fisherman's Village<br>El Torito Restaurant<br>Port D' Italy Restaurant                  |

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| <u>PARCEL NUMBER</u> | <u>LAND USE</u>                        | <u>PARCEL NUMBER</u> | <u>LAND USE</u>                                                           |
|----------------------|----------------------------------------|----------------------|---------------------------------------------------------------------------|
| 61                   | Pieces of Eight Restaurant             | 64                   | Villa Venetia Apartments                                                  |
| 65                   | U.C.L.A. Boat House                    | 75                   | Del Rey Professional Building, Bird Conservation Area                     |
| 76                   | Airport-Marina Freeway Building        | 77                   | Stor-a-Boat                                                               |
| 83                   | Central Directory East Entrance        | 91                   | Sail Boat Rental/Storage                                                  |
| 95                   | Bratskeller Restaurant                 | 97                   | Shopping Center West                                                      |
| 100/101              | Del Rey Shores North/South             | 103                  | South Bay Club Apartments                                                 |
| 111                  | Marina Point Harbor                    | 112                  | Pacific Harbor Apartments                                                 |
| 113                  | Mariners Village                       | 125                  | Marina City Corporation Second Storey Restaurant The Basement Discotheque |
| 130                  | Charley Brown's Restaurant             | 131                  | The Fiasco Restaurant                                                     |
| 132                  | California Yacht Club                  | 133                  | Surety National Bank The Warehouse Restaurant                             |
| 140                  | The Admiralty Apartments               | 150                  | Marina Federal Savings & Loan                                             |
| BB                   | Loyola Boat House                      | CC                   | Launching Ramp                                                            |
| LL                   | Central Directory-North Entrance       | PP                   | Parking                                                                   |
| HA                   | Harbor Administration U.S. Coast Guard | CA                   | Conservation Area                                                         |

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Residential uses. Probably the greatest deviation in the Marina as planned from the Marina as developed appears to be in the very large number of permanent residents living in Marina apartments. By the end of 1970 there were 2,223 residential units at the Marina, with 5,095 planned for completion by mid 1972. Yet apartments were not mentioned in any of the consultant work of preliminary planning for the Marina. Rather, "cabanas" were considered feasible.

Alternate No. 2 shows the moles and basins surrounded by areas labelled "future residential development." Indeed Nicholson's criticism of the scheme included the comment that, "There appears to be an overemphasis on residential development and insufficient areas set aside for commercial and recreational development." <sup>62</sup> Yet, in Nicholson's work, only motels and trailers are mentioned as residential units. Presumably the Marina was to be surrounded by a most extensive trailer park.

Coverdale and Colpitts include only cabanas and cabana trailers as residential units. They describe cabana areas as available for "living quarters such as are provided in motels as well as in individual cabanas." <sup>63</sup>

Cabana trailer areas are "not in the nature of trailer parks. They are not intended for the itinerant trailer owner. The trailer, once located at the site, must remain there." <sup>64</sup> Coverdale and Colpitts make it clear that the majority of occupants of both areas are expected to be permanent residents: they provide no recommendation for trailer parks.

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Gruen Associates include motel-hotels, boatel-cabanas and trailers in their categories of living accommodations in the Marina, with varying densities and height limitations assigned to them.

Much of the consultants' seeming confusion in defining residential structures, as well as their omission of apartments from approved land uses, stems from legal advice provided to the County to observe caution in locating apartments in the Marina. It was uncertain at that time that apartments would be considered a proper use of public land acquired for a small craft harbor.<sup>65</sup> This made it difficult to obtain title insurance for apartments.

Gruen handled this problem by categorizing residences as boatels or cabanas which are "primarily a home ashore for persons spending as much time afloat as possible."<sup>66</sup> Height regulations for these living accommodations were three stories when located at either end of a mole. The central sections of moles were reserved for anchorages and related use. Structures on parcels located between the western Marina boundary and the peripheral road had no height limitations applied to them. Suggested uses for these parcels were motels, hotels, and cabanas and varying densities were supplied for each of them. All parcels at the north end of the Marina were similarly zoned and unrestricted as to height. Apartments were not mentioned in the May 1, 1960 plan.

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Among the revisions to the original Gruen development plan, submitted in September of 1960, the word "apartment" was added to the suggested uses for six parcels, all except one located in the northern and western areas enjoying unrestricted height zoning. Because of the definitions used, the varied density regulation, and the distribution of height restrictions, no changes were necessitated by the addition of the apartment category. In effect, it had already been provided for.

This initiation of approved locations for apartments began a broadening policy for this use so that, at present, apartments fill most of the parcels in the northern and western sections on both mole and peripheral locations. There are no cabanas, cabana-trailers or house trailer parks in the Marina.

Non-revenue producing areas. In 1960, when the Gruen plan was presented to the County, the most urgent consideration for the Marina was to insure that it produced enough revenue to meet the financial obligations incurred by the bonds. The plan is responsive to this pressure. Gruen Associates have worked toward minimizing non-revenue/productive land and water area in relation to areas planned for uses which would return a profit to the County. 67

It would be poor government policy, however, to exclude the general public entirely from a recreational project acquired and developed in large part with

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public funds. Gruen Associates recognized the problem of establishing a balance between the County's financial responsibility to private investors and its need to satisfy some recreational demands for the general public.

In essence, the Gruen approach to this problem was to require that by efficiency, by good planning practice and by closely administered controls, a minimum area allotted for public use would return a maximum satisfaction of public demand.

Parks and recreation: Of the total 17,472,723 square feet of land in the Marina, Gruen allocated approximately 2.2% for "Parks and Recreation" (Including Beach, Buffers, etc.) as follows:

| Parcel | Use          | 69                             | 70                                       |
|--------|--------------|--------------------------------|------------------------------------------|
|        |              | Development Plan<br>(May 1960) | Revised Development<br>Plan (Sept. 1960) |
| B      | Park Site    | 18,000 sq. ft.                 | 14,725 sq. ft.                           |
| D      | Buffer Strip | 43,000 sq. ft.                 | 14,863 sq. ft.                           |
| H      | Beach        | 380,000 sq. ft.                | 280,604 sq. ft.                          |
| J      | Park Site    | 17,200 sq. ft.                 | 18,170 sq. ft.                           |
| X      | Buffer Strip | <u>59,800 sq. ft.</u>          | <u>62,797 sq. ft.</u>                    |
|        | Total        | 518,000 sq. ft.                | 391,159 sq. ft.                          |

A serious effort is given to making this small area an effective increment in the development plan.

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Los Angeles Lake, a salt water lake of approximately 364,000 square feet included in Alternate No. 2 provides the largest area in the Marina for public recreation. Every square foot is planned for use; a sand beach and picnic area, calm water for swimming bordering the beach, and for sailing dinghy-size boats in the wazer between the basin docks and the swimming area make up the facility. Two motels are placed to border the beach. A launch area is provided on the beach for hand-carried small boats. Two of the four public restrooms in the entire Marina are located here. Concessions provide rental boats, sailing instruction and refreshment and the whole is supported by 392,040 square feet of parking area, enough for 1150 cars.

Landscape areas: The importance of creating attractive surroundings in the limited areas open for public use is underscored in the Gruen plan.

Public parking lots are to include planting areas. Buffer strips bordering the peripheral road are to be landscaped, as is a small site at the main entrance, where a memorial plaque will provide a theme center. A tiny park located on the main channel will provide a pleasant site for boat watchers. Parcels for private use bordering the peripheral road carry mandatory landscaping provisions. Planted divider strips on public roads, underground utility lines, strict sign controls, architectural and design review of all structures, and the prohibition of any curb parking would work together to provide a pleasant prospect for the visitor wherever he was permitted to travel within the Marina.

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Planting charts and detailed design diagrams for public areas are included in the plan. Recognizing the difficult soil and climate conditions for planting, Gruen proposed an experimental nursery to develop hardy stock for supply to landscaped areas. All of these provisions lie within the control and are the responsibility of the Marina. Gruen emphasizes that proper design and maintenance of public area "will contribute much to the enjoyment of the Marina and act as an incentive to lessees to provide equally pleasant facilities."

Unfortunately, the plans for beautification of public areas remain largely unfulfilled.

Portable boat launching: Unlike other consultants, Gruen Associates did not believe that portable boat launching would be a remunerative use of Marina land. They foresaw that the amount of space on land required to park cars and trailers, and the amount of protected water area required for boat maneuvering and boats waiting for retrieval would be extremely expensive in terms of Marina resources. Nonetheless they recognized that, as with public recreation areas, this demand from the non-renting general public would have to be met to some extent. In the Gruen development plan 1,197,800 square feet was allocated for portable boat facilities.

After submission, the original plan was evaluated by the Department of

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Small Craft Harbors in consultation with Coverdale and Colpitts, economic consultants, as well as Gruen Associates, the authors of the Plan. Replies from more than 200 questionnaires, mailed by the County to prospective lessees for Marina parcels, were examined and considered. The changes made to the original plan were minor, such as the provision for three gas stations rather than two, or revised areas for specific parcels. All of these changes are reviewed in A Development Plan: Revised, submitted by Gruen to the County on September 15, 1960 which, together with the original Plan, constitute the final Master Plan for the Marina.

The provisions for portable boat launching submitted in the original Development Plan met with the criticism that there was more demand for portable boat launching than the plan provided for. Gruen did not accede to the demand but recommended instead that optional use for portable boats be added to the approved uses of two parcels in an adjoining basin. This was done, but the demand for portable boat launching facilities has never been great enough to require more than the facilities originally provided. This is generally attributable to boating conditions at the Marina. Neither the crowded Marina channels nor the often rough open ocean immediately beyond the breakwater provide suitable conditions for sailing boats under 15 feet in length. Fishing in the area is poor and no protected space is allotted for waterskiing.

✓ Conclusions. It is difficult to retain much flexibility in land uses, short of

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rebuilding, for a limited area requiring a high intensity of uses such as the Marina. Only two possibilities for flexibility were noted in the Gruen development plan: the first was for portable boat launching facilities, and the second for public parking, which was provided on a generous basis with the comment that any excess could easily be converted to other uses, should the need arise.

The economic necessity which precluded large areas for public use, and required intensive private development of revenue productive areas in the Marina was effectively met by the Gruen plan. It is the achievement of this goal which will make it most difficult to change activities and clients for the Marina when the priorities of needs are seen to change. Rebuilding may take place in private leaseholds at any time. However, increases in public space can be expected only when the Marina's debts are paid, and the demands of the general public can be accorded equal importance with those of private investors.

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## FOOTNOTES

- 1 The earlier Corps of Engineers reports had been oriented toward the concerns of the federal government.
- 2 George F. Nicholson and Associates, Marina del Rey Economic Study (Long Beach, California: 1956).
- 3 Coverdale and Colpitts, Report on the Economic Feasibility of a Proposed Marina del Rey Small Craft Harbor at Los Angeles, (New York: 1958).
- 4 Coverdale and Colpitts, Supplementary Report (New York: 1959).
- 5 There are public projects which are carried out without regard to the ability to repay costs, e.g. in public schools, hospitals.
- 6 Nicholson (1956) p. 76.
- 7 Coverdale and Colpitts (1959) Tabulation 2 (Revised).
- 8 Nicholson (1956) p. 66.
- 9 Coverdale and Colpitts (1959) Tabulation 2 (Revised). A discussion of the land acquisition process may be found in the next section of this paper.
- 10 "Marina del Rey Reporter" (September 1970) p. 3.
- 11 Nicholson, p. 60-61. Note that all Nicholson's estimates include a percentage for contingencies and engineering design (p.72).
- 12 "Marina del Rey Reporter" (Sept. 1970) p.3.
- 13 Nicholson (1956) p. 60-61.
- 14 "MdR Fact Sheet" (July 1971).
- 15 Nicholson (1956) pp. 60-61.
- 16 Coverdale and Colpitts (1958) p. 50.
- 17 See Nicholson (1956) p. 66; Coverdale and Colpitts (1959) Tabulation 2 (Revised); and "MdR Reporter" (Sept. 1970) p. 3.

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- 18 Coverdale and Colpitts (1958) pp. 21-22. Currently, this County also operates the portable boat launch facility.
- 19 Nicholson (1956) p. 57.
- 20 Coverdale and Colpitts (1958) pp. 48-49.
- 21 Coverdale and Colpitts (1958) pp. 21-22,
- 22 The leases are usually for a 60 year period with terms subject to renegotiation after 10 or 21 years and every 10 years thereafter, depending on the amount of lessee investment.
- 23 Nicholson (1956) pp. 41-50.
- 24 Coverdale and Colpitts (1958) pp. 26-47 and Exhibit 3; Coverdale and Colpitts (1959) Tabulation 3 (Revised).
- 25 Coverdale and Colpitts (1958) p. 24.
- 26 "Marina del Rey Fact Sheet" (July 1971).
- 27 This criterion is often written as:

$$\sum_{t=0}^T \frac{R_t - C_t}{(1+i)^t} > C_0$$

$C_0$ : initial investment  
 $C_t$ : annual costs, year  $t$   
 $R_t$ : annual revenues, year  $t$   
 $i$ : market interest rate  
 $T$ : last year of planning period

- 28 Coverdale and Colpitts (1958) p. 53 and Exhibit 5.
- 29 Ibid., p. 53 and Exhibit 6.
- 30 Coverdale and Colpitts (1959) Exhibit 5 (Revision No. 2).
- 31 Leeds, Hill, and Jewitt, California Small Craft Harbors and Facilities Plan (San Francisco: 1964). This study was supported by a "701" planning grant to the State from the U.S. Department of Housing and Urban Development.

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- 32 "Marina del Rey Reporter" (Sept. 1970) p.3.
- 33 County of Los Angeles, Department of Small Craft Harbors, "Summary of Experience in Small Craft Harbor Planning and Operation," (1966), p. 5.
- 34 Los Angeles Times, "Richer, 'Fatter Marina' Marina Seen By Chace in '72," (December 19, 1971).
- 35 Board of Supervisors, County of Los Angeles. Marina del Rey Revenue Bonds of 1959 (Los Angeles: September 8, 1959; amended September 15 and November 10, 1959) p. 1.
- 36 Note that revenue bonds normally carry a higher interest rate than general obligation bonds since the former depend on the success of a single project rather than the "full faith and credit" of the County.
- 37 Ibid., p. 7.
- 38 Ibid., p. 8.
- 39 Ibid., p. 16.
- 40 Ibid., p. 15
- 41 Standard lease form for parcels in the Marina del Rey Small Craft Harbor (n.d.).
- 42 Los Angeles County, Department of Small Craft Harbors, Information for Bidders, Revision (December 1961).
- 43 "Standard Lease Form," (n.d.) p. 18.
- 44 Los Angeles County, Department of Small Craft Harbors, Information for Bidders, Revision (December 1961).
- 45 Venice Evening Vanguard, "Story of a Marina..." (April 26, 1957).
- 46 Corps of Engineers, (1956) p. 22.
- 47 Gruen Associates, Planning & Design, A Development Plan for Marina del Rey Small Craft Harbor (Beverly Hills, California: May 1, 1960) and Development Plan, Revised, for Marina del Rey Small Craft Harbor (September 15, 1960).

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- 48 Gruen Associates (May 1, 1960), p. A.
- 49 Ibid.
- 50 Nicholson (1956) p. 78
- 51 Ibid.
- 52 Corps of Engineers, Design Memorandum No. 1 (Los Angeles: November 1956) p. 8.
- 53 Gruen Associates (May 1, 1960) p. L.U.-1.
- 54 Coverdale and Colpitts (1958) Exhibit 2.
- 55 Gruen Associates (May 1, 1960) p. L.U.-2.
- 56 George F. Nicholson, Small Boat Harbor Development, Marina del Rey, Alternate Schematic Plan No. 2 (Long Beach, California: 1955) 6 pp. mimeo.
- 57 Ibid.
- 58 Gruen Associates (Sept. 15, 1960) p. 5.
- 59 Gruen Associates (May 1, 1960) p. L.U.-26.
- 60 Madigan-Hyland, Recreational Development of the Los Angeles Area Shoreline (1949) p. 95.
- 61 Coverdale and Colpitts (1958) p. 23.
- 62 Nicholson, Alternate No. 2 (1955) p. 2.
- 63 Coverdale and Colpitts (1958) pp. 39-40.
- 64 Ibid., p. 41.
- 65 Interview with Mr. Ben H. Southland, Gruen Associates, Nov. 19, 1971.
- 66 Gruen Associates (May 1, 1960) p. L.U.-23.
- 67 Ibid., p. L.U.-35.

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68 Ibid., p. L.U. -20.

69 Ibid., pp. L.U. -31-32.

70 Gruen Associates (Sept. 15, 1960) pp. 31-32.

71 Gruen Associates (May 1, 1960) p. L.D.-2.

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## CHAPTER IV. LATER DEVELOPMENT (1962-71)

### The Critical Period

The County's economic consultants had been optimistic about rapid development of Marina enterprises after the basic and secondary public improvements were complete. Nicholson's schedule indicated full private development almost immediately. Coverdale and Colpitts expected this to occur after three years of operation.

However, private development was limited at first. The Marina was opened to boat traffic in the summer of 1962. The Coverdale and Colpitts prediction, upon which the bond repayment schedule was based, implied that total annual County income would reach \$2,000,000 by 1965. Actually, income in the fiscal year 1965-66 was only about \$1,000,000. This was not sufficient to meet the minimum operating expenses and debt service requirements. The Marina had to borrow \$500,000 over a three year period from the County general fund to meet its obligations. As mentioned earlier, State legislation and a resolution of bondholders was required to do this.

Unfortunately, this situation was not just a matter of slow response to the part of private developers. There had been some fundamental problem which jeopardized the overall success of the Marina project. The most dramatic problem was the "surge" problem which began soon after the Marina opened, but became especially difficult in the winter of 1962-63. Apparently, storms in the Pacific produced high waves which entered

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through the wide entrance channel. Furthermore, the waves were augmented by reflection from the channel walls. The most critical wave action occurred<sup>5</sup> in the side basins nearest the entrance.

Considerable damage was done to boats and slips at this time. Ultimately<sup>6</sup> about \$5,600,000 in damage suits were threatened against the County.

In addition, it was reported that:

Reputable waterfront contractors have refused to accept even temporary responsibility for construction in the interior basins until positive protection of the harbor is in place. Maritime insurance agents are refusing to write hull insurance for boats berthing in the harbor. Property damage insurance recently has increased significantly for Los Angeles County lessees. Manufacturers of floating equipment are refusing to guarantee their<sup>7</sup> protection against wave conditions in Marina del Rey.

Still, ultimately, only one settlement for \$50,000 and another of unknown<sup>8</sup> amount were paid. These events discouraged potential developers of both water and land oriented enterprises. Fortunately the Corps of Engineers was already considering studies of the Marina using a scale model and wave<sup>9</sup> action machine. These studies were soon complete and recommendations were made. The Corps proposed the construction of a breakwater across the channel entrance and the sealing of the south jetty. This was expected to<sup>10</sup> reduce the maximum wave height within the Marina to two feet. The cost was about \$4,600,000, with equal shares paid by Federal and County governments. By 1956, this project was completed and has apparently been successful in eliminating the surge problem.

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Another environmental problem was particularly apparent at that time. Heavy concentrations of "red tide" made up of algae which discolor the water, have an unpleasant odor, and can poison fish and shellfish, appeared all along the coast and affected the Marina area. <sup>11</sup> No cure has been found for this periodic phenomenon although there have been no serious "red tides" recently.

During the "critical period", title companies were being cautious about insuring titles to land leased from the County. The terms of the revenue bond resolution required "active public use" of the Marina by sublessees. This was interpreted to mean that subleases for questionable uses could not be written for periods longer than one year and that the County could require a 25 percent annual turnover in sublessees.

An additional expense for lessees also appeared with a ruling from the Los Angeles County Tax Assessor that the land they had leased, as well as the structures they owned would be subject to property tax. A tax on "possessory interest" in leased land had to be paid by each lessee. This resulted in property taxes said to be about 60% higher than the amounts <sup>12</sup> anticipated at the time leases were signed.

All of these factors combined to put many lessees in financial jeopardy. In May 1962, the Marina del Rey Lessees Association was formed to see what could be done. At this time some lessees were ready to cancel

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their contracts, preferring to take their losses rather than incur greater losses  
 13  
 under the undue hardship conditions which they perceived. Later they met  
 with the Los Angeles County Assessment Appeals Board and worked out mutually  
 acceptable arrangements. This led to some reduction of the possessory interest  
 tax based on the time remaining on leases.

By 1967, most Marina problems had been resolved, consumer demand had  
 increased and considerable new development had taken place. Revenues were  
 sufficient to cover current costs, interest on bonds, and to retire bonds  
 according to the required schedule. The period from 1962-67 had been a  
 difficult one. During this time, much of the negotiation with lessees about  
 private development took place and the policies established then continue  
 to affect current decisions.

#### Land Use Plan 1967

14  
 In 1967 Gruen Associates completed a revised Land Use Study. This was a  
 review of Marina development that had taken place, under the original Plan,  
 an evaluation of problems then current, and an examination of alternative  
 planning strategies for the solution of those problems.

When this Land Use Study was begun, the Marina was still in a critical  
 period of economic development. Revenues were not sufficient to cover  
 bond payments as well as operating expenses.

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## Income Statement

15

Fiscal Year 1965-66

|                             |                |
|-----------------------------|----------------|
| Gross rents                 | \$1,095,851    |
| Small Craft Harbor Expenses | <u>724,068</u> |
| Net Income                  | 371,783        |
| Bond Payments               | \$ 728,000     |
| Deficit                     | 356,717        |

According to the data then available to Gruen, the deficit was expected to drop to \$175,000 for the fiscal year 1966-67, and to \$100,000 the following year. It was expected that after 1968, loans from the County general fund would no longer be needed to meet the deficit. It is clear, then, that the highest priority in planning for the Marina had still to be given to its potential for revenue production.

Leasing problems. Many of the difficulties which slowed the development of the Marina were discussed in the previous section of this chapter. The result of these difficulties was a period of low return from underdeveloped County real estate resources which extend for a longer period than had been anticipated.

In 1967, 53 leases for Marina land had been awarded, and 17 parcels still remained unleased and vacant. In terms of development, only 35 parcels were considered to be fully developed: 10 leased parcels were vacant and 12 were only partially developed. The 17 unleased

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parcels were, of course, vacant. The visible effect of 39 empty or underdeveloped parcels on the Marina was to give it a dispersed and under-used appearance discouraging to investors.

County leasing arrangements for Marina properties stipulated three levels of rent which might be paid. The lowest rent was "holding rent" based on 1/3 of the specified square foot rent for a parcel. It was intended for the initial period in which the leased parcel was either undeveloped or under construction.<sup>19</sup> In either case the parcel was incapable of producing a return for the lessee.

"Square foot rent," sometimes called "minimum rent", was to be charged when construction was complete. The facility on the parcel was assumed to be in operation, but not yet successful. Each parcel was assigned a minimum square foot rent for land which varied, according to location and use, from 6 to 30 cents per square foot.<sup>20</sup> It was hoped that minimum rents would cover all costs to the County, including financing costs, for the operation of the Marina.

The normal return to the County was from "percentage rents", based on percentages of gross receipts earned on each successful parcel.<sup>21</sup> The specific percentage to be charged varied according to the type of business in which the lessee was engaged. Originally, the percentages of gross receipts to be charged ranged from 5% to 25%.<sup>22</sup> This schedule was revised in 1961 to range from 1 $\frac{1}{4}$ % to 20%.<sup>23</sup>

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Rents for each developed parcel were to be based on either square foot rents or percentage rents, whichever was greater, thus insuring that the County would cover its costs as soon as a parcel moved beyond the holding rent stage of its operation. Time limits for paying holding rents were specified in leases.<sup>24</sup> Had these time limits on holding rents been strictly enforced, Marina deficits would have been reduced, if not eliminated. General economic conditions, financing difficulties and the threat of lessee withdrawal made it impolitic to insist on these time constraints.

25

In 1967, 41 parcels in the Marina had been leased. Eleven of the 41 were paying percentage rent, indicating a profitable operation for the County. Ten parcels were paying minimum rent, assumed to be a break-even level of revenue return for the County. Twenty were paying holding rent, which produced a net loss for the County.

Gruen noted that if all unleased parcels were let at minimum rent they would provide additional annual income to the County of only \$184,145. This would not cover current deficits. Furthermore, there was no indication that parcels leased in the future would be developed, and thus move from holding to minimum rents, any more quickly than the parcels already leased. At holding rent, all parcels available for lease would bring in only an additional \$61,380 per year.<sup>26</sup>

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If, on the other hand, the 20 parcels then paying holding rent were developed to pay minimum rent, additional annual County income would amount to \$447,509, a sum more than sufficient to cover annual deficits.

Emphasis, therefore, should be placed on encouraging more rapid completion of improvements on parcels already leased rather than on putting all parcels out for bid. The study recognizes the difficulty to the County of speeding development on leased parcels, since initiation of further construction must lie with the lessee. It was suggested, however, that the County encourage the development of temporary improvements such as public tennis courts or recreational areas on leased parcels. These uses would also provide the appearance of activity. Some income would be obtained by lessees while they awaited favorable financing opportunities for more intensive development. Landscaping, placed so as to be usable on sites destined for future completion, would mature in readiness for final development. This would enhance the appearance of the Marina in the interval. Finally, higher intensity use of parcels already in operation should be encouraged.

The break-through year, in which the Marina achieved an acceptable level of revenue was 1967. So far as is known, neither the temporary uses nor the landscaping improvements were implemented since the problems which suggested them did not continue.

Strategies for the future. Reviewing the analysis of rents, the Gruen study

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recommended against making the unleased parcels available for lease indiscriminately. Pointing out that undeveloped parcels, both leased and unleased, provided an opportunity for flexibility in strategies for revenue maximization, the study recommended that alternate strategies be examined to achieve a goal of optimum balance of land use. "This does not mean that the current land use plan and policies be rejected, but that certain emphases might be changed."<sup>27</sup>

Gruen considered 14 parcels as potential leaseholds and recommended that <sup>four</sup> light of them be withheld from leasing for a time. Four of these parcels were designated as public parking to be converted to other uses as deemed necessary. Four parcels for commercial use should also be withheld. The remaining six, planned for a drive-in restaurant, two gas stations, and anchorages, apartments and related uses were to be leased immediately.

Recommendations for leasing were based partially on location, since key parcels which were empty detracted greatly from the appearance of the Marina. Another consideration was apparently needed. For example gas stations were needed to serve Marina residents and visitors. Proven operational success was also a factor, as in the case of anchorages and apartments.

Recommendations for withholding parcels from leasing were based on

B-217

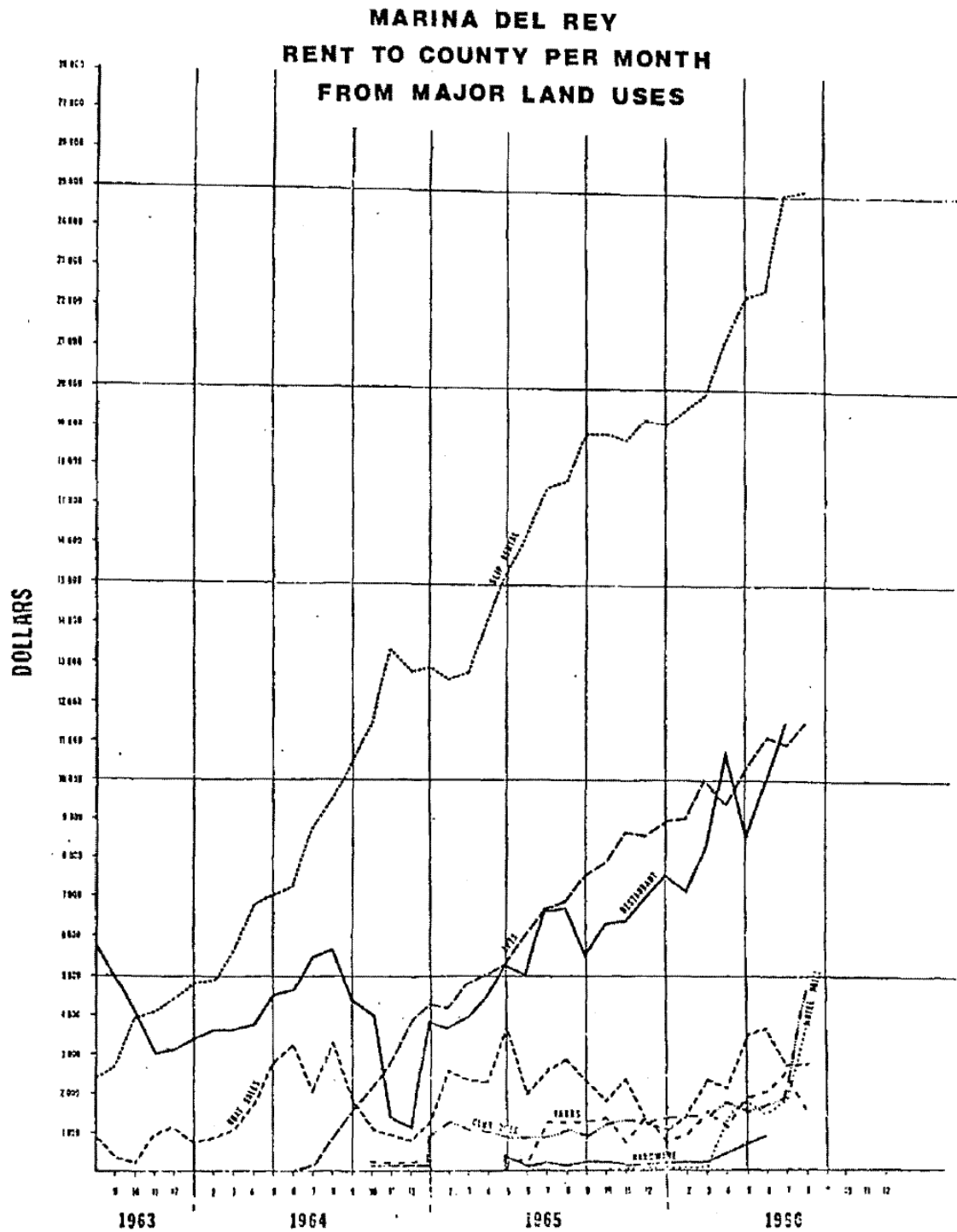
the need to reevaluate some land uses in the light of experience up to that time. Recommendations of particular interest to this study will be considered below.

Analysis of land use revenues. Examination of rents received by the County from August 1963 through August 1966, as shown on the following charts, indicates that boat slips, restaurants and apartments were the most revenue productive uses to the County. Relating area to revenue, rents received per square foot clearly show restaurants to be the most productive use, returning \$.44 in rent per square foot. Boat slips produced \$.41 per square foot if land alone is figured, but only \$.08 if land and water area is considered. Apartments returned \$.105 per square foot. No attempt is made to relate County costs for various uses to the rents received.

The analysis of revenues must be viewed in relation to several factors: gross revenues on which percentage rents are based, the percentages charged for varying uses and the areas of land required to produce the receipts. Thus, for example, restaurants are a highly intensive land use, producing the highest gross receipts in the Marina, \$3,445,013 in 1965-66, but returning only \$119,931 in rents at 3% of gross receipts. Boat slips, however, which grossed only \$1,252,500 during the same period returned \$250,495 on the basis of 20% of gross receipts charged as percentage rent. Ideally, costs to the County in terms of differing services required should

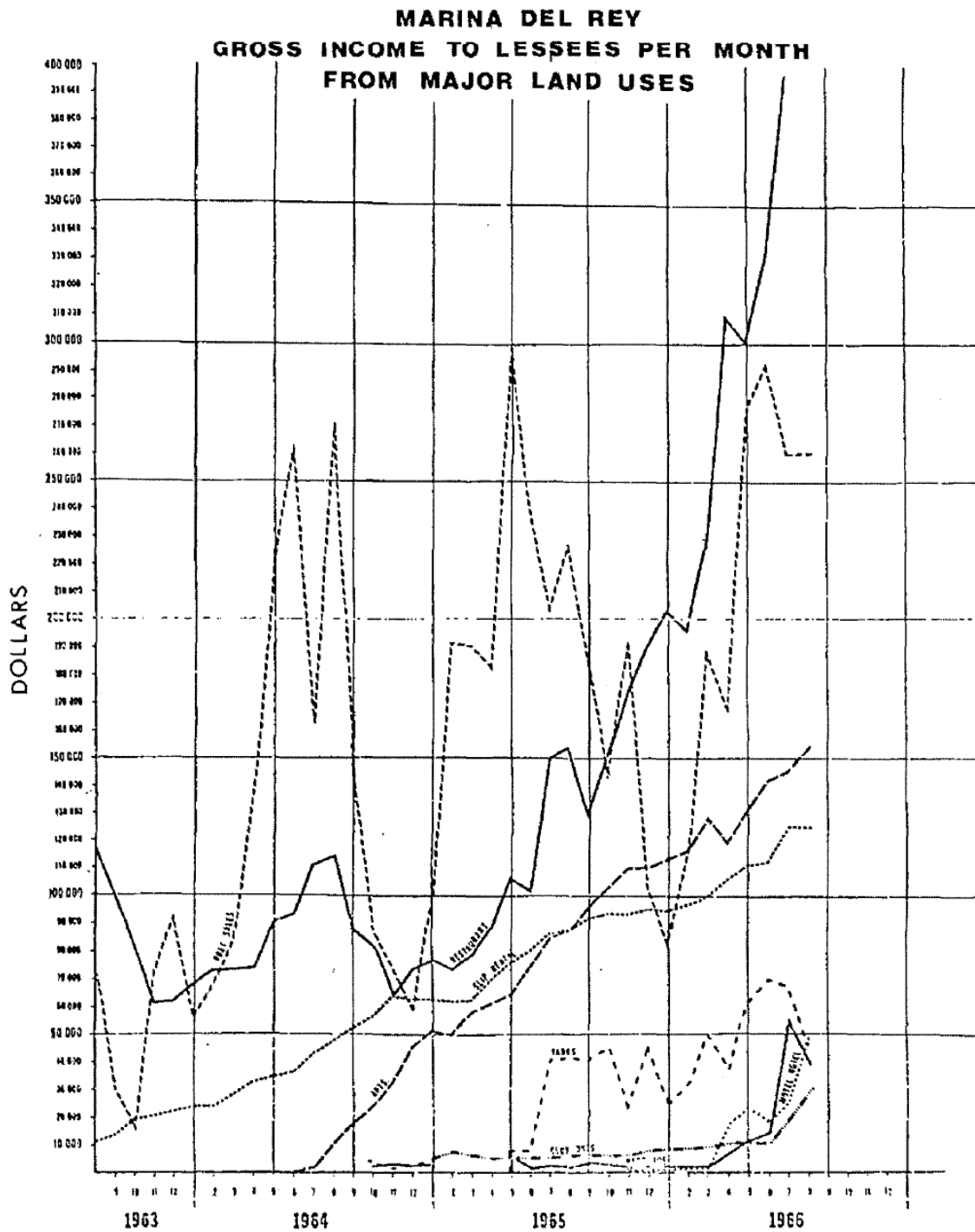
28

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Source: Gruen Associates, Marina del Rey: Land Use Study, Los Angeles  
(March 1967)

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Source: Gruen Associates, Marina del Rey: Land Use Study, Los Angeles (March 1967)

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be figured into the land use revenue analysis to give a true assessment of productivity. The Land Use Study does not provide these figures, but in making recommendations for future planning strategies the study does consider the opportunity costs which would result if balanced and efficient land use were ignored.

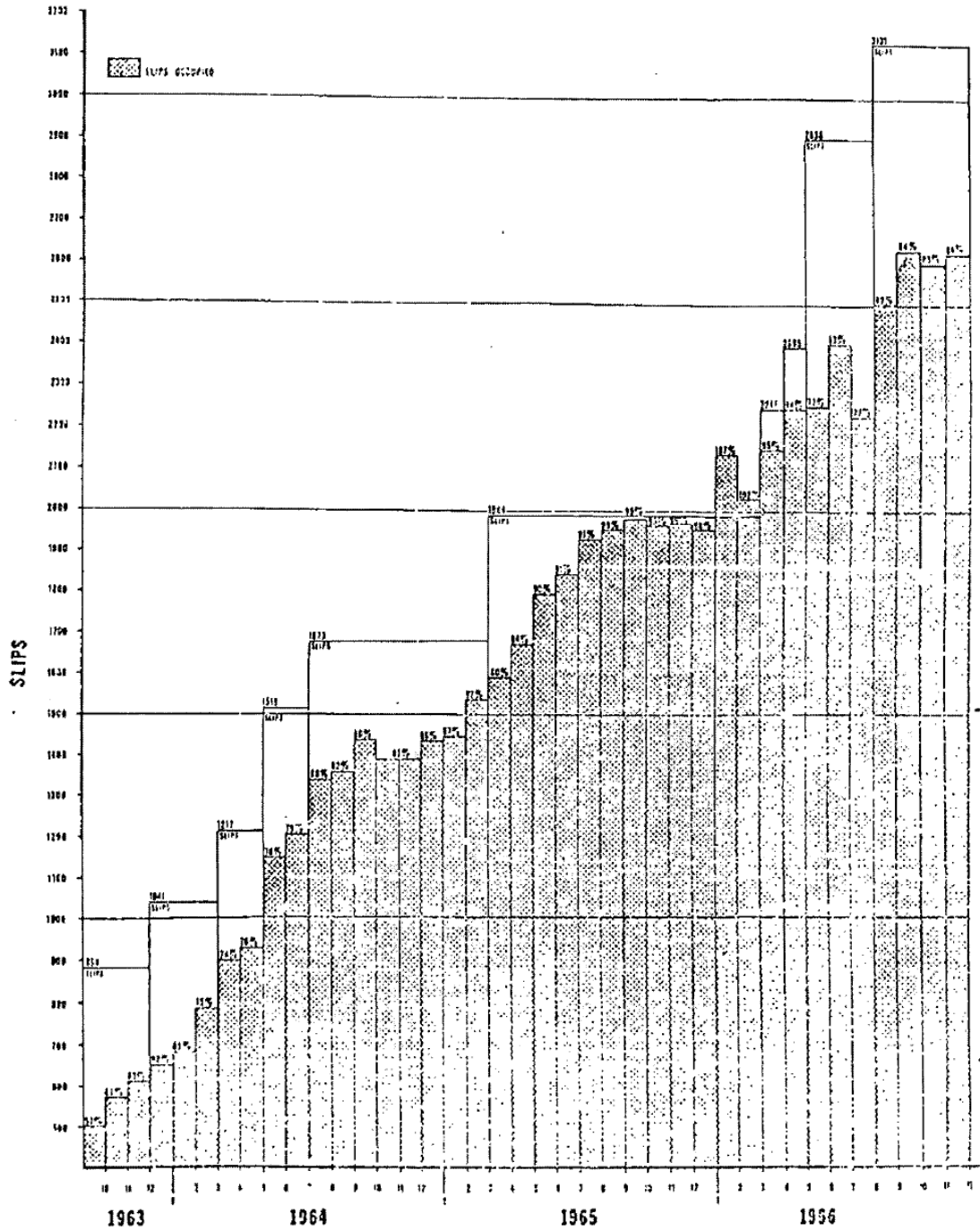
#### The Land Use Study

In general the Land Use Study responds to the financial pressures still prevalent in Marina operations by recommending further development of those land uses which have proved profitable. Anchorages were, of course, the prime purpose for Marina development and were, in addition, a profitable enterprise, producing the largest single source of revenue in 1965-66. The Study recommends that more slips be provided as current occupancy reaches 90%. The following chart shows how occupancy tends to rise to meet newly constructed capacity.

Boat sales, a use related to anchorage, were also a highly successful operation, grossing \$2,278,289 in 1965-66, but returning only \$27,262 to the County because of the  $1\frac{1}{4}\%$  rent charged on the gross receipts. Gruen sees the demand for boat sales as being directly related to the number of slips available. This, coupled with the low return, leads to a recommendation that the area available for boat sales be increased only in proportion to anchorages available.

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# MARINA DEL REY SLIPS OCCUPANCY



Source: Gruen Associates, Marina del Rey: Land Use Study, Los Angeles (March 1967)

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## EXHIBIT 16



HISTORICAL ECOLOGY OF THE

# Ballona Creek Watershed

SHANNA DARK

ERIC D. STEIN

DANIELLE BRAN

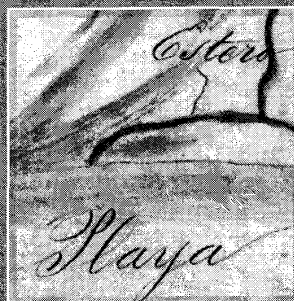
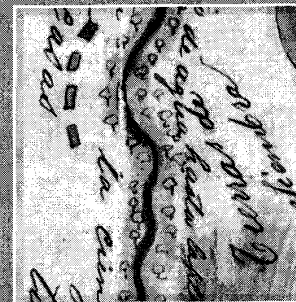
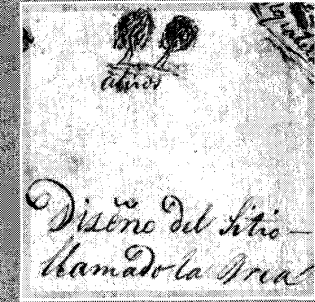
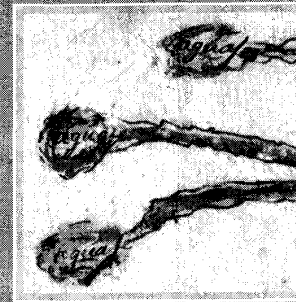
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SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT TECHNICAL REPORT #671-2011



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## EXECUTIVE SUMMARY

LOOKING ACROSS THE VAST URBANIZED LANDSCAPE in the Los Angeles Basin, it is almost impossible to imagine the natural landscape prior to human development. The remaining wetlands leave only a few clues about the past wetland complexes in this region. Nevertheless, the past is vital to understanding the foundation of landscape-processes, historical wetland distribution, and human impact that lend to a better understanding of sustainable restoration plans within the constraints of the contemporary landscape.

The primary goal of this project was to identify the characteristics of historical wetland habitat types and describe the historical form of major creeks in the Ballona Creek watershed. Our target time period was 1850-1890, just prior to contemporary impacts but after the migration of the Los Angeles River, which fundamentally altered the hydrology and morphology of the watershed. It is also a time period that is relatively data rich associated with information compiled around the time of statehood. We set forth to answer the following questions:

1. What was the extent (acreage) of persistent riparian, wetland, and associated floodplain habitat in the Ballona watershed?
2. What were the predominant types of wetlands in the watershed and what was the spatial distribution of these wetlands within the watershed?
3. What potential resources are available for stakeholders and scientists wanting to pursue further and more detailed research on this watershed?

Conclusions about historical wetland composition, extent, and distribution were based on a “weight of evidence” approach. Over

300 documents were compiled from 84 source institutions and organized through a metadata catalogue. Data sources were digitized, georeferenced, and organized by subregions within the study area. Spatially referenced datasets were overlaid and augmented by textual citations, photographs and other non-geospatial data. The concordance between multiple data sources allowed us to draw conclusions that supported inferences about historical conditions. We assigned a certainty rating for interpretation, shape/size, and location of each polygon mapped based on the number and quality of corroborating pieces of evidence. Finally, historical herbaria records and bird observations were used to provide insight into the composition of historical plant communities.

**EXTENT AND TYPE OF WETLANDS IN THE BALLONA WATERSHED**

The Ballona watershed supported a great diversity of wetlands during the mid-late 19th century (FIGURE ES-1). The La Cienega wetlands and the Ballona Lagoon complex accounted for the majority of wetland area in the watershed. Various freshwater ponds, vernal pools, wet meadows, freshwater marshes and numerous springs were found throughout the watershed. We mapped 174 unique wetland polygon features comprising 14,149 acres. The dominant wetland types included alkali meadow (35%), valley freshwater wet meadow (10%), valley freshwater marsh (10%), brackish to salt marsh/tidal marsh (9%), and alkali flats (8%; TABLE ES-1).

| HABITAT CLASSIFICATION    | NUMBER OF WETLANDS | ACRES         | HECTARES    |
|---------------------------|--------------------|---------------|-------------|
| ALKALI FLAT               | 5                  | 1284          | 486         |
| ALKALI MEADOW             | 21                 | 5273          | 1915        |
| BEACH                     | 2                  | 159           | 64          |
| DUNE                      | 8                  | 187           | 76          |
| OPEN WATER*               | 8                  | 96            | 39          |
| PERENNIAL FRESHWATER POND | 8                  | 110           | 45          |
| SALT FLAT/TIDAL FLAT      | 15                 | 423           | 171         |
| SALT MARSH/TIDAL MARSH    | 20                 | 1240          | 498         |
| VALLEY FRESHWATER MARSH   | 35                 | 1356          | 547         |
| VERNAL POOL               | 15                 | 260           | 105         |
| WET MEADOW                | 24                 | 3336          | 1351        |
| WILLOW THICKET            | 13                 | 425           | 173         |
| <b>TOTALS</b>             | <b>174</b>         | <b>11,440</b> | <b>4610</b> |

\*DOES NOT INCLUDE PACIFIC OCEAN

**TABLE ES-1:**  
Summary of wetlands mapped on the Ballona Historical Ecology project.

We mapped 232 miles (373 km) of historical stream channels in the study area. Approximately 80% of the stream channels were intermittent (often discontinuous) washes. Across the valley floor most of the streams sank into porous soils or spread into the major wetland complexes of La Cienega and the Ballona Lagoon. This characteristic likely contributed to a significant amount of subsurface water flow and to the vast wetland complex at La Cienega. The exceptions were Ballona and Centinela Creeks, which were perennial streams lined with willow woodlands. Both streams provided freshwater input to coastal wetlands of Ballona Lagoon.

Freshwater seeps and springs were a characteristic feature of the Ballona Watershed. Although springs were present at a few locations

throughout the Ballona Valley, 70% of the 45 mapped springs in the watershed were found in the Santa Monica Mountain foothills. These springs were clustered in the foothills and stopped abruptly at Franklin Canyon. This distribution could be the result of fault displacement or geologic composition. These springs played a notable role in downstream hydrology, where in several locations freshwater wetlands formed at their confluence (particularly in Rodeos de las Aguas near present day Beverly Hills). Many of these springs persist today and are unique remnant features from the historical landscape.

#### DATA PRODUCTS

In addition to this summary report, we developed several products designed to make the data compiled through this effort more readily available for exploration and use. Once collected, photographs, maps, and textual data were uploaded into an online metadata catalog. The catalog provides a means to organize and query historical documentation by spatial location, wetland descriptions, time period, and source. Bibliographic tables and information about source institutions may also be downloaded from this online database creating a secondary product for stakeholder use. This type of database creates a dynamic tool for the discovery of new information and allows for the creation of different hypothetical questions that can be explored by future researchers. The metadata catalogue, an associated geodatabase with spatially explicit data, raw data tables, and this summary report can be viewed and downloaded from [www.ballonahe.org](http://www.ballonahe.org).

The contemporary Ballona watershed represents unique opportunities for restoration planning. The information in this report should provide a foundation for understanding the functional relationships of the various wetland complexes, lend support to the development of sustainable restoration plans, and facilitate consideration of natural landscapes into future planning for infrastructure and stormwater management.

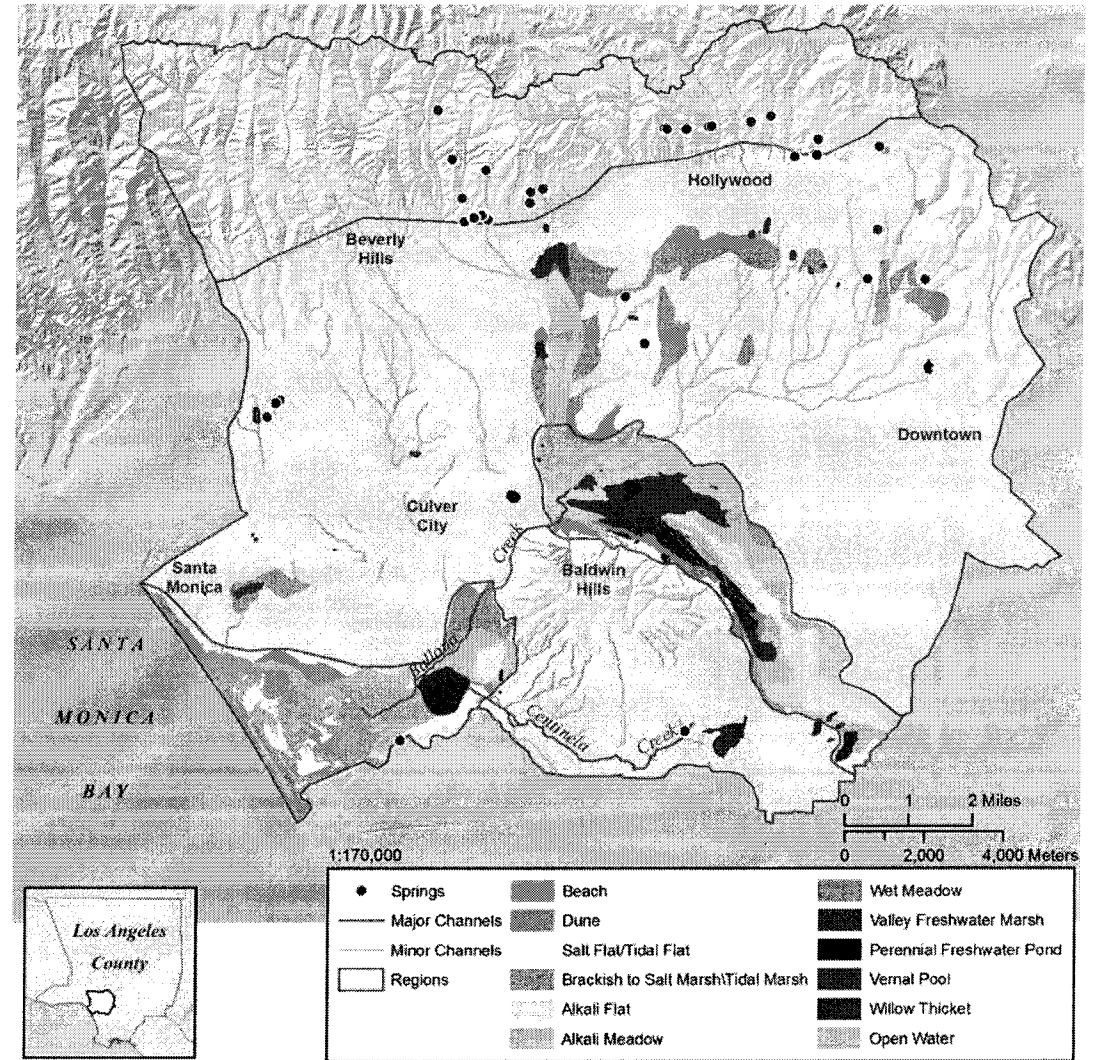


FIGURE ES-1: Distribution of wetlands and associated features within the Ballona Watershed (1850–1890).

## INTRODUCTION

*“Restoring the Ballona Creek watershed is a waste of time and money.”*

Such commonly heard sentiments about highly urbanized watersheds used to be commonplace. Studies in California and other regions have shown that where underlying watershed processes remain intact, restoration options exist, even in highly urbanized settings (Zedler and Leach 1998, Ehrenfeld 2000). Historical ecology provides an understanding of how landscape-scale processes influence wetland extant and distribution under more natural conditions; thus it provides context for restoration planning by providing insight to natural ecosystem functions. (Kentula 1997, Kershner 1997, NRC 2001, White and Fennessy 2005, Kentula 2007).

The on-going planning efforts associated with the Ballona watershed can benefit from the insights of historical ecology. While the Ballona watershed is highly urbanized, it retains remnants of its historical natural resources mainly in the form of coastal wetlands and natural springs. Developing an understanding of potential restoration options in such landscapes depends upon a sound understanding of both contemporary conditions and historical ecological wetland functions. The historical perspective provides an understanding of the relationship between physical settings that support natural wetland functions, the driving forces behind ecosystem degradation and perhaps most importantly, the value of wetland ecosystems that remain intact (Stein et al. 2010). Our goal is to provide this unique perspective of the Ballona Watershed as a valuable tool for understanding not only the past, but for assessing present and future options for management and restoration.

Knowing the historical ecosystem processes associated with the Ballona watershed will provide insight into larger ecosystem processes that governed the greater Los Angeles/San Gabriel river basin. Previous historical ecological research on the San Gabriel River suggests that ecosystem processes were more dynamic and wetlands more diverse than previously expected (Stein et al. 2007). This sheds light on only one component of a larger interconnected system of rivers and wetland complexes, all tied together at some point in time by the Los Angeles River. This report provides information on one additional component of this system, accentuating the importance of historical research on the Los Angeles River to capture a more comprehensive understanding of inter-relatedness and unique qualities of Southern California wetland ecosystems.

## PROJECT OBJECTIVES

The primary goal of this project was to identify the characteristics of historical wetland habitat types and describe the historical form of major creeks in the Ballona Creek watershed. To achieve this goal, we created a habitat map and comprehensive dataset describing the extent of creeks and diversity of habitats throughout the watershed. The target time period was prior to significant Euro-American modification (including the Spanish-Mexican ranching era) and just after the natural realignment of the Los Angeles River in 1825 from the Los Angeles Basin to the San Gabriel Valley. Specifically, we used historical ecological research to answer the following questions about the Ballona watershed:

1. What was the extent (acreage) of persistent riparian, wetland, and associated floodplain habitat in the Ballona watershed?
2. What were the predominant types of wetlands in the watershed and what was the spatial distribution of these wetlands within the watershed?
3. What potential resources are available for stakeholders and scientists wanting to pursue further and more detailed research on this watershed?

### DATA PRODUCTS AVAILABLE

In answering the above questions, we developed a geodatabase with spatially explicit data. This geodatabase can be used to identify the location and classification of historical habitat types. We also developed a web-portal for visualizing the historical distribution of wetlands relative to the contemporary environment, this executive summary report, and a series of tables that will provide resources to those wanting to pursue

more detailed research of specific wetlands or specific time periods not examined for this project. These data sets can be viewed and downloaded from [www.ballonahe.org](http://www.ballonahe.org). TABLE 1 provides an overview of each data set, including data format, source, and brief description.

### DISCLAIMER

The information provided in this report should be viewed as metadata that supports a detailed understanding of how the GIS data layers for this project were created, interpreted from historical documents, and are best used. In addition, we provide a summary of the historical watershed characteristics. This report has a limited focus on interpreting these data. We did not interpret or analyze landscape change or discuss implications for management. While we documented historical habitat and creek patterns in the watershed, we did not investigate historical ecological dynamics such as how the migration of the Los Angeles River impacted hydrological dynamics of the watershed. The “Next Steps” section of this report (see page 34) provides a comprehensive overview of potential efforts that would provide a better understanding and documentation of historical processes and conditions of the Ballona Creek and adjacent watersheds.

| GEOSPATIAL DATA PRODUCTS           |                               |                           |                                                                       |                                                                    |                                                                                                                                            |
|------------------------------------|-------------------------------|---------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| DATA LAYER                         | AVAILABLE FORMAT              | REPRESENTATIONAL GEOMETRY | DATA SOURCES                                                          | CLASSIFICATION                                                     | DESCRIPTION                                                                                                                                |
| WETLAND LAYER                      | GEODATABASE, KML<br>SHAPEFILE | POLYGON                   | COMPILED FROM SYNTHESIS<br>OF ALL HISTORICAL DATA                     | HISTORICAL WETLAND<br>CLASSIFICATIONS, SOURCE,<br>CERTAINTY LEVELS | SEE METHODS SECTION OF THIS<br>DOCUMENT FOR INFORMATION<br>ON THE DERRIVATION OF THIS LAYER                                                |
| CREEKS AND STREAMS                 | GEODATABASE, KML<br>SHAPEFILE | LINE                      | USGS TOPOGRAPHIC MAPS,<br>1927 AERIAL PHOTOGRAPHY,<br>IRRIGATION MAPS | SEASONALITY, SOURCE,<br>CERTAINTY LEVELS                           | DATA LAYER REPRESENTS THE<br>DISTRIBUTION OF HISTORICAL<br>STREAMS IN THE STUDY AREA                                                       |
| GLO DATA                           | GEODATABASE, KML<br>SHAPEFILE | POINT                     | GENERAL LAND OFFICE<br>SURVEY DATA                                    | ECOLOGICAL FLAGS                                                   | FIELD NOTES TRANSCRIBED<br>INTO A GIS                                                                                                      |
| SPECIFIC LOCATION DATA             | GEODATABASE, KML<br>SHAPEFILE | POINT                     | TEXTUAL DATA                                                          | NONE                                                               | TEXTUAL CITATIONS WITH ENOUGH<br>INFORMATION FOR GEOREFERENCING<br>TO A POINT LOCATION                                                     |
| NON-GEOSPATIAL DATA PRODUCTS       |                               |                           |                                                                       |                                                                    |                                                                                                                                            |
| SOURCE INSTITUTIONS<br>VISITED     | EXCEL                         | NA                        | NA                                                                    | NA                                                                 | LIST OF SOURCE INSTITUTIONS<br>VISITED WITH BRIEF DESCRIPTION OF<br>RELATED COLLECTION                                                     |
| CITATION LIST                      | EXCEL                         | NA                        | SOURCE INSTITUTIONS                                                   | ECOLOGICAL FLAG                                                    | EACH TEXTUAL CITATION WAS FLAGGED<br>BASED ON REGIONAL LOCATION WITHIN<br>THE WATERSHED, TYPE OF WETLAND,<br>AND BASIC TYPE OF INFORMATION |
| HISTORICAL BIRD/PLANT<br>SPECIMENS | EXCEL                         | NA                        | SOURCE INSTITUTIONS                                                   | NA                                                                 | NA                                                                                                                                         |
| BIBLIOGRAPHY                       | EXCEL                         | NA                        | SOURCE INSTITUTIONS                                                   | NA                                                                 | LIST OF CITATIONS USED FOR<br>THIS PROJECT                                                                                                 |

TABLE 1: Data products created for the Ballona Historical Ecology project can be downloaded from [www.ballonahe.org](http://www.ballonahe.org).



## WATERSHED BACKGROUND

Historical accounts of the Ballona watershed suggest a landscape with vast and diverse sources of water. Descriptions of groundwater fed wetlands, springs, creeks, and lagoons were abundant in the early literature (Mesmer 1904, Regan 1917). These descriptions also suggest that before most of the county's hydrology was constrained to concrete channels, the prairie-like lowlands were often flooded from seasonal rainfall contributing to a dynamic and diverse watershed (LAT 1906, Regan 1917, USEO 1939, Schiffman 2005).

Understanding the unique history of this watershed is important as it helps to identify the most appropriate target time period for this project. Prior to 1825, the Los Angeles River flowed through the Ballona watershed and into the Ballona Lagoon. However, beginning in 1825, the Los Angeles region experienced three consecutive years of heavy rains that inundated the lowland (LAT 1906, Reagan 1917). Along with years of unusually high precipitation, the residents during this period frequently mention a series of earthquakes that rocked the Los Angeles area (Regan 1917). While it may not be possible to fully determine the extent of each natural change, it was after *both* of these that the discharge of the Los Angeles River shifted south to San Pedro.

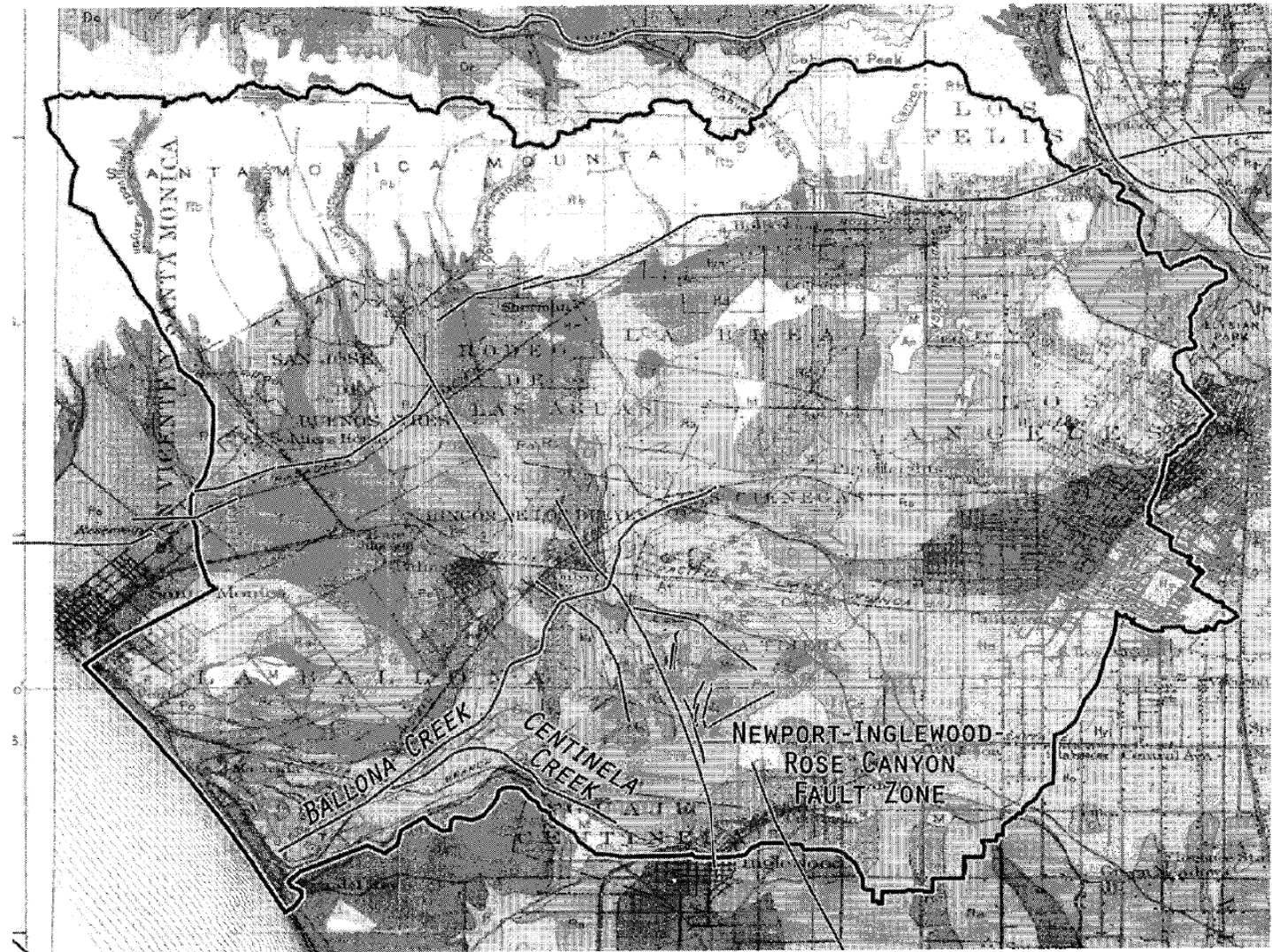
Despite the newly formed southward course of the Los Angeles River, the inland marshes of the Ballona watershed although hydrologically altered, did not dry up. In both the lowlands and the Santa Monica Mountains, fresh water springs flowed in a southwest direction and sustained much of the inland marshland of the Ballona Creek. Because our goal was to identify the historical landscape that is most representative of the contemporary hydrodynamics and it is doubtful the Los Angeles River will ever flow into the Ballona estuary again, we

chose the post-Los Angeles River migration period (1850-1890) as our target time period. This was also just prior to significant changes in land use that likely had a dramatic impact on water resources in the region, such as a shift from ranching to agriculture which was quickly followed by urban development (Stein et al. 2007).

The Ballona watershed geology played a major role in shaping its ecological patterns. Major factors controlling this geologic template include the Newport-Inglewood fault, which created the Baldwin Hills and other outcrops, aeolian beach-derived sand deposits, and the Holocene history of various courses of the Los Angeles River. The eastern part of the watershed comprises well-drained soils of the Los Angeles River's broad alluvial fan (FIGURE 1). Where the coarse alluvial fan deposits diminish, giving way to finer grain soils, wetlands occurred. Wetlands formed in the trough aligned with the Baldwin Hills and faulting throughout the watershed. These geologic patterns expressed themselves in habitats found in the 19th century, such as the groundwater fed wetland complex at the base of the Baldwin Hills and the springs in the Santa Monica Mountain foothill regions.

## METHODS

The following section provides a broad overview of the analytical process used to map wetlands in the study area and provides guidance the most effective use of the data relative to current restoration and management practices. Land use history was investigated as it related to wetland location, type, and extent. A detailed investigation of the history of land and water use for the Ballona watershed is, however, beyond the scope of this study.



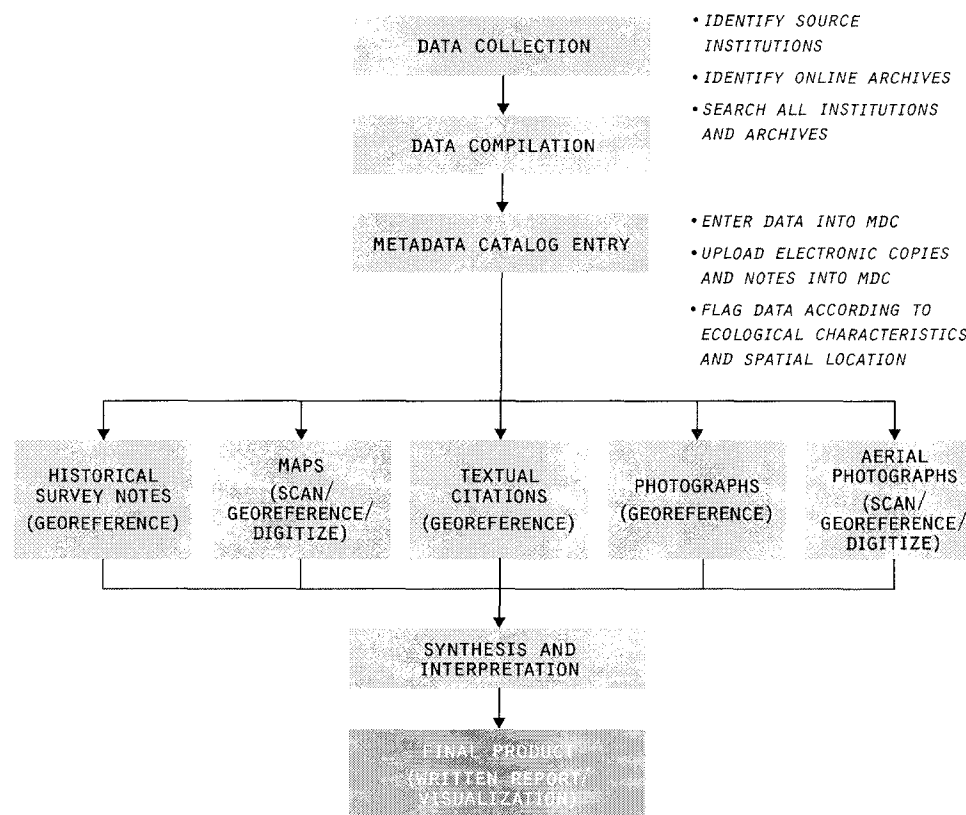
**FIGURE 1:**  
 Historical soil map (Nelson et al.  
 1917) demonstrating the extent of  
 the historical Los Angeles River  
 alluvial fan (dark yellow) within  
 the Ballona watershed.

Our methodology can be divided into a series of phases; data collection/data compilation, synthesis/interpretation, and mapping. Each phase of the project represents a systematic and consistent process that has been developed by the San Francisco Estuary Institute (SFEI) and applied across many historical ecology projects throughout the state of California (e.g., Grossinger et al. 2006, Grossinger et al. 2007, Stein et al. 2007, Grossinger et al. 2008, Beller et al. 2010, Beller et al. 2011). FIGURE 2 demonstrates the various phases of the project and the primary tasks completed in each phase.

#### DATA COLLECTION AND COMPILATION

Mapping historical wetland features is dependent upon building a body of evidence to support habitat boundaries, classification interpretations, and

### BALLONA HISTORICAL ECOLOGY METHODOLOGY



**FIGURE 2:** Schematic illustration of research process for historical data acquisition and use in historical ecology. Methodology described in detail in the following sections.

certainty of the features mapped. For this project, we visited 84 source institutions (50 physical archives and 34 online archives) throughout the state of California, although the majority of institutions are located in Southern California. These institutions included libraries, government agencies, historical societies, map archives, and other institutions housing related historical documents. One of the most notable collections investigated for this project was the Solano Reeves map collection found at the Huntington Library, which provided both early surveyor maps of Los Angeles County and field notes not attainable through other sources.

Over 300 documents were collected. The documents included written accounts, historical photographs (landscape and aerial), and historical maps. Our data collection efforts focused on 19th century sources; a few data sets from the 20th century (e.g. 1927 aerial photography, 1917 soil map) were also collected. The variety of data sets from overlapping time periods allowed for a comprehensive assessment of persistent wetland features and an in-depth interpretation of their classification. We relied on each overlapping dataset to understand the complexity of the ecological pattern and function of the landscape, and our confidence in conclusions about these features was commensurate with the supporting weight of evidence.

Written documents provided detailed insight, supplementing historical map interpretation and allowing for a more comprehensive depiction of the landscape. In some instances, textual data provided significant support for wetland features depicted on a historical map. For example, the following quote identifies the size of a depression and its associated flow regime:

*"In the Northwest corner of the parcel secondly described in said order of partition, I found a depression cover about sixteen acres, which was filled up by the rains in winter so as to render it unfit for either cultivation or pasture."*

*-Solano (1893)*

This information allowed us to verify the size of the mapped feature and classify it as a vernal pool given the additional information about seasonality. Other quotes provided a general overview of the study area:

*"In the medium part of this southwest course [Ballona Creek] it is bordered on either side by a rich plain of several thousand acres in area, and which, to some extent, it has served in irrigation for a long number of years. The lands irrigated are all within the rancho La Ballona and the waters have for many years been considered as appurtenant thereto."*

*-Hall (1888)*

*"In several depressions or arroyos of the Santa Monica plain, and at the footing of that plain against the Centinela hills, as elsewhere better explained, there are a number of little water sources of the class called cienegas, and which have been referred to in this report, also as cienega springs, and sometimes as artesian springs. A belt of these sources in the ranchos La Brea, Rodeo de los Aguas, and Santa Monica, is found one to three miles out from the mountain's base, and nearly half way down the plain."*

*-Hall (1888)*

*"Coldwater Canyon Creek; Ballona Creek basin; Los Angeles County; an intermittent stream, 3 or 4 miles long, draining a small area in the Santa Monica Mountains, and flowing southward and southeastward into Rodeo de las Aguas Rancho. Near the mouth of its canyon it receives streams draining from Franklin and Higgins canyons."*

*-Lee (1912)*



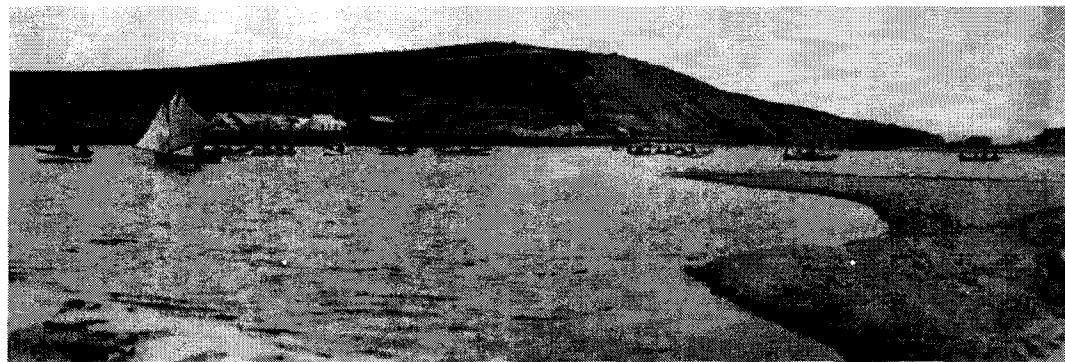
Historical photographs collected from the Los Angeles Public Library and the Huntington Library also provided insight into landscape conditions throughout the watershed. Some of the most useful photographs were those that did not have a principal focus on ecology, but depicted enough of the landscape to provide corroborating data. For example, the photograph in FIGURE 3 depicts recreational boating on Ballona Lake, which gave us insight into not only the size and extent of the dunes surrounding this feature, but also the cultural value of the physical landscape at this site.

A variety of unique historical thematic and reference maps were collected, many of which became the primary source of mapping. Some examples of these include the Hall irrigation maps (1888), a variety of soil maps (1903–1916), and diseño maps of California land grants (circa 1840). The Hall irrigation maps are two maps produced in conjunction with an irrigation report, *Irrigation in California* by the California State Engineer, William H. Hall in 1888. These two maps focused on water works, developments, and use within Southern California (Hall

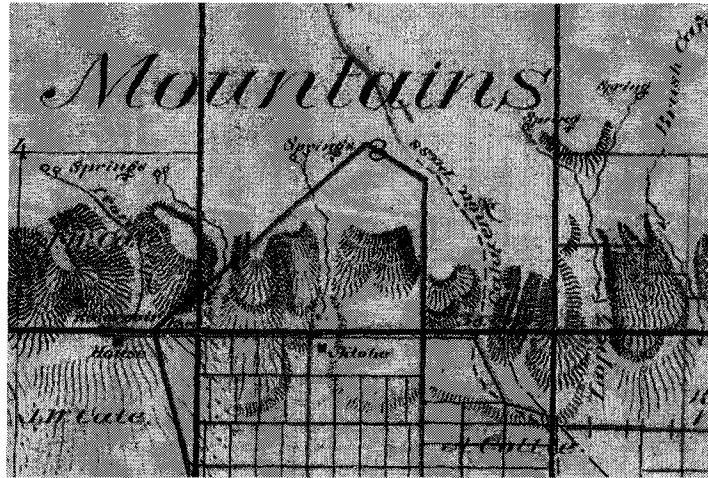
1888). The maps provided an accurate depiction of natural hydrological features such as channels and springs (FIGURE 4).

Additionally, ecological features were accurately presented in the Hall irrigation map, allowing us to use the map as a primary source to digitize historical wetlands (FIGURE 5). Primary digitizing sources were those that we used as a primary source to create habitat boundaries (though these boundaries may have been further adjusted based on additional subsidiary evidence). Because of the maps' accuracy, composition, and time frame they served as a useful source, particularly in areas with large and diverse wetland complexes.

Similarly, the 1876 T-Sheet (Chase 1876; T-1432B) was another dataset that was key to the completion of this project. T-Sheets were produced between 1851 and 1900 by the United States Coast Survey. These accompanied surveys completed along the Southern California coastline (Grossinger et al, 2011). Specifically, the T-Sheet we utilized for this project included the Ballona Lagoon and immediate wetlands as surveyed in 1876. Produced at an unusually large scale (1:10,000),



**FIGURE 3:**  
*Ballona Lake located at what is now Del Rey/Ballona Lagoon (photo courtesy of the Los Angeles Public Library).*



**FIGURE 4:**  
Detail of Hall (1888) irrigation map  
demonstrating the location of springs  
in the Santa Monica Mountains.



**FIGURE 5:**  
Detail of Hall (1888) irrigation map  
demonstrating the level of detail in  
describing habitat types in the La  
Cienega area at the base of present day  
Baldwin Hills.

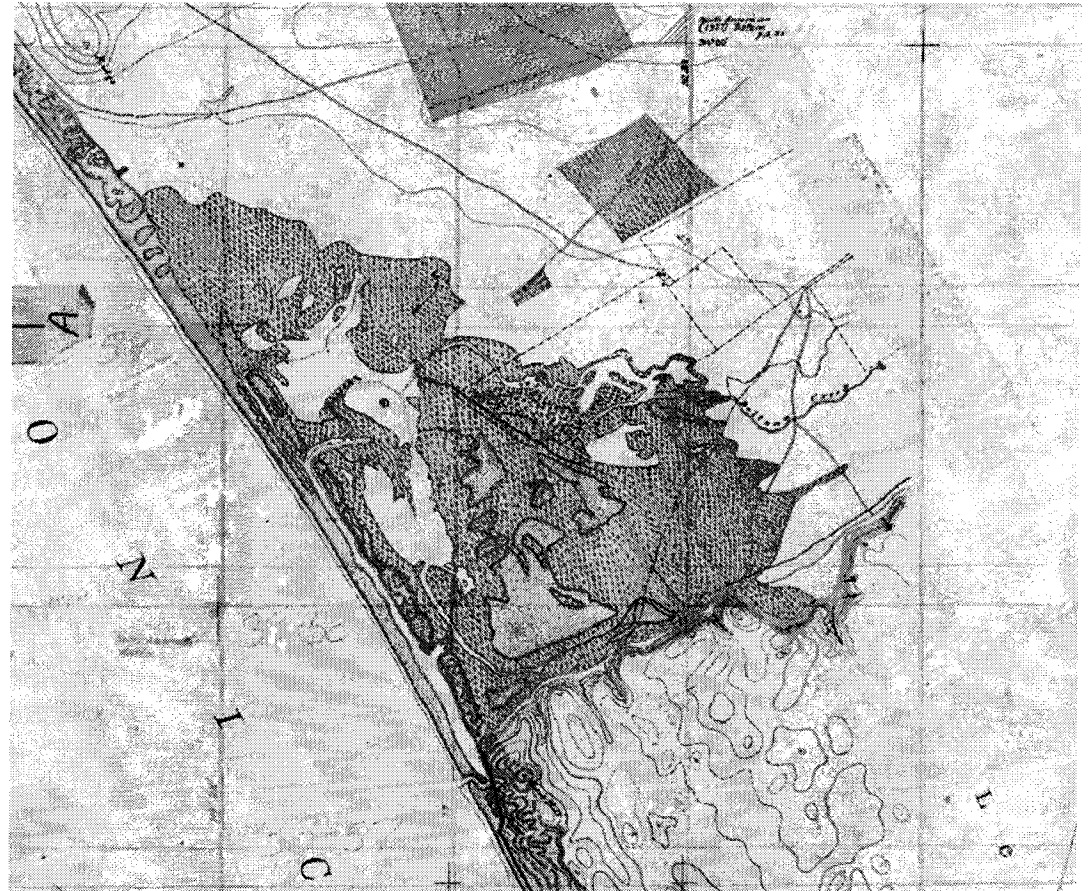
this map provided a level of detail not available on other data sets. It was useful for mapping fine scale features within the estuary, especially when used in conjunction with other data sources (FIGURE 6).

We also obtained detailed ecological information from the General Land Office (GLO) Public Land Survey (PLS) survey notes. Initiated in 1785, the GLO Public Land Survey was carried out by dividing the land into a grid system. Land was divided into 36 mi<sup>2</sup> townships and further divided into square mile sections. In California, Mexican land grant boundaries were not modified, though surrounding lands were assimilated into the township-range system. Surveyors ran the boundaries of these land divisions, including those of the Mexican land grants, taking note of distances and notes on the landscape including any significant human made and natural features to establish these boundaries. The GLO survey notes provide an array of detailed historical ecological descriptions that could be spatially referenced. Notes often included information about hydrology, soil types, and vegetation. At times, survey notes were extremely detailed, providing channel morphology descriptions, physical characteristics of trees, including species, height, and diameter, and wetland descriptions (Manies 1997). In the Ballona watershed, GLO surveys were conducted from 1850 to 1895, with the most frequent survey period being around 1870.

#### **Metadata Catalog**

Once collected, photographs, maps, and textual data were uploaded into an online metadata catalog. Given the collaborative nature of this project, being able to share data dynamically was important to reduce repetition of effort, to allow for collaborative viewing of data, and to

facilitate regional synthesis and ongoing investigations. The catalog provided the means to organize and query historical documentation by spatial location, wetland descriptions, time period, and source (FIGURE 7). Upon review and entry to the catalog, each source was assigned metadata such as year, author, and keywords pertaining to the item's ecological content. The assigning of metadata within the online catalog system allowed us to query our data sources by using simple to complex parameters in an efficient manner with relative ease. For example, we were able search citations by year or by year, location, author, and citation type (i.e., map, text, or photograph). The metadata catalog also allowed for data to be uploaded to a centralized location via ftp so that team members were able to download and access the data dynamically. Bibliographic tables



**FIGURE 6:**  
Chase (1876) T-Sheet demonstrating the detail used to map the Ballona Lagoon.

Subset Records by Title:

Subset Records by Reference Type:

Subset by Primary Source:

Subset by Collector:

|        | Reference Type | Author       | Journal / Publisher | Found (Y/N) | Acquired (Y/N) | Useful (Y/N) | Original Scan Acquired (Y/N) | Title                                 | Year | Primary Source                                      | Call #           | Secondary Source | Call # | Tertiary Source | Call # | Geographic Area               | Watershed | Scale    | Description                        | Keywords                        | Collector | File Path                       | GeoReferenced (Y/N) |
|--------|----------------|--------------|---------------------|-------------|----------------|--------------|------------------------------|---------------------------------------|------|-----------------------------------------------------|------------------|------------------|--------|-----------------|--------|-------------------------------|-----------|----------|------------------------------------|---------------------------------|-----------|---------------------------------|---------------------|
| Select | Text           | Mesmer, L.   |                     | Yes         | Yes            | Yes          |                              | Soil Survey of the Los Angeles County | 1904 | Google Book Search                                  |                  |                  |        |                 |        | Los Angeles County            |           |          | Soil survey for Los Angeles County | soils, hydric soils             | S. Dark   | Mesmer_1904_soilsurvey.pdf      |                     |
| Select | Map            | Unknown      |                     | Yes         | Yes            | Yes          | Yes                          | Map Showing Part of the R...          | 1887 | LA County Department of Public Works                | MR022-020        |                  |        |                 |        | Rancho Rincon de los Buey ... |           |          | Plat map scanned by LA Co ...      | sycamore, valley floor habitats | S. Dark   | MR022-020.pdf                   | Yes                 |
| Select | Map            | Mesmer, L.   |                     | Yes         | Yes            | Yes          | Yes                          | Soil Map: Los Angeles She ...         | 1903 | University of Alabama, Department of Geography      |                  |                  |        |                 |        | Los Angeles County            |           | 1:62,500 | Great soils map, really g ...      | soils, hydric soils, cienegas   | S. Dark   | UnivAlabama_map_Mesmer_1903.tif | Yes                 |
| Select | Text           | Salvator, L. |                     | Yes         | No             | Yes          |                              | Los Angeles in the Sunny ...          | 1929 | First-person Narratives of California's Early Years | F869.L8 L94      |                  |        |                 |        | General Study Area            |           |          | Very general description ...       | Springs, rivers                 | S. Dark   | AmerMem_text_Salvator.doc       |                     |
| Select | Map            | Jonas, C.    |                     | Yes         | Yes            | Yes          | Yes                          | Index map to county surve ...         | 1950 | Library of Congress Map Collections                 | G1528.L6 R3 1950 |                  |        |                 |        | LA Basin                      |           | 1:24000  | General index map for sur ...      | Surveyor index                  | S. Dark   | LiboCong_Map_1950.zip           | Yes                 |
| Select | Text           | Grinnell, J. |                     | Yes         | Yes            | Yes          |                              | Birds of the Pacific Slope ...        | 1898 | Archive.org                                         | None             |                  |        |                 |        | Los Angeles County            |           |          | Birds of LA County. Usefu ...      | Birds                           | S. Dark   | Grinnell_Archive_1877_birds.pdf |                     |
| Select | Map            | Solano, A.   |                     | Yes         | Yes            | Yes          | Yes                          | Map of Those Parts of the ...         | 1868 | LA County Department of Public Works                | 3204             |                  |        |                 |        | Rancho La Ballona             |           |          | Plat map scanned by LA Co ...      | lagoon                          | S. Dark   | MR003_204_LaBallona.pdf         | Yes                 |

**FIGURE 7:**  
Sample of the online metadata catalog used to store, query, and flag data.



and information about source institutions may also be downloaded from this online database creating a secondary product for stakeholder use. These data products are available at [www.ballonahe.org](http://www.ballonahe.org). This type of metadata catalog creates a living tool for the discovery of new information and allows for the creation of different questions that can be explored by future researchers.

### ***Data Processing***

Certain sources required further processing in the form of spatial reference assignments. Maps were georeferenced, GLO data was transferred to a point layer via linear referencing, and aerial photographs were orthorectified and mosaiced into a single data layer. This allowed us to assimilate a significant portion of our data sources into Geographic Information System (GIS) software for electronic mapping. Some data sources were not spatially referenced. These sources, including photographs and most textual documents, were still organized geographically via their metadata, printed, and compiled manually for use during the interpretation process. Over 150 maps were georeferenced. Textual citations with enough spatial detail were also georeferenced into a point layer. For this point layer, the associated textual description and citation were recorded in the features attribute table. Over 50 of these “specific location” points were digitized.

### **MAPPING AND INTERPRETATION OF HISTORICAL DOCUMENTS**

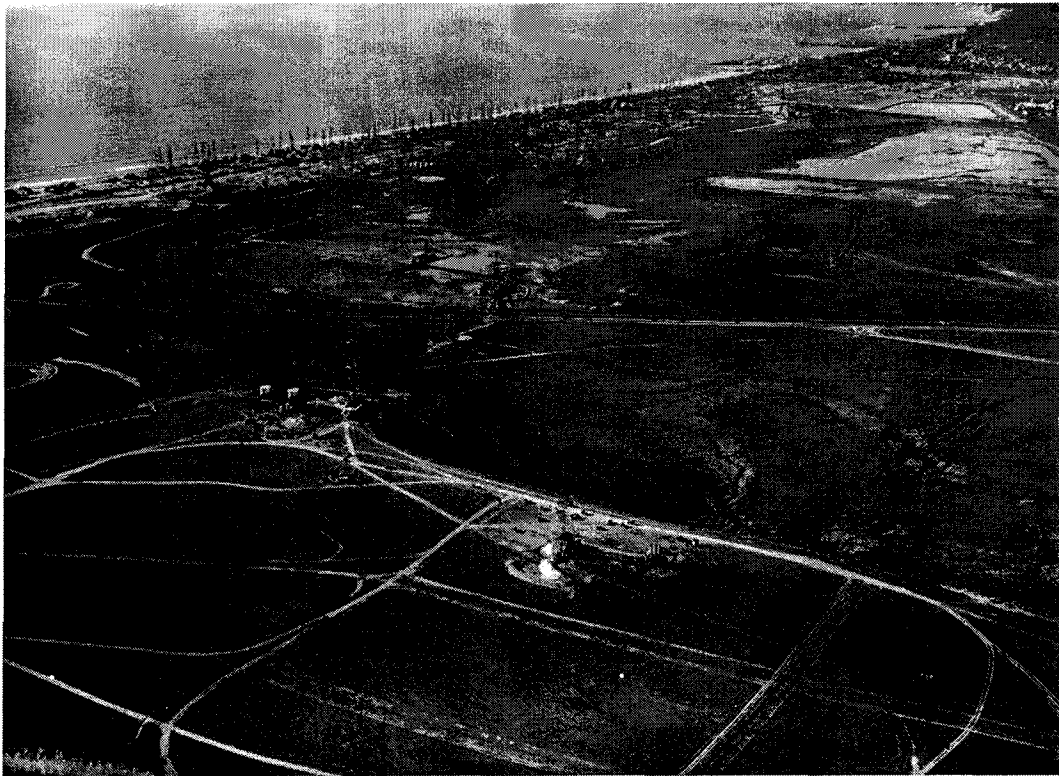
All mapping was completed using a Geographic Information System (GIS). ArcGIS 9.3 (ESRI) software was used to display, manipulate, and compare spatial data sources as well as create our final geospatial dataset.

As discussed in the previous sections, data sources that could not be spatially referenced were printed and organized by very general regional spatial locations (as flagged in our metadata catalog). These data sources were reviewed as we mapped each of these regions and often provided valuable nuanced descriptions of wetlands in the study area that maps could not provide, such as details about tree species or plant composition not depicted on a map. Using GIS, data sources were organized and spatially overlaid with each other, which not only allowed us to view features across multiple datasets, but also allowed us to view change over time. Subsequently, this granted us the ability to better establish the shape, location, and identification of persistent wetland features while at the same time considering the variability (or lack thereof) in the physical and relational aspects of those features through different datasets.

The ability to compare the numerous historical data sources allowed us to build a body of evidence and assess the certainty of each persistent landscape feature mapped. Drawing upon methodological approaches used in previous studies in California, we documented each feature using multiple sources from varying years and authors to ensure accurate interpretation (Grossinger 2005, Grossinger et al. 2007). This was possible for many features, although others (notably some ponds and springs) were only documented by one source.

Usually, the most detailed and accurate datasets that fell within our target mapping period were used to map features. These sources included the Hall irrigation maps and historic topographic maps. After initial digitizing, other datasets were reviewed to determine if corroboration between them deemed it necessary to modify a given feature's properties, such as shape, location, attributes, and sometimes, identification.

Datasets that were produced within our target mapping period, 1850 to 1890, were given mapping priority. Datasets that fell outside of this range were used only as interpretation sources for already mapped features. Interpretation sources are those sources that gave us additional evidence in our interpretation but were not used as a mapping source. These datasets were not used as a mapping source because it is likely they depicted the landscape after significant modification by European



settlement and could only be used as supporting evidence for persistent features found on earlier maps. Examples of these include the soil survey maps and aerial photographs. Whenever photographs or textual documents supported the interpretation of features their citation was added to the feature's attributes, specifically as an interpretation source. Seldom did photographs provide extreme corroboration, but there were times where photographs were vital. For example, a set of oblique aerial photographs taken over the Ballona Lagoon provided excellent corroborating evidence to the shape of included waterbodies (FIGURE 8).

Another important component of the mapping methodology involved transcribing and spatially referencing the GLO survey notes. A total of 1,913 survey points were produced with just over 900 points solely dedicated to describing natural features mapped by the GLO during their surveys. These data proved invaluable due to both their spatial and descriptive accuracy. GLO points were often used to confirm boundaries of habitat features. In several GLO survey notes surveyors would note when they entered or left an area of a given habitat type. Thus, it was common to find phrases such as "enter swamp" or "leave prairie" within GLO surveys. These points aided in modifying feature boundaries that were initially drawn from primary mapping sources. Ultimately, the GLO data resulted in a more refined physical shape in the wetland areas mapped and supported more detailed interpretation. These surveys were

**FIGURE 8:**

*Oblique aerial photograph of the Ballona Lagoon taken from the current site of Loyola Marymount University (circa 1940, photo courtesy of Loyola Marymount University, Special Collections). Areas with a smooth, lighter signature in the background are either open water or unvegetated areas.*

also aligned with known rain and drought cycles to better inform our interpretations.

Streams were mapped primarily from the historical aerial photographs and historical topographic maps (because of their improved spatial accuracy compared to older mapping sources). When available, other data sources were used to provide additional interpretation validation such as the Hall Irrigation Map (1888). All streams that were consistently present across the historical aerials, topographic maps, and irrigation map (Hall 1888) were digitized. However, we prioritized digitizing from the aerials because the spatial referencing was the most accurate. The topographic maps and irrigation maps were in this order of priority where the feature was no longer present on the aerials. The channel network in the watershed was not analyzed extensively due to two factors. First, prepredominantly intermittent streams dominated the Ballona watershed; this likely is the result of porous soils, geology, and climatic conditions (Hall 1888). We were only able to identify two major channels that were perennial: Ballona Creek and Centinela Creek.

Second, as would be expected, corroborating evidence for the remainder of the intermittent channel network was sparse.

#### ESTIMATING CONFIDENCE IN MAPPED POLYGONS

Measuring and quantifying certainty is critical to the final interpretation and usefulness of historical ecology data. Following Grossinger (2005), feature attributes were developed to capture the estimated certainty of a mapped feature's interpretation, size, and location. Each feature was assigned these attributes to provide a concise assessment of how confident we are in its presence and habitat classification, and in its spatial accuracy (Grossinger and Askevold, 2005). Certainty levels were based primarily on the number, type (i.e. GLO versus historical topo) and quality (i.e. degree of detail and/or spatial accuracy) of the data sources (TABLE 2). For example, a feature such as a wet meadow may be supported by numerous and highly detailed independent data sources would be assigned a "high" value for interpretation certainty. On the other hand, a wet meadow referenced in only 1 or 2 more contemporary historical documents may

| CERTAINTY LEVEL      | INTERPRETATION                                               | SIZE                                                          | LOCATION                                             |
|----------------------|--------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------|
| HIGH<br>"DEFINITE"   | FEATURE DEFINITELY PRESENT BEFORE EURO-AMERICAN MODIFICATION | MAPPED FEATURE EXPECTED TO BE 90%-110% OF ACTUAL FEATURE SIZE | EXPECTED MAXIMUM HORIZONTAL DISPLACEMENT <50 METERS  |
| MEDIUM<br>"PROBABLE" | FEATURE PROBABLY PRESENT BEFORE EURO-AMERICAN MODIFICATION   | MAPPED FEATURE EXPECTED TO BE 50%-200% OF ACTUAL FEATURE SIZE | EXPECTED MAXIMUM HORIZONTAL DISPLACEMENT <150 METERS |
| LOW<br>"POSSIBLE"    | FEATURE POSSIBLY PRESENT BEFORE EURO-AMERICAN MODIFICATION   | MAPPED FEATURE EXPECTED TO BE 25%-400% OF ACTUAL FEATURE SIZE | EXPECTED MAXIMUM HORIZONTAL DISPLACEMENT <500 METERS |

**TABLE 2:**  
*Certainty levels assigned to historical features on the Ballona Historical Ecology Project (after Grossinger et al. 2007).*

receive a lower value. Confidence values were assigned not just on the number of data sources supporting the presence of a particular feature, but also on the quality and time period of the individual data source. For example, the Hall Irrigation map (1888) provided detailed information about wetlands mapped, as such, wetlands mapped from this source were given a consistently higher confidence value for interpretation than a feature found on a few coarse scale maps (such of topographic maps) that had very little detail. Estimation of certainty is critical to the scientific credibility of any study and reinforces why conclusions about historical conditions must be based on corroboration of multiple lines of independent evidence. Ultimately, land managers and other stakeholders can utilize these objective classifications of certainty to guide the decision making process by helping to determine how extensively results are applied to various land management and restoration activities.

#### ASSESSMENT OF HISTORICAL PLANT AND BIRD COMMUNITIES

We also collected about the natural history of the study area, concentrating on plants and birds. For plants, all of the digitized herbarium records available from the state clearinghouse (Jepson Interchange) for Los Angeles County were obtained. Because these records contain many spelling errors and the locations are not reported in a standardized manner, they were sorted through (100,382 records) manually to extract those records from the Ballona watershed and to exclude exotic species, leaving 2,342 records of native species. These were updated with current nomenclature, sorted into families, and coded with the standard U.S. Fish and Wildlife Service codes for wetland indicator status. Each record was then assigned to a region within the watershed

to develop species lists for each. For birds, we obtained nest and egg set records from the Western Foundation for Vertebrate Zoology for a suite of riparian indicator species: Black Phoebe, Common Yellowthroat, Black-headed Grosbeak, Least (Bell's) Vireo, Yellow Warbler, House Wren, Long-tailed Chat, Little Flycatcher, Western Wood-Pewee, Song Sparrow, Barn Swallow, and Cliff Swallow. Searches were not made for species associated with coastal wetland features. Region and nest condition notes were consolidated from these records as indicators of riparian vegetation.

#### RESULTS

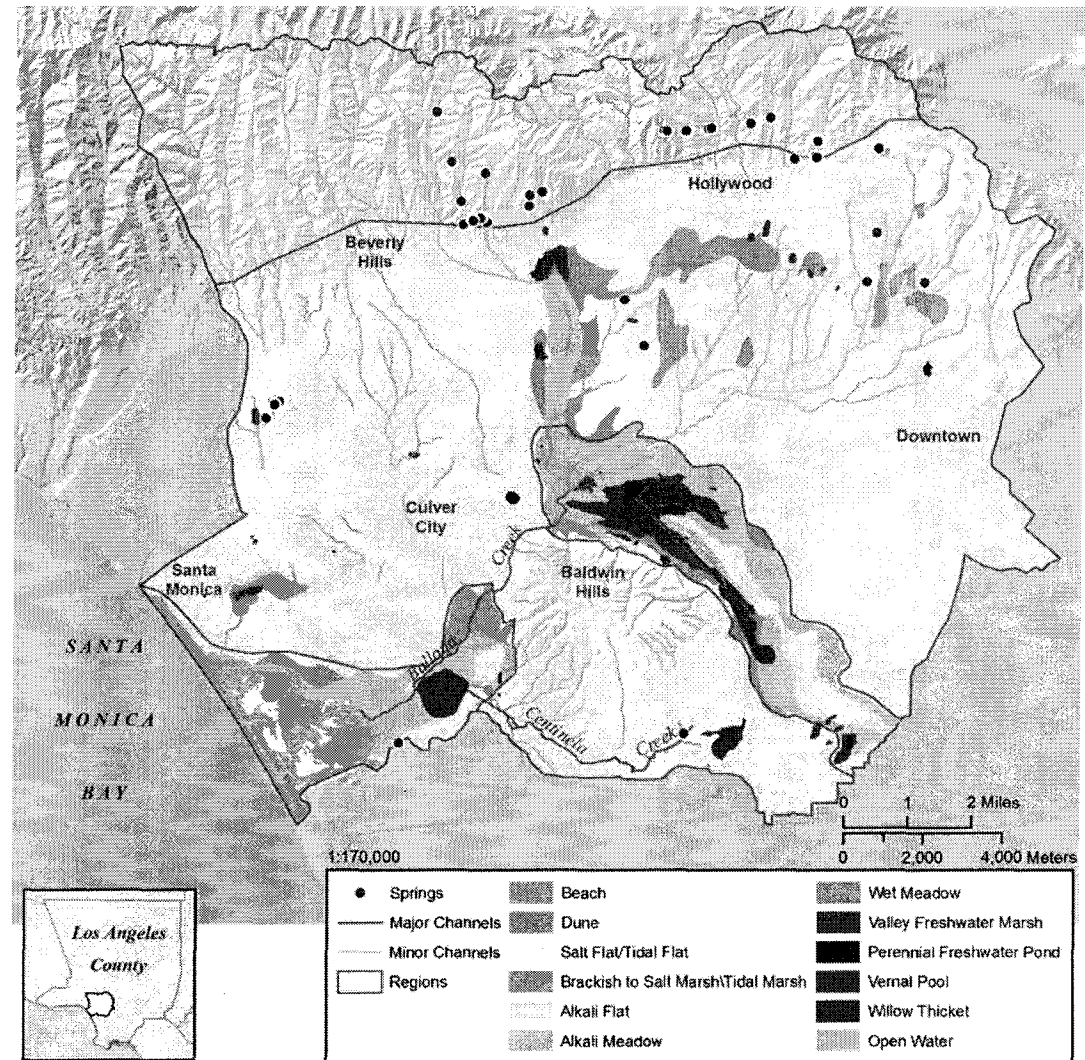
A diversity of wetlands were mapped in the Ballona watershed during the target time period with four major types of wetlands dominating the watershed; coastal wetlands, the inland La Cienega complex (consisting of groundwater and surface water associated depressional wetlands), seeps and springs, and creeks (FIGURE 9). Particularly unique to this watershed was the continued legacy of the migration of the Los Angeles River and its effect on the nature and distribution of wetlands. During the target period of analysis, Ballona Lagoon was undergoing a transition from a wetland at the terminus of the large Los Angeles River watershed to a system associated with the smaller Ballona Creek watershed. The shift to a smaller watershed likely resulted in a reduction in the magnitude and frequency of high energy scouring flows experienced by the estuary. Historical analysis of the Ballona watershed is also complicated by the relatively early human impact beginning in the mid-19th century which escalated in pace into the early 1900s along this portion of the southern California coast.

A total of 174 unique wetland polygons were mapped comprising 14,149 acres (5,470 ha; TABLE 3). The dominant wetland types across the entire study area included alkali meadow (35%), valley freshwater marsh (10%), brackish to salt marsh/tidal marsh (9%), and alkali flats (8%). The watershed contained a wide diversity of wetlands ranging from vernal pools and alkali flats to wetland meadows and willow thickets (excluding willow-dominant riparian corridors). It is likely that our habitat map did not capture the total complexity of this landscape, due to a lack of documentation in the historical record, or inability to display using a habitat map. For example, textual citations describing features at a finer scale cannot be incorporated into a two-dimensional map, but lend depth to our understanding of habitat diversity. We hope to provide a cautioned insight into the complexity of this ecological system in the following pages.

| HABITAT CLASSIFICATION    | UNIQUE WETLANDS | ACRES        | HECTARES    |
|---------------------------|-----------------|--------------|-------------|
| ALKALI FLAT               | 5               | 1284         | 486         |
| ALKALI MEADOW             | 21              | 5273         | 1915        |
| BEACH                     | 2               | 159          | 64          |
| DUNE                      | 8               | 187          | 76          |
| OPEN WATER*               | 8               | 96           | 39          |
| PERENNIAL FRESHWATER POND | 8               | 110          | 45          |
| SALT FLAT/TIDAL FLAT      | 15              | 423          | 171         |
| SALT MARSH/TIDAL MARSH    | 20              | 1240         | 498         |
| VALLEY FRESHWATER MARSH   | 35              | 1356         | 547         |
| VERNAL POOL               | 15              | 260          | 105         |
| WET MEADOW                | 24              | 3336         | 1351        |
| WILLOW THICKET            | 13              | 425          | 173         |
| <b>TOTALS</b>             | <b>174</b>      | <b>14149</b> | <b>5470</b> |

\* DOES NOT INCLUDE PACIFIC OCEAN

**TABLE 3:**  
Summary of wetlands mapped on the Ballona Historical Ecology project.



**FIGURE 9:** Wetlands mapped for the Ballona Historical Ecology project.

The historical location and extent of wetlands in the Ballona watershed was extensive compared to their contemporary distribution. Although discrete boundaries of historical wetlands can be challenging to identify in many instances, a few substantial wetland complexes were clearly evident, namely the La Cienega wetlands and the Ballona Lagoon complex. These complexes, in addition to other topographic and ecological factors, were used to organize the Ballona watershed into meaningful units of analysis. The four regions are Ballona Valley, Ballona Lagoon, Santa Monica Mountain Foothills (SAMO), and La Cienega. Key hydrologic features, Ballona and Centinela Creeks were discussed separately (FIGURE 10).

Each of these regions demonstrated a unique profile of wetland types (FIGURE 11). Two significant wetland complexes (La Cienega and Ballona Lagoon) supported the largest extent of wetland habitat in the watershed. Freshwater marsh surrounded by numerous other habitat types (primarily alkali meadows and flats) dominated a broad band of habitat making up the La Cienega complex. Brackish to salt/tidal marsh was the principal component making up the Ballona Lagoon complex, although various other habitat types were present as well. Elsewhere across the valley floor wetland habitat existed but was sparse with the exception of intermittent streams, which were in greater abundance. Various freshwater ponds, vernal pools, wet meadows, and freshwater marshes and numerous springs were found throughout the watershed.

We mapped 232 miles (373 km) of historical stream channels in the study area (FIGURE 10). One characteristic of the channels is their lack of continuity across the watershed, especially in the Ballona Valley region. With the exception of Ballona Creek, virtually every

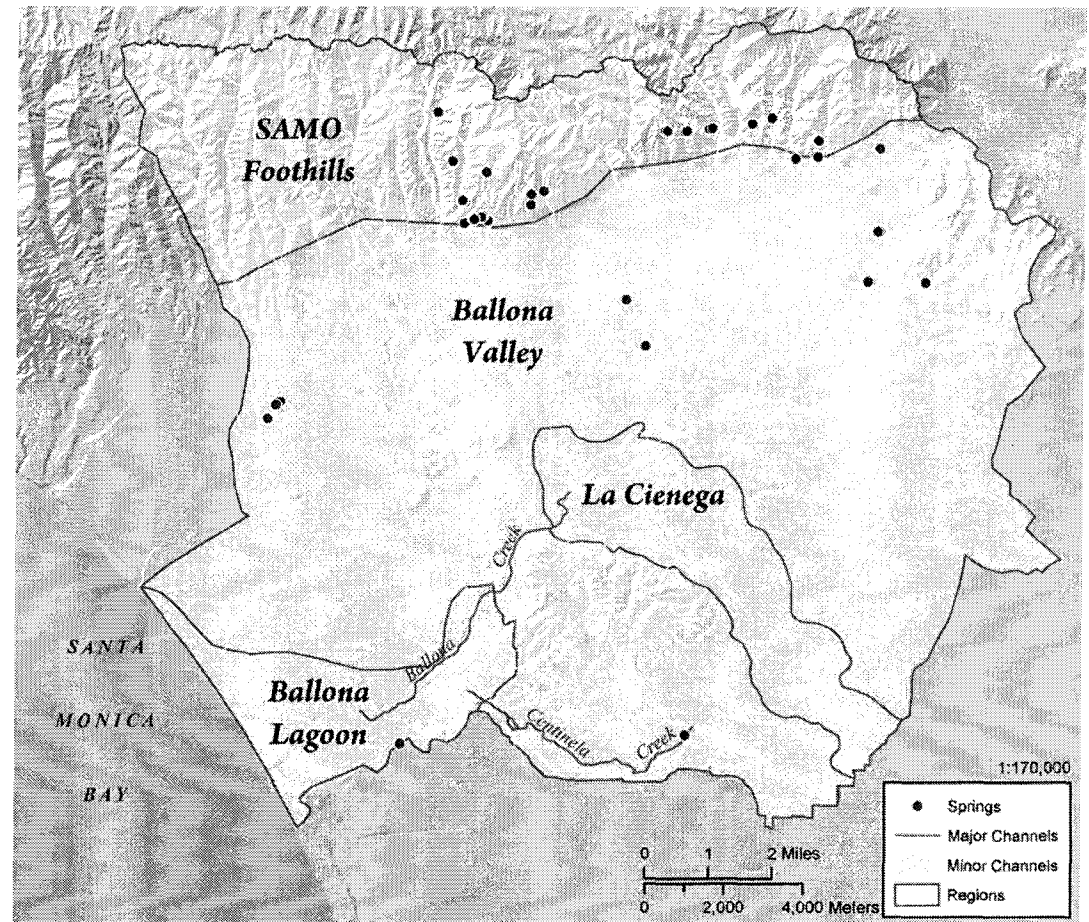


FIGURE 10: Regions and distribution of springs mapped within the Ballona watershed.

other channel either sank into porous soils or spread into the major wetland complexes of La Cienega and the Ballona Lagoon. While this characteristic may have contributed to a significant amount of subsurface water flow and consequently to the vast wetland complex at La Cienega, we were unable to discern if this pattern was naturally occurring or the result of land use changes (that may have lowered the water table) during our target time period.

Although springs were present at a few locations throughout the Ballona Valley, 70% of the springs in the Ballona Watershed were found in the Santa Monica Mountain foothills (primarily from Hall 1888; see FIGURE 10). These springs were clustered in the foothills and stopped abruptly at Franklin Canyon. This distribution could be the result of fault displacement or geologic composition.

In the following sections, a landscape profile of wetlands found within each of the regions identified in the study area. The landscape profile includes a review of wetland types, extent, and spatial distribution. In addition, we have included a discussion of stream characteristics within each region.

#### BALLONA VALLEY

Ballona Valley was the largest region in the study area, comprising the entire valley floor (FIGURE 12). Streams from the surrounding foothill regions drained into the valley floor and in many places disappeared as they flowed across alluvial fans with porous soils. However, in some places spring fed wetlands gave way to wetland and alkali meadows, the dominant wetland types within this region.

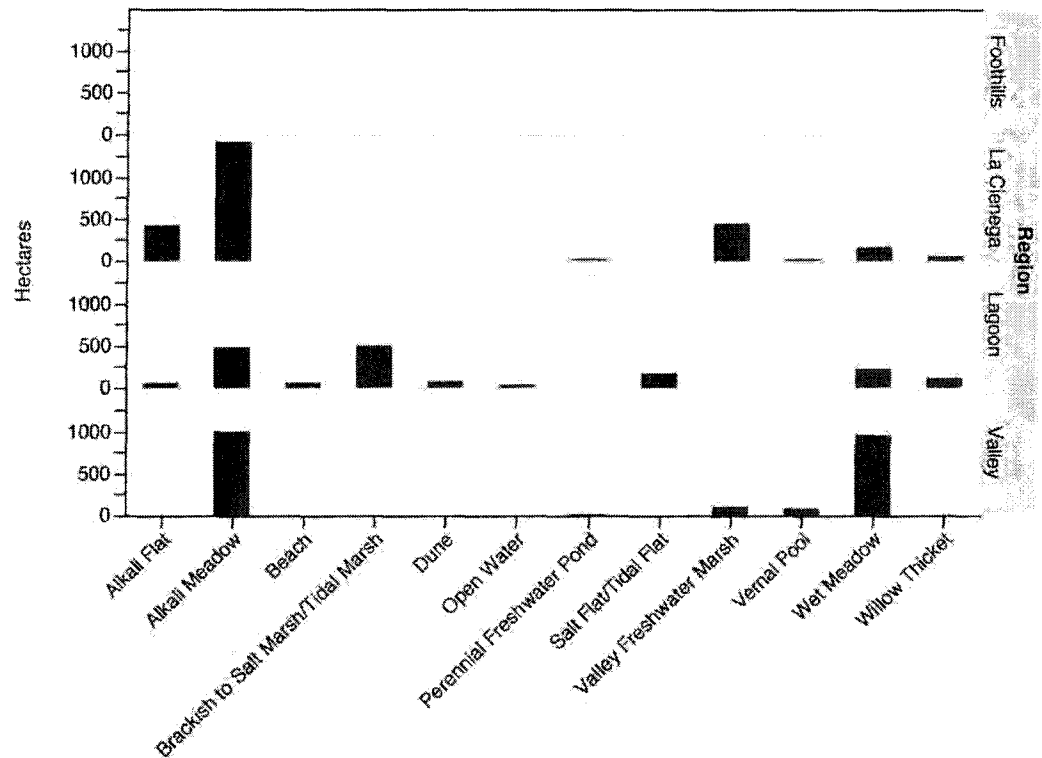


FIGURE 11: Landscape profile for each region in the Ballona watershed.

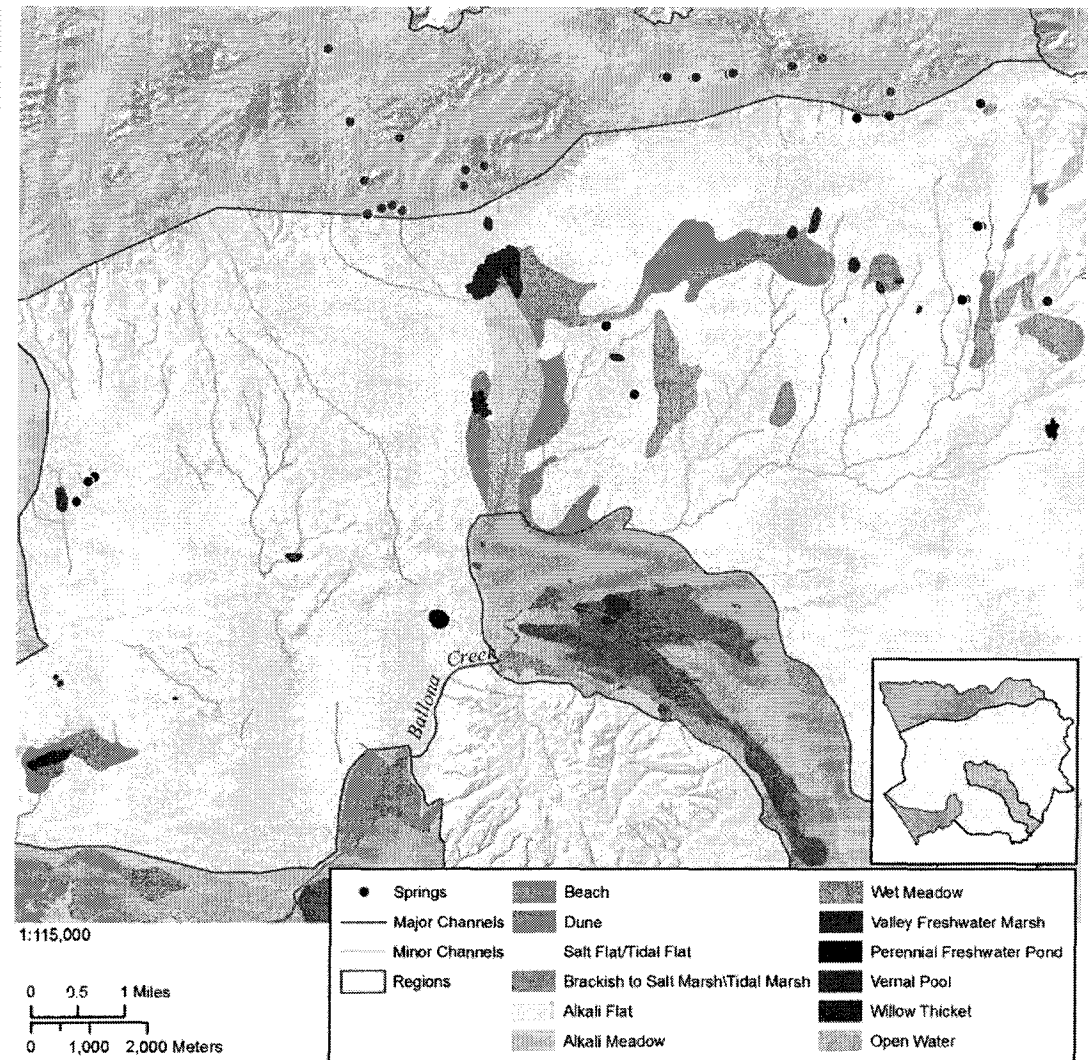
### Wetlands

Wetland habitat, excluding streams and associated riparian areas, covered five percent (5,327 acres) of the Ballona Valley region. We mapped five different types of habitat on the valley floor: valley freshwater marsh (242 acres), wet meadow (2,370 acres), alkali meadow (2,479 acres), freshwater ponds (37 acres) and vernal pools (197 acres) (TABLE 4). With just two freshwater ponds and only one lake documented in the historical record, perennial water bodies were scarce throughout the region.

On the other hand, 12 vernal pools, and a significant vernal pool complex were present, probably comparable in flora to vernal pools described for the Los Angeles Coastal Prairie immediately to the south (Mattoni and Longcore 1997). Concentrations existed in both in the southwestern and southeastern portions of the region. One vernal pool located in the southwest portion of the Valley is noteworthy due to its size (16 acres) and an abundance of supporting historical documentation both in narrative and map form (Carson 1883, Solano 1893) (FIGURE 13). This wetland feature is also shown on a Solano Reeves (1893) map which indicates a channel connecting the depression to the Ballona Lagoon.

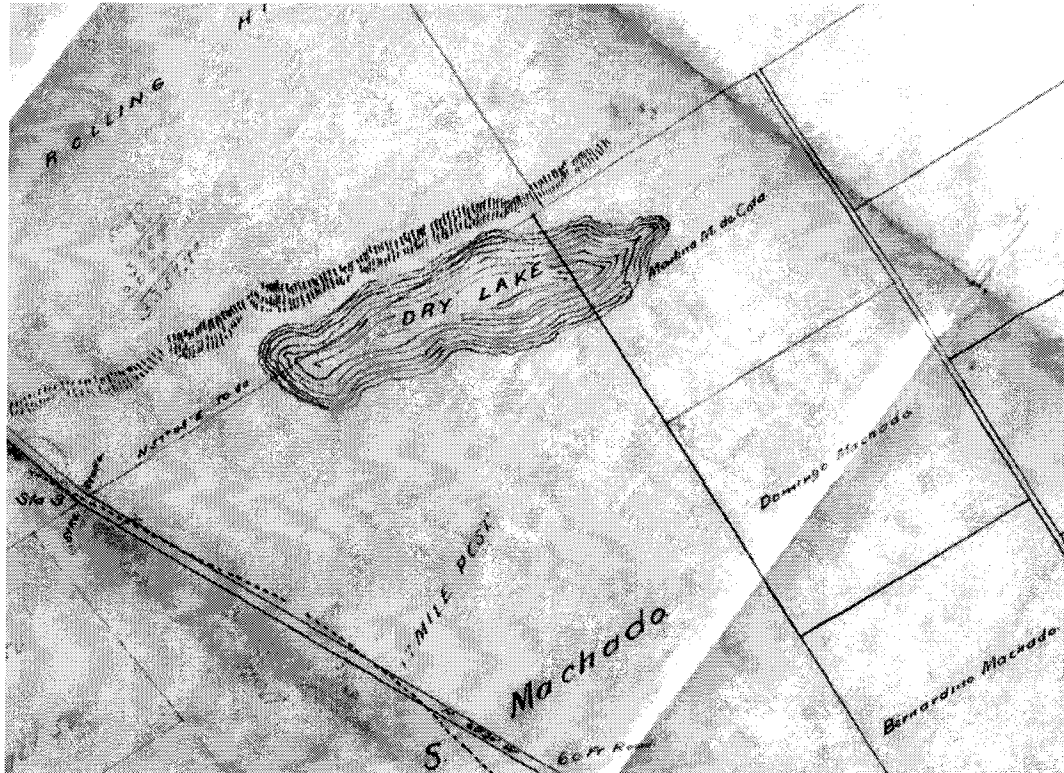
| HABITAT CLASSIFICATION    | UNIQUE WETLANDS | ACRES | HECTARES |
|---------------------------|-----------------|-------|----------|
| ALKALI MEADOW             | 1               | 2479  | 1003     |
| PERENNIAL FRESHWATER POND | 2               | 37    | 15       |
| VALLEY FRESHWATER MARSH   | 14              | 242   | 98       |
| VERNAL POOL               | 12              | 197   | 79       |
| WET MEADOW                | 14              | 2370  | 959      |
| WILLOW THICKET            | 1               | 2     | 1        |
| TOTALS                    | 46              | 5327  | 2155     |

**TABLE 4:**  
Habitat types mapped in the Ballona Valley region of the Ballona Watershed.



**FIGURE 12:** Wetlands of the Ballona Valley region.





**FIGURE 13:**  
Map (Solano 1893) showing the location of a large vernal pool adjacent to the Ballona Lagoon (Map courtesy of Huntington Library).

The central northern section of the Ballona Valley is also of special interest due to the area referred to as the “Rodeo de Las Aguas” or the “Round-up of the Waters” (Hancock 1949). In this area, streams ran down from the Santa Monica foothills and converged “each rainy season in a broad swamp or cienega” (Benedict 1934, Wilson 1959). This locale marks the northernmost extent of a band of wetland habitat that transitions into the La Cienega system to the south. Valley freshwater



**FIGURE 14:**  
Early diseño map showing the location of a spring and fresh water marsh on Rancho de las Aguas. (Map courtesy of the Bancroft Library).

marsh transitions into wet meadow, which in turn becomes a huge swath of alkali meadow. This area is depicted in detail on historical topographic maps, the Hall irrigation maps, and a diseño of this area (FIGURE 14).

The remaining wetland habitat covering the northeastern sections of the Ballona Valley contained a few pockets of valley freshwater marsh, which, in most cases, were surrounded by wet meadow, the most prevalent habitat type in the area. As Ballona Valley’s wet meadows were not clearly and frequently depicted on multiple data sources, polygons were primarily derived from the 1916 soil map offering lower levels of certainty across all categories.

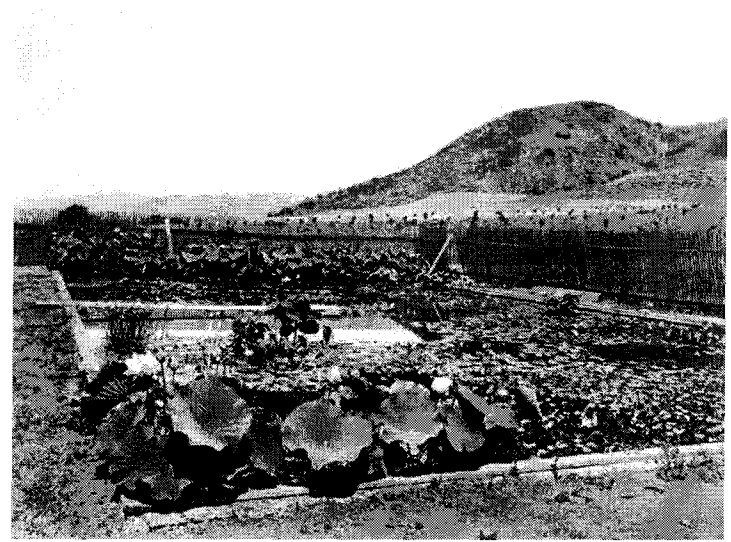
Eleven springs were mapped within the Ballona Valley region. Although most of the springs were not coincident with other wetland features, they were often in close proximity. The absence of a direct physical connection between the springs and other wetlands features

may have been due to the limitations in spatial accuracy of historical data sources, rather than the true locations of the feature themselves. These springs likely played an important role in the early settlement patterns and ranching practices of this region as most settlements were typically located near reliable water sources. FIGURE 15 shows the use of one of these springs for aquaculture (notice a man standing in the background tending to the plants).

### **Streams**

There were approximately 120 miles (193 km) of channels in the Ballona Valley region. Ballona and Centinela creeks are the only two streams consistently identified as perennial in the Ballona Watershed (Hansen 1866, CIU 1874, Hall 1888, Lee 1912, LAT 1914, Mathew 1917). These channels would have been associated with a range of facultative to obligate wetland plant species (as documented in herbaria specimens) but only our channel lines (not polygons) represent the extent of this vegetation. So although riparian and associated stream channel vegetation area is not reported separately, it would have been associated with these linear features, depending on the hydroperiod of the stream. The 1902 topographic map indicates that a few other creeks in the northeast section of Ballona Valley may be perennial, but lack of corroborating evidence limited the interpretation of these creeks' hydrology.

The only intermittent channels that continued out of the SAMO Foothills and down across the valley floor were Brown Canyon and the junction of Franklin and Coldwater Canyons (Giffin 1902, Lee 1912). The northeast section of the region also hosts a fairly continuous network of



**FIGURE 15:**  
*Photograph of a spring being used as a garden in the Ballona Valley (Photo courtesy of the Huntington Library). Note the man standing in the middle of the garden towards the back tending to the plants.*

streams that are likely dependent on groundwater presence, as are the springs, valley freshwater marsh, and wet meadow habitat present in that area (FIGURE 16).

### **Flora and Fauna**

The plant species from the Ballona Valley supported the presence of freshwater wetlands, riparian elements, and some scrub (Appendix 1). The bird species confirmed this, but with some difficulty distinguishing between the foothills and the valley from the location data provided in the historical data sets. Obligate wetland plant species included whorled

marsh pennywort (*Hydrocotyle verticillata*), water parsely (*Oenanthe samentosa*), seaside heliotrope (*Heliotropium curassavicum*), chairmaker's bulrush (*Schoenoplectus americanus*), prairie bulrush (*Scirpus maritimus*), marsh milk-vetch (*Astragalus pycnostachyus*), swollen duckweed (*Lemna gibba*), common duckweed (*Lemna minor*), floating primrose willow (*Ludwigia peploides*), curlytop knotweed (*Polygonum lapathifolium*), silver weed cinquefoil (*Potentilla anserine*), yerba mansa (*Anemopsis californica*), and seep monkeyflower (*Mimulus guttatus*) (Appendix 1).

#### LA CIENEGA

Located at the base of Baldwin Hills, the La Cienega region encompassed approximately 7,012 acres and the complexity of this region was one of the most intriguing aspects of the historical landscape given the contemporary lack of wetlands in this area (FIGURE 17). The historical extent of La Cienega was large, stretching from present day Hollywood in the north to present day Inglewood in the south; roughly 10 miles in length and up to 3 miles wide in places (Denker 1881). Of the wetlands mapped in this complex, we were highly confident in both interpretation and location certainty. We had less confidence with shape certainty, which reflects the dynamic quality of this complex. In years with high rainfall, this complex was likely large and comprised different types of wetlands (more freshwater ponds and marshes) compared to dry years which probably supported more alkali flats and meadows.

#### Wetlands

This wetland complex was dominated by alkali meadow (58%), alkali flat (16%), and valley freshwater marsh (16%; TABLE 5). The internal

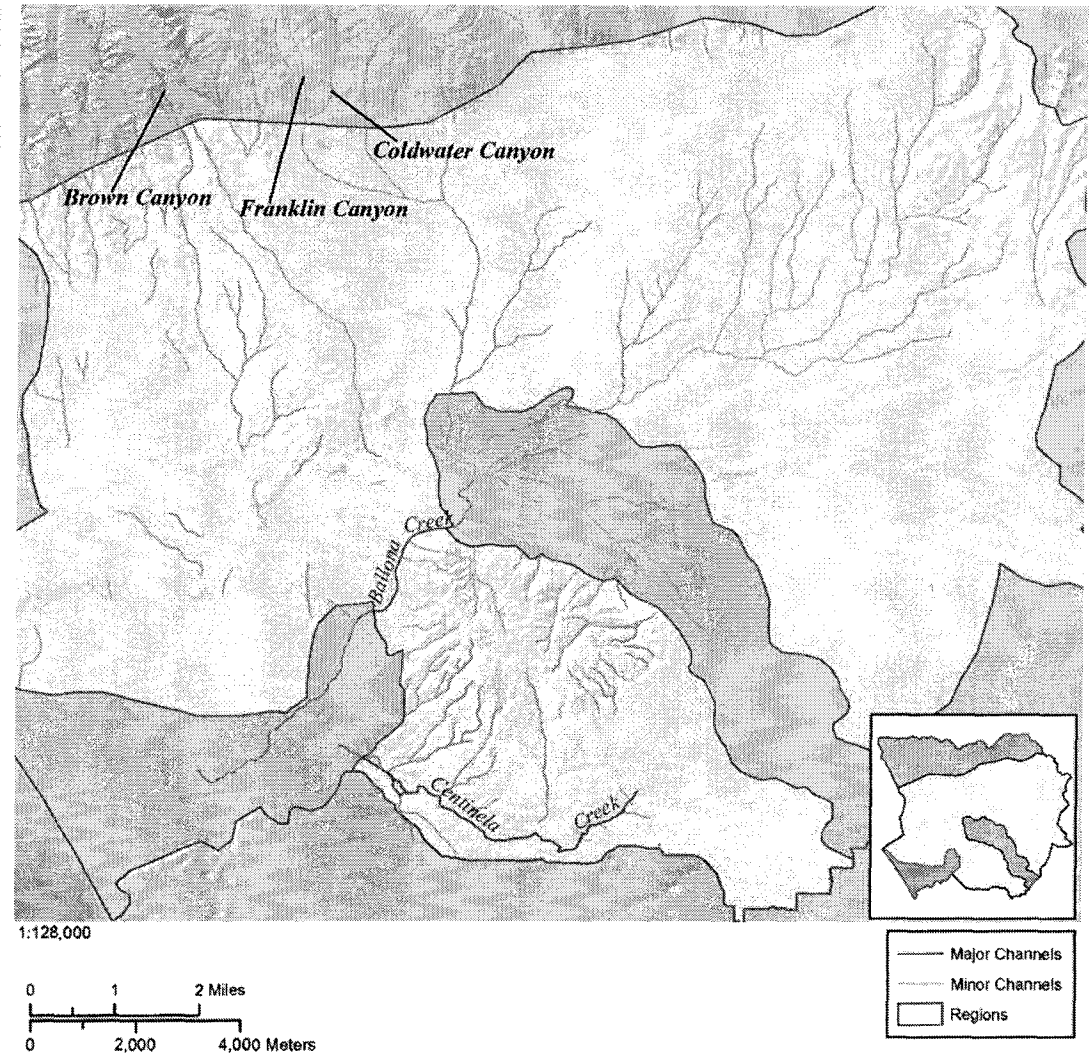


FIGURE 16: Distribution of creeks and streams in the Ballona Valley region.

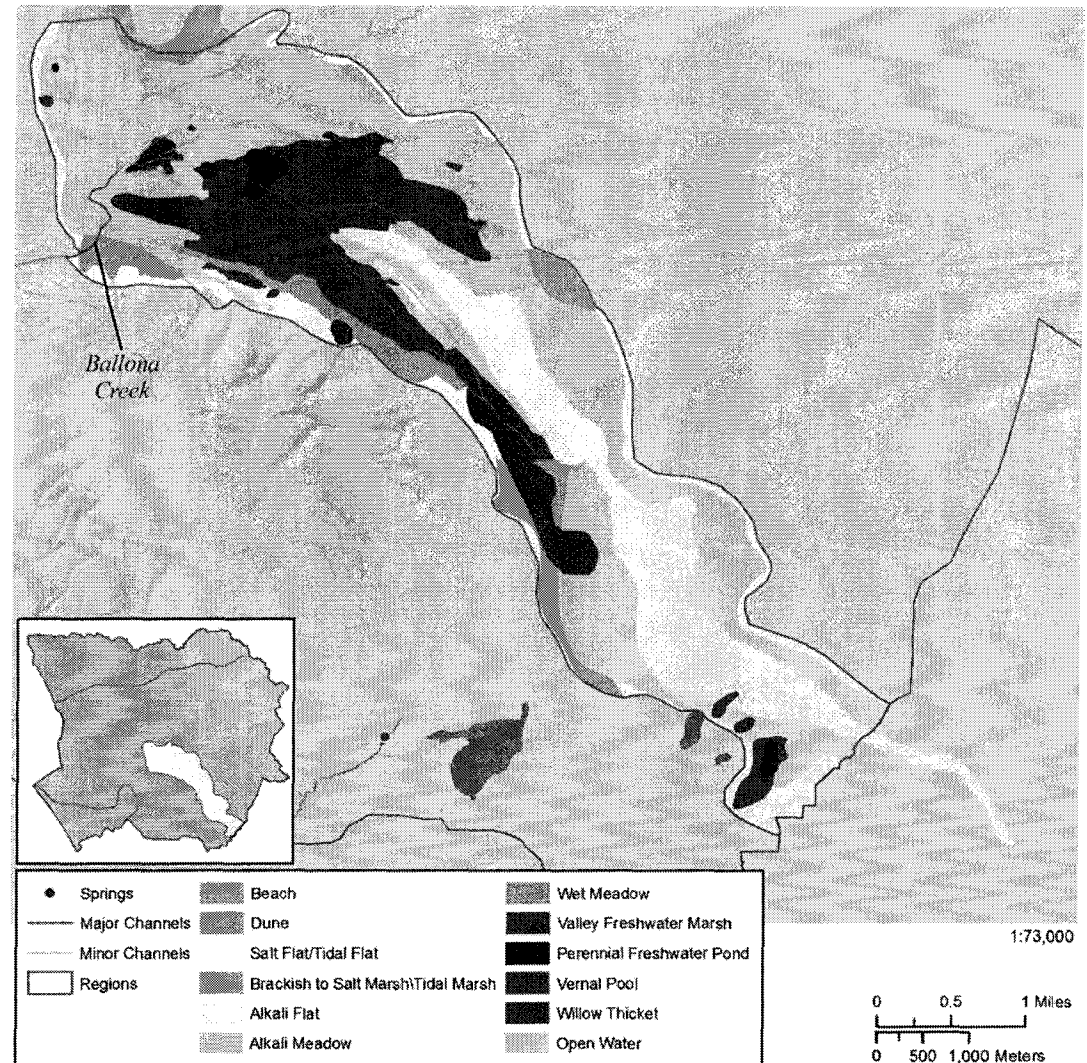
habitat was dominated by valley freshwater marsh and alkali flat, and was surrounded by vast expanses of alkali meadow with wet meadow habitat dotting the periphery of the complex (FIGURE 18, FIGURE 19). The habitat composition also included numerous willow thickets and perennial freshwater ponds (as supported by the Solano Reeves maps). The southwest region of the system is host to a vernal pool complex as indicated by Hansen court dockets (Abila 1859) and consistent with those documented immediately to the south by Mattoni and Longcore (1997).

### Streams

Approximately 18 miles (29 km) of streams and sloughs traversed the La Cienega region. We did not designate many permanent channels in this complex because data indicated that it was extremely dynamic; channels appeared to be continually changing location and even disappearing, as the greater wetland complex engulfed them during very wet seasons (Reagan 1915). An absence of any references to channel names in historical sources appears to support this theory.

| HABITAT CLASSIFICATION    | DIUTQUE WETLANDS | ACRES | HECTARES |
|---------------------------|------------------|-------|----------|
| ALKALI FLAT               | 4                | 1137  | 427      |
| ALKALI MEADOW             | 17               | 4085  | 1434     |
| PERENNIAL FRESHWATER POND | 5                | 68    | 28       |
| VALLEY FRESHWATER MARSH   | 21               | 1114  | 449      |
| VERNAL POOL               | 3                | 63    | 26       |
| WET MEADOW                | 5                | 404   | 164      |
| WILLOW THICKET            | 11               | 141   | 57       |
| TOTALS                    | 60               | 7092  | 2839     |

**TABLE 5:**  
Habitat types mapped in the La Cienega region of the Ballona Watershed.



**FIGURE 17:** Wetlands mapped within the La Cienega region. This complex extended beyond the watershed boundary.

### **Flora and Fauna**

Botanical records from La Cienega conclusively document the presence of extensive perennial and ephemeral freshwater wetlands and alkali meadows in this region (Appendix 2). Records indicated that La Cienega supported many types of sedge and rushes, and even rare species like marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*; once thought extinct) and interestingly also Braunton's milk-vetch (*Astragalus brauntonii*). The language on the herbarium records describes the region mostly as "Cienega," but sometimes also "Cienega swamp," "Culver City marshland," and "marsh at Cienega." Bird nest records from our target species included Black Phoebe ("Under bridge across from Baldwin's sloughs") and Common Yellowthroat ("Tules, in swamp").

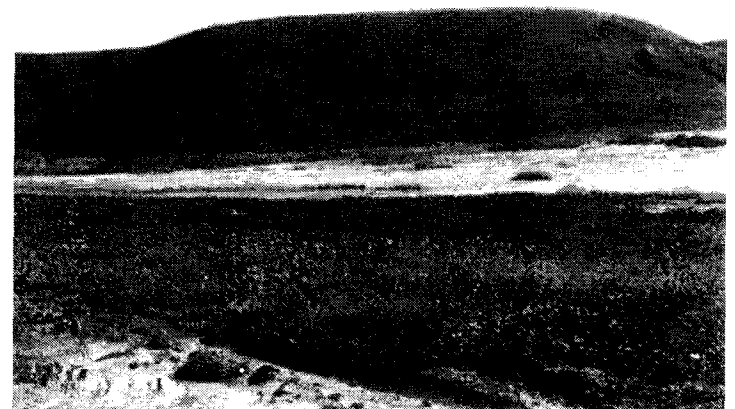
### **BALLONA LAGOON**

The Ballona Lagoon was a large (4,288 acres) and diverse system. The historical lagoon extended from the base of the bluffs to the south all the way to the intersection of Main St and Abbot Kinney to the north, and as far east as Overland Blvd. Historical narratives, such as Reagan (1917), provide strong support to suggest that the size of the greater wetland system was dynamic and heavily influenced by winter rains: "This area was called Ballona Swamp. In rainy winters Ballona Swamp extended over nearly all the low ground as far back as the present site of Culver City, then called 'The Palms,' and running over to the Inglewood Mesa, an area about ten miles square." (Chambers 1936).

This area encompassed a tremendous diversity of wetland habitat types, more so than any region within the study area (TABLE 6). This is likely due to the juxtaposition of freshwater and brackish environments



**FIGURE 18:** Hall irrigation map (1888), notice the reference to alkali land. [courtesy of California State Archives].



**FIGURE 19:** Alkali lands in the La Cienega wetland complex at the base of Baldwin Hills (photo courtesy of Los Angeles Public Library, date unknown).

and the complexity of the hydrodynamics of the system. This complexity was likely enhanced by the change in the volume of freshwater input and the assumed frequency of mouth opening associated with the re-alignment of the Los Angeles River. T-sheet analysis by Grossinger et al. (2011) focused specifically on mapping habitats as depicted by the T-sheet and did not include additional sources. As with other historical ecology studies (e.g., Beller et al. 2011), the use of additional historical data sources revealed additional information. For example, our research determined that the use of the term tidal in reference to habitat associated with the lagoon was too limiting. Our data suggests that at most times, this low energy system had only moderate or no tidal influence and was dominated by freshwater inputs from the watershed (see Jacobs et al. 2011). The textual sources indicate complete closure of the system from the ocean through substantial portions of

| HABITAT CLASSIFICATION             | UNIQUE WETLANDS | ACRES | HECTARES |
|------------------------------------|-----------------|-------|----------|
| ALKALI FLAT                        | 1               | 147   | 59       |
| ALKALI MEADOW                      | 4               | 1118  | 481      |
| BEACH                              | 2               | 159   | 64       |
| DUNE                               | 8               | 187   | 76       |
| OPEN WATER*                        | 8               | 96    | 39       |
| PERENNIAL FRESHWATER POND          | 1               | 5     | 2        |
| SALT FLAT/TIDAL FLAT               | 15              | 423   | 171      |
| BRACKISH TO SALT MARSH/TIDAL MARSH | 18              | 1239  | 498      |
| WET MEADOW                         | 5               | 562   | 228      |
| WILLOW THICKET                     | 1               | 282   | 115      |
| TOTALS                             | 63              | 4286  | 1725     |

\*DOES NOT INCLUDE PACIFIC OCEAN

**TABLE 6:**  
*Distribution of habitats associated with the Ballona Lagoon.*

the year, opening only during periods of significant rainfall (LAT 1887; see discussion in Jacobs et al. 2011). Consequently, we broadened our classification from tidal flat to salt flat/tidal flat and from tidal marsh to brackish to salt marsh/tidal marsh. In addition, we were able to map transitional estuarine–upland habitats not mapped on the T-sheet project such as the presence of willow groves and alkali flats located at the confluence Centinela Creek and the inland extent of the estuary.

### **Wetlands**

The historical mouths of both Ballona and Centinela Creeks emptied into the lagoon complex at different locations (Lee 1912); the Centinela tributary further inland into a large willow thicket, and the Ballona tributary closer to the coast into the brackish to salt/tidal marsh habitat (FIGURE 20). The 1825 migration of the Los Angeles River dramatically reduced flow into the lagoon area and the wetland distribution that developed since that time likely reflected a process of equilibration to this new flow regime. As a consequence, efforts to obtain consistent corroborating evidence for the system were difficult. The documentation that exists, aside from the USCS T-sheet (Chase 1876), often provided conflicting and broad descriptions as to the historical habitat and ecological communities in the complex. Apparent inconsistencies in the historical record may have also resulted from the dynamism inherent in coastal lagoons leading to different physical and biological conditions at different points in time. What is clear is that the system was an expansive marshy area that supported both abundant wildlife, and later on, extensive human activity such as fishing, hunting and boating (Ingersoll 1908, Adler 1969, Wittenberg 1973).



Approximately half of the aggregate Ballona Lagoon area consisted of a freshwater and tidally affected saltmarsh and brackish habitats that transitioned into a more alkaline/freshwater system about 1.5 miles (2.4 km) inland. Historical habitat of the Ballona Lagoon coastal complex consisted of substantial amounts of brackish to salt marsh/tidal marsh habitat (29%), followed by salt flat/tidal flat (10%). Open water made up less than 3 percent of the lagoon and one of the more salient features of the complex was a long but narrow strip of open water referred to by some as a “lake” at what we call today Del Rey/Ballona Lagoon (Sheridan 1887). This strip of open water periodically emptied into the ocean at the documented location of seasonal tidal access (FIGURE 22). We found no evidence that the lagoon remained perennially open, but rather the textual sources indicate that access to the ocean depended on hydraulic forces during any given year (LAT 1887, Sheridan 1887, Hansen and Jackson 1889, Solano 1893). The migration of the Los Angeles River away from the lagoon transitioned the system into a lower energy system where only on rare occasions was there enough freshwater flow from Ballona Creek to break through the buildup of sediment along the coast. As a result, gradual build up of sediment around the terminus of the previous estuary formed dunes and created this “trapped” lake-like feature. The coastal dunes, which occupied four percent of the Ballona Lagoon coastal complex, played a significant role in the formation of the lake and the limited tidal access (see Jacobs et al. 2011).

Inland areas of the Ballona Lagoon were dominated by alkali meadow, with less wet meadow. Water from Centinela Creek also flooded into this area contributing to the formation of an extensive willow thicket which covered approximately 280 acres. Diseno maps

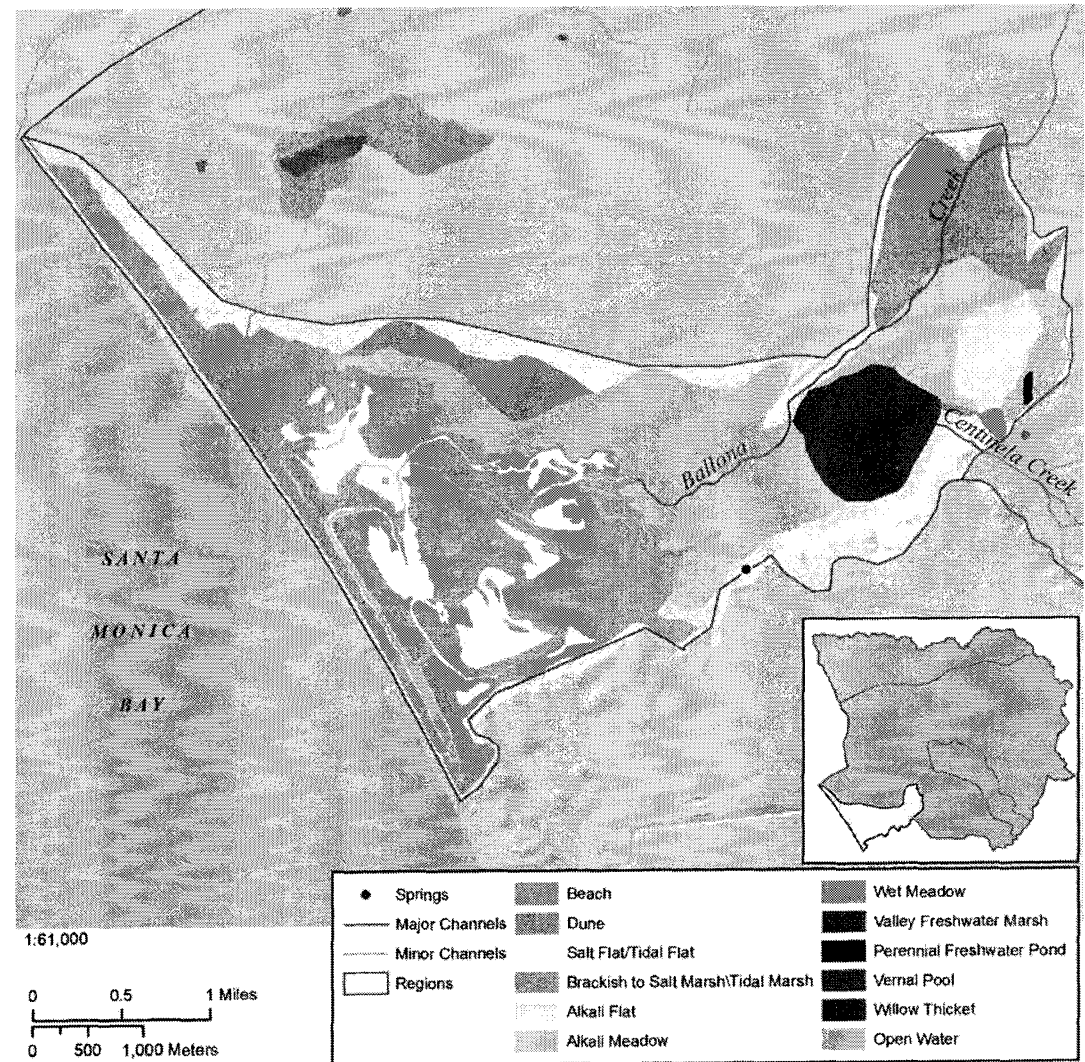


FIGURE 20: Wetlands mapped in the Ballona Lagoon region of the Ballona Watershed.



**FIGURE 21:**  
*Man boating on Ballona Lake (photo courtesy of Los Angeles Public Library, date unknown). Notice the dunes surrounding the lake.*



**FIGURE 22:**  
*Maps demonstrating the location of Ballona Lagoon (a) Chase T-sheet (1876) and b) Hall irrigation map (1887).*

(FIGURE 23) clearly depict a large willow grove or thicket, and ancillary data sources such as the 1894 topographic map and alkali soils map support the delineation and classification of this wetland habitat. Alkali flat comprises 147 acres of the inland lagoon, and a single five-acre freshwater pond sits in a small depression on the southeastern edge of the system.

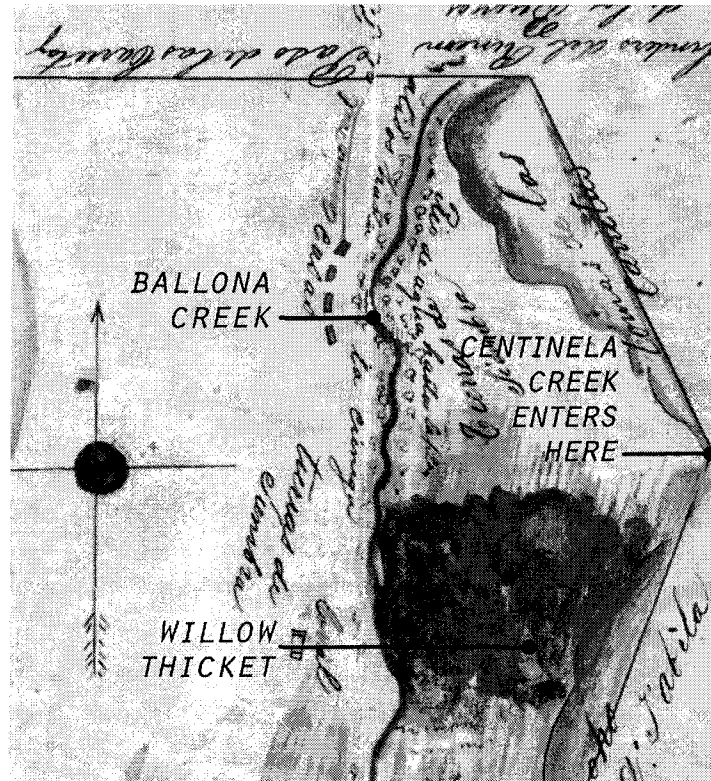
#### ***Streams and Tidal Channels***

The coastal region of the Ballona Lagoon contained extensive drainage channel networks as illustrated in the USCS T-sheet (Chase 1876). These channel networks served in part to connect salt flat/tidal flat habitat, and ultimately drain into the long “lake” described previously. Ballona and Centinela creeks were the only substantial freshwater channels to enter the upper lagoon system. Ballona Creek terminated at the head of the tidal portion of the complex. Centinela Creek entered the upper lagoon region just south of Ballona Creek.

#### ***Flora***

Herbarium records provide a picture of freshwater to brackish and some saltwater wetlands in this region (Appendix 3). Species of perennially open tidal wetlands (e.g., cordgrass) are not found in the older records. Rather, brackish, freshwater, and salt marsh species are represented in the records. All of the dune species are also recorded in this region as these habitats interweave with the wetlands. Of the riparian bird species we surveyed, Song Sparrows are recorded nesting in the tules at the Lagoon. The birds of the lagoon region and the changes in composition over time have been discussed previously by Cooper (2006).





**FIGURE 23:**  
Diseno map (circa 1860)  
demonstrating the location of a  
willow thicket at the confluence of  
Ballona and Centinela Creek (not  
shown on map). (Map courtesy of  
the Bancroft Library).

#### SANTA MONICA MOUNTAIN FOOTHILLS

Located in the northern-most section of the Ballona watershed, the Santa Monica Mountain Foothills (SAMO) are composed entirely of steep canyons (FIGURE 24). This region is dominated by approximately 97 miles of intermittent channels and 29 springs. No other wetland habitat type was documented in historical sources. According to one narrative source, “In the winter time, when the rains came the gullies ran full and overflowing from the mountain. That would only last for two or three days and then it would be gone” (Eckhardt, 1966).

One notable geographic trend is the absence of springs along the western section of the foothill region. This could be the result of local trends in geomorphic composition or displacement caused by faulting. These springs played a notable role in downstream hydrology, where in several locations freshwater wetlands formed at their confluence (particularly in Rodeos de las Aguas as discussed in the Ballona Valley regional description above). Many of these springs persist today and are unique remnant features from the historical landscape (FIGURE 25).

#### Flora and Fauna

The flora of the foothills includes the expected chaparral and coastal sage elements, but also documents the presence and diversity of the riparian habitats associated with perennial and ephemeral streams (Appendix 4). Obligate wetland species included cutleaf water-parsnip (*Berula erecta*), saltmarsh baccharis (*Baccharis douglasii*), mosquito fern (*Azolla filiculoides*), California tule (*Scirpus californicus*), basket rush (*Juncus textilis*), rigid hedge nettle (*Stachys ajugoides*), valdiva duckweed (*Lemna valdiviana*), California loosestrife (*Lythrum californicum*), willow dock

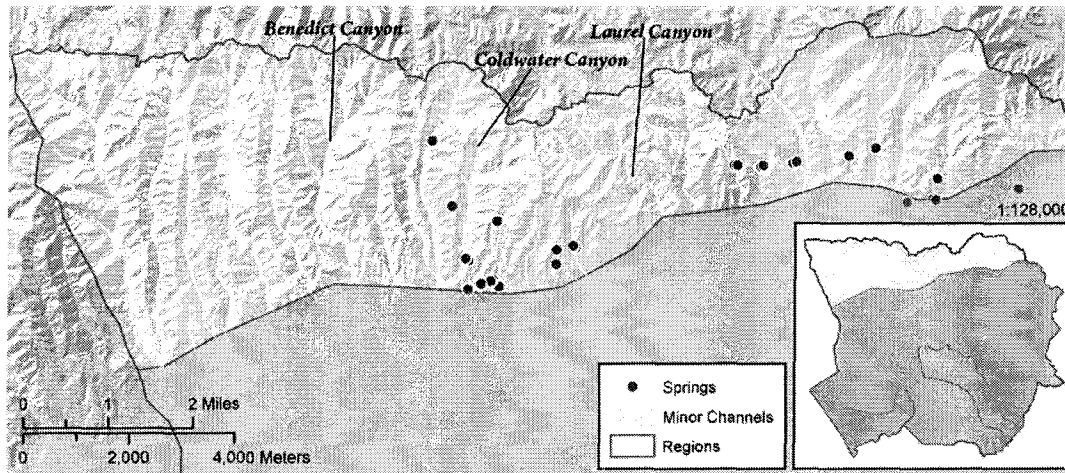


FIGURE 24:  
SAMO region showing location of springs and streams.

(*Rumex salicifolius*), sago pondweed (*Stuckenia pectinata*), and seep monkey flower (*Mimulus guttatus*). The nest and egg records showed the breeding presence of a range of riparian-associated bird species, including Black-headed Grosbeak (in willows, "grape vine," and sycamores), the now-endangered Least Bell's Vireo (in sycamores, willows, and "elder"), Yellow Warbler (in willows), House Wren (in willows), Long-tailed Chat ("blackberry vines in willow thicket," "tangle of briars"), Little flycatcher ("thicket, near stream"), and Western Wood-Pewee (in oaks).

#### BALLONA AND CENTINELA CREEKS

Ballona and Centinela creeks were the dominant fluvial features in the Ballona watershed. Both channels played major roles in the formation, development and usage of the surrounding landscape. Likewise, both channels were the primary streams supplying water to the Ballona Lagoon.

#### Ballona Creek

Although we classified Ballona Creek as a perennial channel (Hall 1888, Giffin 1902, Adler 1969), we were surprised at how relatively little other historical information was available for the most significant channel in the watershed. In retrospect, we realized that this lack of information was related to the relatively short length of the fluvial channel. Contemporary channelized Ballona Creek is a fairly long hydrologic feature, but the historical span was only 5.7 miles (9.2 km) long prior to 1900, when expansive wetlands dominated the adjacent areas. The two ends of Ballona Creek were effectively subsumed by the La Cienega and Ballona Lagoon wetland complexes and the creek provide surface hydrologic linkage between these two larger wetland complexes (FIGURE 26).

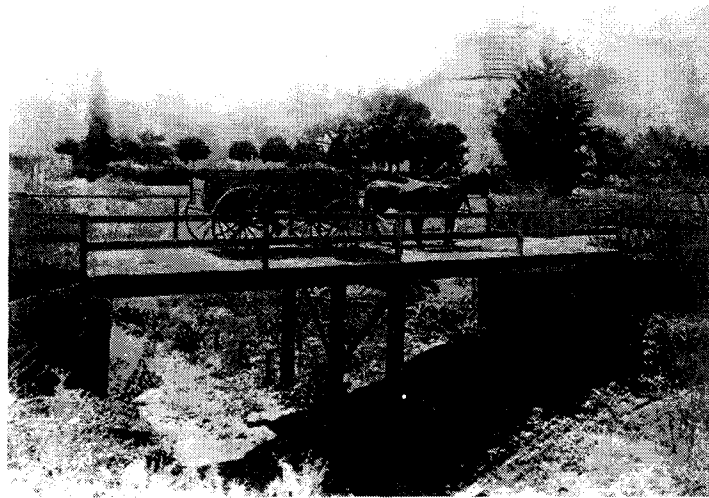


FIGURE 25:  
Bridge over Franklin Canyon, 1890  
(photo courtesy of the Seaver Collection  
at the Natural History Museum).

Several smaller drainages flowed into the La Cienega wetlands, but none appeared to be contiguous with Ballona Creek; therefore, we interpreted the origin of Ballona Creek proper to be at the outflow of the La Cienega complex.

As indicated by textual descriptions such as the one below and various map sources, the Creek's historical terminus was the Ballona wetland complex (Solano 1868, Carson 1883 Adler 1969). The contemporary location of the channel is remarkably similar but now extends substantially farther upstream and downstream than it did historically.

*"Out from the central springs of the upper belt - on the ranchos La Brea and Rodeo de las Aguas - Ballona creek gathers its upper perennial waters, leads them south against the base of the Centinela hills. Here, reinforced by a little stream from the east, draining the springs of the ranchos La Cienega and Paso de la Tijera, it turns west and southwest, parallel with the hill's footing, into the Ballona flats and the sea five to six miles away" (Hall 1888).*

Where Ballona Creek flowed independently from the surrounding wetlands, narrative accounts support the description of a clear flowing "stream" lined with sycamores, willows and tules, which, on occasion, inundated the surrounding lands during times of flooding (LAT 1906, Robinson 1942, Wittenberg 1973). Tributaries of Ballona Creek originated far to the north (potentially via the Los Angeles River), and throughout the La Cienega wetland complex (LAT 1906). As described by Hall in 1888.

### **Centinela Creek**

Centinela Creek was largely a spring fed channel just over 4.5 miles (7.2

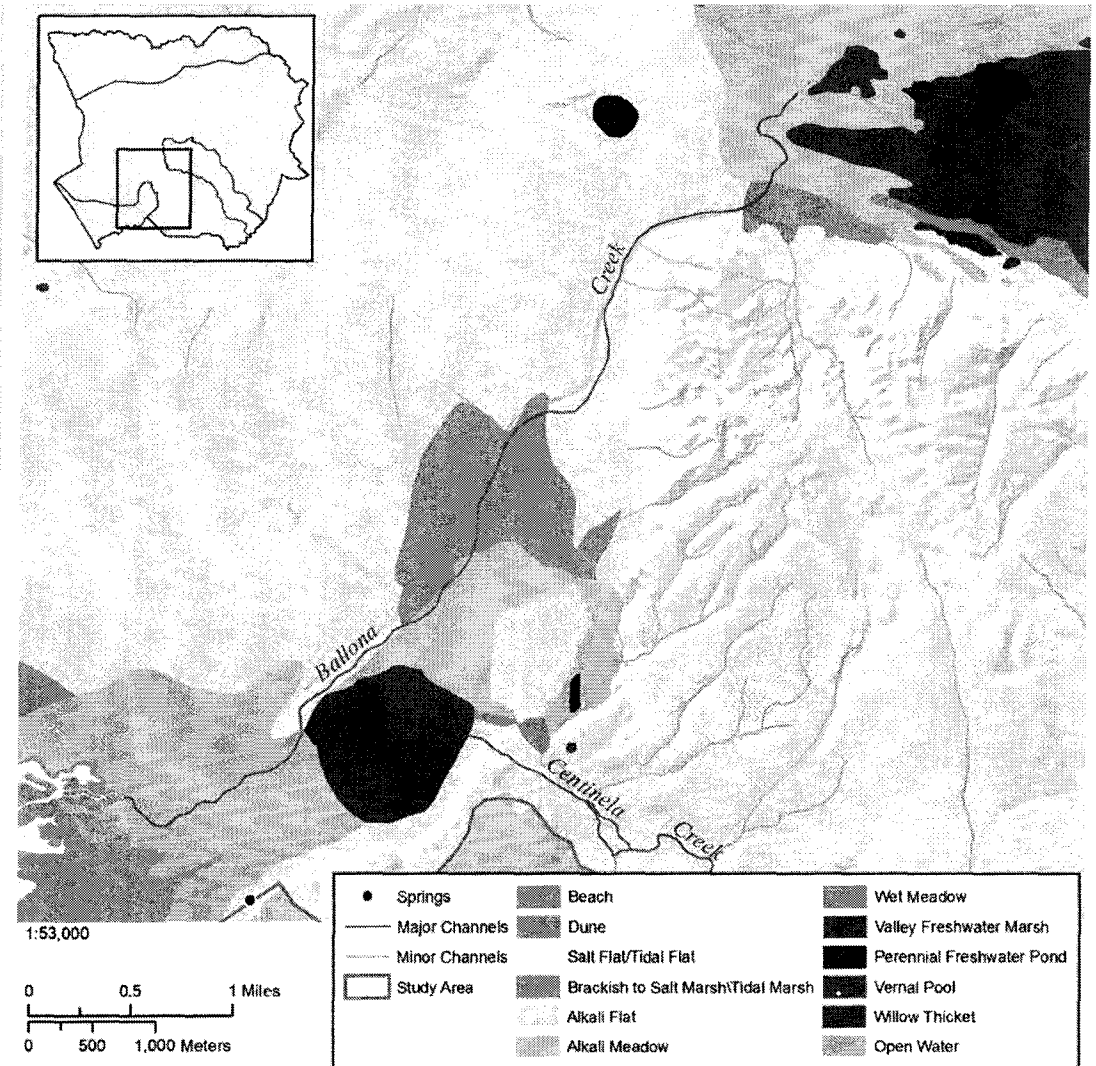


FIGURE 26: Extent of Ballona Creek.

km) long, originating at Centinela Springs (FIGURE 27) in the Inglewood area, and draining most of the lands in the surrounding region (Hansen 1867, CIU 1874). As with Ballona Creek, historical documentation was limited, and mainly focuses on the Centinela Springs and surrounding lands of Centinela rather than the Creek itself. Records indicate that the Creek was a perennial stream that provided consistent and ample flow for both domestic and agricultural uses (Hansen 1867, LAT 1873, CIU 1874). The surrounding lands and rich soils of Centinela produced a region ideal for agriculture (LAT 1873, CIU 1874). Several documents described the creek morphology, for example:

*“The bottom of the Creek from the Spring to St. 16 is from 660 to 1320 feet wide, the banks, from 20 to 30 feet high and steep from station 16*



**FIGURE 27:**  
Photograph of Centinela Springs  
(date unknown, photo courtesy of the  
Huntington Library).

*North westerly the bottom widens out and the banks are less abrupt”  
(Hansen 1867).*

Compared to the channelized, short extent of contemporary Centinela Creek, historical Centinela Creek maintained significant sinuosity as it wound its way through the lands of Centinela. Depth and volume of the historical Creek was “over 75 miner’s inches of water (3 acre feet/day)” (LAT, 1904). At its terminus, Centinela Creek emptied into the southeastern part of the Ballona Lagoon promoting the formation of a large willow thicket (Lee 1912; FIGURE 28).

#### **Flora and Fauna**

The plant records for Ballona Creek are found largely in the Lagoon category for the lower creek, frequently referred to as “Ballona Creek, near Mesmer.” Other records are from the relatively short Culver City section between the marshes of the Cienega and the start of the coastal wetland complex. The flora of Centinela Creek was classified with Inglewood because insufficient records specifically identified the creek (Appendix 5). These records also show presence of vernal pools through the presence of spreading navarretia, which is found in vernal pools and alkali grasslands, and is now federally endangered. None of the riparian bird nest records were from this region.

#### **OVERALL CONFIDENCE IN MAPPED POLYGONS**

Estimated confidence in the historical analysis was based on three factors; interpretation of data sources, wetland location, and wetland shape. Interpretation of data sources and the shape of wetlands mapped had the highest confidence classifications (FIGURE 29). This is not

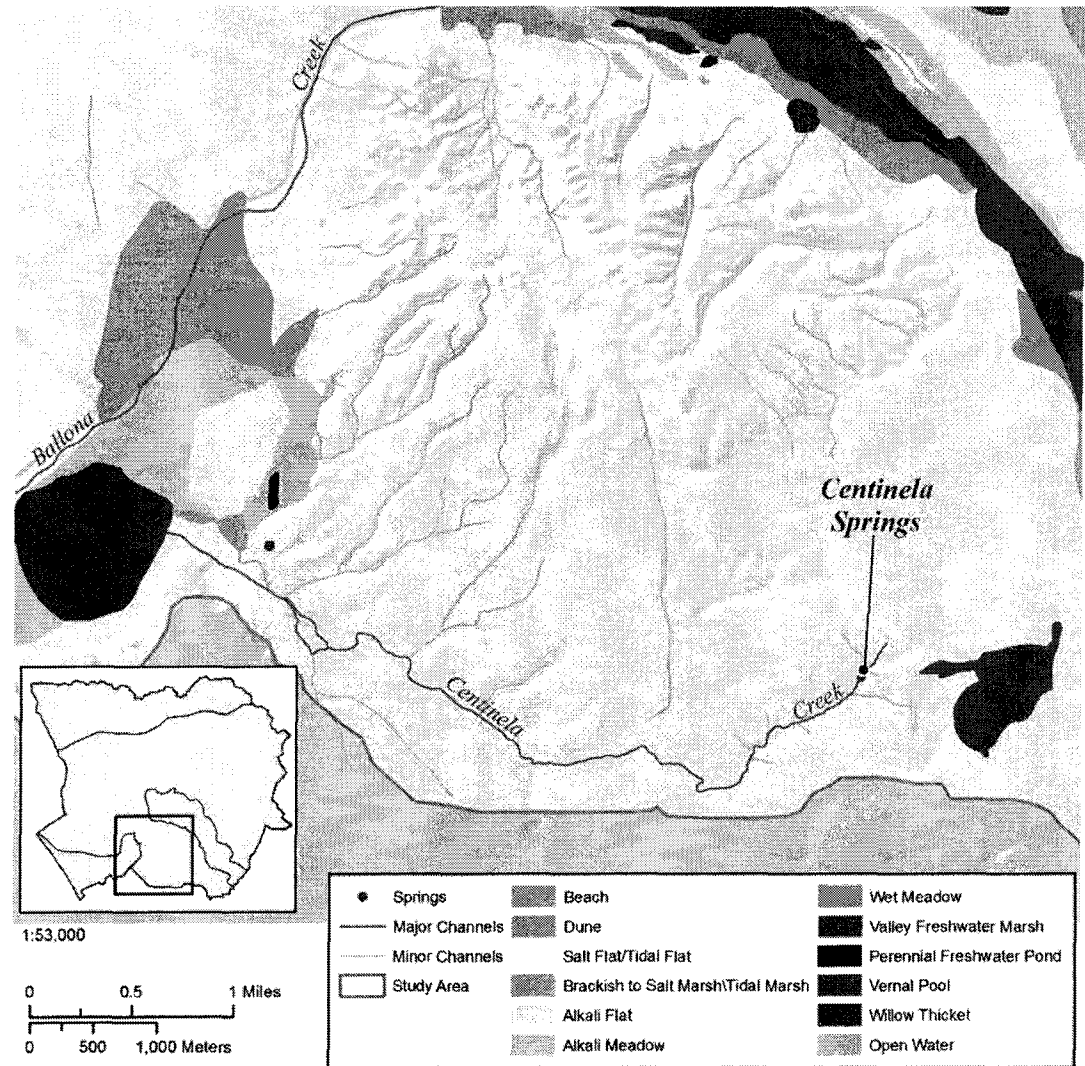
| CERTAINTY  | INTERPRETATION | SHAPE | LOCATION |
|------------|----------------|-------|----------|
| HIGH       | 9              | 3     | 6        |
| MEDIUM     | 91             | 48    | 75       |
| LOW        | 0              | 49    | 19       |
| TOTALS (%) | 100            | 100   | 100      |

**FIGURE 29:**  
Percentage of wetland area mapped in each certainty category.

surprising given the dynamic nature of wetlands in the study area. While a wetland feature may have been persistent on multiple sources it may have been much larger or smaller depending upon the amount of rainfall in any given year.

Certainty estimates based on habitat type were also analyzed. We were the most confident in our interpretation of alkali flats and valley fresh water marsh, both habitat types had certainty classifications of high for 80% of the associated polygons mapped. Salt/tidal flat had the lowest interpretation certainty given the inconsistency of the data sources for the Ballona Lagoon region with regard to tidal influence.

Habitat maps with the greatest confidence in shape and location were; alkali flats, beach, salt/tidal marsh, and salt/tidal flats. Beach, salt/tidal marsh, and salt/tidal flats were all mapped from the detailed USGS T-Sheet (Chase 1876). Given our knowledge of the detail and spatial accuracy of these maps we feel confident in the general location and shape of these features. The location and shape of vernal pools and willow thickets had the lowest confidence classification, with both receiving a classification of low in these categories for about 70% of the polygons mapped. This may reflect the dynamic nature of these habitat types. Vernal pools are heavily influenced by annual precipitation,



**FIGURE 28:** Extent of Centinela Creek.

therefore during dry years there were likely to be less data sources available documenting their location and shape with consistency. Willow thickets were only found on the early diseno and docket maps, but not present on any other maps from the late 19th century. It may be these thickets were so small they were not identified on more coarse scale maps. Also, it could be they were modified by humans early given their location relative to fresh water and the likely fertile soils they are found on.

## SUMMARY

This research outlined above demonstrates the impressive complexity and diversity that was characteristic of southern California's wetland ecosystems. The dynamism of surface waters in combination with broad shallow aquifers supported vast expanses of alkali flats, alkali meadows, wet meadows, and salt/tidal associated wetlands. Vernal pools, freshwater ponds, and willow groves were also evident, contributing to a tremendous diversity of wetland habitats and consequently large amounts of biodiversity that were historically present within the watershed.

The question remains, how do we bridge this knowledge of the historical Ballona watershed to contemporary landscape management plans? The knowledge of reference conditions often creates considerable discussion about what should be restored, how, and where. We consider this discussion to be an extremely valuable process for restoration of wetlands within this watershed. Clearly, it is unrealistic to have the expectation that systems can be restored to their natural hydrodynamics. The vast alkali meadows of the La Cienega region cannot be realistically restored in the contemporary urbanized landscape. Application of the findings of this study is largely dependent on the extent of human modification, the confidence of historical interpretations, and the intended purpose of restoration. We do not believe the results from this study drive toward one specific endpoint, but may support numerous alternatives for a particular project. In fact, the ensuing discussions about restoration and the iterative process by which further understanding is developed are a valuable outcome from this project.

## NEXT STEPS

This project provides significant insight into the historical landscape of the Ballona watershed. The development of living tools such as the metadata catalog and Ballona Historical Ecology website will hopefully encourage further historical research of wetland resources in this region. As stated at the beginning of this report, we provide a summary of the historical watershed characteristics. This report has a limited focus on the interpretation of data created. We do not interpret or analyze landscape change or discuss implications for management. Future efforts can build upon the foundation provided by this project through the exploration of key issues such as:

1. An analysis of how the ecosystem functioned over time, including factors that affected local and regional habitats. Broadening the temporal scale to include human impact would create a better understanding of the key drivers influencing changes within this unique landscape.
2. A more detailed analysis of the distribution of specific plant communities.
3. An examination of where the greatest losses occurred, both geographically and in terms of specific habitat types.
4. A linkage between our results and potential restoration options in light of current day landscape constraints.

The datasets and living tools provided on the Ballona Historical Ecology website may serve as valuable resources to initiate research in some of these areas.

A common theme running through some of the unanswered questions in this report is the lack of information about the historical

ecology of the Los Angeles River. Attempts to understand the history of the Los Angeles River have been made through a variety of mediums (Gumprecht 1999, Elrick and BOLAR 2007). However, there has been little detailed work focusing on the historical wetland habitats, hydrodynamics and associated impacts of the Los Angeles River on connected systems such as the Ballona Watershed and the San Gabriel River watershed. We believe this report offers an opportunity to understand the value and need of such research, not just within the regional landscape but also to better understand the historical ecology of wetland ecosystems throughout Southern California.

In addition to furthering our understanding of the Los Angeles River, there is also a need to better connect the historical ecological research being performed throughout southern California with contemporary landscapes. For example, creating a cross-walk between contemporary and historical habitat classifications would be immensely helpful for restoration purposes. Likewise, the identification of specific sites that could be restored and the options for restoration given the historical ecology would be immensely helpful.

This project has provided a unique opportunity to collaborate across disciplines and within groups currently involved in historical ecology efforts throughout the state of California. We were able to create living tools such as the metadata catalog and the Ballona Historical Ecology website that allow for a coordinated exchange of information in both data collection efforts and visualization of the study area. These tools set a precedent for future research and lend to further development on future projects.

## ACKNOWLEDGEMENTS

The authors gratefully acknowledge the following individuals and organizations whose cooperation and assistance has been instrumental to the success for this project. We thank the California State Library and the Huntington Library for providing access to their data in digital format. Jim Shuttleworth and Steven Lipsahie of the Los Angeles County Department of Public Works provided us with workspaces, map resources, and access to the historical aerial photo collection. Randy Price from the City of Los Angeles Mapping Division also provided us with invaluable historical map resources. We thank Kris Tasick from the CSUN Map Library who helped in the collection and scanning of historical maps and aerial photos; and David Deis from CSUN Department of Geography who provided us with the graphic design of this final report. We thank the Geographical Information Center at CSU Chico, Jason Schwenkler and Darren Inks developed the associated website for this report. This report would not have been possible without the assistance of Jessica Hall. Her hard work, expertise, and scientific input were invaluable to this report. We thank Paula Schiffman and Sean Berquist for providing peer review comments that greatly improved the quality of the document. Funding for this project was provided by the Santa Monica Bay Restoration Commission.

Additional information on historical ecology in southern California, can be obtained from [www.csun.edu/~centergs/](http://www.csun.edu/~centergs/). Digital products associated with this project can be obtained at [www.ballonahe.org](http://www.ballonahe.org).

## LITERATURE CITED

- Abila, B. 1839. Record Group 49: Records of the General Land Office, Docket 416 Aguaje de la Centinela. Courtesy of California State Library.
- Adler, P. 1969. *A History of the Venice Area*. Los Angeles: Department of City Planning. Los Angeles, CA.
- Beller, E.E., M. Salomon, R.M. Grossinger. 2010. Historical Vegetation and Drainage Patterns of Western Santa Clara Valley: A technical memorandum describing landscape ecology in Lower Peninsula, West Valley, and Guadalupe Watershed Management Areas. San Francisco Estuary Institute, No. 622.
- Beller, E.E., R.M. Grossinger, M. Salomon, S. Dark, E. Stein, B.K. Orr, P.W. Downs, T. Longcore, G. Coffman, A. Whipple, R. Askevold, B. Stanford, and J. Beagle. 2011. Historical ecology of the lower Santa Clara River, Ventura River, and Oxnard Plain: An analysis of terrestrial, riverine, and coastal habitats. San Francisco Estuary Institute, No. 641.
- Benedict, P. 1934. *History of Beverly Hills*. Special Collections, Beverly Hills Library, Beverly Hills, CA.
- California Immigrant Union (CIU). 1874. Supplement to All About California. California Immigration Union. City of Los Angeles. Los Angeles, CA.
- Carson, E. 1883. Rancho La Ballona. Descriptive notes. Huntington Library.
- Chase, A.N. 1876. West Beach to Vicinity of Santa Monica, Cal. NOAA (1:20,000).
- Chambers, W.L. 1936. The Hunter In Southern California Versus Wild Animal Life. *The Condor*, 38:199–202.
- Cooper D.S. 2006. Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California. *Bulletin of the Southern California Academy of Sciences* 105: 91–112.
- Denker, A. 1881. Hammer & Denkler Ranch (Rancho de las Aguas). Beverly Hills Historical Society.
- Dunn, J.E. and L.C. Holmes. 1917. Soil Map: Reconnaissance Soil Survey – Central Southern Area. 1:125,000. Prepared by the University of California Experiment Station, Davis, CA. Distributed by the Government Printing Office, Washington D.C. Courtesy of California State University, Northridge Map Library.
- Eckhardt, P. 1963. Field Notes: Telephone Interview with W.R. Benedict. Beverly Hills Historical Society.
- Ehrenfeld, J.G. 2000. Evaluating wetlands within an urban context. *Ecological Engineering* 15(3):253–265.
- Elrick, T. and Friends of the Los Angeles River (FOLAR). 2007. *Images of America: Los Angeles River*. Arcadia Publishing, San Francisco, CA.
- Giffin, C.E. 1902. Santa Monica Quadrangle. Map courtesy of the California State University Map Library (1:62,500).
- Grossinger, R.M. and R.A. Askevold. 2005. Historical analysis of California coastal landscapes: methods for the reliable acquisition, interpretation, and synthesis of archival data. SFEI Report No. 396. San Francisco Estuary Institute. Oakland, CA.
- Grossinger, R.M., R. Askevold, C.J. Striplen, E. Brewster, S. Pearce, K. Larned, L.J. McKee, and J.N. Collins. 2006. Coyote Creek Watershed Historical Ecology Study: Historical Conditions and Landscape Change in the Eastern Santa Clara Valley, California. San Francisco Estuary Institute, Oakland, CA.



- Grossinger, R., C. Striplen, R.A. Askevold, E. Brewster, and E.E. Beller. 2007. Historical landscape ecology of an urbanized California valley: wetlands and woodlands in the Santa Clara Valley. *Landscape Ecology* 22:103–120.
- Grossinger, R.M., E.E. Beller, M. Salomon, A. Whipple, R. Askevold, C.J. Striplen, E. Brewster, and R.A. Leidy. 2008. South Santa Clara Valley Historical Ecology Study, including Soap Lake, the Upper Pajaro River, and Llagas, Uvas-Carnadero, and Pacheco Creeks. San Francisco Estuary Institute, Oakland, CA.
- Grossinger, R., E.D. Stein, K. Cayce, R. Askevold, S. Dark, A. Whipple. 2011. Historical Wetlands of the Southern California Coast: An Atlas of US Coast Survey T-sheets, 1851–1889. Technical Report 589. Southern California Coastal Water Research Project. Costa Mesa, CA and San Francisco Estuary Institute, Oakland, CA.
- Gumprecht, B. 1999. *The Los Angeles River*. Johns Hopkins University Press. Baltimore, MA.
- Hall, W.H. 1888. Detail Irrigation Map: Santa Monica Sheet. California State Archives.
- Hancock, R. 1949. *Fabulous Boulevard*. Funk and Wagnalls, New York, New York.
- Hansen, G. 1866. Field notes of the Final Survey of Rancho de Aguaje de Centinella. Solano Reeves Collection, Huntington Library.
- Hansen, G. 1867. Field notes of the Rancho La Cienegas Confirmed to Jannariou Abila. Solano Reeves Collection, Huntington Library.
- Ingersoll, L. 1908. *Ingersoll's Century History*, Santa Monica Bay Cities. Los Angeles County, Los Angeles, CA.
- Jacobs, D.K., Stein, E.D., Longcore, T. 2011. Classification of California estuaries based on natural closure patterns: templates for restoration and management (revised). Costa Mesa, California: Southern California Coastal Water Research Project, Technical Report 619.a.
- Kentula, M.E. 2007. Monitoring wetlands at the watershed scale - Foreword. *Wetlands*, 27:412–415.
- Kershner, J.L. 1997. Setting Riparian/Aquatic Restoration Objectives Within a Watershed Context. *Restoration Ecology*, 5:14–24.
- Los Angeles Times (LAT). 1887. "The First Excursion Over the New Road." Pg I-1.
- Los Angeles Times (LAT). 1906. "Tragedy Dam in Hot Flight." Pg II-1.
- Los Angeles Times (LAT). 1914. "Concil Denies Drain Protest: Determines for Arroyo De La Brea Storm Sewer." Pg. II-12.
- Lee, C. 1912. An Intensive Study of the Water Resources of a Part of Owens Valley, CA. in Connection with the Supply of the Los Angeles Aqueduct. Water Resources Research Center Archives, U.C. Berkeley.
- Mattoni, R. and T.R. Longcore. 1997. The Los Angeles Coastal Prairie, a vanished community. *Crossosoma* 23(2):71–102.
- Mesmer, L. 1904. Soil Survey of the Los Angeles Area, California. U.S. Dept. of Agriculture, Washington D.C.
- Mathew, W.D. 1917. The Demon of the Black Pools. *Overland Monthly*, 70(1): 428–432.
- National Research Council (NRC). 2001. Compensating For Wetland Losses Under The Clean Water Act. National Academy Press, Washington D.C. 1: 62,5000. Map courtesy of the University of Alabama.
- Nelson, J.W., C.J. Zinn, A.T. Strahorn, E.B. Watson, and J.E. Dunn. 1916. Soil Survey of the Los Angeles Area. US Dept. of Agriculture, Washington D.C.
- Reagan, J.W. 1917. Los Angeles County Flood Control District (filed w/Board of Supervisors 1/2/1917), Citizen Print Shop, Los Angeles, CA. Courtesy of Huntington Library Rare Book Collection.
- Robinson, W.W. 1942. *Beverly Hills: A Calendar in the Events of the Making of a City*. Title Guarantee and Trust Company. Seaver Center for Western Historical Research.
- Schiffman, P. 2005. The Los Angeles Prairie. pp. 38–52 in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles*. Eds. W. Deverell and G. Hise. Pittsburgh: University of Pittsburgh Press, Pittsburg, PA.
- Sheridan, S. N. 1887. The Lake and the Harbor of La Ballona. *Overland Monthly*, 9(53): 467–470.
- Solano, A. 1868. Map of Those Parts of the Rancho La Ballona. Solano Reeves Collection, Huntington Library.
- Solano, A. 1893. Report of Comissioner in Partition: In the Matter of the Estate of Ramona S. De Machado. Solano Reeves Collection, Huntington Library.
- Stein, E.D., S. Dark, T. Longcore, N. Hall, M. Beland, R. Grossinger, J. Casanova, and M. Sutula. 2007. Historical Ecology and Landscape Change of the San Gabriel River and Floodplain. SCCWRP Technical Report #499.
- Stein, E.D., S. Dark, T. Longcore, R. Grossinger, N. Hall, and M. Beland. 2010. Historical ecology as a tool for assessing landscape change and informing wetland restoration priorities. *Wetlands* 30:589–601.
- United States Engineers Office (USEO). 1939. Los Angeles County Drainage Area Flood Control 1872–1936. Source: CSULB, California Water Resources Institute.
- Wilson, J.A. 1959. *Thompson & West's History of Los Angeles County*, CA. Howell-North, Berkeley, CA.
- White, D., & Fennessy, S. 2005. Modeling the suitability of wetland restoration potential at the watershed scale. *Ecological Engineering*, 24:359–377.
- Wittenberg, M. 1973. *The Machados and Rancho La Ballona*. Dawson Book Shop. Los Angeles, CA.
- Zedler, J. B. and M. Leach. 1998. Managing urban wetlands for multiple use: research, restoration, and recreation. *Urban Ecosystems* 2:189–204.

# APPENDIX 1.

## PLANT SPECIES RECORDED IN THE BALLONA VALLEY REGION

| FAMILY     | SPECIES                                               | COMMON NAME               | WETLAND |
|------------|-------------------------------------------------------|---------------------------|---------|
| Apiaceae   | <i>Hydrocotyle verticillata</i>                       | whorled marsh pennywort   | OBL     |
| Apiaceae   | <i>Oenanthe sarmentosa</i>                            | water parsley             | OBL     |
| Apiaceae   | <i>Tauschia arguta</i>                                | southern umbrellawort     |         |
| Asteraceae | <i>Ambrosia acanthicarpa</i>                          | annual bursage            |         |
| Asteraceae | <i>Ambrosia psilostachya</i>                          | western ragweed           | FAC     |
| Asteraceae | <i>Ambrosia psilostachya</i> var. <i>californica</i>  | western ragweed           | FAC     |
| Asteraceae | <i>Chrysothamnus nauseosus</i>                        |                           |         |
| Asteraceae | <i>Conyza canadensis</i>                              | Canada horseweed          | FAC     |
| Asteraceae | <i>Corethrogyne filaginifolia</i>                     | common sandaster          |         |
| Asteraceae | <i>Corethrogyne filaginifolia</i> var. <i>virgata</i> | common sandaster          |         |
| Asteraceae | <i>Deinandra fasciculata</i>                          | common tarweed            |         |
| Asteraceae | <i>Erigeron foliosus</i>                              | leafy fleabane            |         |
| Asteraceae | <i>Gnaphalium leucocephalum</i>                       | white-headed cudweed      |         |
| Asteraceae | <i>Gnaphalium stramineum</i>                          | Small-flowered cudweed    |         |
| Asteraceae | <i>Grindelia camporum</i>                             | Great Valley gumweed      |         |
| Asteraceae | <i>Grindelia hirsutula</i>                            | hairy gumweed             | FACW    |
| Asteraceae | <i>Helianthus annuus</i>                              | common sunflower          | FAC     |
| Asteraceae | <i>Helianthus annuus</i> subsp. <i>lenticularis</i>   | common sunflower          | FAC     |
| Asteraceae | <i>Hemizonia australis</i>                            | Asteraceae                |         |
| Asteraceae | <i>Heterotheca grandiflora</i>                        | telegraphweed             |         |
| Asteraceae | <i>Isocoma menziesii</i> var. <i>vernonioides</i>     | white-flowered goldenbush | FAC     |
| Asteraceae | <i>Lasthenia californica</i>                          | California goldfields     | FACW    |
| Asteraceae | <i>Lasthenia glabrata</i> subsp. <i>coulteri</i>      | yellowray goldfields      | FACW    |
| Asteraceae | <i>Layia glandulosa</i>                               | White tidy-tips           |         |
| Asteraceae | <i>Lepidospartum squamatum</i>                        | scalebroom                |         |
| Asteraceae | <i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>   | cliff aster               |         |

| FAMILY          | SPECIES                                                 | COMMON NAME               | WETLAND |
|-----------------|---------------------------------------------------------|---------------------------|---------|
| Asteraceae      | <i>Pseudognaphalium leucocephalum</i>                   | white headed cudweed      |         |
| Asteraceae      | <i>Pseudognaphalium microcephalum</i>                   |                           |         |
| Asteraceae      | <i>Senecio californicus</i>                             | California Butterweed     |         |
| Asteraceae      | <i>Senecio flaccidus</i> var. <i>douglasii</i>          | Douglas' shrubby ragwort  |         |
| Asteraceae      | <i>Stephanomeria exigua</i> subsp. <i>coronaria</i>     | milk aster                |         |
| Asteraceae      | <i>Uropappus lindleyi</i>                               | silver puffs              |         |
| Asteraceae      | <i>Xanthium spinosum</i>                                | spiny cocklebur           | FAC     |
| Boraginaceae    | <i>Amsinckia intermedia</i>                             | Eastwood's fiddleneck     |         |
| Boraginaceae    | <i>Cryptantha muricata</i>                              | prickly cryptantha        |         |
| Boraginaceae    | <i>Heliotropium curassavicum</i> var. <i>oculatum</i>   | seaside heliotrope        | OBL     |
| Boraginaceae    | <i>Plagiobothrys nothofulvus</i>                        | rusty popcornflower       | FAC     |
| Brassicaceae    | <i>Erysimum capitatum</i>                               | western wallflower        |         |
| Brassicaceae    | <i>Lepidium oblongum</i>                                | Wayside peppergrass       |         |
| Brassicaceae    | <i>Lepidium strictum</i>                                | prostrate pepper grass    |         |
| Cactaceae       | <i>Opuntia oricola</i>                                  | chaparral pricklypear     |         |
| Caryophyllaceae | <i>Silene laciniata</i> subsp. <i>major</i>             | Indian pink               |         |
| Chenopodiaceae  | <i>Atriplex serenana</i>                                | saltscale                 | FAC     |
| Chenopodiaceae  | <i>Suaeda calceoliformis</i>                            | Pursh seepweed            | FACW+   |
| Chenopodiaceae  | <i>Suaeda moquinii</i>                                  | bush seepweed             | FAC     |
| Cistaceae       | <i>Helianthemum scoparium</i> var. <i>vulgare</i>       | common sun-rose           |         |
| Convolvulaceae  | <i>Calystegia macrostegia</i> subsp. <i>cyclostegia</i> | south coast morning-glory |         |
| Convolvulaceae  | <i>Cressa truxillensis</i>                              | spreading alkaliweed      | FACW    |
| Cupressaceae    | <i>Calocedrus decurrens</i>                             | incense cedar             |         |
| Cuscutaceae     | <i>Cuscuta campestris</i>                               | field dodder              |         |
| Cyperaceae      | <i>Carex praegracilis</i>                               | clustered field sedge     | FACW-   |
| Cyperaceae      | <i>Cyperus eragrostis</i>                               | tall flatsedge            | FACW    |

| FAMILY          | SPECIES                                                  | COMMON NAME                  | WETLAND |
|-----------------|----------------------------------------------------------|------------------------------|---------|
| Cyperaceae      | <i>Cyperus esculentus</i>                                | Yellow nutgrass              | FACW    |
| Cyperaceae      | <i>Schoenoplectus americanus</i>                         | chairmaker's bulrush         | OBL     |
| Cyperaceae      | <i>Scirpus maritimus</i>                                 | prairie bulrush              | OBL     |
| Euphorbiaceae   | <i>Chamaesyce albomarginata</i>                          | rattlesnake weed             |         |
| Euphorbiaceae   | <i>Croton californicus</i>                               | California croton            |         |
| Fabaceae        | <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> | marsh milk-vetch             | OBL     |
| Fabaceae        | <i>Astragalus trichopodus</i> var. <i>lonchus</i>        | Santa Barbara milk-vetch     |         |
| Fabaceae        | <i>Lathyrus vestitus</i> subsp. <i>laetiflorus</i>       | wild sweetpea                |         |
| Fabaceae        | <i>Lotus unifoliolatus</i>                               | American bird's foot trefoil |         |
| Fabaceae        | <i>Lupinus excubitus</i> var. <i>hallii</i>              | Hall's bush lupine           |         |
| Fabaceae        | <i>Lupinus longifolius</i>                               | long leaf bush lupine        |         |
| Fabaceae        | <i>Pickeringia montana</i>                               | chaparral pea                |         |
| Fabaceae        | <i>Trifolium ciliolatum</i>                              | foothill clover              |         |
| Fabaceae        | <i>Trifolium obtusiflorum</i>                            | creek clover                 | FAC     |
| Grossulariaceae | <i>Ribes aureum</i> var. <i>gracillimum</i>              | golden currant               | FACW    |
| Hydrophyllaceae | <i>Nemophila menziesii</i>                               | baby blue eyes               |         |
| Hydrophyllaceae | <i>Phacelia distans</i>                                  | common phacelia              |         |
| Hydrophyllaceae | <i>Phacelia minor</i>                                    | California bluebell          |         |
| Iridaceae       | <i>Sisyrinchium bellum</i>                               | blue-eyed grass              | FAC     |
| Juncaceae       | <i>Juncus ambiguus</i>                                   | saline toad rush             | FACW    |
| Lamiaceae       | <i>Stachys ajugoides</i> var. <i>rigida</i>              | rigid hedge nettle           |         |
| Lemnaceae       | <i>Lemna gibba</i>                                       | swollen duckweed             | OBL     |
| Lemnaceae       | <i>Lemna minor</i>                                       | common duckweed              | OBL     |
| Liliaceae       | <i>Bloomeria crocea</i> var. <i>crocea</i>               | common goldenstar            |         |
| Loasaceae       | <i>Mentzelia affinis</i>                                 | yellow blazing star          |         |
| Myricaceae      | <i>Morella californica</i>                               | Myricaceae                   | FAC     |

| FAMILY         | SPECIES                                                      | COMMON NAME              | WETLAND |
|----------------|--------------------------------------------------------------|--------------------------|---------|
| Nyctaginaceae  | <i>Abronia umbellata</i>                                     | purple sand verbena      |         |
| Onagraceae     | <i>Camissonia cheiranthifolia</i> subsp. <i>suffruticosa</i> | beach evening-primrose   |         |
| Onagraceae     | <i>Epilobium canum</i> subsp. <i>canum</i>                   | California fuchsia       |         |
| Onagraceae     | <i>Ludwigia peploides</i> subsp. <i>peploides</i>            | floating primrose willow | OBL     |
| Papaveraceae   | <i>Platystemon californicus</i>                              | cream cups               |         |
| Papaveraceae   | <i>Romneya coulteri</i>                                      | Coulter's matilija poppy | RARE    |
| Plantaginaceae | <i>Plantago erecta</i>                                       | California plantain      |         |
| Platanaceae    | <i>Platanus racemosa</i>                                     | western sycamore         | FACW    |
| Poaceae        | <i>Bromus grandis</i>                                        | tall brome               |         |
| Poaceae        | <i>Elymus condensatus</i>                                    | giant wild rye           | FACU    |
| Poaceae        | <i>Elymus triticoides</i>                                    | alkali rye               | FAC     |
| Poaceae        | <i>Eragrostis pectinacea</i>                                 | tufted lovegrass         | FAC     |
| Poaceae        | <i>Eragrostis pectinacea</i> var. <i>pectinacea</i>          | tufted lovegrass         | FAC     |
| Poaceae        | <i>Leptochloa panicea</i> ssp. <i>brachiata</i>              | mucronate sprangletop    |         |
| Poaceae        | <i>Leptochloa uninervia</i>                                  | Mexican sprangletop      | FACW    |
| Poaceae        | <i>Leymus triticoides</i>                                    | beardless wildrye        | FAC     |
| Poaceae        | <i>Nassella cernua</i>                                       | nodding needlegrass      |         |
| Poaceae        | <i>Nassella pulchra</i>                                      | purple needlegrass       |         |
| Poaceae        | <i>Phalaris lemmonii</i>                                     | Lemmon's canarygrass     | FACW-   |
| Poaceae        | <i>Phalaris minor</i>                                        | littleseed canarygrass   |         |
| Polygonaceae   | <i>Polygonum lapathifolium</i>                               | curlytop knotweed        | OBL     |
| portulacaceae  | <i>Calandrinia ciliata</i>                                   | red maids                | FACU    |
| Primulaceae    | <i>Dodecatheon clevelandii</i>                               | padre's shootingstar     |         |
| Rosaceae       | <i>Potentilla anserina</i>                                   | silver weed cinquefoil   | OBL     |
| Rosaceae       | <i>Potentilla glandulosa</i>                                 | Common cinquefoil        | FAC     |
| Salicaceae     | <i>Salix lasiolepis</i>                                      | arroyo willow            | FACW    |

| FAMILY           | SPECIES                                              | COMMON NAME                 | WETLAND |
|------------------|------------------------------------------------------|-----------------------------|---------|
| Saururaceae      | <i>Anemopsis californica</i>                         | yerba mansa                 | OBL     |
| Scrophulariaceae | <i>Castilleja exserta</i>                            | purple owl's clover         |         |
| Scrophulariaceae | <i>Kochia scoparia</i>                               | climbing penstemon          |         |
| Scrophulariaceae | <i>Linaria canadensis</i> var. <i>texana</i>         | rough seeded blue toad flax |         |
| Scrophulariaceae | <i>Mimulus guttatus</i>                              | seep monkeyflower           | OBL     |
| solanaceae       | <i>Datura wrightii</i>                               | Jimson weed                 |         |
| Ulmaceae         | <i>Celtis laevigata</i>                              | western hackberry           |         |
| Urticaceae       | <i>Hesperocnide tenella</i>                          | western stinging nettle     |         |
| Verbenaceae      | <i>Verbena lasiostachys</i> var. <i>lasiostachys</i> | Common verbena              | FAC     |

# APPENDIX 2.

## FLORA OF THE LA CIENEGA REGION AS DOCUMENTED IN HERBARIUM SPECIMENS

| FAMILY         | SPECIES                                                                 | COMMON NAME               | WETLAND |
|----------------|-------------------------------------------------------------------------|---------------------------|---------|
| Apiaceae       | <i>Oenanthe sarmentosa</i>                                              | water parsley             | OBL     |
| Asclepiadaceae | <i>Asclepias fascicularis</i>                                           | narrow leaf milkweed      | FAC     |
| Asteraceae     | <i>Ambrosia acanthicarpa</i>                                            | annual bursage            |         |
| Asteraceae     | <i>Baccharis douglasii</i>                                              | saltmarsh baccharis       | OBL     |
| Asteraceae     | <i>Helianthus nuttallii</i> subsp. <i>parishii</i>                      | Los Angeles sunflower     | FACW    |
| Asteraceae     | <i>Hemizonia australis</i>                                              | Asteraceae                |         |
| Asteraceae     | <i>Isocoma menziesii</i> var. <i>menziesii</i>                          | white-flowered goldenbush | FAC     |
| Asteraceae     | <i>Pluchea odorata</i>                                                  | salt marsh fleabane       |         |
| Asteraceae     | <i>Pseudognaphalium stramineum</i>                                      | Small flowered cudweed    | FAC     |
| Asteraceae     | <i>Symphytotrichum defoliatum</i>                                       | San Bernardino aster      |         |
| Asteraceae     | <i>S. lanceolatum</i> var. <i>hesperium</i> [= <i>Aster hesperius</i> ] |                           |         |
| Asteraceae     | <i>Xanthium spinosum</i>                                                | spiny cocklebur           | FAC     |
| Brassicaceae   | <i>Hutchinsia procumbens</i>                                            | prostrate hutchinsia      | FAC     |
| Brassicaceae   | <i>Nasturtium gambelii</i>                                              | Gambel's yellowcress      | OBL     |
| Chenopodiaceae | <i>Atriplex argentea</i> var. <i>mohavensis</i>                         | mohave saltbush           | FAC     |
| Chenopodiaceae | <i>Atriplex serenana</i> var. <i>davidsonii</i>                         | saltscale                 | FAC     |
| Chenopodiaceae | <i>Atriplex triangularis</i>                                            | spear leaved saltbrush    |         |
| Chenopodiaceae | <i>Salicornia virginica</i>                                             | pickleweed                | OBL     |
| Chenopodiaceae | <i>Suaeda moquinii</i>                                                  | bush seepweed             | FAC     |
| Cornaceae      | <i>Cornus californica</i>                                               | Creek Dogwood             | FACW    |
| Cornaceae      | <i>Cornus occidentalis</i>                                              | Creek Dogwood             | FACW    |
| Cyperaceae     | <i>Carex barbarae</i>                                                   | Santa Barbara sedge       | FACW    |
| Cyperaceae     | <i>Carex praegracilis</i>                                               | clustered field sedge     | FACW    |
| Cyperaceae     | <i>Carex schottii</i>                                                   | Schott's sedge            | OBL     |
| Cyperaceae     | <i>Cyperus esculentus</i>                                               | Yellow nutgrass           | FACW    |
| Cyperaceae     | <i>Cyperus niger</i> var. <i>capitatus</i>                              | black flatsedge           | FACW    |

| FAMILY        | SPECIES                                                  | COMMON NAME              | WETLAND |
|---------------|----------------------------------------------------------|--------------------------|---------|
| Cyperaceae    | <i>Scirpus californicus</i>                              | California tule          | OBL     |
| Euphorbiaceae | <i>Chamaesyce serpens</i>                                | creeping spurge          | FAC     |
| Euphorbiaceae | <i>Euphorbia serpens</i>                                 | creeping spurge          | FAC     |
| Fabaceae      | <i>Astragalus brauntonii</i>                             | Braunton's milk vetch    |         |
| Fabaceae      | <i>Astragalus funereus</i>                               | black milk vetch         |         |
| Fabaceae      | <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> | marsh milk-vetch         | OBL     |
| Fabaceae      | <i>Lotus purshianus</i> var. <i>purshianus</i>           | Spanish clover           |         |
| Juncaceae     | <i>Juncus mexicanus</i>                                  | mexican rush             | FACW    |
| Juncaceae     | <i>Juncus phaeocephalus</i>                              | brownhead rush           | FACW    |
| Lamiaceae     | <i>Stachys albens</i>                                    | whitestem hedgenettle    | OBL     |
| Liliaceae     | <i>Bloomeria crocea</i> var. <i>crocea</i>               | common goldenstar        |         |
| Onagraceae    | <i>Epilobium ciliatum</i>                                | fringed willowherb       | FACW    |
| Onagraceae    | <i>Epilobium ciliatum</i> subsp. <i>ciliatum</i>         | fringed willowherb       | FACW    |
| Onagraceae    | <i>Ludwigia peploides</i> subsp. <i>peploides</i>        | floating primrose willow | OBL     |
| Poaceae       | <i>Setaria parviflora</i>                                | marsh bristleglass       |         |
| Polygonaceae  | <i>Polygonum punctatum</i>                               | Common water smartweed   | OBL     |
| Rosaceae      | <i>Potentilla anserina</i> var. <i>grandis</i>           | silver-weed cinquefoil   | OBL     |
| Rubiaceae     | <i>Galium trifidum</i> var. <i>pacificum</i>             | Pacific Bedstraw         | FACW    |
| Typhaceae     | <i>Sparganium erectum</i> subsp. <i>stoloniferum</i>     | simplestem bur-reed      | OBL     |



# APPENDIX 3.

## PLANT SPECIES RECORDED AT BALLONA LAGOON FROM HERBARIUM RECORDS

| FAMILY         | SPECIES                                          | COMMON NAME             | WETLAND |
|----------------|--------------------------------------------------|-------------------------|---------|
| Aizoaceae      | <i>Sesuvium verrucosum</i>                       | western sea-purslane    |         |
| Alismataceae   | <i>Sagittaria montevidensis ssp. calycina</i>    | hooded arrowhead        | OBL     |
| Amaranthaceae  | <i>Amaranthus blitoides</i>                      | mat amaranth            | FACW    |
| Anacardiaceae  | <i>Malosma laurina</i>                           | laurel sumac            |         |
| Anacardiaceae  | <i>Rhus ovata</i>                                | sugar bush              |         |
| Apiaceae       | <i>Bowlesia incana</i>                           | hoary bowlesia          | FACW    |
| Apiaceae       | <i>Hydrocotyle verticillata</i>                  | whorled marsh pennywort | OBL     |
| Apiaceae       | <i>Oenanthe sarmentosa</i>                       | water parsley           | OBL     |
| Asclepiadaceae | <i>Asclepias fascicularis</i>                    | narrow leaf milkweed    | FAC     |
| Asteraceae     | <i>Amblyopappus pusillus</i>                     | dwarf coastweed         | FACW    |
| Asteraceae     | <i>Ambrosia acanthicarpa</i>                     | annual bursage          |         |
| Asteraceae     | <i>Ambrosia chamissonis</i>                      | Silver Beachweed        |         |
| Asteraceae     | <i>Ambrosia chamissonis var. bipinnatisecta</i>  | Silver Beachweed        |         |
| Asteraceae     | <i>Ambrosia psilostachya</i>                     | western ragweed         | FAC     |
| Asteraceae     | <i>Ambrosia psilostachya var. californica</i>    | western ragweed         | FAC     |
| Asteraceae     | <i>Artemisia californica</i>                     | California sagebrush    |         |
| Asteraceae     | <i>Artemisia douglasiana</i>                     | mugwort                 | FACW    |
| Asteraceae     | <i>Artemisia dracunculus</i>                     | herbaceous sagewort     |         |
| Asteraceae     | <i>Aster subulatus var. ligulatus</i>            | annual water-aster      |         |
| Asteraceae     | <i>Baccharis douglasii</i>                       | saltmarsh baccharis     | OBL     |
| Asteraceae     | <i>Baccharis pilularis</i>                       | coyote brush            |         |
| Asteraceae     | <i>Baccharis salicifolia</i>                     | mulefat                 | FACW    |
| Asteraceae     | <i>Bidens laevis</i>                             | bur marigold            | OBL     |
| Asteraceae     | <i>Centromadia parryi subsp. australis</i>       | Parry's tarweed         | FAC     |
| Asteraceae     | <i>Chaenactis glabriuscula</i>                   | yellow pincushion       |         |
| Asteraceae     | <i>Chaenactis glabriuscula var. glabriuscula</i> | yellow pincushion       |         |

| FAMILY     | SPECIES                                               | COMMON NAME            | WETLAND |
|------------|-------------------------------------------------------|------------------------|---------|
| Asteraceae | <i>Chaenactis glabriuscula</i> var. <i>lanosa</i>     | yellow pincushion      |         |
| Asteraceae | <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> | yellow pincushion      |         |
| Asteraceae | <i>Cirsium occidentale</i> var. <i>occidentale</i>    | California thistle     |         |
| Asteraceae | <i>Conyza canadensis</i>                              | Canada horseweed       | FAC     |
| Asteraceae | <i>Corethrogyne filaginifolia</i>                     | common sandaster       |         |
| Asteraceae | <i>Deinandra fasciculata</i>                          | common tarweed         |         |
| Asteraceae | <i>Ericameria ericoides</i>                           | California goldenbush  |         |
| Asteraceae | <i>Euthamia occidentalis</i>                          | western goldenrod      | OBL     |
| Asteraceae | <i>Filago californica</i>                             | California Cottonrose  |         |
| Asteraceae | <i>Gnaphalium bicolor</i>                             | bicolored everlasting  |         |
| Asteraceae | <i>Gnaphalium californicum</i>                        | California cudweed     |         |
| Asteraceae | <i>Gnaphalium californicum</i>                        | California everlasting |         |
| Asteraceae | <i>Gnaphalium ramosissimum</i>                        | pink everlasting       |         |
| Asteraceae | <i>Gnaphalium stramineum</i>                          | Everlasting Cudweed    | FAC     |
| Asteraceae | <i>Grindelia camporum</i>                             | Great Valley gumweed   |         |
| Asteraceae | <i>Helianthus annuus</i> subsp. <i>lenticularis</i>   | common sunflower       | FAC     |
| Asteraceae | <i>Hemizonia australis</i>                            | Asteraceae             |         |
| Asteraceae | <i>Hemizonia fasciculata</i>                          | common tarweed         |         |
| Asteraceae | <i>Heterotheca grandiflora</i>                        | telegraphweed          |         |
| Asteraceae | <i>Jaumea carnosa</i>                                 | marsh jaumea           | OBL     |
| Asteraceae | <i>Laennecia coulteri</i>                             | Coulter's horseweed    | FAC     |
| Asteraceae | <i>Lasthenia californica</i>                          | California goldfields  | FACW    |
| Asteraceae | <i>Lasthenia coronaria</i>                            | royal goldfields       |         |
| Asteraceae | <i>Lasthenia glabrata</i> subsp. <i>coulteri</i>      | yellowray goldfields   | FACW    |
| Asteraceae | <i>Lasthenia gracilis</i>                             | needle goldfields      |         |
| Asteraceae | <i>Layia platyglossa</i>                              | White tidy-tips        |         |

| FAMILY       | SPECIES                                                 | COMMON NAME                    | WETLAND |
|--------------|---------------------------------------------------------|--------------------------------|---------|
| Asteraceae   | <i>Lessingia filaginifolia</i>                          | common sandaster               |         |
| Asteraceae   | <i>Logfia filaginoides</i>                              | California Cottonrose          |         |
| Asteraceae   | <i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>     | cliff aster                    |         |
| Asteraceae   | <i>Pluchea odorata</i>                                  | salt marsh fleabane            |         |
| Asteraceae   | <i>Pseudognaphalium biolettii</i>                       | twocolor cudweed               |         |
| Asteraceae   | <i>Pseudognaphalium canescens</i> ssp. <i>beneolens</i> | Wright's cudweed               |         |
| Asteraceae   | <i>Pseudognaphalium microcephalum</i>                   |                                |         |
| Asteraceae   | <i>Pseudognaphalium microcephalum</i>                   | white headed cudweed           |         |
| Asteraceae   | <i>Senecio californicus</i>                             | California Butterweed          |         |
| Asteraceae   | <i>Stephanomeria diegensis</i>                          | San Diego milk aster           |         |
| Asteraceae   | <i>Stephanomeria exigua</i> subsp. <i>coronaria</i>     | milk aster                     |         |
| Asteraceae   | <i>Stephanomeria virgata</i>                            | Tall stephanomeria             |         |
| Asteraceae   | <i>Symphyotrichum subulatum</i>                         | eastern annual saltmarsh aster | FACW    |
| Asteraceae   | <i>Xanthium spinosum</i>                                | spiny cocklebur                | FAC     |
| Asteraceae   | <i>Xanthium strumarium</i>                              | rough cocklebur                | FAC     |
| Boraginaceae | <i>Amsinckia eastwoodiae</i>                            | Eastwood's fiddleneck          |         |
| Boraginaceae | <i>Amsinckia intermedia</i>                             | Eastwood's fiddleneck          |         |
| Boraginaceae | <i>Amsinckia lycopsoides</i>                            | Eastwood's fiddleneck          |         |
| Boraginaceae | <i>Amsinckia spectabilis</i>                            | seaside fiddleneck             | FACU    |
| Boraginaceae | <i>Cryptantha clevelandii</i>                           | Cleveland's cryptantha         |         |
| Boraginaceae | <i>Cryptantha clevelandii</i> var. <i>florosa</i>       | Cleveland's cryptantha         |         |
| Boraginaceae | <i>Cryptantha intermedia</i>                            | Clearwater cryptantha          |         |
| Boraginaceae | <i>Cryptantha leiocarpa</i>                             | coast cryptantha               |         |
| Boraginaceae | <i>Cryptantha microstachys</i>                          | Tejon cryptantha               |         |
| Boraginaceae | <i>Heliotropium curassavicum</i>                        | seaside heliotrope             | OBL     |
| Boraginaceae | <i>Heliotropium curassavicum</i> var. <i>oculatum</i>   | seaside heliotrope             | OBL     |

| FAMILY          | SPECIES                                                                | COMMON NAME              | WETLAND |
|-----------------|------------------------------------------------------------------------|--------------------------|---------|
| Brassicaceae    | <i>Descurainia pinnata</i> subsp. <i>menziesii</i>                     | western tansymustard     |         |
| Brassicaceae    | <i>Dithyrea californica</i>                                            | California shieldpod     |         |
| Brassicaceae    | <i>Dithyrea maritima</i>                                               | beach shieldpod          | RARE    |
| Brassicaceae    | <i>Erysimum insulare</i> subsp. <i>suffrutescens</i>                   | suffrutescent wallflower |         |
| Brassicaceae    | <i>Erysimum suffrutescens</i>                                          | suffrutescent wallflower |         |
| Brassicaceae    | <i>Guillenia lasiophylla</i>                                           | California mustard       |         |
| Brassicaceae    | <i>Lepidium lasiocarpum</i>                                            | shaggyfruit pepperweed   |         |
| Brassicaceae    | <i>Lepidium nitidum</i>                                                | shining pepperweed       |         |
| Brassicaceae    | <i>Lepidium virginicum</i>                                             | wild pepper grass        | FACW    |
| Brassicaceae    | <i>Lepidium virginicum</i> var. <i>pubescens</i>                       | hairy pepperweed         | FACW    |
| Brassicaceae    | <i>Rorippa curvisiliqua</i>                                            | curvepod yellowcress     | OBL     |
| Brassicaceae    | <i>Tropidocarpum gracile</i>                                           | slender tropidocarpum    |         |
| Cactaceae       | <i>Opuntia oricola</i>                                                 | chaparral pricklypear    |         |
| Capparaceae     | <i>Isomeris arborea</i>                                                | Coastal bladderpod       |         |
| Caryophyllaceae | <i>Cardionema ramosissimum</i>                                         | Sand mat                 |         |
| Caryophyllaceae | <i>Minuartia douglasii</i>                                             | Douglas' stitchwort      |         |
| Caryophyllaceae | <i>Polycarpon depressum</i>                                            | California manyseed      |         |
| Caryophyllaceae | <i>Spergularia macrotheca</i>                                          | sticky sandspurry        | FAC     |
| Caryophyllaceae | <i>Spergularia marina</i>                                              | salt marsh sand spurry   | OBL     |
| Chenopodiaceae  | <i>Atriplex argentea</i>                                               | silverscale saltbush     | FAC     |
| Chenopodiaceae  | <i>Atriplex argentea</i> var. <i>mohavensis</i>                        | mohave saltbush          | FAC     |
| Chenopodiaceae  | <i>A. argentea</i> var. <i>mohavensis</i> [= <i>Atriplex expansa</i> ] | mohave saltbush          | FAC     |
| Chenopodiaceae  | <i>Atriplex breweri</i>                                                | quailbush                | FAC     |
| Chenopodiaceae  | <i>Atriplex californica</i>                                            | California saltbush      | FAC     |
| Chenopodiaceae  | <i>Atriplex lentiformis</i>                                            | big saltbush             | FAC     |
| Chenopodiaceae  | <i>Atriplex lentiformis</i> subsp. <i>breweri</i>                      | quailbush                | FAC     |

| FAMILY         | SPECIES                                                | COMMON NAME               | WETLAND |
|----------------|--------------------------------------------------------|---------------------------|---------|
| Chenopodiaceae | <i>Atriplex lentiformis</i> subsp. <i>lentiformis</i>  | big saltbush              | FAC     |
| Chenopodiaceae | <i>Atriplex lentiformis</i> var. <i>breweri</i>        | quailbush                 | FAC     |
| Chenopodiaceae | <i>Atriplex leucophylla</i>                            | beach saltbush            | FAC     |
| Chenopodiaceae | <i>Atriplex patula</i> subsp. <i>hastata</i>           | fathen saltweed           | FACW    |
| Chenopodiaceae | <i>Atriplex triangularis</i>                           | spear leaved saltbrush    |         |
| Chenopodiaceae | <i>Atriplex truncata</i>                               | wedgescale                | FAC     |
| Chenopodiaceae | <i>Salicornia europaea</i>                             | slender pickleweed        | OBL     |
| Chenopodiaceae | <i>Salicornia subterminalis</i>                        | Parish's pickleweed       | OBL     |
| Chenopodiaceae | <i>Salicornia virginica</i>                            | pickleweed                | OBL     |
| Chenopodiaceae | <i>Suaeda calceoliformis</i>                           | Pursh seepweed            | FACW    |
| Chenopodiaceae | <i>Suaeda taxifolia</i>                                | woolly seablite           | FACW    |
| Chenopodiaceae | <i>Chenopodium berlandieri</i> var. <i>sinuatum</i>    | Berlandier's goosefoot    |         |
| Convolvulaceae | <i>Calystegia macrostegia</i> subsp. <i>intermedia</i> | south coast morning-glory |         |
| Convolvulaceae | <i>Calystegia soldanella</i>                           | beach morning glory       |         |
| Convolvulaceae | <i>Cressa truxillensis</i>                             | spreading alkaliweed      | FACW    |
| Crassulaceae   | <i>Crassula connata</i>                                | sand pygmyweed            | FAC     |
| Crassulaceae   | <i>Crassula connata</i> var. <i>erectoides</i>         | sand pygmyweed            | FAC     |
| Crassulaceae   | <i>Dudleya lanceolata</i>                              | lanceleaf liveforever     |         |
| Cucurbitaceae  | <i>Cucurbita foetidissima</i>                          | calabazilla               |         |
| Cucurbitaceae  | <i>Marah macrocarpus</i>                               | southern wild-cucumber    |         |
| Cuscutaceae    | <i>Cuscuta californica</i>                             | chaparral dodder          |         |
| Cuscutaceae    | <i>Cuscuta campestris</i>                              | field dodder              |         |
| Cuscutaceae    | <i>Cuscuta salina</i>                                  | saltmarsh dodder          |         |
| Cyperaceae     | <i>Carex praegracilis</i>                              | clustered field sedge     | FACW    |
| Cyperaceae     | <i>Cyperus eragrostis</i>                              | tall flatsedge            | FACW    |
| Cyperaceae     | <i>Cyperus esculentus</i>                              | Yellow nutgrass           | FACW    |

| FAMILY        | SPECIES                                                   | COMMON NAME              | WETLAND |
|---------------|-----------------------------------------------------------|--------------------------|---------|
| Cyperaceae    | <i>Eleocharis macrostachya</i>                            | common spikerush         | OBL     |
| Cyperaceae    | <i>Eleocharis montevidensis</i>                           | sand spikerush           | FACW    |
| Cyperaceae    | <i>Eleocharis montevidensis</i> var. <i>montevidensis</i> | sand spikerush           | FACW    |
| Cyperaceae    | <i>Isolepis cernua</i>                                    | annual tule              | OBL     |
| Cyperaceae    | <i>Schoenoplectus americanus</i>                          | chairmaker's bulrush     | OBL     |
| Cyperaceae    | <i>Scirpus [=Schoenoplectus] californicus</i>             | California tule          | OBL     |
| Cyperaceae    | <i>Scirpus californicus</i>                               | California tule          | OBL     |
| Cyperaceae    | <i>Scirpus maritimus</i>                                  | prairie bulrush          | OBL     |
| Equisetaceae  | <i>Equisetum hyemale</i> subsp. <i>affine</i>             | common scouring rush     | FACW    |
| Equisetaceae  | <i>Equisetum telmateia</i> subsp. <i>braunii</i>          | giant horsetail          | OBL     |
| Euphorbiaceae | <i>Chamaesyce albomarginata</i>                           | rattlesnake weed         |         |
| Euphorbiaceae | <i>Chamaesyce polycarpa</i> var. <i>polycarpa</i>         | small seeded spurge      |         |
| Euphorbiaceae | <i>Chamaesyce serpens</i>                                 | creeping spurge          | FAC     |
| Euphorbiaceae | <i>Croton californicus</i>                                | California croton        |         |
| Euphorbiaceae | <i>Croton californicus</i> var. <i>californicus</i>       | California croton        |         |
| Euphorbiaceae | <i>Croton californicus</i> var. <i>tenuis</i>             | California croton        |         |
| Euphorbiaceae | <i>Croton setigerus</i>                                   | dove weed                |         |
| Fabaceae      | <i>Astragalus didymocarpus</i> var. <i>didymocarpus</i>   | dwarf white milk vetch   |         |
| Fabaceae      | <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>  | marsh milk-vetch         | OBL     |
| Fabaceae      | <i>Astragalus trichopodus</i> var. <i>lonchus</i>         | Santa Barbara milk-vetch |         |
| Fabaceae      | <i>Hoffmannseggia glauca</i>                              | Indian rushpea           | FACU    |
| Fabaceae      | <i>Lotus heermannii</i>                                   | Heermann's lotus         |         |
| Fabaceae      | <i>Lotus scoparius</i>                                    | deerweed                 |         |
| Fabaceae      | <i>Lotus scoparius</i> var. <i>scoparius</i>              | deerweed                 |         |
| Fabaceae      | <i>Lotus strigosus</i>                                    | Hairy Lotus              |         |
| Fabaceae      | <i>Lotus strigosus</i> var. <i>strigosus</i>              | Hairy Lotus              |         |

| FAMILY          | SPECIES                                          | COMMON NAME                    | WETLAND |
|-----------------|--------------------------------------------------|--------------------------------|---------|
| Fabaceae        | <i>Lotus unifoliolatus</i>                       | American bird's foot trefoil   |         |
| Fabaceae        | <i>Lupinus bicolor</i>                           | miniature lupine               |         |
| Fabaceae        | <i>Lupinus bicolor subsp. microphyllus</i>       | miniature lupine               |         |
| Fabaceae        | <i>Lupinus chamissonis</i>                       | dune bush lupine               |         |
| Fabaceae        | <i>Lupinus excubitus</i>                         | grape lupine                   |         |
| Fabaceae        | <i>Lupinus excubitus var. hallii</i>             | Hall's bush lupine             |         |
| Fabaceae        | <i>Lupinus longifolius</i>                       | long leaf bush lupine          |         |
| Fabaceae        | <i>Lupinus succulentus</i>                       | succulent lupine               |         |
| Fabaceae        | <i>Lupinus truncatus</i>                         | truncated lupine               |         |
| Fabaceae        | <i>Trifolium willdenovii</i>                     | tomcat clover                  |         |
| Frankeniaceae   | <i>Frankenia salina</i>                          | alkali seaheath                | FACW    |
| Frankeniaceae   | <i>Frankenia salina</i>                          | alkali seaheath                | FACW    |
| Frankeniaceae   | <i>Fraxinus latifolia</i>                        | alkali seaheath                | FACW    |
| Grossulariaceae | <i>Ribes malvaceum var. viridifolium</i>         | chaparral currant              |         |
| Hydrophyllaceae | <i>Nemophila menziesii</i>                       | baby blue eyes                 |         |
| Hydrophyllaceae | <i>Phacelia distans</i>                          | common phacelia                |         |
| Hydrophyllaceae | <i>Phacelia douglasii</i>                        | Douglas' phacelia              |         |
| Hydrophyllaceae | <i>Phacelia ramosissima</i>                      | south coast branching phacelia |         |
| Hydrophyllaceae | <i>Phacelia ramosissima var. austrolitoralis</i> | south coast branching phacelia |         |
| Hydrophyllaceae | <i>Phacelia stellaris</i>                        | Brand's phacelia               |         |
| Hydrophyllaceae | <i>Phacelia tanacetifolia</i>                    | tansy leafed phacelia          |         |
| Juncaceae       | <i>Juncus bufonius</i>                           | toad rush                      | FACW    |
| Juncaceae       | <i>Juncus mexicanus</i>                          | mexican rush                   | FACW    |
| Juncaceae       | <i>Juncus textilis</i>                           | basket rush                    | OBL     |
| Lamiaceae       | <i>Lycopus americanus</i>                        | American water horehound       | OBL     |
| Lamiaceae       | <i>Salvia carduacea</i>                          | thistle sage                   |         |

| FAMILY        | SPECIES                                                      | COMMON NAME              | WETLAND |
|---------------|--------------------------------------------------------------|--------------------------|---------|
| Lamiaceae     | <i>Salvia columbariae</i>                                    | chia sage                |         |
| Lamiaceae     | <i>Stachys ajugoides</i>                                     | bugle hedgenettle        | OBL     |
| Lamiaceae     | <i>Stachys ajugoides</i> var. <i>rigida</i>                  | rigid hedge nettle       | OBL     |
| Lamiaceae     | <i>Stachys albens</i>                                        | whitestem hedgenettle    | OBL     |
| Lemnaceae     | <i>Lemna minuscula</i>                                       | least duckweed           | OBL     |
| Lemnaceae     | <i>Lemna valdiviana</i>                                      | valdivia duckweed        | OBL     |
| Lennoaceae    | <i>Pholisma arenarium</i>                                    | Desert pholisma          |         |
| Loasaceae     | <i>Mentzelia affinis</i>                                     | yellow blazing star      |         |
| Lythraceae    | <i>Lythrum californicum</i>                                  | California loostripe     | OBL     |
| Malvaceae     | <i>Malacothamnus fasciculatus</i>                            | chaparral mallow         |         |
| Malvaceae     | <i>Malvella leprosa</i>                                      | alkali mallow            | FAC     |
| Malvaceae     | <i>Malvella leprosa</i> var. <i>hederacea</i>                | alkali mallow            | FAC     |
| Nyctaginaceae | <i>Abronia maritima</i>                                      | red sand verbena         |         |
| Nyctaginaceae | <i>Abronia umbellata</i>                                     | purple sand verbena      |         |
| Nyctaginaceae | <i>Abronia umbellata</i> subsp. <i>umbellata</i>             | purple sand verbena      |         |
| Nyctaginaceae | <i>Abronia villosa</i>                                       | desert sand verbena      |         |
| Nyctaginaceae | <i>Mirabilis laevis</i> var. <i>crassifolia</i>              | California four o'clock  |         |
| Oleaceae      | <i>Fraxinus velutina</i> var. <i>coriacea</i>                | velvet ash               | FACW    |
| Onagraceae    | <i>Camissonia bistorta</i>                                   | California sun cup       |         |
| Onagraceae    | <i>Camissonia cheiranthifolia</i> subsp. <i>suffruticosa</i> | beach evening-primrose   |         |
| Onagraceae    | <i>Camissonia lewisii</i>                                    | Lewis' evening primrose  |         |
| Onagraceae    | <i>Camissonia micrantha</i>                                  | miniature suncup         |         |
| Onagraceae    | <i>Epilobium ciliatum</i> subsp. <i>ciliatum</i>             | fringed willowherb       | FACW    |
| Onagraceae    | <i>Epilobium pygmaeum</i>                                    | smooth boisduvalia       | OBL     |
| Onagraceae    | <i>Ludwigia peploides</i> subsp. <i>peploides</i>            | floating primrose willow | OBL     |
| Onagraceae    | <i>Oenothera elata</i> subsp. <i>hirsutissima</i>            | hairy evening primrose   | FACW    |



| FAMILY         | SPECIES                                              | COMMON NAME               | WETLAND |
|----------------|------------------------------------------------------|---------------------------|---------|
| Papaveraceae   | <i>Eschscholzia californica</i>                      | California poppy          |         |
| Papaveraceae   | <i>Platystemon californicus</i>                      | cream cups                |         |
| Papaveraceae   | <i>Stylomecon heterophylla</i>                       | wind poppy                |         |
| Plantaginaceae | <i>Plantago erecta</i>                               | California plantain       |         |
| Poaceae        | <i>Agrostis viridis</i>                              | green bentgrass           |         |
| Poaceae        | <i>Distichlis spicata</i>                            | saltgrass                 | FACW    |
| Poaceae        | <i>Elymus condensatus</i>                            | giant wild rye            | FACU    |
| Poaceae        | <i>Elymus glaucus</i>                                | blue wildrye              | FACU    |
| Poaceae        | <i>Elymus triticoides</i>                            | alkali rye                | FAC     |
| Poaceae        | <i>Hordeum brachyantherum</i>                        | meadow barley             | FACW    |
| Poaceae        | <i>Hordeum intercedens</i>                           | vernal barley             | FAC     |
| Poaceae        | <i>Koeleria macrantha</i>                            | prairie Junegrass         |         |
| Poaceae        | <i>Leptochloa uninervia</i>                          | Mexican sprangletop       | FACW    |
| Poaceae        | <i>Melica imperfecta</i>                             | smallflower melicgrass    |         |
| Poaceae        | <i>Nassella pulchra</i>                              | purple needlegrass        |         |
| Poaceae        | <i>Phalaris minor</i>                                | littleseed canarygrass    |         |
| Poaceae        | <i>Setaria parviflora</i>                            | marsh bristlegrass        |         |
| Polemoniaceae  | <i>Gilia clivorum</i>                                | purplespot gilia          |         |
| Polemoniaceae  | <i>Linanthus parviflorus</i>                         | common linanthus          |         |
| Polemoniaceae  | <i>Navarretia prostrata</i>                          | prostrate pincushionplant | OBL     |
| Polygonaceae   | <i>Eriogonum fasciculatum</i>                        | California buckwheat      |         |
| Polygonaceae   | <i>Eriogonum gracile</i>                             | slender buckwheat         |         |
| Polygonaceae   | <i>Eriogonum gracile</i> var. <i>gracile</i>         | slender buckwheat         |         |
| Polygonaceae   | <i>Eriogonum parvifolium</i>                         | seacliff buckwheat        |         |
| Polygonaceae   | <i>Eriogonum parvifolium</i> var. <i>parvifolium</i> | seacliff buckwheat        |         |
| Polygonaceae   | <i>Lastarriaea coriacea</i>                          | leather spineflower       |         |

| FAMILY           | SPECIES                                                    | COMMON NAME             | WETLAND |
|------------------|------------------------------------------------------------|-------------------------|---------|
| Polygonaceae     | <i>Mucronea californica</i>                                | California spineflower  |         |
| Polygonaceae     | <i>Mucronea californica</i> var. <i>suksdorfii</i>         | California spineflower  |         |
| Polygonaceae     | <i>Polygonum hydropiperoides</i>                           | swamp smartweed         | OBL     |
| Polygonaceae     | <i>Polygonum lapathifolium</i>                             | curlytop knotweed       | OBL     |
| Polygonaceae     | <i>Pterostegia drymarioides</i>                            | woodland pterostegia    |         |
| Polygonaceae     | <i>Rumex maritimus</i>                                     | golden dock             | FACW    |
| Polygonaceae     | <i>Rumex salicifolius</i>                                  | willow dock             | OBL     |
| Portulacaceae    | <i>Calandrinia ciliata</i>                                 | red maids               | FACU    |
| Portulacaceae    | <i>Calyptridium monandrum</i>                              | common pussypaws        |         |
| Potamogetonaceae | <i>Ruppia cirrhosa</i>                                     | spiral ditchgrass       | OBL     |
| Potamogetonaceae | <i>Ruppia maritima</i>                                     | widgeongrass            | OBL     |
| Ranunculaceae    | <i>Clematis ligusticifolia</i>                             | creek clematis          | FAC     |
| Ranunculaceae    | <i>Delphinium parryi</i> subsp. <i>maritimum</i>           | seaside larkspur        |         |
| Ranunculaceae    | <i>Delphinium parryi</i> subsp. <i>parryi</i>              | San Bernardino larkspur |         |
| Rosaceae         | <i>Potentilla anserina</i> ssp. <i>pacifica</i>            | Pacific potentilla      | OBL     |
| Rosaceae         | <i>Potentilla anserina</i> subsp. <i>pacifica</i>          | silver-weed cinquefoil  | OBL     |
| Rosaceae         | <i>Potentilla anserina</i> var. <i>grandis</i>             | silver-weed cinquefoil  | OBL     |
| Rosaceae         | <i>Potentilla multijuga</i>                                | ballona cinquefoil      | OBL     |
| Rubiaceae        | <i>Galium angustifolium</i> subsp. <i>angustifolium</i>    | narrowleaf bedstraw     |         |
| Salicaceae       | <i>Populus fremontii</i>                                   | Fremont cottonwood      | FACW    |
| Salicaceae       | <i>Salix exigua</i>                                        | sandbar willow          | OBL     |
| Salicaceae       | <i>Salix laevigata</i>                                     | red willow              |         |
| Salicaceae       | <i>Salix lasiolepis</i>                                    | arroyo willow           | FACW    |
| Saururaceae      | <i>Anemopsis californica</i>                               | yerba mansa             | OBL     |
| Scrophulariaceae | <i>Antirrhinum coulterianum</i>                            | Coulter's snapdragon    |         |
| Scrophulariaceae | <i>Antirrhinum nuttallianum</i> subsp. <i>nuttallianum</i> | Nuttall's snapdragon    |         |

| FAMILY           | SPECIES                                               | COMMON NAME            | WETLAND |
|------------------|-------------------------------------------------------|------------------------|---------|
| Scrophulariaceae | <i>Castilleja exserta</i>                             | purple owl's clover    |         |
| Scrophulariaceae | <i>Collinsia heterophylla</i>                         | purple Chinese houses  |         |
| Scrophulariaceae | <i>Cordylanthus maritimus</i> subsp. <i>maritimus</i> | salt marsh bird's beak | OBL     |
| Scrophulariaceae | <i>Mimulus guttatus</i>                               | seep monkeyflower      | OBL     |
| Solanaceae       | <i>Datura wrightii</i>                                | Jimson weed            |         |
| Solanaceae       | <i>Nicotiana clevelandii</i>                          | Cleveland's tobacco    |         |
| Solanaceae       | <i>Solanum americanum</i>                             | common nightshade      | FAC     |
| Solanaceae       | <i>Solanum douglasii</i>                              | Douglas' nightshade    | FAC     |
| Typhaceae        | <i>Sparganium erectum</i> subsp. <i>stoloniferum</i>  | simplestem bur-reed    | OBL     |
| Typhaceae        | <i>Typha domingensis</i>                              | narrowleaf cattail     | OBL     |
| Typhaceae        | <i>Typha latifolia</i>                                | broadleaf cattail      | OBL     |
| Urticaceae       | <i>Urtica dioica</i> subsp. <i>holosericea</i>        | giant creek nettle     | FACW    |
| Urticaceae       | <i>Urtica urens</i>                                   | dwarf nettle           |         |
| Verbenaceae      | <i>Phyla lanceolata</i>                               | lanceleaf fogfruit     |         |
| Verbenaceae      | <i>Phyla lanceolata</i>                               | lanceleaf fogfruit     | FACW    |
| Verbenaceae      | <i>Verbena lasiostachys</i> var. <i>lasiostachys</i>  | Common verbena         | FAC     |
| Zosteraceae      | <i>Phyllospadix torreyi</i>                           | Torrey's surfgrass     | OBL     |

## APPENDIX 4.

## FLORA OF THE SANTA MONICA MOUNTAIN REGION AS DOCUMENTED IN HERBARIUM RECORDS

| FAMILY        | SPECIES                                              | COMMON NAME             | WETLAND |
|---------------|------------------------------------------------------|-------------------------|---------|
| Amaranthaceae | <i>Amaranthus blitoides</i>                          | mat amaranth            | FACW    |
| Amaranthaceae | <i>Amaranthus powellii</i>                           | Powell's amaranth       |         |
| Anacardiaceae | <i>Malosma laurina</i>                               | laurel sumac            |         |
| Anacardiaceae | <i>Rhus integrifolia</i>                             | lemonade berry          |         |
| Anacardiaceae | <i>Rhus ovata</i>                                    | sugar bush              |         |
| Anacardiaceae | <i>Rhus trilobata</i>                                | skunkbush sumac         | NI      |
| Anacardiaceae | <i>Rhus trilobata</i> var. <i>pilosissima</i>        | skunkbush sumac         | NI      |
| Apiaceae      | <i>Apiastrum angustifolium</i>                       | wild celery             |         |
| Apiaceae      | <i>Berula erecta</i>                                 | cutleaf water-parsnip   | OBL     |
| Apiaceae      | <i>Bowlesia incana</i>                               | hoary bowlesia          | FACW    |
| Apiaceae      | <i>Daucus pusillus</i>                               | Wild carrot             |         |
| Apiaceae      | <i>Lomatium lucidum</i>                              | shiny biscuitroot       |         |
| Apiaceae      | <i>Sanicula arguta</i>                               | sharp toothed snakeroot |         |
| Apiaceae      | <i>Sanicula bipinnata</i>                            | poison sanicle          |         |
| Apiaceae      | <i>Sanicula crassicaulis</i>                         | Pacific blacksnakeroot  |         |
| Apiaceae      | <i>Tauschia arguta</i>                               | southern umbrellawort   |         |
| Asteraceae    | <i>Achillea millefolium</i>                          | common yarrow           | FACU    |
| Asteraceae    | <i>Acourtia microcephala</i>                         | sacapellote             |         |
| Asteraceae    | <i>Ambrosia acanthicarpa</i>                         | annual bursage          |         |
| Asteraceae    | <i>Ambrosia chamissonis</i>                          | Silver Beachweed        |         |
| Asteraceae    | <i>Ambrosia confertiflora</i>                        | weak leaved burweed     |         |
| Asteraceae    | <i>Ambrosia psilostachya</i>                         | western ragweed         | FAC     |
| Asteraceae    | <i>Ambrosia psilostachya</i> var. <i>californica</i> | western ragweed         | FAC     |
| Asteraceae    | <i>Artemisia californica</i>                         | California sagebrush    |         |
| Asteraceae    | <i>Artemisia douglasiana</i>                         | mugwort                 | FACW    |
| Asteraceae    | <i>Artemisia dracunculus</i>                         | herbaceous sagewort     |         |

| FAMILY     | SPECIES                                                      | COMMON NAME                      | WETLAND |
|------------|--------------------------------------------------------------|----------------------------------|---------|
| Asteraceae | <i>Baccharis douglasii</i>                                   | saltmarsh baccharis              | OBL     |
| Asteraceae | <i>Baccharis pilularis</i>                                   | coyote brush                     |         |
| Asteraceae | <i>Baccharis salicifolia</i>                                 | mulefat                          | FACW-   |
| Asteraceae | <i>Brickellia californica</i>                                | California brickellbush          | FACU    |
| Asteraceae | <i>Brickellia nevinii</i>                                    | Nevin's brickellia               |         |
| Asteraceae | <i>Centromadia parryi</i> subsp. <i>australis</i>            | Parry's tarweed                  | FAC     |
| Asteraceae | <i>Chaenactis artemisiifolia</i>                             | artemisia leaved chaenactis      |         |
| Asteraceae | <i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i>      | yellow pincushion                |         |
| Asteraceae | <i>Cirsium occidentale</i>                                   | California thistle               |         |
| Asteraceae | <i>Cirsium occidentale</i> var. <i>californicum</i>          | California thistle               |         |
| Asteraceae | <i>Cirsium occidentale</i> var. <i>occidentale</i>           | California thistle               |         |
| Asteraceae | <i>Conyza canadensis</i>                                     | Canada horseweed                 | FAC     |
| Asteraceae | <i>Corethrogyne filaginifolia</i>                            | common sandaster                 |         |
| Asteraceae | <i>Corethrogyne filaginifolia</i> var. <i>virgata</i>        | common sandaster                 |         |
| Asteraceae | <i>Deinandra fasciculata</i>                                 | common tarweed                   |         |
| Asteraceae | <i>Dicoria canescens</i>                                     | desert dicoria                   |         |
| Asteraceae | <i>Encelia californica</i>                                   | California sunflower             |         |
| Asteraceae | <i>Ericameria ericoides</i>                                  | California goldenbush            |         |
| Asteraceae | <i>Ericameria linearifolia</i>                               | narrowleaf goldenbush            |         |
| Asteraceae | <i>Ericameria palmeri</i> var. <i>pachylepis</i>             | broad scaled Palmer's goldenbush |         |
| Asteraceae | <i>Ericameria parishii</i>                                   | Parish's goldenbush              |         |
| Asteraceae | <i>Ericameria pinifolia</i>                                  | pinebush                         |         |
| Asteraceae | <i>Erigeron foliosus</i>                                     | leafy fleabane                   |         |
| Asteraceae | <i>Erigeron foliosus</i> var. <i>foliosus</i>                | leafy fleabane                   |         |
| Asteraceae | <i>Eriophyllum confertiflorum</i>                            | golden-yarrow                    |         |
| Asteraceae | <i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i> | golden-yarrow                    |         |

| FAMILY     | SPECIES                                                 | COMMON NAME               | WETLAND |
|------------|---------------------------------------------------------|---------------------------|---------|
| Asteraceae | <i>Filago californica</i>                               | California Cottonrose     |         |
| Asteraceae | <i>Gnaphalium bicolor</i>                               | bicolored everlasting     |         |
| Asteraceae | <i>Gnaphalium californicum</i>                          | California cudweed        |         |
| Asteraceae | <i>Gnaphalium californicum</i>                          | California everlasting    |         |
| Asteraceae | <i>Gnaphalium canescens</i> subsp. <i>microcephalum</i> | white everlasting         |         |
| Asteraceae | <i>Gnaphalium ramosissimum</i>                          | pink everlasting          |         |
| Asteraceae | <i>Grindelia camporum</i>                               | Great Valley gumweed      |         |
| Asteraceae | <i>Grindelia hirsutula</i>                              | hairy gumweed             | FACW    |
| Asteraceae | <i>Gutierrezia californica</i>                          | California matchweed      |         |
| Asteraceae | <i>Gutierrezia sarothrae</i>                            | Matchweed                 |         |
| Asteraceae | <i>Hazardia squarrosa</i> var. <i>grindelioides</i>     | saw toothed goldenbush    |         |
| Asteraceae | <i>Hazardia squarrosa</i> var. <i>squarrosa</i>         | saw toothed goldenbush    |         |
| Asteraceae | <i>Hemizonia fasciculata</i>                            | common tarweed            |         |
| Asteraceae | <i>Heterotheca grandiflora</i>                          | telegraphweed             |         |
| Asteraceae | <i>Heterotheca sessiliflora</i> ssp. <i>fastigiata</i>  | erect goldenaster         |         |
| Asteraceae | <i>Isocoma menziesii</i> var. <i>vernonioides</i>       | white-flowered goldenbush | FAC     |
| Asteraceae | <i>Iva hayesiana</i>                                    | San Diego marsh elder     | FACW    |
| Asteraceae | <i>Laennecia coulteri</i>                               | Coulter's horseweed       | FAC     |
| Asteraceae | <i>Lasthenia californica</i>                            | California goldfields     | FACW    |
| Asteraceae | <i>Lasthenia gracilis</i>                               | needle goldfields         |         |
| Asteraceae | <i>Layia platyglossa</i>                                | White tidy-tips           |         |
| Asteraceae | <i>Layia platyglossa</i> subsp. <i>campestris</i>       | White tidy-tips           |         |
| Asteraceae | <i>Lepidospartum squamatum</i>                          | scalebroom                |         |
| Asteraceae | <i>Lepidospartum squamatum</i> var. <i>squamatum</i>    | scalebroom                |         |
| Asteraceae | <i>Lessingia filaginifolia</i>                          | common sandaster          |         |
| Asteraceae | <i>Madia gracilis</i>                                   | slender tarweed           |         |

| FAMILY     | SPECIES                                                       | COMMON NAME                  | WETLAND |
|------------|---------------------------------------------------------------|------------------------------|---------|
| Asteraceae | <i>Madia sativa</i>                                           | coast tarweed                |         |
| Asteraceae | <i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>           | cliff aster                  |         |
| Asteraceae | <i>Monolopia lanceolata</i>                                   | common monolopia             |         |
| Asteraceae | <i>Pluchea sericea</i>                                        | arrowweed                    | FACW    |
| Asteraceae | <i>Pseudognaphalium biolettii</i>                             | twocolor cudweed             |         |
| Asteraceae | <i>Pseudognaphalium microcephalum</i>                         |                              |         |
| Asteraceae | <i>Pseudognaphalium microcephalum</i>                         | white headed cudweed         |         |
| Asteraceae | <i>Pseudognaphalium ramosissimum</i>                          | pink cudweed                 |         |
| Asteraceae | <i>Pseudognaphalium stramineum</i>                            | Small flowered cudweed       | FAC     |
| Asteraceae | <i>Psilocarphus tenellus</i>                                  | round woolly-marbles         | FAC     |
| Asteraceae | <i>Rafinesquia californica</i>                                | California chicory           |         |
| Asteraceae | <i>Senecio californicus</i>                                   | California Butterweed        |         |
| Asteraceae | <i>Senecio flaccidus</i>                                      | Douglas' shrubby ragwort     |         |
| Asteraceae | <i>Senecio flaccidus</i> var. <i>douglasii</i>                | Douglas' shrubby ragwort     |         |
| Asteraceae | <i>Solidago californica</i>                                   | California goldenrod         |         |
| Asteraceae | <i>Solidago velutina</i> subsp. <i>californica</i>            |                              |         |
| Asteraceae | <i>Stebbinsoseris heterocarpa</i>                             | grassland stebbinsoseris     |         |
| Asteraceae | <i>Stephanomeria cichoriacea</i>                              | chicory leaved stephanomeria |         |
| Asteraceae | <i>Stephanomeria diegensis</i>                                | San Diego milk aster         |         |
| Asteraceae | <i>Stephanomeria exigua</i> subsp. <i>coronaria</i>           | milk aster                   |         |
| Asteraceae | <i>Stephanomeria virgata</i>                                  | Tall stephanomeria           |         |
| Asteraceae | <i>Stephanomeria virgata</i> subsp. <i>virgata</i>            | Tall stephanomeria           |         |
| Asteraceae | <i>Symphyotrichum defoliatum</i> [=Aster <i>bernardinus</i> ] | San Bernardino aster         | RARE    |
| Asteraceae | <i>Symphyotrichum greatae</i> [=Aster <i>greatae</i> ]        | Greata's aster               | RARE    |
| Asteraceae | <i>Venegasia carpesioides</i>                                 | canyon sunflower             |         |
| Asteraceae | <i>Xanthium spinosum</i>                                      | spiny cocklebur              | FAC     |

| FAMILY        | SPECIES                                                    | COMMON NAME                | WETLAND |
|---------------|------------------------------------------------------------|----------------------------|---------|
| Asteraceae    | <i>Xanthium strumarium</i>                                 | rough cocklebur            | FAC     |
| Azollaceae    | <i>Azolla filiculoides</i>                                 | mosquito fern              | OBL     |
| Berberidaceae | <i>Berberis nevadensis</i>                                 | Nevadensis barberry        |         |
| Boraginaceae  | <i>Amsinckia intermedia</i>                                | Eastwood's fiddleneck      |         |
| Boraginaceae  | <i>Amsinckia punctata</i>                                  |                            |         |
| Boraginaceae  | <i>Cryptantha intermedia</i>                               | Clearwater cryptantha      |         |
| Boraginaceae  | <i>Cryptantha micromeres</i>                               | minute flowered cryptantha |         |
| Boraginaceae  | <i>Cryptantha microstachys</i>                             | Tejon cryptantha           |         |
| Boraginaceae  | <i>Cryptantha muricata</i>                                 | prickly cryptantha         |         |
| Boraginaceae  | <i>Cryptantha muricata</i> var. <i>jonesii</i>             | prickly cryptantha         |         |
| Boraginaceae  | <i>Pectocarya penicillata</i>                              | sagebrush combseed         |         |
| Boraginaceae  | <i>Pedicularis densiflora</i>                              | Indian warrior             |         |
| Boraginaceae  | <i>Plagiobothrys collinus</i>                              | Cooper's popcornflower     |         |
| Brassicaceae  | <i>Arabis glabra</i>                                       | smooth rock cress          |         |
| Brassicaceae  | <i>Barbarea orthoceras</i>                                 | American Wintercress       | FACW    |
| Brassicaceae  | <i>Cardamine californica</i>                               | California toothwort       | UPL*    |
| Brassicaceae  | <i>Caulanthus heterophyllus</i> var. <i>pseudosimulans</i> | San Diego wild cabbage     |         |
| Brassicaceae  | <i>Descurainia pinnata</i> subsp. <i>menziesii</i>         | western tansymustard       |         |
| Brassicaceae  | <i>Erysimum capitatum</i> subsp. <i>capitatum</i>          | western wallflower         |         |
| Brassicaceae  | <i>Guillenia lasiophylla</i>                               | California mustard         |         |
| Brassicaceae  | <i>Lepidium virginicum</i>                                 | wild pepper grass          | FACW    |
| Brassicaceae  | <i>Thysanocarpus curvipes</i>                              | common fringe-pod          |         |
| Brassicaceae  | <i>Thysanocarpus laciniatus</i>                            | common lace pod            |         |
| Brassicaceae  | <i>Tropidocarpum gracile</i>                               | slender tropidocarpum      |         |
| Cactaceae     | <i>Opuntia littoralis</i>                                  | coast prickly pear         |         |
| Cactaceae     | <i>Opuntia vaseyi</i>                                      | Vasey's prickly pear       |         |



| FAMILY          | SPECIES                                                 | COMMON NAME                  | WETLAND |
|-----------------|---------------------------------------------------------|------------------------------|---------|
| Campanulaceae   | <i>Githopsis diffusa</i> subsp. <i>candida</i>          | San Gabriel bluecup          |         |
| Campanulaceae   | <i>Triodanis biflora</i>                                | Venus looking glass          |         |
| Capparaceae     | <i>Isomeris arborea</i>                                 | Coastal bladderpod           |         |
| Caprifoliaceae  | <i>Lonicera interrupta</i>                              | chaparral honeysuckle        |         |
| Caprifoliaceae  | <i>Lonicera subspicata</i> var. <i>denudata</i>         | southern honeysuckle         |         |
| Caprifoliaceae  | <i>Sambucus nigra</i> ssp. <i>caerulea</i>              | blue elderberry              | FAC     |
| Caprifoliaceae  | <i>Symphoricarpos mollis</i>                            | creeping snowberry           |         |
| Caryophyllaceae | <i>Polycarpon depressum</i>                             | California manyseed          |         |
| Caryophyllaceae | <i>Silene antirrhina</i>                                | sleepy silene                |         |
| Caryophyllaceae | <i>Silene laciniata</i>                                 | Indian pink                  |         |
| Caryophyllaceae | <i>Silene laciniata</i> subsp. <i>major</i>             | Indian pink                  |         |
| Chenopodiaceae  | <i>Atriplex serenana</i>                                | saltscall                    | FAC     |
| Chenopodiaceae  | <i>Chenopodium californicum</i>                         | soaproot                     |         |
| Chenopodiaceae  | <i>Chenopodium berlandieri</i>                          | Berlandier's goosefoot       |         |
| Cistaceae       | <i>Helianthemum scoparium</i>                           | common sun-rose              |         |
| Cistaceae       | <i>Helianthemum scoparium</i> var. <i>scoparium</i>     | common sun-rose              |         |
| Cistaceae       | <i>Helianthemum scoparium</i> var. <i>vulgare</i>       | common sun-rose              |         |
| Convolvulaceae  | <i>Calystegia macrostegia</i>                           | south coast morning-glory    |         |
| Convolvulaceae  | <i>Calystegia macrostegia</i> subsp. <i>cyclostegia</i> | south coast morning-glory    |         |
| Convolvulaceae  | <i>Calystegia macrostegia</i> subsp. <i>intermedia</i>  | south coast morning-glory    |         |
| Convolvulaceae  | <i>Calystegia purpurata</i>                             | Pacific false bindweed       |         |
| Convolvulaceae  | <i>Convolvulus simulans</i>                             | small flowered morning glory | RARE    |
| Cornaceae       | <i>Cornus occidentalis</i>                              | Creek Dogwood                | FACW    |
| Crassulaceae    | <i>Crassula connata</i> var. <i>erectoides</i>          | sand pygmyweed               | FAC     |
| Crassulaceae    | <i>Dudleya lanceolata</i>                               | lanceleaf liveforever        |         |
| Crassulaceae    | <i>Dudleya multicaulis</i>                              | manystem liveforever         | RARE    |

| FAMILY           | SPECIES                                                 | COMMON NAME             | WETLAND |
|------------------|---------------------------------------------------------|-------------------------|---------|
| Cucurbitaceae    | <i>Marah macrocarpus</i>                                | southern wild-cucumber  |         |
| Cucurbitaceae    | <i>Marah macrocarpus</i> var. <i>macrocarpus</i>        | southern wild-cucumber  |         |
| Cuscutaceae      | <i>Cuscuta californica</i>                              | chaparral dodder        |         |
| Cuscutaceae      | <i>Cuscuta subinclusa</i>                               | canyon dodder           |         |
| Cyperaceae       | <i>Carex triquetra</i>                                  | triangular fruit sedge  |         |
| Cyperaceae       | <i>Scirpus californicus</i>                             | California tule         | OBL     |
| Dennstaedtiaceae | <i>Pteridium aquilinum</i>                              | western brackenfern     | FACU    |
| Dennstaedtiaceae | <i>Pteridium aquilinum</i> var. <i>pubescens</i>        | hairy brackenfern       | FACU    |
| Dryopteridaceae  | <i>Athyrium filix-femina</i> var. <i>californicum</i>   | Western Lady Fern       | FAC     |
| Dryopteridaceae  | <i>Dryopteris arguta</i>                                | California wood fern    |         |
| Equisetaceae     | <i>Equisetum hyemale</i> subsp. <i>affine</i>           | common scouring rush    | FACW    |
| Equisetaceae     | <i>Equisetum laevigatum</i>                             | smooth horsetail        | FACW    |
| Ericaceae        | <i>Arctostaphylos glandulosa</i>                        | Eastwood manzanita      |         |
| Ericaceae        | <i>Arctostaphylos glandulosa</i> subsp. <i>mollis</i>   | Eastwood manzanita      |         |
| Euphorbiaceae    | <i>Chamaesyce albomarginata</i>                         | rattlesnake weed        |         |
| Euphorbiaceae    | <i>Chamaesyce melanadenia</i>                           | squaw spurge            |         |
| Euphorbiaceae    | <i>Chamaesyce polycarpa</i>                             | small seeded spurge     |         |
| Euphorbiaceae    | <i>Chamaesyce polycarpa</i> var. <i>polycarpa</i>       | small seeded spurge     |         |
| Euphorbiaceae    | <i>Chamaesyce serpens</i>                               | creeping spurge         | FAC     |
| Euphorbiaceae    | <i>Chamaesyce serpyllifolia</i>                         | thyme leafed spurge     |         |
| Euphorbiaceae    | <i>Croton californicus</i>                              | California croton       |         |
| Euphorbiaceae    | <i>Croton setigerus</i>                                 | dove weed               |         |
| Euphorbiaceae    | <i>Euphorbia polycarpa</i>                              | small seeded spurge     |         |
| Fabaceae         | <i>Amorpha californica</i>                              | California false indigo |         |
| Fabaceae         | <i>Amorpha californica</i> var. <i>californica</i>      | California false indigo |         |
| Fabaceae         | <i>Astragalus didymocarpus</i> var. <i>didymocarpus</i> | dwarf white milk vetch  |         |

| FAMILY   | SPECIES                                            | COMMON NAME                      | WETLAND |
|----------|----------------------------------------------------|----------------------------------|---------|
| Fabaceae | <i>Astragalus gambelianus</i>                      | Gambel's dwarf milk vetch        |         |
| Fabaceae | <i>Astragalus trichopodus</i> var. <i>phoxus</i>   | Santa Barbara milk-vetch         |         |
| Fabaceae | <i>Cercis occidentalis</i>                         | western redbud                   |         |
| Fabaceae | <i>Lathyrus vestitus</i> subsp. <i>laetiflorus</i> | wild sweetpea                    |         |
| Fabaceae | <i>Lathyrus vestitus</i> subsp. <i>laevicarpus</i> | wild sweetpea                    |         |
| Fabaceae | <i>Lathyrus vestitus</i> subsp. <i>vestitus</i>    | wild sweetpea                    |         |
| Fabaceae | <i>Lathyrus vestitus</i> var. <i>vestitus</i>      | wild sweetpea                    |         |
| Fabaceae | <i>Lotus argophyllus</i> var. <i>argophyllus</i>   | southern California silver lotus |         |
| Fabaceae | <i>Lotus purshianus</i> var. <i>purshianus</i>     | Spanish clover                   |         |
| Fabaceae | <i>Lotus salsuginosus</i>                          | coastal lotus                    |         |
| Fabaceae | <i>Lotus salsuginosus</i> var. <i>salsuginosus</i> | coastal lotus                    |         |
| Fabaceae | <i>Lotus scoparius</i>                             | deerweed                         |         |
| Fabaceae | <i>Lotus strigosus</i>                             | Hairy Lotus                      |         |
| Fabaceae | <i>Lotus strigosus</i> var. <i>strigosus</i>       | Hairy Lotus                      |         |
| Fabaceae | <i>Lotus wrangelianus</i>                          | Calf lotus                       |         |
| Fabaceae | <i>Lupinus affinis</i>                             | fleshy lupine                    |         |
| Fabaceae | <i>Lupinus bicolor</i>                             | miniature lupine                 |         |
| Fabaceae | <i>Lupinus excubitus</i>                           | grape lupine                     |         |
| Fabaceae | <i>Lupinus excubitus</i> var. <i>hallii</i>        | Hall's bush lupine               |         |
| Fabaceae | <i>Lupinus formosus</i>                            | summer lupine                    |         |
| Fabaceae | <i>Lupinus formosus</i> var. <i>formosus</i>       | summer lupine                    |         |
| Fabaceae | <i>Lupinus hirsutissimus</i>                       | stinging annual lupine           |         |
| Fabaceae | <i>Lupinus latifolius</i> subsp. <i>parishii</i>   | broadleaf lupine                 |         |
| Fabaceae | <i>Lupinus lepidus</i> var. <i>sellulus</i>        | dwarf tidy lupine                |         |
| Fabaceae | <i>Lupinus longifolius</i>                         | long leaf bush lupine            |         |
| Fabaceae | <i>Lupinus sparsiflorus</i>                        | Coulter's lupine                 |         |

| FAMILY          | SPECIES                                                 | COMMON NAME                   | WETLAND |
|-----------------|---------------------------------------------------------|-------------------------------|---------|
| Fabaceae        | <i>Lupinus sparsiflorus</i> subsp. <i>sparsiflorus</i>  | Coulter's lupine              |         |
| Fabaceae        | <i>Lupinus succulentus</i>                              | succulent lupine              |         |
| Fabaceae        | <i>Lupinus truncatus</i>                                | truncated lupine              |         |
| Fabaceae        | <i>Pickeringia montana</i>                              | chaparral pea                 |         |
| Fabaceae        | <i>Rupertia physodes</i>                                | California tea                |         |
| Fabaceae        | <i>Trifolium albopurpureum</i>                          | Indian clover                 | FACU    |
| Fabaceae        | <i>Trifolium ciliolatum</i>                             | foothill clover               |         |
| Fabaceae        | <i>Trifolium gracilentum</i>                            | pinpoint clover               |         |
| Fabaceae        | <i>Vicia americana</i>                                  | American vetch                | FACU    |
| Fabaceae        | <i>Vicia americana</i> var. <i>americana</i>            | American vetch                | FACU    |
| Fagaceae        | <i>Quercus agrifolia</i>                                | coast live oak                |         |
| Fagaceae        | <i>Quercus berberidifolia</i>                           | inland scrub oak              |         |
| Fagaceae        | <i>Quercus dumosa</i>                                   | Nuttall's scrub oak           |         |
| Fagaceae        | <i>Quercus durata</i> var. <i>gabrielensis</i>          | San Gabriel Mtns. leather oak |         |
| Fagaceae        | <i>Quercus wislizeni</i> var. <i>frutescens</i>         | Chapparal Oak                 |         |
| Fumariaceae     | <i>Ehrendorferia ochroleuca</i>                         | yellow bleeding heart         |         |
| Gentianaceae    | <i>Centaurium venustum</i>                              | Beautiful centaury            |         |
| Geraniaceae     | <i>Geranium carolinianum</i>                            | Carolina geranium             |         |
| Grossulariaceae | <i>Ribes aureum</i> var. <i>gracillimum</i>             | golden currant                | FACW    |
| Grossulariaceae | <i>Ribes californicum</i> var. <i>hesperium</i>         | California gooseberry         |         |
| Grossulariaceae | <i>Ribes indecorum</i>                                  | white-flowering currant       |         |
| Grossulariaceae | <i>Ribes malvaceum</i>                                  | chaparral currant             |         |
| Grossulariaceae | <i>Ribes malvaceum</i> var. <i>viridifolium</i>         | chaparral currant             |         |
| Grossulariaceae | <i>Ribes speciosum</i>                                  | fuchsia flowered gooseberry   |         |
| Hydrophyllaceae | <i>Emmenanthe penduliflora</i>                          | whisperingbells               |         |
| Hydrophyllaceae | <i>Emmenanthe penduliflora</i> var. <i>penduliflora</i> | whisperingbells               |         |

| FAMILY          | SPECIES                                                         | COMMON NAME                      | WETLAND |
|-----------------|-----------------------------------------------------------------|----------------------------------|---------|
| Hydrophyllaceae | <i>Eriodictyon trichocalyx</i>                                  | hairy yerba santa                |         |
| Hydrophyllaceae | <i>Eucrypta chrysanthemifolia</i>                               | common eucrypta                  |         |
| Hydrophyllaceae | <i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i> | common eucrypta                  |         |
| Hydrophyllaceae | <i>Nama stenocarpum</i>                                         | mud fiddleleaf                   | FACW    |
| Hydrophyllaceae | <i>Nemophila menziesii</i>                                      | baby blue eyes                   |         |
| Hydrophyllaceae | <i>Nemophila menziesii</i> var. <i>integrifolia</i>             | baby blue eyes                   |         |
| Hydrophyllaceae | <i>Phacelia cicutaria</i>                                       | caterpillar phacelia             |         |
| Hydrophyllaceae | <i>Phacelia cicutaria</i> var. <i>hispida</i>                   | caterpillar phacelia             |         |
| Hydrophyllaceae | <i>Phacelia cicutaria</i> var. <i>hubbyi</i>                    | caterpillar phacelia             |         |
| Hydrophyllaceae | <i>Phacelia grandiflora</i>                                     | giant flowerd phacelia           |         |
| Hydrophyllaceae | <i>Phacelia imbricata</i> subsp. <i>imbricata</i>               | imbricate phacelia               |         |
| Hydrophyllaceae | <i>Phacelia minor</i>                                           | California bluebell              |         |
| Hydrophyllaceae | <i>Phacelia parryi</i>                                          | Parry's phacelia                 |         |
| Hydrophyllaceae | <i>Phacelia viscida</i>                                         | sticky phacelia                  |         |
| Hydrophyllaceae | <i>Pholistoma auritum</i>                                       | blue fiestaflower                |         |
| Hydrophyllaceae | <i>Turricula parryi</i>                                         | common turricula                 |         |
| Iridaceae       | <i>Sisyrinchium bellum</i>                                      | blue-eyed grass                  | FAC     |
| Juglandaceae    | <i>Juglans californica</i>                                      | Southern California black walnut | FAC     |
| Juglandaceae    | <i>Juglans californica</i> var. <i>californica</i>              | Southern California black walnut | FAC     |
| Juncaceae       | <i>Juncus balticus</i>                                          | wire rush                        | FACW    |
| Juncaceae       | <i>Juncus textilis</i>                                          | basket rush                      | OBL     |
| Lamiaceae       | <i>Salvia apiana</i>                                            | white sage                       |         |
| Lamiaceae       | <i>Salvia columbariae</i>                                       | chia sage                        |         |
| Lamiaceae       | <i>Salvia leucophylla</i>                                       | purple sage                      |         |
| Lamiaceae       | <i>Salvia mellifera</i>                                         | black sage                       |         |
| Lamiaceae       | <i>Salvia spathacea</i>                                         | hummingbird sage                 |         |

| FAMILY    | SPECIES                                            | COMMON NAME             | WETLAND |
|-----------|----------------------------------------------------|-------------------------|---------|
| Lamiaceae | <i>Scutellaria tuberosa</i>                        | Danny's skullcap        |         |
| Lamiaceae | <i>Stachys ajugoides</i> var. <i>rigida</i>        | rigid hedge nettle      |         |
| Lamiaceae | <i>Stachys ajugoides</i> var. <i>rigida</i>        | rigid hedge nettle      | OBL     |
| Lamiaceae | <i>Stachys bullata</i>                             | California hedgenettle  |         |
| Lamiaceae | <i>Trichostema lanatum</i>                         | woolly bluecurls        |         |
| Lamiaceae | <i>Trichostema lanceolatum</i>                     | vinegarweed             |         |
| Lauraceae | <i>Umbellularia californica</i>                    | California laurel       | FAC     |
| Lemnaceae | <i>Lemna valdiviana</i>                            | valdivia duckweed       | OBL     |
| Liliaceae | <i>Allium haematochiton</i>                        | redskin onion           |         |
| Liliaceae | <i>Allium peninsulare</i>                          | Mexicali onion          |         |
| Liliaceae | <i>Bloomeria crocea</i>                            | common goldenstar       |         |
| Liliaceae | <i>Bloomeria crocea</i> var. <i>crocea</i>         | common goldenstar       |         |
| Liliaceae | <i>Brodiaea terrestris</i> subsp. <i>kernensis</i> | chaparral brodiaea      |         |
| Liliaceae | <i>Calochortus catalinae</i>                       | Catalina mariposa lily  |         |
| Liliaceae | <i>Calochortus clavatus</i> var. <i>clavatus</i>   | club haired mariposa    |         |
| Liliaceae | <i>Calochortus plummerae</i>                       | Plummer's mariposa lily |         |
| Liliaceae | <i>Dichelostemma capitatum</i>                     | blue dicks              |         |
| Liliaceae | <i>Fritillaria biflora</i>                         | chocolate lily          |         |
| Liliaceae | <i>Lilium humboldtii</i>                           | Humboldt's lily         |         |
| Liliaceae | <i>Triteleia ixioides</i> subsp. <i>scabra</i>     | prettyface              | FAC     |
| Liliaceae | <i>Triteleia laxa</i>                              | Ithuriel's spear        |         |
| Liliaceae | <i>Yucca whipplei</i> subsp. <i>intermedia</i>     | chaparral yucca         |         |
| Liliaceae | <i>Yucca whipplei</i> var. <i>parishii</i>         | chaparral yucca         |         |
| Liliaceae | <i>Zigadenus fremontii</i>                         | Fremont's Star Lily     |         |
| Loasaceae | <i>Mentzelia lindleyi</i>                          | Lindley's blazing star  |         |
| Loasaceae | <i>Mentzelia micrantha</i>                         | chaparral blazing star  |         |

| FAMILY        | SPECIES                                                    | COMMON NAME              | WETLAND |
|---------------|------------------------------------------------------------|--------------------------|---------|
| Lythraceae    | <i>Lythrum californicum</i>                                | California loostrife     | OBL     |
| Malvaceae     | <i>Malacothamnus fasciculatus</i>                          | chaparral mallow         |         |
| Malvaceae     | <i>Malacothamnus fasciculatus</i> var. <i>fasciculatus</i> | chaparral mallow         |         |
| Malvaceae     | <i>Malvella leprosa</i> var. <i>hederacea</i>              | alkali mallow            | FAC     |
| Nyctaginaceae | <i>Mirabilis laevis</i> var. <i>crassifolia</i>            | California four o'clock  |         |
| Nyctaginaceae | <i>Mirabilis multiflora</i> var. <i>pubescens</i>          | Colorado four o'clock    |         |
| Onagraceae    | <i>Camissonia bistorta</i>                                 | California sun cup       |         |
| Onagraceae    | <i>Camissonia californica</i>                              | California suncup        |         |
| Onagraceae    | <i>Camissonia hirtella</i>                                 | Santa Cruz Island suncup |         |
| Onagraceae    | <i>Camissonia ignota</i>                                   | Jurupa Hills sun cups    |         |
| Onagraceae    | <i>Camissonia intermedia</i>                               | intermediate suncup      |         |
| Onagraceae    | <i>Camissonia micrantha</i>                                | miniature suncup         |         |
| Onagraceae    | <i>Camissonia robusta</i>                                  | robust sun cup           |         |
| Onagraceae    | <i>Clarkia bottae</i>                                      | Botta's clarkia          |         |
| Onagraceae    | <i>Clarkia cylindrica</i>                                  | speckled clarkia         |         |
| Onagraceae    | <i>Clarkia dudleyana</i>                                   | Dudley's clarkia         |         |
| Onagraceae    | <i>Clarkia epilobioides</i>                                | Willow Herb Clarkia      |         |
| Onagraceae    | <i>Clarkia purpurea</i>                                    | purple clarkia           |         |
| Onagraceae    | <i>Clarkia unguiculata</i>                                 | elegant clarkia          |         |
| Onagraceae    | <i>Epilobium canum</i> subsp. <i>canum</i>                 | California fuchsia       |         |
| Onagraceae    | <i>Epilobium ciliatum</i>                                  | fringed willowherb       | FACW    |
| Onagraceae    | <i>Epilobium paniculatum</i>                               | autumn willowherb        |         |
| Oxalidaceae   | <i>Oxalis albicans</i> subsp. <i>californica</i>           | California woodsorrel    |         |
| Paeoniaceae   | <i>Paeonia californica</i>                                 | California peony         |         |
| Papaveraceae  | <i>Dendromecon rigida</i> subsp. <i>rigida</i>             | bush poppy               |         |
| Papaveraceae  | <i>Eschscholzia californica</i>                            | California poppy         |         |

| FAMILY         | SPECIES                                        | COMMON NAME                | WETLAND |
|----------------|------------------------------------------------|----------------------------|---------|
| Papaveraceae   | <i>Meconella denticulata</i>                   | smallflower fairypoppy     |         |
| Papaveraceae   | <i>Papaver californicum</i>                    | western poppy              |         |
| Papaveraceae   | <i>Platystemon californicus</i>                | cream cups                 |         |
| Plantaginaceae | <i>Plantago erecta</i>                         | California plantain        |         |
| Platanaceae    | <i>Platanus racemosa</i>                       | western sycamore           | FACW    |
| Poaceae        | <i>Vulpia bromoides</i>                        |                            |         |
| Poaceae        | <i>Achnatherum coronatum</i>                   | giant needlegrass          |         |
| Poaceae        | <i>Agrostis pallens</i>                        | Bent grass                 |         |
| Poaceae        | <i>Bothriochloa barbinodis</i>                 | Beard grass                |         |
| Poaceae        | <i>Bromus arizonicus</i>                       | Arizona brome              |         |
| Poaceae        | <i>Bromus carinatus</i>                        | California brome           |         |
| Poaceae        | <i>Elymus condensatus</i>                      | giant wild rye             | FACU    |
| Poaceae        | <i>Elymus glaucus</i>                          | blue wildrye               | FACU    |
| Poaceae        | <i>Hordeum brachyantherum</i>                  | meadow barley              | FACW    |
| Poaceae        | <i>Melica imperfecta</i>                       | smallflower melicgrass     |         |
| Poaceae        | <i>Muhlenbergia microsperma</i>                | littleseed muhly           |         |
| Poaceae        | <i>Nassella lepida</i>                         | small flowered needlegrass |         |
| Poaceae        | <i>Poa secunda</i>                             | one sided blue grass       | FACW    |
| Poaceae        | <i>Setaria parviflora</i>                      | marsh bristlegass          |         |
| Poaceae        | <i>Vulpia octoflora</i>                        | sixweeks fescue            |         |
| Polemoniaceae  | <i>Allophyllum glutinosum</i>                  | sticky false gilia         |         |
| Polemoniaceae  | <i>Eriastrum sapphirinum</i>                   | sapphire woollystar        |         |
| Polemoniaceae  | <i>Eriastrum sapphirinum subsp. dasyanthum</i> | sapphire woollystar        |         |
| Polemoniaceae  | <i>Gilia angelensis</i>                        | chaparral gilia            |         |
| Polemoniaceae  | <i>Gilia cana subsp. cana</i>                  | showy gilia                |         |
| Polemoniaceae  | <i>Gilia capitata</i>                          | blue field-gilia           |         |



| FAMILY           | SPECIES                                                    | COMMON NAME                | WETLAND |
|------------------|------------------------------------------------------------|----------------------------|---------|
| Polemoniaceae    | <i>Gilia capitata</i> subsp. <i>abrotanifolia</i>          | blue field-gilia           |         |
| Polemoniaceae    | <i>Gilia tricolor</i>                                      | Tricolor gilia             |         |
| Polemoniaceae    | <i>Leptodactylon californicum</i>                          | prickly phlox              |         |
| Polemoniaceae    | <i>Leptodactylon californicum</i> ssp. <i>californicum</i> | California prickly phlox   |         |
| Polemoniaceae    | <i>Leptosiphon grandiflorus</i>                            | large flowered leptosiphon |         |
| Polemoniaceae    | <i>Leptosiphon liniflorus</i>                              | narrowflower flaxflower    |         |
| Polemoniaceae    | <i>Navarretia atractyloides</i>                            | hollyleaf pincushionplant  |         |
| Polemoniaceae    | <i>Navarretia hamata</i> subsp. <i>hamata</i>              | hooked pincushionplant     |         |
| Polemoniaceae    | <i>Saltugilia splendens</i>                                |                            |         |
| Polygonaceae     | <i>Chorizanthe parryi</i> var. <i>fernandina</i>           | Parry's spineflower        | RARE    |
| Polygonaceae     | <i>Chorizanthe staticoides</i>                             | Turkish rugging            |         |
| Polygonaceae     | <i>Eriogonum elongatum</i>                                 | longstem buckwheat         |         |
| Polygonaceae     | <i>Eriogonum elongatum</i> var. <i>elongatum</i>           | longstem buckwheat         |         |
| Polygonaceae     | <i>Eriogonum fasciculatum</i>                              | California buckwheat       |         |
| Polygonaceae     | <i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>     | California buckwheat       |         |
| Polygonaceae     | <i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>       | California buckwheat       |         |
| Polygonaceae     | <i>Eriogonum gracile</i>                                   | slender buckwheat          |         |
| Polygonaceae     | <i>Pterostegia drymarioides</i>                            | woodland pterostegia       |         |
| Polygonaceae     | <i>Rumex salicifolius</i> var. <i>salicifolius</i>         | willow dock                | OBL     |
| Polypodiaceae    | <i>Polypodium californicum</i>                             | California polypody        |         |
| Portulacaceae    | <i>Calandrinia breweri</i>                                 | Brewer's calandrinia       |         |
| Portulacaceae    | <i>Calandrinia ciliata</i>                                 | red maids                  | FACU    |
| Portulacaceae    | <i>Claytonia perfoliata</i> subsp. <i>mexicana</i>         | miner's lettuce            | FAC     |
| Portulacaceae    | <i>Claytonia perfoliata</i> subsp. <i>perfoliata</i>       | miner's lettuce            | FAC     |
| Potamogetonaceae | <i>Stuckenia pectinata</i>                                 | sago pondweed              | OBL     |
| Primulaceae      | <i>Dodecatheon clevelandii</i>                             | padre's shootingstar       |         |

| FAMILY        | SPECIES                                                    | COMMON NAME                  | WETLAND |
|---------------|------------------------------------------------------------|------------------------------|---------|
| Primulaceae   | <i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>   | padre's shootingstar         |         |
| Pteridaceae   | <i>Adiantum jordanii</i>                                   | California maiden-hair       | FAC     |
| Pteridaceae   | <i>Pellaea andromedifolia</i>                              | coffee fern                  |         |
| Pteridaceae   | <i>Pellaea mucronata</i>                                   | bird's foot fern             |         |
| Pteridaceae   | <i>Pentagramma triangularis</i> subsp. <i>triangularis</i> | gold back fern               |         |
| Ranunculaceae | <i>Clematis ligusticifolia</i>                             | creek clematis               | FAC     |
| Ranunculaceae | <i>Delphinium cardinale</i>                                | scarlet larkspur             |         |
| Ranunculaceae | <i>Delphinium parryi</i> subsp. <i>parryi</i>              | San Bernardino larkspur      |         |
| Ranunculaceae | <i>Delphinium patens</i>                                   | spreading larkspur           |         |
| Ranunculaceae | <i>Delphinium patens</i> subsp. <i>hepaticodeum</i>        | spreading larkspur           |         |
| Ranunculaceae | <i>Ranunculus californicus</i>                             | California buttercup         | FAC     |
| Rhamnaceae    | <i>Ceanothus crassifolius</i>                              | hoary leaved ceanothus       |         |
| Rhamnaceae    | <i>Ceanothus cuneatus</i>                                  | buckbrush                    |         |
| Rhamnaceae    | <i>Ceanothus cuneatus</i> var. <i>cuneatus</i>             | buckbrush                    |         |
| Rhamnaceae    | <i>Ceanothus cyaneus</i>                                   | Lakeside ceanothus           | RARE    |
| Rhamnaceae    | <i>Ceanothus megacarpus</i>                                | big pod ceanothus            |         |
| Rhamnaceae    | <i>Ceanothus megacarpus</i> var. <i>megacarpus</i>         | big pod ceanothus            |         |
| Rhamnaceae    | <i>Ceanothus oliganthus</i>                                | hairy ceanothus              |         |
| Rhamnaceae    | <i>Ceanothus spinosus</i>                                  | greenbark ceanothus          |         |
| Rhamnaceae    | <i>Rhamnus californica</i>                                 | California coffeeberry       |         |
| Rhamnaceae    | <i>Rhamnus crocea</i>                                      | redberry buckthorn           |         |
| Rhamnaceae    | <i>Rhamnus ilicifolia</i>                                  | hollyleaf redberry           |         |
| Rosaceae      | <i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i>    | chamise                      |         |
| Rosaceae      | <i>Cercocarpus betuloides</i>                              | birch-leaf mountain-mahogany |         |
| Rosaceae      | <i>Cercocarpus betuloides</i> var. <i>betuloides</i>       | birch-leaf mountain-mahogany |         |
| Rosaceae      | <i>Fragaria vesca</i>                                      | California strawberry        |         |

| FAMILY           | SPECIES                                                 | COMMON NAME                | WETLAND |
|------------------|---------------------------------------------------------|----------------------------|---------|
| Rosaceae         | <i>Heteromeles arbutifolia</i>                          | Toyon                      |         |
| Rosaceae         | <i>Holodiscus discolor</i>                              | Ocean spray                | FAC     |
| Rosaceae         | <i>Horkelia cuneata</i>                                 | wedge-leaf horkelia        |         |
| Rosaceae         | <i>Potentilla glandulosa</i>                            | Common cinquefoil          | FAC     |
| Rosaceae         | <i>Prunus ilicifolia</i>                                | holly leaf cherry          |         |
| Rosaceae         | <i>Prunus ilicifolia</i> subsp. <i>ilicifolia</i>       | holly leaf cherry          |         |
| Rosaceae         | <i>Rosa californica</i>                                 | California wild rose       | FAC     |
| Rubiaceae        | <i>Galium angustifolium</i> subsp. <i>angustifolium</i> | narrowleaf bedstraw        |         |
| Rubiaceae        | <i>Galium aparine</i>                                   | common bedstraw            | FACU    |
| Rubiaceae        | <i>Galium cliftonsmithii</i>                            | Santa Barbara bedstraw     |         |
| Rubiaceae        | <i>Galium porrigens</i>                                 | Nuttall's bedstraw         |         |
| Rubiaceae        | <i>Galium porrigens</i> var. <i>porrigens</i>           | Nuttall's bedstraw         |         |
| Salicaceae       | <i>Populus fremontii</i>                                | Fremont cottonwood         | FACW    |
| Salicaceae       | <i>Salix lasiolepis</i>                                 | arroyo willow              | FACW    |
| Saxifragaceae    | <i>Lithophragma affine</i>                              | common woodland star       |         |
| Saxifragaceae    | <i>Lithophragma affine</i> subsp. <i>mixtum</i>         | common woodland star       |         |
| Saxifragaceae    | <i>Saxifraga californica</i>                            | California saxifrage       |         |
| Scrophulariaceae | <i>Antirrhinum coulterianum</i>                         | Coulter's snapdragon       |         |
| Scrophulariaceae | <i>Antirrhinum kelloggii</i>                            | Kellogg's snapdragon       |         |
| Scrophulariaceae | <i>Antirrhinum multiflorum</i>                          | Withered Snapdragon        |         |
| Scrophulariaceae | <i>Antirrhinum nuttallianum</i>                         | Nuttall's snapdragon       |         |
| Scrophulariaceae | <i>Castilleja affinis</i>                               | Indian paintbrush          |         |
| Scrophulariaceae | <i>Castilleja affinis</i> subsp. <i>affinis</i>         | Indian paintbrush          |         |
| Scrophulariaceae | <i>Castilleja applegatei</i> subsp. <i>martinii</i>     | wavyleaf Indian paintbrush |         |
| Scrophulariaceae | <i>Castilleja exserta</i>                               | purple owl's clover        |         |
| Scrophulariaceae | <i>Castilleja foliolosa</i>                             | Texas paintbrush           |         |

| FAMILY           | SPECIES                                              | COMMON NAME                       | WETLAND |
|------------------|------------------------------------------------------|-----------------------------------|---------|
| Scrophulariaceae | <i>Collinsia heterophylla</i>                        | purple Chinese houses             |         |
| Scrophulariaceae | <i>Cordylanthus rigidus</i> subsp. <i>setigerus</i>  | bristly bird's beak               |         |
| Scrophulariaceae | <i>Keckiella cordifolia</i>                          | climbing penstemon                |         |
| Scrophulariaceae | <i>Linaria canadensis</i>                            | blue toad flax                    |         |
| Scrophulariaceae | <i>Mimulus aurantiacus</i>                           | sticky monkeyflower               |         |
| Scrophulariaceae | <i>Mimulus aurantiacus</i> var. <i>pubescens</i>     | sticky monkeyflower               |         |
| Scrophulariaceae | <i>Mimulus aurantiacus</i> var. <i>puniceus</i>      | sticky monkeyflower               |         |
| Scrophulariaceae | <i>Mimulus brevipes</i>                              | wide throated yellow monkeyflower |         |
| Scrophulariaceae | <i>Mimulus guttatus</i>                              | seep monkeyflower                 | OBL     |
| Scrophulariaceae | <i>Penstemon centranthifolius</i>                    | scarlet bugler                    |         |
| Scrophulariaceae | <i>Penstemon heterophyllus</i>                       | foothill penstemon                |         |
| Scrophulariaceae | <i>Penstemon heterophyllus</i> var. <i>australis</i> | southern foothill penstemon       |         |
| Scrophulariaceae | <i>Penstemon spectabilis</i>                         | showy penstemon                   |         |
| Scrophulariaceae | <i>Scrophularia californica</i>                      | California Bee plant              | FAC     |
| Solanaceae       | <i>Datura wrightii</i>                               | Jimson weed                       |         |
| Solanaceae       | <i>Solanum americanum</i>                            | American black nightshade         | FAC     |
| Solanaceae       | <i>Solanum douglasii</i>                             | Douglas' nightshade               | FAC     |
| Solanaceae       | <i>Solanum umbelliferum</i>                          | blue witch nightshade             |         |
| Solanaceae       | <i>Solanum xanti</i>                                 | chaparral nightshade              |         |
| Solanaceae       | <i>Solanum xanti</i> var. <i>intermedium</i>         | chaparral nightshade              |         |
| Typhaceae        | <i>Typha latifolia</i>                               | broadleaf cattail                 | OBL     |
| Urticaceae       | <i>Hesperocnide tenella</i>                          | western stinging nettle           |         |
| Urticaceae       | <i>Parietaria hespera</i>                            | western pellitory                 |         |
| Urticaceae       | <i>Parietaria hespera</i> var. <i>hespera</i>        | western pellitory                 |         |
| Urticaceae       | <i>Urtica dioica</i> subsp. <i>holosericea</i>       | giant creek nettle                | FACW    |
| Verbenaceae      | <i>Verbena lasiostachys</i>                          | Common verbena                    | FAC     |

| FAMILY      | SPECIES                                              | COMMON NAME               | WETLAND |
|-------------|------------------------------------------------------|---------------------------|---------|
| Verbenaceae | <i>Verbena lasiostachys</i> var. <i>lasiostachys</i> | Common verbena            | FAC     |
| Violaceae   | <i>Viola pedunculata</i>                             | California Golden Violet  |         |
| Vitaceae    | <i>Vitis girdiana</i>                                | Southern california grape |         |

APPENDIX 5.

FLORA OF INGLEWOOD AND CENTINELA CREEK FROM HERBARIUM RECORDS

| FAMILY          | SPECIES                                                | COMMON NAME                      | WETLAND |
|-----------------|--------------------------------------------------------|----------------------------------|---------|
| Apiaceae        | <i>Perideridia parishii</i> subsp. <i>latifolia</i>    | wide leaved Parish's yampah      | FACW    |
| Apiaceae        | <i>Sanicula arguta</i>                                 | sharp toothed snakeroot          |         |
| Asteraceae      | <i>Artemisia californica</i>                           | California sagebrush             |         |
| Asteraceae      | <i>Centromadia parryi</i> subsp. <i>australis</i>      | Parry's tarweed                  | FAC     |
| Asteraceae      | <i>Cirsium brevistylum</i>                             | Indian thistle                   |         |
| Asteraceae      | <i>Ericameria palmeri</i> var. <i>pachylepis</i>       | broad scaled Palmer's goldenbush |         |
| Asteraceae      | <i>Gnaphalium palustre</i>                             | western marsh cudweed            | FACW    |
| Asteraceae      | <i>Grindelia hirsutula</i>                             | hairy gumweed                    | FACW    |
| Asteraceae      | <i>Heterotheca grandiflora</i>                         | telegraphweed                    |         |
| Asteraceae      | <i>Lasthenia glabrata</i> subsp. <i>coulteri</i>       | yellowray goldfields             | FACW    |
| Asteraceae      | <i>Psilocarphus brevissimus</i>                        | woolly marbles                   | OBL     |
| Asteraceae      | <i>Stephanomeria exigua</i> subsp. <i>exigua</i>       | slender stephanomeria            |         |
| Boraginaceae    | <i>Pectocarya linearis</i> subsp. <i>ferocula</i>      | sagebrush combseed               |         |
| Brassicaceae    | <i>Rorippa palustris</i> subsp. <i>occidentalis</i>    | western bog yellow cress         | OBL     |
| Brassicaceae    | <i>Sibara virginica</i>                                | common rock cress                | FAC     |
| Caryophyllaceae | <i>Spergularia macrotheca</i> var. <i>leucantha</i>    | sticky sandspurry                | FAC     |
| Caryophyllaceae | <i>Spergularia marina</i>                              | salt marsh sand spurry           | OBL     |
| Chenopodiaceae  | <i>Atriplex serenana</i> var. <i>serenana</i>          | salt scale                       | FAC     |
| Chenopodiaceae  | <i>Chenopodium californicum</i>                        | soaproot                         |         |
| Convolvulaceae  | <i>Calystegia macrostegia</i> subsp. <i>intermedia</i> | south coast morning-glory        |         |
| Convolvulaceae  | <i>Cressa truxillensis</i>                             | spreading alkaliweed             | FACW    |
| Convolvulaceae  | <i>Calystegia macrostegia</i> ssp. <i>intermedia</i>   | south coast morning glory        |         |
| Cyperaceae      | <i>Eleocharis acicularis</i>                           | needle spikerush                 | OBL     |
| Cyperaceae      | <i>Eleocharis acicularis</i> var. <i>acicularis</i>    | needle spikerush                 | OBL     |
| Cyperaceae      | <i>Eleocharis macrostachya</i>                         | common spikerush                 | OBL     |
| Cyperaceae      | <i>Scirpus californicus</i>                            | California tule                  | OBL     |

| FAMILY         | SPECIES                                              | COMMON NAME              | WETLAND |
|----------------|------------------------------------------------------|--------------------------|---------|
| Cyperaceae     | <i>Scirpus maritimus</i>                             | prairie bulrush          | OBL     |
| Elatinaceae    | <i>Elatine brachysperma</i>                          | short-seed waterwort     | FACW    |
| Euphorbiaceae  | <i>Chamaesyce albomarginata</i>                      | rattlesnake weed         |         |
| Euphorbiaceae  | <i>Croton setigerus</i>                              | dove weed                |         |
| Fabaceae       | <i>Astragalus tener</i> var. <i>titi</i>             | alkali milk-vetch        | FACW    |
| Fabaceae       | <i>Astragalus trichopodus</i> var. <i>lonchus</i>    | Santa Barbara milk-vetch |         |
| Fabaceae       | <i>Lotus heermannii</i>                              | Heermann's lotus         |         |
| Fabaceae       | <i>Lotus strigosus</i>                               | Hairy Lotus              |         |
| Fabaceae       | <i>Lotus strigosus</i> var. <i>hirtellus</i>         | Hairy Lotus              |         |
| Fabaceae       | <i>Lotus strigosus</i> var. <i>strigosus</i>         | Hairy Lotus              |         |
| Fabaceae       | <i>Lupinus bicolor</i> subsp. <i>microphyllus</i>    | miniature lupine         |         |
| Fabaceae       | <i>Trifolium ciliolatum</i>                          | foothill clover          |         |
| Fabaceae       | <i>Trifolium gracilentum</i>                         | pinpoint clover          |         |
| Fabaceae       | <i>Trifolium willdenovii</i>                         | tomcat clover            |         |
| Malvaceae      | <i>Sidalcea malviflora</i> subsp. <i>sparsifolia</i> | dwarf checkerbloom       |         |
| Onagraceae     | <i>Camissonia lewisii</i>                            | Lewis' evening primrose  |         |
| Onagraceae     | <i>Camissonia strigulosa</i>                         | sandysoil suncup         |         |
| Onagraceae     | <i>Epilobium pygmaeum</i>                            | smooth boisduvalia       | OBL     |
| Plantaginaceae | <i>Plantago elongata</i>                             | coastal plantain         | FACW    |
| Plantaginaceae | <i>Plantago subnuda</i>                              | tall coastal plantain    | FACW    |
| Poaceae        | <i>Agrostis viridis</i>                              | green bentgrass          |         |
| Poaceae        | <i>Alopecurus carolinianus</i>                       | Carolina foxtail         | FACW    |
| Poaceae        | <i>Bromus carinatus</i>                              | California brome         |         |
| Poaceae        | <i>Phalaris lemmonii</i>                             | Lemmon's canarygrass     | FACW    |
| Poaceae        | <i>Phalaris minor</i>                                | littleseed canarygrass   |         |
| Poaceae        | <i>Poa secunda</i>                                   | one sided blue grass     | FACW    |

| FAMILY        | SPECIES                                                    | COMMON NAME               | WETLAND |
|---------------|------------------------------------------------------------|---------------------------|---------|
| Polemonaceae  | <i>Navarretia fossalis</i>                                 | spreading navarretia      |         |
| Polemoniaceae | <i>Gilia angelensis</i>                                    | chaparral gilia           |         |
| Polemoniaceae | <i>Linanthus dianthiflorus</i> subsp. <i>dianthiflorus</i> | fringed linanthus         |         |
| Polemoniaceae | <i>Navarretia prostrata</i>                                | prostrate pincushionplant | OBL     |
| Polemoniaceae | <i>Saltugilia splendens</i> ssp. <i>spendens</i>           |                           |         |
| Portulacaceae | <i>Calandrinia ciliata</i> var. <i>menziesii</i>           | red maids                 | FACU    |
| Ranunculaceae | <i>Ranunculus californicus</i>                             | California buttercup      | FAC     |
| Rosaceae      | <i>Heteromeles arbutifolia</i>                             | Toyon                     |         |
| Salicaceae    | <i>Salix lasiolepis</i>                                    | arroyo willow             | FACW    |
| Solanaceae    | <i>Solanum douglasii</i>                                   | Douglas' nightshade       | FAC     |
| Verbenaceae   | <i>Verbena bracteata</i>                                   | bigbract verbena          | FACW    |
| Verbenaceae   | <i>Verbena lasiostachys</i> var. <i>lasiostachys</i>       | Common verbena            | FAC     |
| Violaceae     | <i>Viola pedunculata</i>                                   | California Golden Violet  |         |



**From:** maryknight <kathy.knight@verizon.net>  
**Subject:** **Additional Ballona Restoration NOI Comments**  
**Date:** October 23, 2012 11:05:35 AM PDT  
**To:** "Daniel P. Swenson" <daniel.p.swenson@usace.army.mil>, David Lawhead  
<DLawhead@dfg.ca.gov>

October 23, 2012

TO: Dr. Daniel P. Swenson, U.S. Army Corps of Engineers, Los Angeles District P.O. Box  
532711, Los Angeles, CA 90053-2325  
Mr. David Lawhead, California Dept. of Fish & Game, 3883 Ruffin Road, San Diego, CA  
92123

FROM: Kathy Knight, (310) 613-1175, [kathy.knight@verizon.net](mailto:kathy.knight@verizon.net)

RE: Additional Comments Re: Ballona Restoration NOI Comments

Dear Mr. Swenson and Mr. Lawhead:

I have these additional comments to add to the record regarding the proposed restoration of the Ballona Ecological Reserve. Please add them to the comments I have already mailed/delivered to you.

## **ALTERNATIVE RESTORATION PLAN**

Please study seriously an ALTERNATIVE plan for restoration of the Ballona reserve. This plan would NOT entail major bulldozing and removing levees from the LA River. This plan would have the following components:

- 1) Plan approved by Tongva Native Americans for their sacred site.
- 2) Plan may allow for minor earthmoving to make a couple of small channels for fresh water.
- 3) No water from Ballona Creek allowed into the wetlands until it is cleaned up to a tertiary level.
- 4) Use Bond funds available, from not doing an expensive major bulldozing/dredging/levee-building project, to buy buffer lands around the reserve to reduce road kill of Ballona wildlife in the area, and allow larger more stable populations of wildlife. Additional land would also make limited public trails less disturbing to wildlife, as they would have additional places to live.
- 5) Study the value of this plan for 5-10 years. Some alterations could be made during that time, based on the results.
- 6) Utilize local citizens who have been documenting/photographing this area for the past 20-30 years in the active science committee. Do not continue to relegate them to public comments of 2-3 minutes at in-frequent meetings, but rather make them integral participants in the science committees where they can communicate more fully with the other members. Some of them see wildlife that is never documented on the science cameras. Their input is CRITICAL to a

well-done evaluation of this area.

7) Continue to bring Los Angeles area students out to the wetlands to help clean-up the area, document flora and fauna, etc. so that they are interested in helping to watch over this land in the future.

8) Follow the natural course of the land/water. Please consult with Dr. Travis Longcore and his researchers on this.

9) Use this plan to teach the public that the first rule of restoration is to "Do No Further Harm". Teach the public that big expensive industrial solutions are not always the best, most permanent way to protect nature. A slower alternative that teaches people to respect nature, and allow its natural tendency to balance itself.

IF YOU WANT FURTHER INFORMATION ON SUCH A PLAN, LET ME KNOW AND I WILL WORK ON GETTING YOU MORE DETAILS. A PLAN LIKE THIS WOULD GIVE THE PUBLIC A REAL CHOICE, AND validate what the public is being told - that there IS NO preferred plan, that it is wide open on what will happen at Ballona.

#### **OTHER COMMENTS:**

1) I do not agree at all with bulldozing this site. But if you do, please reveal any background information regarding any bulldozing of Ballona, and if any company will benefit from mitigation credits, and any other financial connections to the restoration efforts, so that there is transparency on how and why these decisions are made.

2) REGARDING WATER STUDIES: Please study the impact of the water from Marina Del Rey on ANY proposed alternative for restoration. Marina Del Rey water is highly polluted from toxics from many boats (I have been told there are 7,000 boats there!). These boats have toxic chemicals applied to them to preserve them, and to run them, that leak into the water, plus people using the boats have been seen to dump liquids and trash into the water. Please test the water of Marina Del Rey very carefully and assess how that water will impact the wetlands, and how it could be kept separate from the wetlands.

2) Remove the trash (local groups and citizens can help on this issue) and find somewhere for homeless people to sleep. Don't make these issues a reason why the restoration has to be hurried.

Thank you very much.

Kathy Knight, MSW

(Have been volunteering and donating funds for 20 years to save and protect this precious ecosystem)

(310) 613-1175

*P.S. THE REASON THAT IT IS CRITICAL TO STUDY THE WATER/GAS INTERACTION IS THAT THERE ARE MANY RESIDENTS AT PLAYA VISTA THAT COULD BE IMPACTED BY ANY CHANGES.*

October 22, 2012

Dr. Daniel P. Swenson, Chief  
Los Angeles Section  
U.S. Army Corps of Engineers  
915 Wilshire Blvd.  
Los Angeles, CA 90017

Mr. David Lawhead  
California Dept. of Fish & Game  
3883 Ruffin Road  
San Diego, CA 92123

**Comments on NOI to Prepare Joint EIS/EIR on Ballona Wetlands  
Restoration**

Dear Mr. Swenson and Mr. Lawhead:

I have been volunteering since 1992 to help protect the Ballona wetlands ecosystem from development and bulldozing. I am Conservation Chair of the Sierra Club Airport Marina Group, but these comments are my own. The Sierra Club will be making comments separately.

As I understand the proposed project is for a full review of the area of the Ballona Ecological Reserve. It has never had a federal review before. And based on this review, a proposal will be made for what should be done to help enhance this valuable resource. I have the following comments/questions and requests for studies:

1) This entire area is a registered Sacred Site for the indigenous people of Los Angeles, the Tongva Native Americans, who have been living in this area for the past 10,000 years. This area is called Sa'angna in their culture. They had a very deep respect for nature and kept this area as a beautiful paradise.

They have suffered horribly through the past 300 years from having their land taken from them and their culture disrespected. The Playa Vista developers dug up over 1400 of their ancestors' graves to build their development. It is time that this process is stopped. Please respect their wishes and their culture when considering how to treat this land.

2) PLEASE STOP ALL ALTERATIONS AND/OR CONSTRUCTION ACTIVITIES ON THIS LAND UNTIL THE EIS/EIR IS APPROVED.

I have been told that approximately 60 core drillings have been made on the land in the past month. What is that for? How has that activity impacted plants and animals on the site? Please keep the land unaltered until this process is approved.

3) PLEASE EXPLAIN WHY THE 2005 JOINT EIS/EIR IS NOT BEING FOLLOWED

Why instead is this very narrowly focused restoration plan with only a fraction of the Ballona ecosystem being studied?

Marina del Rey would be reviewed under House Document 389. The Corp would then report back to Congress to recommend any changes thereto.

The entire Ballona Watershed was considered.

The process was funded by Congress.

The process was requested by Congress.

The 2005 NOI covered the Ballona ecosystem, including Marina Del Rey, the Playa Vista Urban Runoff Basin (aka Fresh Water Marsh). Please follow the 2005 NOI, not this shortened one. All of the adjacent bodies of water need to be included into the Ballona Wetlands Study Area (BWSA) including, but not limited to, the Marina Del Rey Harbor, Oxford Lagoon, Del Rey Lagoon, Venice Canals, and Santa Monica Bay. The Ballona Ecosystem needs to be studied as a whole. Its waters and wildlife are interactive, and you can't study one section properly without studying the whole.

The Sierra Club Airport Marina Group supports this restoration process to continue under the more inclusive 2005 NOI. (See attached letter of support).

4) WHY HASN'T A PUBLIC HEARING BEEN HELD FOR THE NOI?

This current process is not conducive to the public being able to make full comments. Local citizens have fought to save this land for many years. They deserve to hear each other speak at a public hearing, not just have the walk around displays on August 16, 2012. This process is critical at the NOI stage, where the groundwork is being set on what to study in the EIS/EIR.

It would be beneficial to the Army Corps and Fish & Game to hear their concerns and for the public to be able to ask them questions.

Please extend the Oct. 23rd NOI deadline until a public hearing by the Army Corps and CDFG can be held. This request was made at the August display event, but thus far it has not happened.

**5) PLEASE ANALYZE AND ASSESS HOW THE PLAYA VISTA AND BALLONA WETLANDS GROUNDWATER WILL BE IMPACTED BY THE PROPOSED RESTORATION PLANS.**

How much groundwater is being taken out of the aquifer currently by Playa Vista and sent to Hyperion?

How much more water will be withdrawn if Playa Vista Phase 2 is built? What effect will that have on the wetlands?

How much water can be withdrawn from the Playa Vista site and not take away from the wetlands' source of underground water?

What effect is the withdrawing of this amount of water and this depletion of the aquifer having currently on the Ballona wetlands ecosystem?

What is the impact if the aquifer beneath Playa Vista and Ballona (the Silverado aquifer) which is a potential drinking water aquifer, is needed for public use due to drought?

Ballona is a non-adjudicated basin. As I understand, this means that entities can take as much water as they want from underneath their property. For example, Playa Vista is withdrawing a large amount of water under their development to maintain their gas mitigation system. As far as we know, it is unmonitored and sent straight to Hyperion. The area seems much drier than usual, even more so than in previous drought years like this one.

**6) HOW WOULD ANY CHANGE IN THE HYDROLOGY (ESPECIALLY ADDITION OR WITHDRAWAL OF WATER) OF THE AREA IMPACT THE MIGRATORY GAS UNDER THE PLAYA VISTA DEVELOPMENT?**

After 5 years of Grassroots Coalition and their expert, Dr. Bernard Endres, warning the Los Angeles Dept. of Building and Safety that there was a problem of escaping gas at the Playa Vista site, the Dept. finally ordered a peer review study

by Exploration Technologies, Inc. (ETI). This study showed that Grassroots Coalition was right - there was a large amount of gas coming out of the site (see attached 4-13-2000 ETI gas map attached).

ETI stated that this gas is highly migratory (January 19, 1999 letter attached). Also the site is subject to significant earthquakes in the future that can alter both the subsurface methane concentrations migrating from subsurface sources and degrade any methane mitigation system (July 23, 1999 ETI letter attached).

A December 15, 1999 letter (attached) from ETI said the Playa Vista area is a "High Potential Methane Zone" and that no excavations should be made below the ground table water, and a report should be filed before pumping of any groundwater.

Doesn't this documentation regarding the serious gas issue at Playa Vista warrant very serious studies on the effects of adding or changing the water dynamics of the area? We think that ETI should be consulted on any proposed changes to the hydrology/tidal influence in this area.

Please address the concerns of Dr. Bernard Endres, Grassroots Coalition's expert in his June 7, 2000 document to LA City entitled "An Evaluation of Gas Migration and Environmental Hazards Existing at the Playa Vista Project" (attached). Dr. Endres wrote a book about the Playa Del Rey oilfield and was very familiar with its aspects. On Issue #6 in this document, he says an evaluation of the special problems created by the 50 ft. gravel zone (the old Los Angeles River bed) under Ballona Creek needs to be performed due to the fact that it allows gas to build to high pressures from a rising water table.

Also, it is our understanding that Southern California Gas Co. which stores 7 billion cubic feet of gas just west of Lincoln Blvd. in a sandstone rock formation approximately 6,000 ft. below the ground should be consulted. We have been told that they maintain the pressure of this gas in the rock formation through a system of pressure that changes with the tides going in and out of the area.

Finally, if any changes to the hydrology of the area were to exacerbate the gas problem at Playa Vista, the Marina, or the Gas Co., who would be responsible financially? Would there be any risk of liability from the State of California?

7) Why is the Playa Vista Urban Runoff Basin (aka Fresh Water Marsh) left out of this EIS/EIR proposal when it is part of the wetlands? Please include this area in the EIS/EIR. It is part of this Ballona ecosystem.

Why isn't the dewatering of the Playa Vista site going to the Fresh Water Marsh, instead of being sent to Hyperion?

It is our understanding that it was required through the Playa Vista Environmental Impact Report.

Also what will be the impact on the Ballona Ecological Reserve if the Fresh Water Marsh has to be dredged every 5-15 years to remove toxic contamination build up from street runoff, as stated will have to happen in the Playa Vista Phase 1 EIR?

It is also our understanding that the Fresh Water Marsh is being maintained by the Playa Vista developer with watering from tap water sources. How much water does this use, and how will it be maintained when the developers are gone? We are concerned that the Playa Vista homeowners will not be able to afford to keep the Fresh Water Marsh watered. What impact would that have on the Ballona Reserve?

#### 8) BALLONA CREEK SHOULD NOT BE ALLOWED TO POLLUTE THE WETLANDS

Ballona Creek should not be allowed, with all its street run-off contamination from a wide area of the Los Angeles basin, to flow into the Ballona Reserve just to "bring water to the wildlife." This is using the Ballona Reserve as an End of the Line clean-up basin to clean up Ballona Creek before it enters Santa Monica Bay.

A full EIR needs to be done of opening up Ballona Creek into the wetlands before it would ever be happen due to its toxic contamination from many miles of runoff sources.

Are you going to do an EIS/EIR on the impact of changing Ballona Creek and letting it go into the wetlands?

I talked to a scientist on your technical advisory committee, Dr. Richard Ambrose, who agreed that opening up Ballona Creek into the reserve would bring contamination, but he said the animals would benefit from the water.

Please analyze and assess how the pollution from Ballona Creek would impact

plant and animal life.

The Ballona Reserve looks dry now, but that is because the rainfall for 2011-2012 is only half of normal. (See attached rainfall charts). This land has gone through periodic droughts and heavy rainfall seasons for many years. It is a seasonal wetland, not a year-round wetland.

Also, what are the positive effects of a drought? It is our understanding that during droughts some of the invasive non-native plants die off, giving the native plants more chance to re-generate. Are there any other benefits?

Also, please analyze the upland habitat needed for the wildlife of Ballona. We understand from a previous study that the wetlands were 2,000 acres surrounded by 6,000 acres of uplands. So uplands are a very important part of the system, and the current proposed project looks like it will create too much wetland area vs. upland area.

#### 9) THE BALLONA WETLANDS CANNOT CLEAN UP TOXIC POLLUTION FROM BALLONA CREEK

If Ballona Creek is opened up into the wetlands, how will the sediment be taken out of the wetlands, and how will the toxics sent into it from the creek be removed? In a study done by Dr. Rimmon C. Fay who spent his life studying the Ballona wetlands and Santa Monica Bay, wetlands can absorb and handle a certain amount of sewage waste. But they cannot handle toxic waste. It builds up in the soil, gets absorbed into plants, and therefore by wildlife. Wetlands cannot break down toxic chemicals into non-toxic chemicals.

How much would it cost to remove this sediment and toxic contamination from the wetlands, and how often would it have to be done?

#### 10) ANY NEW WATER INTO THE WETLANDS NEEDS TO BE FROM A CLEAN SOURCE SO AS TO NOT DAMAGE IT MORE.

Any new water should be treated to a tertiary level to protect the plants and animals. Otherwise, this area may have to be periodically dredged every 5-15 years just like the Fresh Water Marsh.

What would be the cost of cleaning up the Ballona Creek water to a tertiary level?



11) WHAT IS THE EFFECT OF THE 20' HIGH LEVEES ON THE RESTORATION PROPOSAL PUT FORTH BY THE COASTAL CONSERVANCY? (See attached document)

Will they have an impact on Playa Del Rey? If a tsunami came through, the levees might protect Playa Vista, but could the water end up rebounding west back through the wetlands to Playa Del Rey, instead of being gradually absorbed to the east of Lincoln Blvd.?

It should be studied how the wetlands would fare in a tsunami. For example I have been told that in the 1930's a tsunami 9 ft. high went east past the 405 freeway. Another one in 2011 in Northern California caused \$44 million in damage to harbors.

Are these levees being put there to protect Playa Vista and the large commercial interests at the site? What is the cost to taxpayers of these levees?

12) WHAT IS THE ESTIMATED COST OF THESE STUDIES AND PROPOSED PLAN TO RESTORE THE BALLONA WETLANDS?

13) SLOWER RESTORATION ALTERNATIVE

Please review the attached 7 GUIDING PRINCIPLES document that is supported by the Ballona Wetlands Land Trust, Sierra Club, Ballona Institute, Ballona Ecosystem Education Project, Grassroots Coalition, and Wetlands Defense Fund.

What would be the cost of a slower restoration? For example, take more time to study the land and see the effects of an ongoing restoration.

Please study the advantage of this type of restoration as a legitimate proposal. It would not be a no-project alternative, but it would be much less invasive than the proposed bulldozing/dredging of the site.

A slower, more careful restoration process would help avoid the mistakes made in the past, such as at the El Segundo Dunes in the 1990's. There LAX did a restoration where they had a company come in and plant native californian

buckwheat plants to help the endangered El Segundo Blue butterfly recover. However, it was observed that the numbers of this species was going down even more. Only after careful studying of the situation did Dr. Rudi Mattoni find out that the PARTICULAR type of California buckwheat planted there was helping the El Segundo Blue's competitor butterfly increase in numbers. It hatched earlier than the El Segundo Blue on this particular type of buckwheat, and ate the food source up before the El Segundo Blue hatched. After these plants were removed and replaced by the right type of California buckwheat the El Segundo Blue started recovering and now is doing well at the dunes.

A massive bulldozing, dredging of the wetlands could destroy a lot of this valuable information.

How would any bulldozing/dredging hurt/impact threatened and endangered species out there, such as the California Gnatcatcher and the Least Bell's Vireo? Isn't it the law that the habitat of these rare animals should not be altered or destroyed?

Students from Los Angeles area schools could come out and help do surveys and restore one area at a time, helping to teach them about nature and helping them to feel connected to Ballona as their wetlands.

#### 14) ACQUISITION OF BUFFER LAND AROUND THE RESERVE

Please study the cost effectiveness of using restoration money towards acquiring more buffer land around the reserve.

Wouldn't this have a more beneficial effect on the plants and wildlife than bulldozing/dredging?

This reserve is in a highly developed area and the amount of road kill is already very high. According to a study in 2010, approximately 3,500 animals a year are killed on the roads around Ballona (see attached summary of road kill study).

And another intense development, Playa Vista Phase 2 was approved by the Los Angeles City Council in 2010. It is a few blocks east of the Reserve. According to the Playa Vista Phase 2 EIR, it would generate 24,000 additional car trips daily.

If that land and other buffer lands at risk of development were acquired, wouldn't that prove to be very beneficial to restoring and protecting wildlife and native flora at the Reserve?

# 15) STUDY AND FOLLOW THE NATURAL DYNAMICS AND HISTORY OF THE ECOSYSTEM

What is the natural flow of water on this land during the past 200 years?

As evidenced in photos that we have seen, there was not an estuarine habitat here with full tidal flow. Most of the time the wetlands were closed to the ocean, except in a rainy season.

According to research done by Dr. Travis Longcore the wetlands were mostly closed to the ocean. **Please review his lecture, entitled "Closure Dynamics of Southern California Estuaries and Implications for Restoration" given May 22, 2012 to the Los Angeles Audubon Society.** It is available on the website of Grassroots Coalition ([www.saveballona.org](http://www.saveballona.org)). Hearing his presentation is critical to understanding the NATURAL balance of this area.

Please analyze the benefits to the wetlands and the species there of it being closed most of the time to the ocean.

The reason this issue needs to be studied more is that many times "restoration plans" include expensive bulldozing/dredging that do not follow the natural flow of the land/water on the site. It is not only expensive to bulldoze and dredge to begin with, but it does not last and must be done again. For example, the 1983 bulldozing of Malibu Lagoon to restore it did not work, and it recently has been bulldozed again. What was the cost 30 years ago and what was the cost this year at Malibu and who paid for it? Thirty years from now it will probably have to be bulldozed again - at what cost?

Also, the Bolsa Chica wetlands were dredged out and it keeps filling in because it does not reflect the natural flow of water and runoff. So every 2 years, it must be re-dredged at a cost of approximately \$3 million. It is our understanding that in 2011 it had to be dredged at a cost of \$13.3 million. Where does this money come from? Where would be the source of this money if it were needed at Ballona to maintain an unnatural estuarine habitat?

This waste of taxpayer bond money is a tragedy, especially in hard economic times. Any restoration of Ballona should be one that will not have to be repeated. What would be the cost of following the natural dynamics of this area, vs. creating a situation that does not? What would be the cost of bulldozing/dredging an estuarine habitat at Ballona that does not naturally exist now?

16) DO NOT DISTURB THE SOIL PLACED ON THE BALLONA RESERVE FROM THE DREDGING OF MARINA DEL REY, BEFORE IT IS ANALYZED FOR ITS VALUE AND THE TONGVA NATIVE AMERICANS HAVE BEEN CONSULTED AND AGREED TO ANY DISTURBANCE

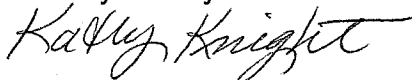
Land that was placed onto the Ballona Reserve just south of Fiji Way is very valuable land. It was placed there when the Ballona wetlands north were dug up and Marina del Rey was built. It would have the original soil from that area that may be valuable later to study, it has native plants growing on it, and it may have Native American artifacts/historical parts to it.

This land should not be disturbed without first consulting with the Tongva Native Americans, and should most likely be left there.

Also please consult the California Native Plant Society for their input on this restoration of Native Plants at the Ballona Reserve.

Please keep me informed of any events and information relating to this Ballona wetlands area.

Thank you very much.



Kathy Knight  
1122 Oak St.  
Santa Monica, CA 90405  
(310) 613-1175  
Kathy.knight@verizon.net

Attachments:

Photo of Ballona wetlands in 1995  
Sierra Club letter re 2005 NOI dated August 16, 2012  
2 Annual Los Angeles Rainfall charts  
ETI gas map of Playa Vista and So. California Gas Co Storage area of 4-13-2000  
Letters dated January 19, 1999, July 23, 1999, and December 15, 1999 from ETI to LADBS and LA Building & Safety Dept. to PLAYA CAPITAL  
An Evaluation of Gas Migration and Environmental Hazards Existing at the Playa Vista Site by Dr. Bernard Endres, June 7, 2000  
Ballona Ecosystems Rejuvenation 7 Guiding Principles  
Ballona Roadkill Statistical Document  
Coastal Conservancy Proposed Construction Plan for Ballona Restoration

CC: DONNA MCCORMICK, ICFI - 10 -



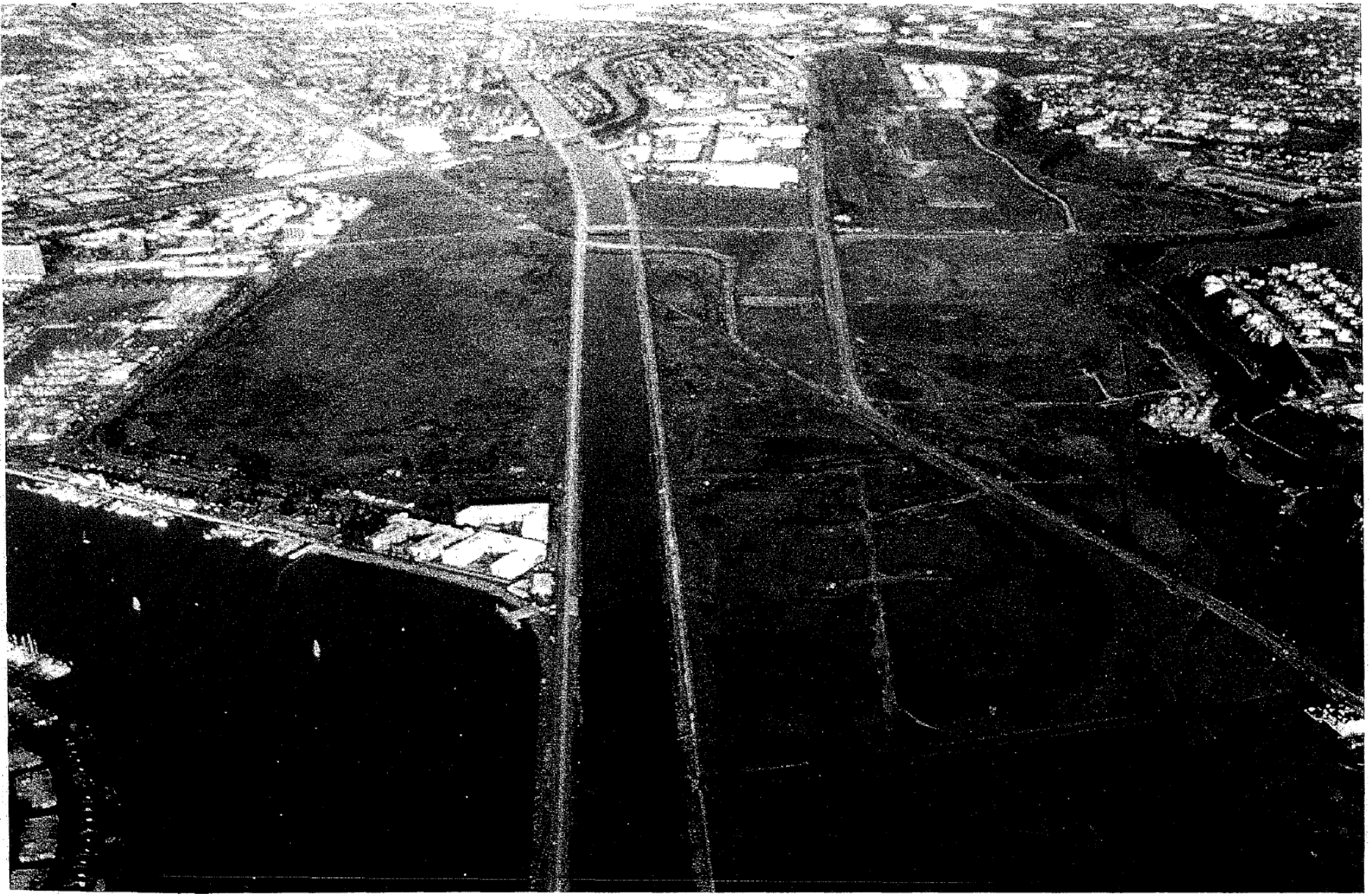


Photo By Rob Kinslow 1995

A-1886 View towards the Ballona Wetlands Ecosystem  
Los Angeles, California

# **BALLONA ECOSYSTEMS REJUVENATION**

## **"SEVEN GUIDING PRINCIPLES"**

1. 21<sup>st</sup> century, incremental, community involved ecosystem rejuvenation that is in harmony with natural laws . We are opposed to industrial-scale habitat conversion, including major bulldozing, which destroys existing ecosystems.
2. In appreciation of what is there now, recognize the resiliency of the ecosystems and identify areas that require no more than observation for the foreseeable future.
3. In recognition of the importance of gaining control of more acreage before it is built on, or otherwise negatively impacted, give priority to acquisition/addition of additional unprotected parcels of land at a reasonable price to the Ballona Wildlife Refuge, over restoration activities. Such land protection will increase habitat enhancing buffer zones for wildlife and plants, and decrease car trips in the area, which lead to animal road fatalities.
4. Utilize existing opportunities to access the refuge, such as the Ballona Creek bike path, and south earthen levy along Ballona Creek and install a walking/biking path around as much of the perimeter of the refuge as is ecologically feasible.
5. Utilizing existing infrastructure such as the old Pacific Railway bridge supports and other man made structures, along with materials that have the deepest sustainability, create wildlife, bicycle, and walking linkages that connect all areas of the ecosystems in a fashion that allow homo sapiens and animals alike, to safely go over or under all roads and waterways that divide the refuge.
6. In recognition of the importance of enhancing the beauty of the refuge, safety of birds and other mammals, and the reduction of light pollution, move all power, telephone, and cable lines underground, and remove the majority of street lighting.
7. Endangered, threatened, and imperiled species must be given priority for protection in any refuge alteration considerations.

Supported by numerous environmental and community groups, including Ballona Wetlands Land Trust, Sierra Club, Ballona Institute, Ballona Ecosystem Education Project, Grassroots Coalition and Wetlands Defense Fund



SIERRA  
CLUB

FOUNDED 1892

Angeles Chapter  
Airport Marina Regional Group  
3435 Wilshire Blvd., Ste. 320  
Los Angeles, CA 90010

August 16, 2012

**U.S. Army Corps of Engineers**

Los Angeles District  
915 Wilshire Blvd, Suite 1101  
Los Angeles, CA 90017  
Att: Col. Mark Toy Commander Los Angeles District  
Att: Dr. Daniel P. Swenson  
1416 9th St., 12th Floor

**California Dept. of Fish & Game**

1416 9th Street, 12th Floor  
Sacramento, CA 95814  
Att: Executive Director Charlton H. Bonham

Re: 2012 Notice of Joint EIS/EIR

This letter responds to the Notice of Intent to conduct a joint EIS/EIR pursuant to the National Environmental Policy Act and the California Environmental Protection Act at the Ballona Wetlands Ecological Preserve in the State of California, County of Los Angeles, in 2012.

The Club has resolved to support the joint EIR/EIS process noticed in the Federal Register on September 20, 2005 by the U.S. ACE Los Angeles District and the Santa Monica Bay Restoration Commission, a State Agency, as the local sponsor.

The position of the Club is that the new Notice of Intent placed in the Federal Register on July 25, 2012 contradicts and duplicates the former EIS noticed in 2005.

The Secretary of the Army has stated in writing that the 2005 joint EIS/EIR process is not terminated and is therefore current.

The reasoning of the resolution is as follows:

Another EIS process has been introduced by LA USACE that interferes with and contradicts the current process. The Corp has begun a new process that duplicates and reduces the scope of the 2005 Environmental Process, without first terminating it.

The two processes cannot exist concurrently, because of duplication, and the requirement for the first study to be completed. The first study has been fully funded by the U.S. Congress and the latter process has not.

The second process proposes to change the course of Ballona Creek, and to dredge and fill wetlands, prior to the completion of the first process and before the Corp can report its recommendations back to Congress.

Furthermore, the second process proposes to reintroduce tidal flow to a freshwater wetland system that was not historically connected to the to the ocean to the degree the new process implies.

The National Oceanic and Atmospheric Administration warned against this project, as it would destroy valuable upland habitat.

The U.S. Clean Water Act designates four separate Section 303(d) Impaired Waterways that are present.

- Marina del Rey
- Upper Ballona Creek
- Ballona Creek Estuary
- Ballona Wetlands

The 2012 Notice proposes to divert one Impaired Waterway into another. It is illegal to further impair a waterway that is already impaired.



The resolution reads as follows and represents the Sierra Club official stance on both of the aforesaid environmental processes.

### **RESOLUTION**

*Whereas, the Airport Marina Regional Group of the Angeles Chapter Sierra Club has jurisdiction over Marina del Rey,*

*Whereas, The Club supports National Planning for Environmental Restoration, Recreational Boating, Storm Damage Reduction, and is Supportive of other purposes the Congress of the United States intended for Marina del Rey such as a youth hostel and camping facilities.*

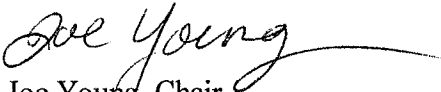
*Whereas, The U.S. Army Corp of Engineers Environmental Impact Statement process noticed in the Federal Register in 2005 supports the same aforesaid purposes that the Sierra Club supports,*

*Therefore, be it resolved by the Airport Marina Regional Group, Angeles Chapter of Sierra Club, supports the completion of the 2005 Environmental Review process Noticed in the Federal Register to conduct a review of Marina del Rey: September 20, 2005 (Volume 70, Number 181) [Notices] [Page 55116-55117]*

END

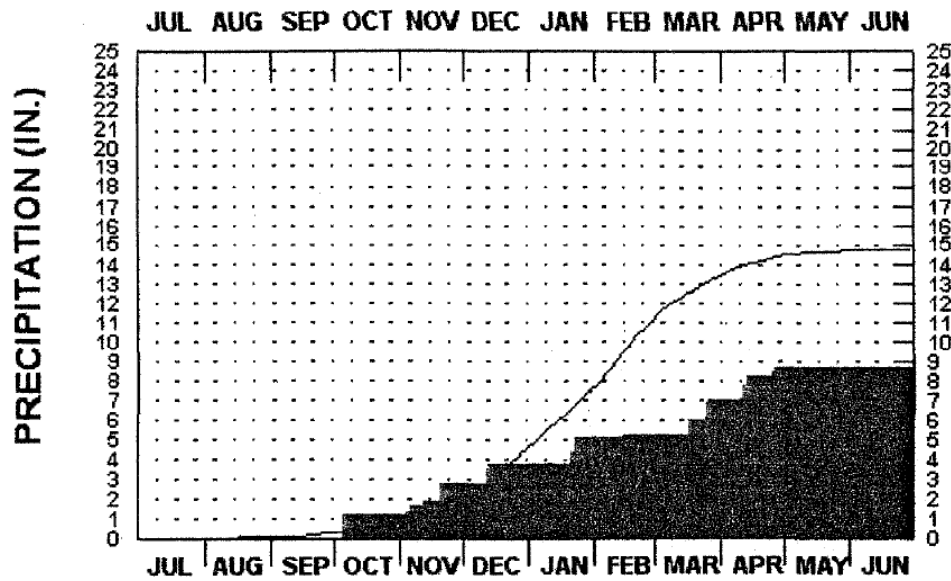
The Sierra Club supports a full range of alternatives for the restoration, which is called for in the 2005 Notice for Environmental Impact Statement pursuant to the National Environmental Policy Act. The Sierra Club does not support a limited range of alternatives as proposed by the 2012 Notice for an Environmental Impact Statement.

Sincerely,



Joe Young, Chair  
Airport Marina Group  
(310) 822-9676

# SEASON-TO-DATE DOWNTOWN LOS ANGELES PRECIP FOR 2011-12 (BARS) VERSUS LONG-TERM AVERAGE (LINE TRACE)



er the role of propofol, and both sides tried to use the testimony of emergency room doctors to launch opening salvos.

Deputy Dist. Atty. David Walgren quizzed Cooper about the appropriate uses of propofol.

"I've never seen or heard it used in a home setting, if that is what you are asking," he said. She said that the drug can endanger the respiratory system and that hospital procedures require "a person whose only job is the monitoring of the sedation."

On cross-examination, defense attorney J. Michael Lanagan asked her to consider a hypothetical situation that mirrored Murray's assertion to police that he gave Jackson only a small amount of propofol — 25 milligrams — more than an hour before he stopped breathing.

"If the patient was awake and completely normal and then sedated after the medication [wore off] and then had a subsequent problem... I could not think it was related," she said.

But when Walgren asked whether her conclusion was based on the doctor's being truthful about the amount of propofol he had given, she said it was.

diet.ryan@latimes.com  
es staffwriter Victoria  
contributed to this  
ort.

found in Franklin's possessions, and the two other missing-person cases surfaced as a result of the publicity surrounding release of the photos, police said.

"We know who they are. They can't be located. They haven't been seen in a substantial amount of time,"

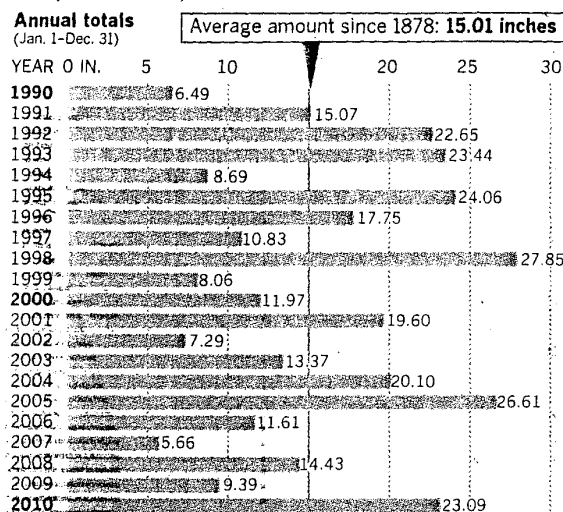
isa Pensanti, was critical of the LAPD for releasing the photos and said more than a dozen of the women were relatives or friends.

Pensanti returned a call but did not immediately comment on the case.

andrew.blankstein  
@latimes.com

## L.A. annual rainfall, 1990-2010

A total of 23.09 inches of rain was recorded in 2010 at the National Weather Service's downtown Los Angeles weather station, located at USC. Over 44% of the year's total, 10.23 inches, fell in December alone.



**Annual records since 1878**  
Wettest: 30.23 (1884) Driest: 4.08 (1953)  
Source: National Weather Service

Los Angeles Times

### Performance for High Expectation.

54.4 Megapixel CMOS sensor, 14-bit A/D conversion, wide-range ISO 6400 (expandable to 12800), 17.9mm f/2.8 lens, 100% coverage at 100x magnification for pro 4GB CF card for 40x magnification of 100x, 100% coverage at 100x magnification for pro 4GB CF card for 40x magnification of 100x, 100% coverage at 100x magnification for pro 4GB CF card for 40x magnification of 100x.



**Canon EOS 5D Mark II**



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High-powered 28.5mm Wide-Angle Optical Zoom (24-85mm) with Optical Image Stabilizer for high image quality and speed. ISO 100-6400 (expandable to 12800) for shooting from bright to dim light. Enhanced 63-zone Dual-Layer Metering System and 9-point AF system utilizing a high-precision, 49.8-cross-type center point. Includes Canon USA 1-year Limited Warranty/Registration Card. Warranty available for inspection at authorized Canon dealers in the US.

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• ISO 100-6400 (expandable to 12800) for shooting from bright to dim light.  
• Enhanced 63-zone Dual-Layer Metering System and 9-point AF system utilizing a high-precision, 49.8-cross-type center point.  
• Includes Canon USA 1-year Limited Warranty/Registration Card.  
• Warranty available for inspection at authorized Canon dealers in the US.

**SPECIAL!**  
INC: T2i, 18-55 IS, 4GB, Case **\$779!**

- A high-powered 12x Wide-Angle Optical Zoom with Optical Image Stabilizer reduces camera shake so you achieve brilliant images whether you are up close or far away.
- Advanced Smart AUTO detects and analyzes faces, brightness, colors, distance, and movement, then selects an appropriate setting based on 28 predefined shooting situations.
- Large 3.0-inch LCD (230,000 dots) with high resolution and wide viewing angle.
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**\$185**

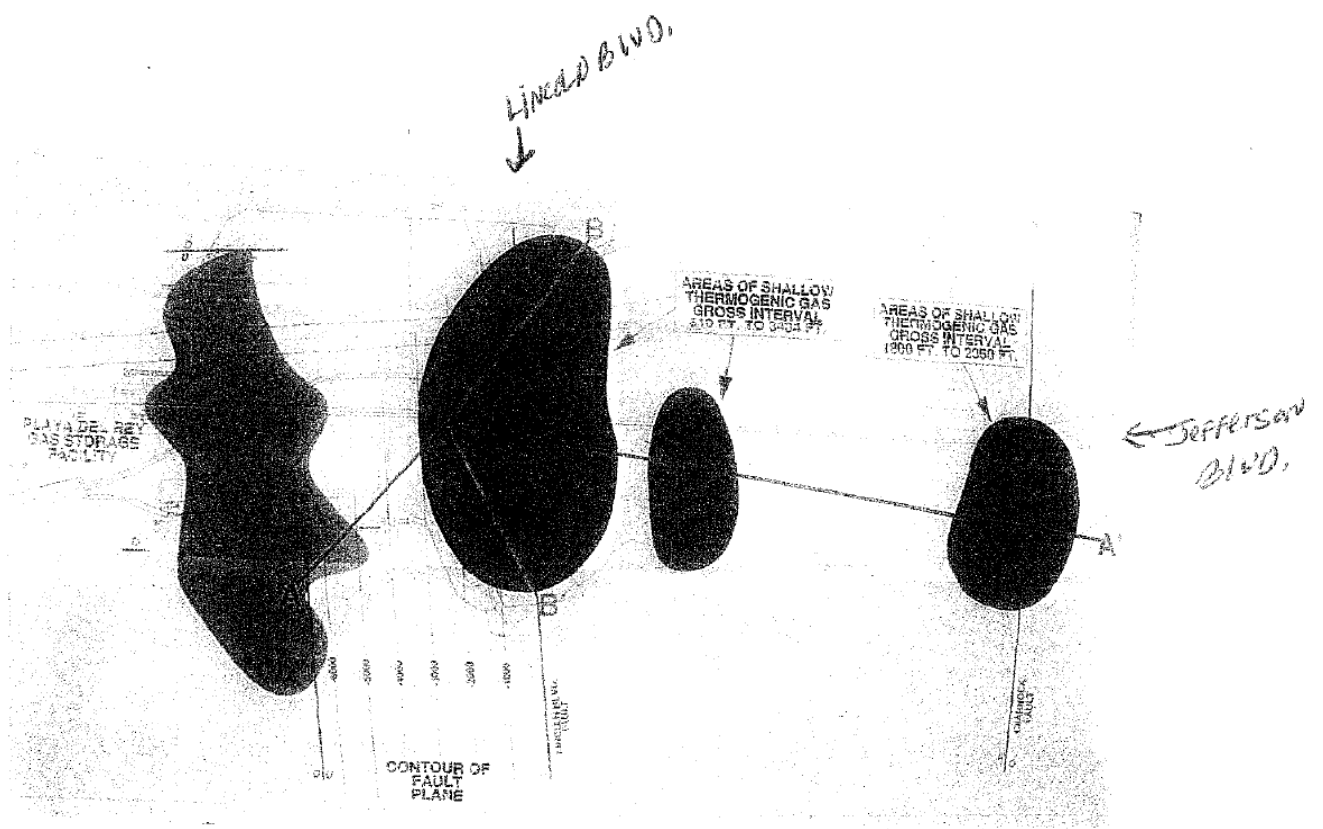
### Beyond the Still.



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• New all cross-type 19-point AF system equipped with dual diagonal cross-type sensors in center at 12.8 and 15.6 and AF area selections modes to match various shooting situations.  
• Includes Canon USA 1-year Limited Warranty/Registration Card.

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Includes a 1-year U.S. warranty. Order online at www.whcamera.com. Not responsible for typographical or illustrative errors. We reserve the right to limit quantities. Ad prices good thru 12/31/10.



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SHALLOW THERMOGENIC GAS AREAS  
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GROSS INTERVAL 1900 FT. TO 2300 FT.

Exploration Technologies, Inc.  
1970 Westside Dr. Houston, Texas 77062 (713) 787-0901

Plate I  
Site Characterization

Plaza Vista Development  
First Phase Project  
Los Angeles, California

Prepared For:  
City of Los Angeles Department of Building and Safety

199-211904-2000(PROD0009) Date Prepared: 04/13/00

4/13/2000

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MAYOR

DEPARTMENT OF  
BUILDING AND SAFETY  
201 NORTH FIGUEROA STREET  
LOS ANGELES, CA 90012

ANDREW A. ADELMAN  
GENERAL MANAGER

RICHARD E. HOLGUIN  
EXECUTIVE OFFICER

January 19, 1999

Log # 26682  
C.D. --

METHANE CTRL FILE - 7

Playa Capital, LLC  
12555 W. Jefferson Bl  
Los Angeles, CA 90066

TRACT: Rancho La Ballona (DCC 2722 CF 64)  
LOT: Ramona S De Machado 341.85095 Acres  
LOCATION: 13250 Jefferson Bl

| <u>CURRENT REFERENCE</u><br><u>REPORT/LETTER(S)</u> | <u>REPORT</u><br><u>NO.</u> | <u>DATE(S) OF</u><br><u>DOCUMENT</u> | <u>PREPARED BY</u> |
|-----------------------------------------------------|-----------------------------|--------------------------------------|--------------------|
| Methane Report                                      | 10610-22844-110.RT.GAS      | 10/14/98                             | Camp Dresser McK.  |
| "                                                   | "                           | 01/13/99                             | "                  |

The referenced reports concerning recommendations for mitigation of methane gas for the First Phase of the Playa Vista development have been reviewed by the Grading Section of the Department of Building and Safety. The areal limits of the First Phase are shown on Figure 2-3 of the report. Most of the area is south of Ballona Creek and northeast of Lincoln Bl.

According to the report, significant levels of methane gas were detected on the southwest portion of the subject area. The report indicates that only buildings within the area of observed high concentrations of gas are recommended for mitigation measures. It is the experience of the Department that methane gas can be highly migratory and transient. Therefore, limiting mitigation measures to the area of high gas concentrations observed during the field investigation does not appear acceptable at this time. The reports are acceptable, provided the following conditions are complied with during site development:

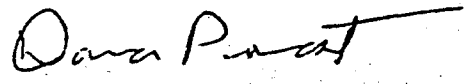
1. All construction in the First Phase area shall comply with section 7104.2 of the Building Code and MGD #92.
2. Based upon the information in the report, the Second Phase area will also require mitigation for methane gas.

Page 2

13250 Jefferson Bl

3. The use of a membrane or sealing materials other than 60 mil HDPE will require an approved Research Report.
4. The Gas Control Specialist shall review and approve the detailed plans prior to the issuance of any permits.
5. Installation of the gas mitigation devices shall be done under the observation and inspection of the Gas Control Specialist and the Department.

DAVID HSU  
Chief of Grading Section

  
DANA PREVOST  
Engineering Geologist II

DP:dp  
26682  
(213) 977-6329

cc: Camp Dresser & McKee  
WLA District Office

July 23, 1999

Mr. David Hsu  
Chief of Grading Section  
City of Los Angeles  
Dept. of Building and Safety  
201 North Figueroa Street  
Los Angeles, CA 90012-2827

**PEER REVIEW  
METHANE GAS CONCERNS FOR THE PLAYA VISTA PROJECT**

First, let me take this opportunity to thank you and Victor Pennera for selecting me as the Peer Reviewer for this very high-profile project. It is gratifying to be selected, and even more to be appreciated, particularly, after completing our initial, cursory evaluation of the facts in this case. Our meeting on Tuesday with Bruce Harrigan and Tim Connors of Playa Capitol, went as well as could be expected under the circumstances. I can't imagine a much more difficult technical and legal situation for the City of Los Angeles.

In fairness to all parties and in spite of all the work completed thus far, there is a great deal of very important information regarding the sources of subsurface methane that have not been adequately developed for proper scientific judgments to be completed regarding the safety aspects of the planned development. My associate, Rufus LeBlanc and I spent most of the morning outlining the type of sampling approach that should be required to determine the necessary information. This objective is made considerably more difficult by the size of the project (over 1000 acres) and the variety of potential methane sources known to exist within the project area. This is compounded by the fact that the Playa Vista site in the City of Los Angeles will be subjected to significant earthquakes in the future that can alter both the subsurface methane concentrations migrating from subsurface sources and degrade any methane mitigation system. As you know, the problem is far from trivial.

Also included with this letter is our first invoice for work completed in June. I divided the invoice into two work segments because the initial instructions by Bruce Harrigan to our Sales Manager,

Frank Levy were considerably more restrictive than those issued by you and Victor Penner in our initial conversations. We reviewed the initial report along with the list of questions and comments that were sent to us and found that we could not render a fair nor honest judgment based on the very limited information initially received. Additional reports sent by the City of Los Angeles, along with several published papers (obtained from Rice Library and our archived DOG files) were used to verify and add to the information that was required for us to write a brief summary (letter, June 24, 1999) report on the status of the project. Our previous summary report stands and still represents our main views and data needs, that must be addressed in order to successfully conclude this project.

Enclosed please find a progress report which focuses on the methane sources and our initial recommendations for obtaining the data required to solve the problems. A regional methane map based on all available shallow gas data is included for your review.

Sincerely,  
EXPLORATION TECHNOLOGIES, INC.

Victor T. Jones III  
President



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CALIFORNIA



RICHARD J. RIORDAN  
MAYOR

DEPARTMENT OF  
BUILDING AND SAFETY  
291 NORTH FIGUEROA STREET  
LOS ANGELES, CA 90012

ANDREW A. ADELMAN  
GENERAL MANAGER

WALT KRUKOW  
EXECUTIVE OFFICER

December 15, 1999

Log # 29469  
SOILS/GEOLOGY FILE - 2

Playa Vista Capital Corp.  
12555 W. Jefferson Bl  
Los Angeles, CA 90066

TRACT: 49104-03  
LOT: 1, 2, 3, 9 & 10 // 5  
LOCATION: 13151, 13163 & 13175 Fountain Park Dr // 5450 Lincoln Bl

| <u>CURRENT REFERENCE</u><br><u>REPORT/LETTER(S)</u> | <u>REPORT</u><br><u>NO.</u> | <u>DATE(S) OF</u><br><u>DOCUMENT</u> | <u>PREPARED BY</u> |
|-----------------------------------------------------|-----------------------------|--------------------------------------|--------------------|
| Methane Report                                      | -                           | 12/15/99(revised)                    | Sepich Assoc.      |
| Peer Review Report                                  | -                           | 12/14/99                             | Exploration Tech.  |

| <u>PREVIOUS REFERENCE</u><br><u>REPORT/LETTER(S)</u> | <u>REPORT</u><br><u>NO.</u> | <u>DATE(S) OF</u><br><u>DOCUMENT</u> | <u>PREPARED BY</u> |
|------------------------------------------------------|-----------------------------|--------------------------------------|--------------------|
| Department letter                                    | 27706-01                    | 11/19/99                             | Bldg&Safety        |

The referenced reports concerning methane mitigation and monitoring systems for the Fountain Park Apartments and the Marketing Pavilion have been reviewed by the Grading Section of the Department of Building and Safety. Sepich Associates is the methane gas consultant for Playa Vista Capital and has provided the recommendations for the monitoring and mitigation of methane gas. Exploration Technologies, Inc is the Peer Reviewer for the City of Los Angeles, Department of Building and Safety. Based upon the acceptance of the plans and report by the Peer Reviewer, the Department is accepting the recommendations for the monitoring and mitigation of methane gas on the site.

The Fountain Park Apartments and the Marketing Pavilion methane mitigation shall conform to all requirements specified in Chapter 71 of the Building Code and MGD#92, as stipulated for areas designated as a "High Potential Methane Zone". The methane monitoring system is to be operated continuously, in addition to data gathering and reporting, during occupancy of the buildings. Furthermore, all building construction shall comply with the following supplemental requirements. The report is acceptable, provided the following conditions are complied with during site development:

1. An affidavit shall be filed with the County Records Office, in which the owners state that they agree to take responsibility for contracting with a methane gas consultant to insure that the methane monitoring systems are functioning correctly and to submit a report

- containing the results of the monitoring to the Department of Building and Safety and the Peer Reviewer, a minimum of every three months, until such time as it is agreed to revise this requirement.
2. Internet access to the methane monitoring data shall be provided to the Department of Building and Safety, Exploration Technologies, Inc and the Fire Department.
  3. Additional soil gas survey and monitoring wells shall be required as deemed necessary by the Peer Reviewer; this shall be completed prior to the first footing inspection.
  4. All of the abandoned oil wells on the Playa Vista Development shall be re-abandoned subject to the current standards of the State of California Department of Oil, Gas and Geothermal Resources; the Certificate of Occupancy for the initial buildings on this site shall be withheld until verification of complete abandonment has been provided.
  5. Obtain clearance from the Fire Department for the methane gas design and monitoring system, and other environmental issues.
  6. Obtain clearance from the Department of Public Works, Bureau of Engineering, for H<sub>2</sub>S, BETX and other environmental issues.
  7. The methane mitigation design includes the capability, or option, of changing the passive methane mitigation system to an active methane mitigation system. The system shall be converted to an active system when the level of methane reaches 75 percent of the L.E.L. in the monitoring system located under the building foundation vapor barrier.
  8. No excavations shall be made below the groundwater table.
  9. Prior to pumping of any groundwater, a supplemental report shall be submitted to the Grading Section for approval.
  10. Installation of the recommended monitoring and mitigation systems shall be inspected by the methane gas consultant for Playa Vista Capital and the Building Inspector.
  11. All recommendations of the report which are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
  12. The methane gas engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans which clearly indicates that the gas engineer has reviewed the plans and that the plans include the recommendations contained in their reports.
  13. A continuous gravel/clean sand mixture blanket shall be provided beneath all building slabs. This blanket shall be a minimum of 12 inches in thickness. De-watering pipes, if any, shall be located in trenches beneath the blanket.
  14. Methane roof vent risers shall be enclosed in a one-hour fire rated enclosure.

15. Fire Sprinklers shall be provided throughout the Building.
16. An emergency power supply shall be provided for all methane gas ventilation and monitoring systems.
17. Incorporate the mitigation/ventilation systems into the final building plans.
18. Obtain approval for the specified 60mm thick impermeable membrane.
19. Building plans shall include complete details for vent pipes through footings.
20. Obtain plan check approval from Electrical, Mechanical and Fire Department.

DAVID HSU  
Chief of Grading Section



DANA PREVOST  
Engineering Geologist II

DP:dp  
29469  
(213) 977-6329

cc: Sepich Associates, Inc  
Exploration Technologies, Inc  
WLA District Office

---

**AN EVALUATION OF  
GAS MIGRATION  
AND  
ENVIRONMENTAL HAZARDS  
EXISTING AT THE  
PLAYA VISTA PROJECT**

---

**BY: Dr. Bernard Endres, Ph.D.  
Oil & Gas Consultant**

**DATE: June 7, 2000**

**LOCATION: City of Los Angeles,  
City Hall**

## ISSUE #2

---

- CAN A MONITORING AND MITIGATION SYSTEM BE DESIGNED AND OPERATED WITH 100% RELIABILITY OVER THE LIFETIME OF THE PROJECT?
- 

- A GAS MEMBRANE THAT WILL RESIST THE RUPTURE FORCES OF LIQUEFACTION DURING AN EARTHQUAKE.
- OPERATION OF SENSORS AND EQUIPMENT IN A CORROSIVE AND H<sub>2</sub>S ENVIRONMENT
- COSTS OF MAINTAINING THE SYSTEM OVER THE PROJECT LIFETIME.

## ISSUE #4


---

- THE CITY OF LOS ANGELES METHANE ORDINANCE IS NOT ADEQUATE TO DEAL WITH THE GAS AND GEOLOGICAL HAZARDS EXISTING AT PLAYA VISTA
- 

- LIQUEFACTION SEISMIC HAZARD ZONE REQUIRES SPECIFICALLY DESIGNED GAS MEMBRANE BARRIERS.
- SENSORS AND MONITORING EQUIPMENT MUST OPERATE IN A CORROSIVE AND H<sub>2</sub>S ENVIRONMENT.
- NATIONAL ELECTRICAL CODE REQUIREMENTS FOR A GAS EXPLOSION RISK FROM ELECTRICAL SPARKS MUST BE COMPLIED WITH, INCLUDING GAS MIGRATION INFORMATION, IN ELECTRICAL VAULTS.

## ISSUE #6




- AN EVALUATION OF THE SPECIAL PROBLEMS CREATED BY THE HIGHLY PERMEABLE 50 FOOT GRAVEL ZONE NEEDS TO BE PERFORMED.
- 

- ALLOWS GAS TO BUILD TO HIGH PRESSURES FROM A RISING WATER TABLE.
- HIGH DEGREE OF GAS MOBILITY UNDER THE ENTIRE SITE, MAKING GAS LEVEL PREDICTIONS DIFFICULT, IF NOT IMPOSSIBLE TO MAKE WITH CONFIDENCE.
- HIGH SULFATE LEVELS GIVING RISE TO H<sub>2</sub>S PRODUCTION BY SULFATE REDUCING BACTERIA ALREADY VERIFIED AS PRESENT.

## **ISSUE #8**



- **AN EVALUATION OF THE GAS MIGRATION HAZARDS INTO THE SURROUNDING COMMUNITY**
- 

- **GAS MITIGATION AND MONITORING IS REQUIRED FOR THE SURROUNDING RESIDENTIAL AND COMMERCIAL BUILDINGS, INCLUDING U.S. REGIONAL POST OFFICE.**
- **THE CITY NEEDS TO URGENTLY EVALUATE THEIR PERMITTING PRACTICES FOR HOUSING CURRENTLY BEING CONSTRUCTED OVER GAS WELLS SOLD BY SOCALGAS (INCLUDING SALES NOT APPROVED BY THE PUBLIC UTILITIES COMMISSION).**




## ISSUE #10

- EVALUATE THE SUBSIDENCE HAZARDS POSED BY THE LONG TERM FLUID PRODUCTION BY SOCAL GAS AND ITS PREDECESSORS

- NEARLY 2 FEET OF SUBSIDENCE IN 1970, AND INCREASING.
- NO SUBSIDENCE MONITORING SINCE 1970.
- STRESS AND STRAIN BUILD-UP WILL CAUSE INCREASED GAS MIGRATION ALONG FAULTS AND COULD TRIGGER EARTHQUAKES ALONG THESE FAULTS.
- IMMEDIATE IMPLEMENTATION OF MONITORING IS REQUIRED, INCLUDING FOR MICRO-SEISMIC ACTIVITY, TO PROTECT AGAINST GAS MIGRATION AND DAMAGE TO COASTAL STRUCTURES.

## ISSUE #12



- EVALUATE THE EXTREME DANGER POSED BY THE REPRESSURIZATION OF THE UNDERGROUND GAS STORAGE FIELD AND PLAYA DEL REY OILFIELD
- 

- INCREASED RISK OF GAS MIGRATION IN HUGE QUANTITIES ALONG THE LINCOLN BOULEVARD FAULT AND ALONG WELL BORES.
- FAULT BLOCK 13-1, LOCATED AT THE BASE OF THE LINCOLN BOULEVARD FAULT, HAS REPRESSURIZED FROM 1700 PSI TO APPROXIMATELY 2400 PSI IN RECENT TIMES.



To:

October 23, 2012

Mr. Daniel P. Swenson, Chief, Los Angeles Section  
Army Corps of Engineers  
915 Wilshire Blvd., Los Angeles CA 90017  
Email: [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil)

Mr. David Lawhead  
California Dept. of Fish and Game  
3883 Ruffin Road, San Diego, CA 92123  
Email: [DLawhead@dfg.ca.gov](mailto:DLawhead@dfg.ca.gov)

Questions, Comments, and Recommendations by Douglas Fay on the  
proposed Ballona Wetlands Restoration Project NOI

1. Corps Release no. 12-015 Posted 9/26/12 Re: Termination of existing  
process at the request of the Santa Monica Bay Restoration Commission  
(SMBRC), a Joint Power Authority with the County of Los Angeles  
(County).

Question: Will the termination of the existing feasibility study and  
accompanying EIS result in a project consistent with a comprehensive  
Santa Monica Bay Restoration Plan (SMBRP), or fragment the process?

Comments: My concern, and the concern of others, is the 2008 SMBRP is  
a significantly flawed document, with minimal public input. I have made  
several attempts to address my concerns publicly that have been denied  
by individuals in the SMBRC leadership rolls, the SMBRC Governing  
Board, members of the Santa Monica Bay Restoration Foundation  
(SMBRF), and submitted documentation to the California Coastal  
Commission (CCC).

A (partial) document analysis I prepared of the 2008 SMBRP addressed to  
the SMBRC Governing Board was submitted to Scott Valor. Months later  
Mr. Valor told me he did not give the time critical document to the  
Governing Board members. This is only one example of several deliberate  
and documented actions to exclude and deter me from this process.

Also, the SMBRC has recently approved the development of Parcel OT, a  
parking lot adjacent to the Oxford Lagoon a.k.a. the Oxford Retention

Basin and the Oxford Retention Basin Multi-Use Enhancement Project, both of which are under the County's control. The Oxford Lagoon is part of the historical Ballona Wetlands that is primarily used for urban flood control discharge and retention prior to entering the Marina Del Rey (MDR) harbor through mechanical gates.

The Oxford Retention Basin Multi-Use Enhancement Project increases/enhances public access, which in turn reduces terrestrial habitat value. There is no significant aquatic habitat value due to the drastic variation of salinity levels that are catastrophic to most marine animals. This shows that their actions are based on politics, not science and sound restoration principles.

Current management practices of the Oxford Lagoon contradict SMBRP Goals and Objectives A. PRIORITY ISSUE: WATER QUALITY Goal 1: Improve water quality through treatment or elimination of pollutant discharges, Goal 2: Improve water quality through pollution prevention and source control, B. PRIORITY ISSUE: NATURAL RESOURCES Goal 4: Create and support policies and programs to protect natural resources.

Questions: Are these acceptable practices in the eyes of the Corps and CDFG? Please explain and elaborate if needed.

Are other documents being censored without the Governing Board's knowledge jeopardizing their abilities to evaluate and vote on proposed projects? Please explain and elaborate if needed.

What policies and programs to protect natural resources have been created by the SMBRC and implemented by government agencies and municipalities within the Santa Monica Bay watershed? Please explain and elaborate if needed.

What is the "commission's proposed restoration project"?

Comment: I do not see a link to a website in this document, or have detailed knowledge of the commission's proposed restoration project, which makes it difficult, if not impossible to comment on with an acceptable degree of accuracy.

Recommendation: Reverse your decision to accept the request by the SMBRC and proceed with the existing 2005 process.

Provide ample opportunities for the public to be educated and engaged in drafting a restoration project through the existing process.

Assure the public that the non-profit Santa Monica Bay Restoration Foundation (SMBRF) and SMBRC will not be controlling the process.

Investigate any wrong doings to members of the public including, but not limited to, misappropriation of public funds.

2. Corps Public Notice: SPL-2010-1155, Date: August 24, 2012

**SUMMARY:**

Comment: Historical maps show breaching of sand and full tidal exchange in the Del Rey Lagoon area of the coastline.

Questions: Is the restoration of this historic exchange in the proposed Ballona Wetlands Restoration Project (BWRP)?

If, and I quote, "The proposed project is intended to return the daily ebb and flow of tidal waters", then why wouldn't the first step to a restoration be limited to restoring the historical breaching?

What is the percentage of the proposed project's intended return of daily ebb and flow of tidal waters compared to historical levels within the wetlands?

Comment: I attended a lecture by Dr. Travis Longcore on May 22, 2012 entitled, "Closure Dynamics of Southern California Estuaries and Implications for Restoration."

Recommendation: View this lecture, reference it in the EIS/EIR, and answer the following questions. If you cannot easily obtain a copy, I will provide a copy upon request.

Questions: Do you agree that the historical photos, maps, and plant life show that the Ballona Wetlands were primary a fresh water to brackish wetlands? Please explain your answer and elaborate if needed.

Is there any historical data that shows the Ballona Wetlands ever had full tidal flow (ocean levels of salinity) throughout the proposed project area (approximately 600 acres)? Please explain your answer and elaborate if needed.

Is there any historical data that shows natural berming/levees adjacent to the Ballona Creek and around the parameter of the proposed project? Please explain your answer and elaborate if needed.

Is preservation of the historical Ballona Wetlands a concern? Please

explain and elaborate if needed.

#### **SUPPLEMENTARY INFORMATION:**

**Comment:** This document states, "The Corps intends to prepare a joint EIS/EIR to assess the environmental effects associated with the proposed project. CDFG is the state lead agency for the EIR pursuant to the California Environmental Quality Act (CEQA)."

**Questions:** Is the Corps the Federal lead agency for the project, the EIR, or just the EIS?

Is CDFG the State lead agency for the project, the EIS, or just the EIR?

If CDFG is the lead agency, are they required to act as stewards of the public?

If so, why are the SCC, SMBRF, SMBRC, DRP, and others, appearing to be dominating all aspects of the proposed BWRP process with limited/controlled public input?

If the Corps and CDFG intend to jointly prepare a Draft EIS/EIR for the proposed BWRP, is one Scoping Meeting all that is legally required?

**Comment:** The Scoping Meeting(s) schedule was limited to 3 hours on 1 day. I was unable to attend due to a conflicting work schedule. Scott Valor told me the minimum that State law requires will be all that is provided throughout this process. I'm assuming this is true if the SMBRF, that Mr. Valor is associated with, is influencing the process.

**Questions:** If public participation is critical then shouldn't there have been more than one Scoping Meeting?

**Comment:** This document states, "7. Availability of the DEIS/EIR. The DEIS/EIR is expected to be published and circulated in late 2012. A public hearing will be held after its publication to field comments on the document."

**Questions:** Is one public hearing on the DEIS/EIR sufficient?

Will it be limited in time?

Will there be opportunity for question and answer sessions?

Will speaker time during public comment be limited?

If public participation is critical then shouldn't there be more than one Public Hearing?

1. Background.

Comment: The background description is limited and vague.

Question: Where are the "attached figures"?

Comment: There were not any attached figures in the Corps SPECIAL PUBLIC NOTICE download.

Questions: If the Ballona Creek a.k.a. Ballona Flood Control Channel is "a component feature of a federal flood risk management project," could a project increase flood risk?

Who owns the Ballona Creek/Flood Control Channel portion that bisects the State owned Ballona Wetlands?

Who is legally responsible for liabilities associated with altering the alignment of the Ballona Creek/Flood Control Channel?

Will there be special laws and/or regulations drafted specifically for the proposed project?

Has a Federal/State wetlands project partnership similar to this proposed project been completed before?

Comment: If so, please describe with references.

Recommendations: Study and describe all of the water bodies associated with the Ballona Wetlands and the development adjacent to the proposed project and adjacent water bodies, including, but not limited to, industrial, commercial, residential, recreational, flood plain, polluted waters, and Native American data.

Study and describe how an alteration of what I am assuming are Federal waters/land/boundaries with State land/waters/boundaries will be conducted including, but not limited to, jurisdiction, law enforcement, management, maintenance, funding and liability.



## 2. Project Purpose and Need.

Comments: Regarding the statement, "In addition, the wetland habitat and natural hydrological functions in the area have been substantially degraded."

Questions: How have the natural hydrological functions been substantially degraded? Please explain your answer and elaborate if needed.

Who is responsible? Please explain your answer and elaborate if needed.

Is the degradation of the natural hydrology of the project area ongoing? Please explain your answer and elaborate if needed.

If so, is the degradation legal or illegal?

Comment: Regarding the statement, "Restoration of coastal wetlands is needed in order to increase available nursery and foraging habitat for wildlife and to provide recreational and educational opportunities to the public."

Questions: Will a comprehensive plan including all coastal waters and water sources originating inland be more effective at maintaining and increasing biodiversity than limiting the scope of study to coastal wetlands within the proposed project site? Please explain your answer and elaborate if needed.

What does CEQA require?

What are the recreational and educational opportunities proposed?

Comment: I'm told my grandfather and father hunted ducks in the Ballona Wetlands area.

Questions: Will regulated hunting and fishing be allowed publicly in the proposed project area?

Will Native Americans be allowed to hunt and fish in the proposed project area? Please explain your answer and elaborate if needed.

Comment: Regarding the statement, "A restored, optimally functioning wetland would also benefit the adjacent marine environment and enhance

the quality of tidal waters.”

Questions: How does a wetland enhance the quality of tidal waters?

Does the proposed project intend to introduce polluted water sources into the wetlands?

How do polluted waters including, but not limited to, waters laden with synthetic chemical compounds affect the health and reproductive cycle of living organisms? Please explain your answer and elaborate if needed.

Are there endangered or threatened species within and/or adjacent to the proposed project area?

Would the proposed project need maintenance and funding to remove introduced pollutants in perpetuity? Please explain your answer and elaborate if needed.

Comments: Not mentioned in the Project Purpose and Need is the need, or should I say intent, to construct flood and tsunami control levees in an effort to mitigate and protect recently developed structures. Also, the significant amount of earth/soils, that are proposed to be moved, to build the massive levees, will significantly increase the amount of ocean waters, and thereby decrease the need to restore fresh water sources that have been depleted.

Questions: Do any of the proposed project alternatives appear to be flood control mitigation for the Playa Vista development? Please explain your answer and elaborate if needed.

If so, is it an acceptable practice, both morally and financially, by the Corps and CDFG to move forward with an NOI when the preferred restoration project appears to be based on flood control mitigation for adjacent lands?

What is the cost incurred to date to develop what I’m assuming is the preferred proposed project alternative? Please explain your answer and elaborate if needed.

How much of the expenses to date have gone to, or through, CDFG? Please explain and elaborate if needed.

Are you aware that a Santa Monica Bay Restoration Account (SMBRA)

exists?

Has any money gone in or out of the SMBRA for this project, or any other project that you are aware of?

Is the proposed restoration funded by grants? Please explain and elaborate if needed.

Does CDFG have detailed accounting records for all financial activities related to the BWRP? Please explain and elaborate if needed.

Are there financial accounting records and/or audits available for public viewing?

If so, how is it accessed? Please explain and elaborate if needed.

If not, why? Please explain and elaborate if needed.

Comment: Regarding the statement, "The purpose of the project is to restore ecological functions of the site, in part, by enhancing tidal flow." When the County introduced/increased urban flood control waters into the Oxford Lagoon, removed sources of fresh water, and manually maintained tidal flushing, the migratory bird population dropped significantly. I have witnessed Mallard ducklings expire in the MDR harbor due to lack of fresh water access.

Question: How do you enhance migratory bird habitat by enhancing tidal flow?

### 3. Proposed Action.

Comment: Regarding the statement: "CDFG is proposing a large-scale restoration of the Ballona Wetlands Ecological Reserve. The proposed project entails restoring, enhancing, and establishing native coastal wetland and upland habitats in the approximately 600-acre Ballona Wetlands Ecological Reserve."

Questions: Is CDFG proposing a large-scale restoration, or is the large-scale restoration proposal coming from the SMBRF and/or other organizations? Please explain and elaborate if needed.

Why is the State Coastal Conservancy (SCC) taking the lead in funding for planning and restoration of the CDFG property? Please explain and

elaborate if needed.

What is the roll of California Department of Parks and Recreation (DPR)?

Will CDFG control the proposed "Long-term operations and management activities including inspections, repairs, clean-up, vegetation maintenance, and related activities," or will they be subcontracted?

If subcontracted to who will they subcontracted to and why? Please explain and elaborate if needed.

Comment: The 2008 SMBRP states, "Determine preferred alternative by 2009."

Question: Does CDFG have a preferred alternative?

Does the SMBRC have a preferred alternative? Please explain and elaborate if needed.

If so, why hasn't it been released to the public so we can accurately comment on the NOI?

If a draft has been released, where can I obtain a copy?

#### 4. Alternatives Considered.

Comment: Regarding the statement, "The feasibility of several alternatives is being considered and will be addressed in the DEIS/EIR."

Questions: What are the alternatives and where did they come from? Please explain and elaborate if needed.

Is the Proposed Ballona Wetlands Restoration Plan (BWRP)(Draft), Prepared in conjunction with the Ballona Wetlands Land Trust, Save Ballona Wetlands, and Rimmon C. Fay, Ph.D. dated June 21, 1995, submitted to the Corps, County, and City of Los Angeles included in the proposed alternatives? Please explain and elaborate if needed.

Is it a document that both the Corps and CDFG have in their possession and has been studied by staff biologists and engineers? Please explain and elaborate if needed.

Recommendation: If not, obtain the BWRP draft document dated June 21,

1995. (I have a copy if needed) Study and describe the viability of implementing this alternative with acknowledgement of current conditions: ownership, development, etc.

## 5. Scoping Process.

Comments: The Scoping Meeting was conducted on August 16, 2012 from 4:00 to 7:00 p.m. One 3 hour meeting was all that was provided.

Regarding the statement, "providing useful information such as published and unpublished data, and knowledge of relevant issues and recommending mitigation measures to offset potential impacts from proposed actions."

Questions: What is being done to improve the diminishing water quality within the MDR harbor? Please explain and elaborate if needed.

What is proposed project plan and/or mitigation for being impacted by poor water quality, pollutants, and invasive species originating from within the MDR harbor? Please explain and elaborate if needed.

How many industrial dischargers are permitted into the Santa Monica Bay? Please explain and elaborate if needed.

What are they reportedly discharging? Please explain and elaborate if needed.

What are the locations of discharge? Please explain and elaborate if needed.

What is the reported volume of discharge daily/annually? Please explain and elaborate if needed.

What mitigation measures are in place to ensure there is no negative impact to water quality, and biological diversity and quantities? Please explain and elaborate if needed.

Are there any legal discharge permits issued anywhere within the Ballona Creek Flood Control Channel (BCFCC)? Please explain and elaborate if needed.

Have there been any reported accidental spills into the BCFCC within the past 10 years?

If so, how many and what was spilled? Please explain and elaborate if needed.

What are the specifics: date, time, estimated quantity, etc. and result: beach closures, number of days, etc.? Please explain and elaborate if needed.

What is the current biological assessment of the Ballona Wetlands? Please explain and elaborate if needed.

What is the current biological assessment of the Marina Del Rey harbor? Please explain and elaborate if needed.

What is the current biological assessment of the Del Rey Lagoon? Please explain and elaborate if needed.

What is the current biological assessment of the Oxford Lagoon? Please explain and elaborate if needed.

What is the current biological assessment of the Ballona Creek including all tributaries? Please explain and elaborate if needed.

What is the current biological assessment of the Venice Canals? Please explain and elaborate if needed.

What is the current biological assessment of the Santa Monica Bay? Please explain and elaborate if needed.

What was the annual historic high catch, combined recreational and commercial, in tons, taken from the Santa Monica Bay, include the year and as much data as possible including, but not limited to, variety of fish, shellfish, crustaceans, mammals, and value (adjusted)? Please explain and elaborate if needed.

What is the current annual catch, combined recreational and commercial, in tons, taken from the Santa Monica Bay, include the year and as much data as possible including, but not limited to, variety of fish, shellfish, crustaceans, mammals, and value? Please explain and elaborate if needed.

What plants and animals, both terrestrial and marine, are currently proposed to be restored and/or introduced to the above listed waterbodies directly related to the proposed project including, but not limited to, the

Ballona Wetlands, MDR harbor, Del Rey Lagoon, Oxford Lagoon, Ballona Creek flood control channel including all tributaries, the Venice Canals, and the Santa Monica Bay? Please explain and elaborate if needed.

What is the current percentage of annual take/catch, combined recreational and commercial, within the Santa Monica Bay, as a percentage of historical recorded highs? Please explain and elaborate if needed.

What is the estimated annual take/catch, combined recreational and commercial, within the Santa Monica Bay, increase over a 10 year period, with the currently proposed Ballona Wetlands Restoration project when completed? Please explain and elaborate if needed.

What is the annual consumption cost of seafood imported and sold within the Santa Monica Bay watershed? Please explain and elaborate if needed.

Would it be better for our local economy to reduce our dependence on imported seafood? Please explain and elaborate if needed.

Would implementing a comprehensive Santa Monica Bay Restoration Plan that strives to restore biomass to historical levels create a significant amount of new jobs in areas of, but not limited to, research, fisheries, aquaculture, education, scuba industry, hospitality, marine resources management, tourism, etc.? Please explain and elaborate if needed.

Have you read the 2008 SMBRP?

Are you aware of the fact that there is no mention of artificial reefs in the 2008 SMBRP?

Comment: 2 years ago I asked SMBRC Governing Board member and (then) HTB president Mark Gold a question about artificial reefs in the Santa Monica Bay? His reply was something to the effect of, "We didn't discuss them." A year later when I repeated what I thought I heard he corrected me saying something to the effect of, "No, the definition of artificial reefs!"

Questions: Does the Corps and/or CDFG have knowledge of artificial reefs in the Santa Monica Bay? Please explain and elaborate if needed.

Does the Corps (Federal) and CDFG (State) have a uniform definition for "artificial reefs" that can be included in the proposed project glossary of

terms? Please explain and elaborate if needed.

Are you aware of the fact that there is no language whatsoever in the 2008 SMBRP to do enhancement projects within the Santa Monica Bay, even though that it is worded into the mission statement of the SMBRF?

Are you aware of the fact that the majority of restoration projects funded by the SMBRC/SMBRF have been improperly classified as enhancement projects? Please explain and elaborate if needed.

Have pilot tide pools at varying depth, configurations, material, size, etc. within the existing Ballona Creek flood control channel to test the viability of removing the existing levees been proposed? Please explain and elaborate if needed.

Comments: I was invited by a member of the SMBRC to attend and participate in the annual Bay Watershed Council (BWC) working group to draft the annual work plan held on Feb. 12, 2012. When I arrived I was told I could not participate. SMBRF staff Mark Abrams was present and hired to prevent members of the public from participating in the working groups. I attempted to suggest the pilot tide pools during public comment while attending this humiliating experience.

This unacceptable behavior of members of the SMBRC/SMBRF that authorized and enforced this action completely contradicts the "Letter From the Director" SMBRC Executive Director Shelley Luce in the SMBRC Annual Report 2011 which states, "We are planning new workshops and other mechanisms for getting public input on the BRP and annual work plans."

Question: What actions will the Corps and CDFG take to assure the public that the behavior of this magnitude will not continue to occur throughout the proposed project process? Please explain and elaborate if needed.

Comment: Other actions that contradict sound science and restoration principles surround decisions made aware to me by Dr. Wang. Dr. Wang told me he did not read the Montrose Settlement Restoration Plan (MSRP). Specifically, Appendix A1 Construct Artificial Reefs and Fishing Access Improvements and Appendix A3 Restore Full Tidal Exchange Wetlands. There was \$40 million in Federal MSRP grant money available in 1995.

Questions: Did the SMBRC and/or SMBRF apply for MSRP grant(s) for the



Ballona Wetlands and/or Santa Monica Bay projects? Please explain and elaborate if needed.

Did CDFG or any State agency apply for MSRP grant(s) for the Ballona Wetlands and/or Santa Monica Bay projects? Please explain and elaborate if needed.

Comments: Dr. Wang also told me the SMBRC did not propose/apply to incorporate the County's Parcel OT (the parking lot adjacent to the Oxford Lagoon) to expand the Oxford Lagoon which would have increased the viability of wildlife significantly. The County is planning to build a massive luxury senior living facility that will abut the Oxford Lagoon further reducing wildlife viability.

This action contradicts SMBRP B. PRIORITY ISSUE: NATURAL RESOURCES Goal 5: Acquire land for preservation of habitat and ecological services.

Question: Is development of vacant land adjacent to coastal wetlands that are compromised through management practices in the best interest of sound restoration principles?

Other actions that concern me are the Total Maximum Daily Loads (TMDLs), imposed by a Heal The Bay (HTB) lawsuit, that may not reflect natural occurring levels of waterways and waterbodies. For example, the TMDL approved for the Malibu Lagoon may be much cleaner than what naturally occurs within a healthy lagoon triggering an approval for a restoration project based on false and/or misleading information.

What is the scientific opinion of the Corps and CDFG on the establishment and enforcement of TMDLs that may not reflect naturally occurring water quality standards of all waterbodies and waterways associated with the proposed project? Please explain and elaborate if needed.

## FINAL SUMMARY AND RECOMMENDATIONS

Why am I so concerned about the outcome of the historical Ballona Wetlands and Santa Monica Bay area you might ask?

I was born in Santa Monica, Ca at St. Johns Hospital in 1962 and raised on Howard Street adjacent to the railroad tracks and the Oxford Lagoon. There was so much wildlife present in the area when I was young. Dozens of ducks would land in our yard. Salamanders, lizards, and snakes could easily be found. Cancer crabs could be caught in the MDR harbor by the bucket full. Catching your limit of fish in the Bay seemed much easier. The

tidepools at Palos Verdes and Paradise Cove were abundant with life. Now 40 years later, the effects of urban development and associated pollution without sufficient mitigation have significantly compromised all life forms.

My father was Dr. Rimmon C. Fay, a second-generation Santa Monica Bay fisherman who, through education and experiences, became a leading expert of the Santa Monica Bay and California coastal pollution issues starting in the 1950s. His independence and contributions to environmental protection and education were epic, including his contributions to save the Ballona Wetlands.

With PhDs in Chemistry and Oceanography, countless California ocean dives, hours at sea, days on the beach growing up and fifty years as an ocean lifeguard, as owner/operator of Pacific Bio Marine biomedical research, supply & education, as a founding member of the CCC, and many more contributions worthy of honor and respect, Rim's input in the 1995 Proposed BWRP Draft deserves recognition.

I have a lifetime of experience learning from my father, have served on a land use advisory committee in Monterey County, CA, have several professional certifications in multiple fields including PADI Master Scuba Diver Trainer, Emergency First Response Instructor, ASE Master Technician, Toyota Expert Technician and a BAR Smog Technician License. I have traveled throughout the Pacific region, have hundreds of logged dives, survived the 2004 Asian Tsunami, and have ten years of experience with upper watershed management including over 500 hours of heavy equipment operation and maintenance.

My knowledge of the Santa Monica Bay may never eclipse my fathers. I do believe that I have a better general knowledge than most and have an exceptional ability to identify and fix problems that are obviously broken. The library of Dr. Rimmon C. Fay is in storage awaiting a location where it can be housed, digitized, and made available for all academia on a website. Valuable historical data pertaining to the proposed project may be in his library. Funding to make this information accessible has not been secured.

What are the additional recommendations and desired outcome that I would like to see for the Ballona Wetlands and Santa Monica Bay?

Strongly consider the history of the Tongva Native Americans and respect the current concerns of Johntommy Rosas. If he has registered the Ballona Wetlands as a Sacred Site, the massive alterations proposed should not be allowed in perpetuity. Any enhancements should be harmonious, based on time proven science independent of the SMBRC/SMBRF influence, and focused on restoring an ecosystem that is as natural and maintenance free

as possible.

Restore the historical levels of fresh water to the aquifer below the wetlands through natural recharge and/or injection wells.

Restore the historic levels of fresh surface water

Restore the native terrestrial animals to historical levels to the greatest extent possible including deer and bats.

Explore creating the habitat necessary to allow for greatest diversity of terrestrial animals with minimal change to existing conditions.

Ban domestic animals, especially cats and dogs, from the Ballona Wetlands and adjacent walking/viewing areas.

Install fencing and/or concrete barriers to prevent wildlife from entering roadways.

Install large culverts with solar lighting for animals to cross under existing roadways. Raise the roadways if needed to allow reasonable mobility.

Do not remove the Ballona Creek flood control levees.

Implement pilot test tidepools throughout the Ballona Creek flood control channel with varying designs, locations, and conditions.

Cut openings into the concrete of the existing Ballona Creek levees to allow for native trees to grow, providing habitat and shade for wildlife.

Do not consider opening the wetlands to full tidal flush until the source of ocean water is of the highest quality. The current water quality of the MDR harbor and Playa Del Rey nearshore waters are unacceptable at this time.

Research and implement restoring staff and funding to CDFG so that they truly are the lead agency in this process. I'm told that CDFG funding has been reduced which reduces their effectiveness to educate and enforce locally is reduced. I recently read where the non-profit Santa Monica Baykeeper were making transects across the Bay looking for illegal activity in the Marine Protected Areas (MPAs) in an effort to warn boaters of a potential CDFG citation. This behavior is not a cost effective way to manage marine resources.

Remove the SMBRF from this process. If they have research and recorded data through grant funding acquired from the public, this information shall be given to CDFG. Allowing a non-profit to have the amount of control and influence over State agencies and commissions, with limited public accountability, is not in the general public's or the environment's best interest including the Ballona Wetlands.

Implement partnerships with local educational institutions in an effort to recruit students from Kindergarten to College to participate in research, education, restoration, maintenance, monitoring and management programs, including SCUBA training and certification.

Create and nonpartisan independent review board with membership that is not financially associated to the proposed project and has term limits for members.

Make restoring the abundance and diversity of marine life in the Santa Monica Bay to historical levels a top priority. This can be achieved by: Removing all forms of industrial pollution (thermal, sewage waste, and desalination brine) discharged directly into the Bay and ban in perpetuity. Fully mitigating for all of the sand historically placed on the shoreline through natural rock and artificial reefing to replace the lost nearshore habitat.

Fully mitigating the sediment discharged from Hyperion in mid to deep waters through natural rock and artificial reefing to restore and possibly enhance the lost habitat diversity that biomass requires.

Establish and manage a significant amount of kelp forest in the Santa Monica Bay from El Segundo to north of the Santa Monica Pier.

Restore the historical breach to the Del Rey Lagoon.

Drastically change how the waters within the MDR harbor are managed including, but not limited to: mandatory nets on all docks to remove floating debris, developing and implementing a vacuum system for in-water boat bottom cleaning, and stronger enforcement of illegal spills.

## IN CONCLUSION

My family has been in this process for three generations. My grandfather instilled the love and respect of nature and all that it has to offer to my father. My father shared that experience with me. And now I'm nurturing the values taught to me into my young son and daughter.

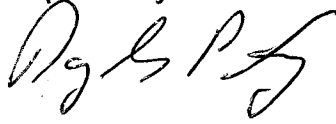
It was at my father's memorial that I promised Tom Hayden, the only politician to finally stand beside my father and fight for healing the Santa Monica Bay rather than treat it as a dumping ground. It was a surprise and pleasure to see him this morning in passing to say hello and thanks.

If there was one quote that sets the tone for why I'm fighting for the historical Ballona Wetlands it would be, "so preservation of a historic wetland is not a concern."

You'll find that quote on page 4 of the HTB letter to the CCC in support of the controversial Malibu Lagoon Restoration project.

Please judge wisely and favor restoring nature over alternatives influenced by huge sums of money and those that can easily lose their way.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Dg B Pf'.

10/23/12

Douglas Fay  
644 Ashland Ave Apt A  
Santa Monica, CA 90405  
Tele: 310 437-0765  
Email: douglaspfay@aol.com

**Jones, Tanya**

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-----Original Message-----

From: [Jonathan D Snyder@fws.gov](mailto:Jonathan_D_Snyder@fws.gov) [mailto:[Jonathan\\_D\\_Snyder@fws.gov](mailto:Jonathan_D_Snyder@fws.gov)]

Sent: Tuesday, October 23, 2012 4:36 PM

To: Swenson, Daniel P SPL

Cc: [Brittni Moskus@fws.gov](mailto:Brittni_Moskus@fws.gov); [Christine Medak@fws.gov](mailto:Christine_Medak@fws.gov); [Jackie Morales@fws.gov](mailto:Jackie_Morales@fws.gov)

Subject: Ballona Wetlands Restoration Project NOI

Dan,  
Please see the attached comment letter regarding the above-referenced NOI. Please contact Christine Medak at (760) 431-9440 x298 with any questions.

Sincerely,  
Jonathan

---

Jonathan Snyder  
U.S. Fish and Wildlife Service  
6010 Hidden Valley Road, Suite 101  
Carlsbad, CA 92011  
(760) 431-9440 x307  
[jonathan\\_d\\_snyder@fws.gov](mailto:jonathan_d_snyder@fws.gov)

Classification: UNCLASSIFIED  
Caveats: NONE



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
Carlsbad Fish and Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011



In Reply Refer To:  
FWS-LA-02B0010-13TA0023

Dr. Daniel P. Swenson  
U.S. Army Corps of Engineers  
Los Angeles District  
P.O. Box 532711  
Los Angeles, California 90053-2325

**OCT 23 2012**

**Subject:** Notice of Intent to Prepare a Draft Environmental Impact Statement/Environmental Impact Report for the Ballona Wetlands Restoration Project, City of Los Angeles and Unincorporated Los Angeles County, California

Dear Dr. Swenson:

We have reviewed the Notice of Intent (NOI) for the proposed Ballona Wetlands Restoration Project in the city of Los Angeles and unincorporated Los Angeles County, California. The proposed project will restore ecological functions within the 600-acre Ballona Wetlands Ecological Reserve (Reserve) by increasing tidal flow throughout the project area, removing invasive species, and planting native vegetation.

We offer the following comments and recommendations regarding project-associated biological benefits and impacts based on our review of the NOI and our knowledge of declining habitats and species within Los Angeles County. We provide these comments pursuant to our responsibilities under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), and in keeping with our agency's mission to work "with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people."

To facilitate the evaluation of the proposed project from the standpoint of fish and wildlife protection, we request the draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) consider the following specific information:

1. *Project Purpose* – According to the NOI the purpose of the proposed project is to restore ecological function to the Reserve. In southern California the effects of fragmentation have been shown to decrease the number of resident bird species, decrease the diversity of small rodents, and decrease the diversity and cover of native plant species (e.g., Alberts et al. 1993; Bolger et al. 1991, Bolger et al. 1997; Soulé et al. 1988). In general, the ecological



function of habitat is correlated with its contiguity. As stated by the Ballona Wetlands Science Advisory Committee<sup>1</sup>:

“Alternatives with larger, contiguous, areas of diverse estuarine wetland habitat are more likely to sustain populations of associated species. Alternatives with fewer roads, wider transitions and more channels would have a higher quality of wetland habitat because they would be more remote from noise, lights, cars, and other human impacts. Alternatives with larger areas of contiguous wetland would also have fewer impacts from, and require less active management for, invasive plant and animal species.”

To maximize the benefit of the restoration project for rare and sensitive wetland species and to reduce the costs of management over the long term, we recommend available resources be directed foremost toward the creation of contiguous habitat and that project alternatives and phasing be prioritized accordingly.

2. *Species* – The DEIS/EIR should include quantitative and qualitative assessments of the biological resources and habitat types that will be impacted by the proposed project and its alternatives. To assist you, we are providing the enclosed list of federally listed endangered, threatened, proposed, and candidate species to consider in association with the proposed restoration project.

The assessment of direct, indirect, and cumulative project impacts to fish and wildlife associated habitats should consider all facets of the project (e.g., construction, implementation, operation, and maintenance). In addition, the DEIS/EIS should consider the potential benefits of the proposed restoration project for each federally listed species that is known to occur or has the potential to occur in or adjacent to the project area from a regional perspective. For example, the tidewater goby (*Eucyclogobius newberryi*) is unlikely to occur in the project area due to the current lack of suitable habitat; however, the Recovery Plan for this species identifies the Reserve as a potential site for reintroduction should suitable habitat be restored (Service 2005). The California least tern (*Sternula antillarum browni*) currently nests on Venice Beach and forages in the Reserve. The establishment of an additional nest site within the Reserve, less than 1 mile from Venice Beach, would provide the terns with an alternative for when heavy predation pressure results in their abandonment from Venice Beach.

The analysis of impacts to biological resources and habitat types should include detailed maps and tables summarizing specific acreages and locations of all habitat types, as well as an updated assessment of the number and distribution of all Federal candidate, proposed, or listed species; State-listed species; and locally sensitive species, on or near the project site that may be affected by the proposed project or project alternatives.

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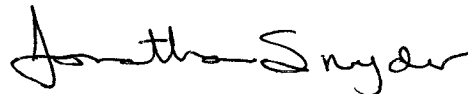
<sup>1</sup> Memorandum to the Ballona Project Management Team, dated October 15, 2008. Retrieved from: [http://www.santamonicabay.org/BWRP/BWRP\\_Documents/Feasibility%20Report/SAC%20recommendation.pdf](http://www.santamonicabay.org/BWRP/BWRP_Documents/Feasibility%20Report/SAC%20recommendation.pdf).



3. *Habitats* – When evaluating the extent of proposed habitats restored within the project area, the DEIS/EIR should consider the dynamic nature of estuarine habitat (e.g., fluctuations in the distribution and quality of habitat over time) over both the short term (due to fluctuations in annual rainfall) and the long term (due to sea level rise). Upper salt marsh and upland habitats should be provided as a refuge for wading birds such as light-footed clapper rail (*Rallus longirostris levipes*) during high tides and to support pollinators of salt marsh plants such as salt marsh bird's beak (*Chloropyron maritimum* subsp. *maritimum*). Establishment of habitat with gentle slopes throughout the project area will allow for wetland fish and birds to adjust to sea level rise gradually over time.
4. *Existing Infrastructure* – The proposed project area is currently bisected by the Ballona Creek flood control channel, Culver Boulevard, Jefferson Boulevard, and Lincoln Boulevard. To maximize the extent of continuous habitat, we recommend that flood control protection for the surrounding residential and commercial development be relocated to the outside edge of the project area. Roadways and utilities should be relocated outside of the project area or otherwise raised above the flood zone on causeways to reestablish hydrologic continuity throughout the project area.
5. *Public Access* – Improving public access to the site will increase educational opportunities within the Reserve and help to foster public appreciation for native fish and wildlife resources; however, with increased public access, the Reserve will be vulnerable to increased degradation associated with human-generated disturbance, particularly unauthorized recreational use. To minimize degradation of restored habitats, we recommend long-term management of the Reserve include: (1) Regular inspections of recreational facilities, fencing and adjacent habitat to identify maintenance needs; (2) control of unauthorized human access to habitat areas; (3) fence maintenance; (4) trash removal; and (5) restoration of habitats impacted by unauthorized public uses. The increase in public access should be balanced with anticipated funding available for long-term management of Reserve.

We appreciate the opportunity to comment on the subject NOI. If you have any questions regarding these comments, please contact Christine Medak of this office at 760-431-9440, extension 298.

Sincerely,



for Karen A. Goebel  
Assistant Field Supervisor

Enclosure

Literature Cited

- Alberts, A. C., A. D. Richman, D. Tran, R. Sauvajot, C. McCalvin, and D. T. Bolger. 1993. Effects of habitat fragmentation on populations of native and exotic plants in southern California coastal scrub. *In* J. E. Keeley (ed.), *Interface between ecology and land development in California*, pp. 103-110. Southern California Academy of Science, Los Angeles, California.
- Bolger, D. T., A. C. Alberts, and M. E. Soulé. 1991. Bird species occurrence patterns in habitat fragments: sampling, extinction and nested species subsets. *American Naturalist* 137:155-166.
- Bolger, D. T., A. C. Alberts, R. M. Sauvajot, P. Potenza, C. McCalvin, D. Tran, S. Mazzoni, and M. E. Soulé. 1997. Responses of rodents to habitat fragmentation in coastal southern California. *Ecological Applications* 7:552-563.
- Soulé, M. E., D. T. Bolger, A.C. Roberts, R. Sauvajot, J. Wright, M. Sorice, and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. *Conservation Biology* 2:75-92.
- U.S. Fish and Wildlife Service. 2005. Recovery Plan for the Tidewater Goby (*Eucyclogobius newberryi*). U.S. Fish and Wildlife Service, Portland, Oregon. vi + 199 pp.

Enclosure

**Federally Endangered, Threatened, Proposed, and Candidate Species to Consider in Association with the Ballona Wetlands Restoration Project, City of Los Angeles and Unincorporated Los Angeles County, California**

October 22, 2012

| Common Name                    | Scientific Name                                          | Federal Status <sup>i</sup> |
|--------------------------------|----------------------------------------------------------|-----------------------------|
| <b><u>Birds</u></b>            |                                                          |                             |
| western snowy plover           | <i>Charadrius alexandrinus nivosus</i>                   | threatened, CH              |
| coastal California gnatcatcher | <i>Polioptila californica californica</i>                | threatened, CH              |
| light-footed clapper rail      | <i>Rallus longirostris levipes</i>                       | endangered, R               |
| California least tern          | <i>Sternula antillarum browni</i>                        | endangered                  |
| least Bell's vireo             | <i>Vireo bellii pusillus</i>                             | endangered, CH              |
| <b><u>Invertebrates</u></b>    |                                                          |                             |
| El Segundo blue butterfly      | <i>Euphilotes battoides allyni</i>                       | endangered, R               |
| <b><u>Fish</u></b>             |                                                          |                             |
| tidewater goby                 | <i>Eucyclogobius newberryi</i>                           | endangered, R               |
| <b><u>Plants</u></b>           |                                                          |                             |
| Ventura marsh milk-vetch       | <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> | endangered, CH              |
| coastal dunes milk-vetch       | <i>Astragalus tener</i> var. <i>titi</i>                 | endangered                  |
| salt marsh bird's beak         | <i>Chloropyron maritimum</i> subsp. <i>maritimum</i>     | endangered                  |
| Brand's phacelia               | <i>Phacelia stellaris</i>                                | candidate                   |

<sup>i</sup> CH – Critical habitat designated but excludes the project area, R – Ballona Wetlands identified as a potential reintroduction area in the Recovery Plan for the species.

**Jones, Tanya**

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**To:** McCormick, Donna  
**Subject:** RE: addendum to Bigelow comment re Ballona Restoration

**From:** micheleanna b [<mailto:micheleanna@gmail.com>]  
**Sent:** Tuesday, October 23, 2012 11:44 AM  
**To:** McCormick, Donna  
**Subject:** addendum to Bigelow comment re Ballona Restoration

Hello Ms McCormick,

I emailed a comment to you on 10/22/12 stating my views on the proposed Ballona Wetlands restoration.

I forgot to mention that I am a board member of a local nonprofit organization devoted to creek issues, Ballona Creek Renaissance.

However, I am writing to express my own personal opinion only, and not as a representative of BCR.

thank you,  
Michele Bigelow

**Jones, Tanya**

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**From:** Bruce Campbell [<mailto:madroneweb@aol.com>]  
**Sent:** Tuesday, October 23, 2012 10:41 AM  
**To:** McCormick, Donna; [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil)  
**Subject:** Scoping comments on Ballona (Public Notice / Application No. SPL-2010-1155

October 22, 2012

Bruce Campbell  
3520 Overland Ave. # A 149  
Los Angeles, CA 90034

Ballona Wetlands Restoration Project  
US Army Corps of Engineers  
California Dept. of Fish and Game  
c/o Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92816

Re: Public Notice / Application No. SPL-2010-1155 (Scoping Comments on Ballona Wetlands Restoration Project

To Ms. McCormick, Mr. Lawhead, and Dr. Swenson, and to whom it may concern:

Thank you for your attention to this comment on the so-called "restoration" project in the publicly owned portions of the Ballona Wetlands.

First, we need a good baseline from which to work. There must be:

**a.) new thorough inventories and counts of species (as well as a thorough review of existing research) so we have a better idea of what biota may be lost depending upon which alternative is chosen;**

(To elaborate here, there must be a range of alternatives, and all the alternatives must calculate as best they can which species would win and which species would lose under each alternative in the near, mid, and far away time frames.) **All species (and certainly the federal and state endangered, threatened, rare, and species of concern species) must be considered in terms of what severe habitat alteration would do to those species in the near, mid, and far term.**

**b. a thorough study on the hydrology of the Ballona Wetlands ecosystem -- both current (partially examining "dewatering" operations at Playa Vista) as well as historic.**

\*\*\*\*\*

The cart seems to be ahead of the horse in this process. **There is mention of five "preliminary" alternatives already advised by some groups. THERE MUST BE A REASONABLE RANGE OF ALTERNATIVES TO ABIDE BY NEPA AND CEQA. Besides the No Action / No Project Alternative which always must be offered, it is likely all the other alternatives are small variations of a major grandiose rearrangement of the ecosystem -- which is inadequate to satisfy the necessity to have a reasonable range of alternatives.**

**Can you name any other DEIS/EIR that did not have a formal public scoping hearing accepting recorded vocal input by the public? Also, can you name any other project that already had 5 alternatives developed even before the scoping phase of a project?**

\*\*\*\*\*

In the past decade, we have lost a serious amount of upland coastal prairie habitat in the Ballona West Bluff area -- now 114 luxury homes. Please **discuss species that live in or depend on coastal prairies and upland areas in the Ballona area**, and the general food chain such as what birds eat what mammals or seafood, etc. How will each action alternative impact the critters that still survive despite widespread development following rodenticide use? Discuss this in the near, mid, and far terms.

\*\*\*\*\*

I note a map on the Santa Monica Bay Restoration website which shows habitat types and has a Coastal Conservancy logo at the bottom. It says at the bottom that the map was from October 20, 2011, but then it also said that the study and I suppose a map of "existing habitats" in the Ballona area was conducted in 2007.

For each alternative presented, I call either for larger maps one can open up next to each other to compare "existing habitat" noted by CDFG alongside the grandiose plans for habitat alteration in the Preferred Alternative and what habitat types you see at Ballona after the large public works project is completed. Color the sections on the map accordingly please. It would also be good to see habitat maps in various phases of the bulldozing / earthmoving.

Also, please indicate for as many species as possible where some species would go in the meantime during the massive earthmoving / bulldozing phases of the proposed project.

Obviously there are plans for years or even decades of work for so-called "Ballona restoration." **Please indicate not only what CDFG "existing habitat types" are for certain sections of Ballona, but what the habitat types would be for various phases of the earthmoving project, and what you hope the habitat types in the various areas will be at the end of the project.**

\*\*\*\*\*

**Please discuss in the DEIS/DEIR what access there will be to the publicly-owned areas at the Ballona Wetlands at various stages of the Ballona "Restoration" project.**

Are there any plans associated with this project, or under any of the alternatives, to transfer jurisdiction and oversight for the area from current overseeing agencies to some other agencies? Please elaborate as to why or why not.

Was the CDFG overview of species and mapping of habitat types half a decade ago considered sufficient by a range of biologists, or is there disagreement as to the thoroughness or timing or other aspects of this overview?

\*\*\*\*\*

Will there be any attempted relocation or scaring away of certain species during some major ground-moving phases of the Ballona so-called "restoration" project? **Will different protocol be followed for species on federal or state Endangered Species Act lists, as versus other resident or visiting species in the area?** We need responses relating to **rare plant species as well as birds and other kinds of critters of the area. Will rare plants be relocated prior to bulldozing, and how will they be cared for in the interim, and will they be returned to the vicinity they were in before the bulldozing phase of their area?**

\*\*\*\*\*

The NOP seems to indicate that the Ballona Wetlands area is pretty worthless unless it undergoes a major so-called "restoration" alternative based on massive bulldozing. I note that the "intent" of the project is to "return the daily ebb and flow of tidal waters", "maintain freshwater circulation", and to "augment the biological and physical functions and services in the project area".

**When considering various alternatives, consider the term "return" and substantiate with valid studies that the ebb and flow of tidal waters which will take place at Ballona upon completion of that alternative is actually returning to an earlier era.** As far as "maintain(ing) freshwater circulation", I assume you are calling the very polluted water of Ballona Creek to be "freshwater", is this correct?

\*\*\*\*\*

As far as #6 on page 6 of the NOP, it claims that "A public scoping hearing to receive input on the scope of the DEIS/EIR was conducted on August 16th, 2012". I have been to a lot of hearings, scoping and otherwise, and this was no hearing, but instead just a gathering of some folks by some easels to peer at a few maps. Thus, **there still is a need for an actual**

**public scoping hearing to receive formal input into the record on the Ballona so-called restoration plan. When will this hearing occur, or will it occur?** Has there ever been a "public scoping hearing" before which did not feature oral input by the public into what the scope of the study related to the project will entail? Who was the ultimate decisionmaker who decided not to accept formal vocal input by the public, and was that person pressured to allow as little public input as possible in the scoping phase?

\*\*\*\*\*

I notice under the third bullet point under the Proposed Action mentions "providing flood risk management for Culver Blvd. and surrounding developed areas". **Please (in your DEIS/EIR) mention which parts of the project are proposed in order to achieve "flood control."**

The NOP acts like only after grandiose restoration will the Ballona area be important for migrating birds, etc. It is the largest coastal wetland in L.A. County currently, and provides important habitat for many species.

\*\*\*\*\*

The most hopeful part of the NOP seems to be the part near the end that mentions that "Other alternatives that may be considered include restoring smaller portions of the 600-acre site, alternative designs that would provide differing amounts of various habitat types, and alternative designs for enhanced tidal flow." **I STRONGLY URGE that the BEEP alternative (Ballona Ecosystem and Education Project) BE INCLUDED AS A FORMAL ALTERNATIVE in the DEIS/EIR.**

**Are the five preliminary alternatives which have been advised thus far all grandiose massive bulldozing alternatives, or do any consider smaller-scale projects perhaps impacting just a portion of the Ballona wetland complex?**

**Please discuss every person that was formally on any of the groups which advised the "five preliminary alternatives" and discuss their employer and possible financial interest either in planning or carrying out the grandiose restoration plan, in getting paid to "monitor" such a plan, as well as discuss direct and indirect links of these people to the Playa Vista development and related investors. Thus, every person on the Ballona Wetlands Working Group, Science Advisory Committee, and the Agency Advisory Committee involved with developing or preliminarily approving the five preliminary alternatives must be discussed in relation to employer and financial interest in the Ballona Wetlands vicinity.**

\*\*\*\*\*

It is disingenuous for the NOP to claim that "Restoration of coastal wetlands is needed in order" "to provide recreational and educational opportunities to the public." Apparently one group controls access to the site and except for token tours, has been severely restricting or prohibiting access even to key members of groups which worked to get the state to purchase (theoretically to protect) the western part of the Ballona wetlands. Thus, there could be plenty of education and recreation going on, but the buddies of developers want to monopolize such.

**Is meeting federal Total Maximum Daily Load targets considered a purpose for the project? If so, admit it in the documentation.**

The fifth bullet point in the NOP discusses "maintenance of existing levels of flood risk management for areas surrounding the Ballona Wetlands site." **Is a purpose of a large so-called "restoration" scheme to enhance protection from floods, or just to maintain existing levels?**

**Page 4 of the NOP talks of "conservative estimates" of "cubic yards of excavation" and "cubic yards of fill placement". What are less conservative estimates for the amount of excavated material and fill placement to be moved under varying alternatives for this project at Ballona?**

**Is it legally proper to divert a polluted "impaired" body of water (Ballona Creek) into another polluted "impaired" body of water (Ballona Wetlands)?**

Please keep me updated as to when and where the formal scoping hearing will be on this project, and keep me updated on other aspects of the so-called "restoration" project as well.

Sincerely yours,

Bruce Campbell



**From:** Natalie Carrere [<mailto:ndcarrere@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 12:25 PM  
**To:** McCormick, Donna  
**Subject:** Comment on Ballona Wetlands Restoration Project

To Donna McCormick:

Here are my public comments on the Ballona Wetlands Restoration Project:

1. I would like the project to consider raising Culver Blvd and Jefferson Blvd. to allow the restored wetlands to have more continuity and be contiguous. I have observed many dead animals and birds on Culver Blvd. If the street was raised, waters/land could flow underneath.
2. I would like to see species impact reports on all known species in the area currently. This should help guide the project to determine the best restoration. While some species may be displaced, it is good to have that information. Also, studies should be done on what the restoration hopes to bring to the area in terms of species so that a full cost/benefit, from a species level, can be done.
3. If the proposed preferred alternative (#5) is adopted, it is my understanding that this would require ongoing dredging to maintain the area. What would be the financial impact to the City of Los Angeles and the State of California to maintain this dredging? What would be the environmental impact of this dredging to plants and wildlife. What are the alternatives to the dredging?
4. What actions will be taken to ensure respectful treatment of native american burial grounds or other sacred sites?
5. What will impact of bulldozing be on the existing native plants and species? What are the alternatives to large-scale bulldozing and has a cost-benefit analysis been performed? How long will it take for the plants and wildlife to return to the area if they are dug up/displaced/destroyed by bulldozing or other large scale digging? Could a less disruptive restoration accomplish the same ultimate goal of a restored wetland habitat?
6. What will be the impact of the proposed large berms on species, habitat and the water flow? Why do they need to be so large? What % of the existing habitat to restored will be effectively unusable due to the large proposed berms?
7. I signed up for the SMBRC newsletter and to be on their mailing list on March 5, 2012 with a confirmation from Donna Tuttle that I would be included from then on. I have received NO information, NO newsletter and NO notification of this comment period deadline (October 23, 2012). I believe the public has a right to be informed of this public project and request that SMBRC be more forthcoming, transparent and inclusive of the public in this process.

Sincerely,

Natalie Carrere  
[ndcarrere@yahoo.com](mailto:ndcarrere@yahoo.com)

and YES, I would like to be included on the SMBRC email mailing list, as I requested back in March.

**Jones, Tanya**

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**From:** mike chamness [<mailto:mchamness@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 3:19 PM  
**To:** [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil)  
**Cc:** McCormick, Donna  
**Subject:** DON'T BULLDOZE THE BALLONA WETLANDS IN CA!

As a voter & a lover of the wetlands, I demand you do everything in your power to NOT BULLDOZE THE BALLONA WETLANDS.

Sincerely,

Mike Chamness  
Venice, CA 90291

**From:** Joyce Dillard [<mailto:dillardjoyce@yahoo.com>]

**Sent:** Tuesday, October 23, 2012 2:33 PM

**To:** Swenson, Daniel P SPL

**Subject:** Comments to NOI for Draft EIS/EIR- SPL-2010-1155 Ballona Wetlands Restoration Project due 10.23.2012

Ballona Wetlands is “an example of a wetland where tides are excluded by a tide gate (PERL, 1989, Boland and Zedler 1991, PERL unpublished data)” as stated in the book TIDAL WETLAND RESTORATION, A SCIENTIFIC PERSPECTIVE AND SOUTHERN CALIFORNIA FOCUS by Joy B. Zedler, Principal Author, 1996.

The plans are to restore outflows, not inflows. There is no tidal influence. Flood risk would be from Sea-Level Rise or Tsunamis, not natural in nature. The storm drain aspect of this plan needs to be emphasized as the major thrust. Dredge and fill activities would need to be analyzed from sediment flows upland.

You would need to consider the Land Use in the Community Plans surrounding and/or contributing to Ballona. In the case of the Hollywood Community Plan, there is increased density and, consequently, anticipated increases in sediment flows because of the overbuilding. Those natural systems in the upland are ignored in this project, yet contribute to any drainage problem.

Sediment Management Plans in LA County are 100 years old and lack the foresight of anticipated capital costs and operation and maintenance costs.

We cannot even be assured that Earthquake Fault Mapping is current for the area.

We do not know the age and condition of pipelines and storm drains, both by the City of Los Angeles or the County of Los Angeles and their relationship to Ballona as an outfall. The NPDES MS4 permit, current and pending, are factors for the Draft EIS.

The factors listed in PRACTICAL PROXIES FOR TIDAL MARSH ECOSYSTEM SERVICES: APPLICATION TO INJURY AND RESTORATION by Charles H. Peterson, Kenneth W. Able, Christin Frieswyk DeJong, Michael F. Piehler, Charles A. Simenstad, and Joy B. Zedler from ADVANCES IN MARINE BIOLOGY, VOLUME 54 states:

Tidal marshes are valued, protected and restored in recognition of their ecosystem services:

- (1) high productivity and habitat provision supporting the food web leading to fish and wildlife,
- (2) buffer against storm wave damage,
- (3) shoreline stabilization,
- (4) flood water storage,
- (5) water quality maintenance,
- (6) biodiversity preservation,
- (7) carbon storage and
- (8) socio-economic benefits.

It is questionable whether this wetland restoration fits that criteria in such a highly urbanized area with continued plans for density and population growth. Would a restored nearshore environment reduce the effects of continued urbanization.

The Southern California Bight studies, which hold pollution close to shore, should be considered.

TMDL Storm Means data from the sub-watersheds should be analyzed as point sources versus Ballona as an end source. Again, aspects and inadequacies in the upland watershed should be addressed including destruction/alteration of Ballona Creek such as the Echo Park Lake. Also, major projects such as Farmers Field (NFL Football Stadium) and its impacts on the Ballona Creek Watershed should be considered.

The Port of LA is included Ballona Creek in Wetlands Banking. Does this banking take precedence over Ballona itself.

Joyce Dillard  
P.O. Box 31377  
Los Angeles, CA 90031

Classification: UNCLASSIFIED  
Caveats: NONE

**Jones, Tanya**

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-----Original Message-----

From: [douglaspfay@aol.com](mailto:douglaspfay@aol.com) [<mailto:douglaspfay@aol.com>]  
Sent: Tuesday, October 23, 2012 1:00 PM  
To: [DLawhead@dfg.ca.gov](mailto:DLawhead@dfg.ca.gov); Swenson, Daniel P SPL  
Subject: Re: Proposed Ballona Wetlands Restoration Project questions

Dear Mr. Lawhead and Mr. Swenson,

Attached are my comments on the NOI. Please reply by email that you have received them.

Respectfully requested,

Douglas Fay

-----Original Message-----

From: David Lawhead <[DLawhead@dfg.ca.gov](mailto:DLawhead@dfg.ca.gov)>  
To: douglaspfay <[douglaspfay@aol.com](mailto:douglaspfay@aol.com)>; Daniel.p.swenson <[Daniel.p.swenson@usace.army.mil](mailto:Daniel.p.swenson@usace.army.mil)>  
Sent: Mon, Oct 22, 2012 11:43 am  
Subject: Re: Proposed Ballona Wetlands Restoration Project questions

Dear Mr. Fay,

You are correct that the close of the public comment period for the Ballona Wetlands Restoration Project NOP/NOI is October 23rd, at 5 pm (the close of business). In response to your other questions:

- You can send your comments to me electronically, however, if you send them to [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com) both Dr. Swenson and I will receive them at the same time.
- The Department of Fish and Game will accept your comments if they are postmarked by October 23rd.
- Comments received during the NOP/NOI scoping process are not individually responded to, but are considered in the development of the draft EIR/EIS that is still to be developed. Under CEQA, these comments do not require formal responses, but will be included in the draft EIR/EIS for the public to review. Comments received in the course of public review of the future Draft EIR/EIS will have formal responses in the Final EIR/EIS.

Thank you for submitting comments on the project.

David Lawhead  
Staff Environmental Scientist  
CA Dept. of Fish and Game

>>> <[douglaspfay@aol.com](mailto:douglaspfay@aol.com)> 10/20/2012 8:16 PM >>>

Dear Dr. Swenson & Mr. Lawhead,

It is my understanding that the Comment Period on the proposed BWRP ends October 23, 2012.

At what time of day on October 23, 2012 does the Comment Period close?

Can I send comments to you electronically by email before the deadline?

Will postmarked by October 23, 2012 submissions by postal mail be accepted?

Will all of my questions asked at this time (NOI) be answered and mailed to me prior to the Draft EIS/EIR being prepared?

Will acknowledgement of my comments and proposed alternatives be mailed to me prior to the Draft EIS/EIR being prepared?

Will a complete list of all letters, comments and questions and your replies be posted and available online prior to the Draft EIS/EIR being prepared?

I'm somewhat familiar with CEQA, but not the NOI process. If you could briefly elaborate on the format of comments on the NOI that is best for you, I would appreciate your reply ASAP by Monday, October 22, as the imposed deadline is near.

Respectfully submitted,

Douglas Fay  
644 Ashland Ave Apt A  
Santa Monica, CA 90405  
Tele: 310 437-0765  
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Classification: UNCLASSIFIED  
Caveats: NONE

To:

October 23, 2012

Mr. Daniel P. Swenson, Chief, Los Angeles Section  
Army Corps of Engineers  
915 Wilshire Blvd., Los Angeles CA 90017  
Email: [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil)

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California Dept. of Fish and Game  
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Questions, Comments, and Recommendations by Douglas Fay on the  
proposed Ballona Wetlands Restoration Project NOI

1. Corps Release no. 12-015 Posted 9/26/12 Re: Termination of existing  
process at the request of the Santa Monica Bay Restoration Commission  
(SMBRC), a Joint Power Authority with the County of Los Angeles  
(County).

Question: Will the termination of the existing feasibility study and  
accompanying EIS result in a project consistent with a comprehensive  
Santa Monica Bay Restoration Plan (SMBRP), or fragment the process?

Comments: My concern, and the concern of others, is the 2008 SMBRP is  
a significantly flawed document, with minimal public input. I have made  
several attempts to address my concerns publicly that have been denied  
by individuals in the SMBRC leadership rolls, the SMBRC Governing  
Board, members of the Santa Monica Bay Restoration Foundation  
(SMBRF), and submitted documentation to the California Coastal  
Commission (CCC).

A (partial) document analysis I prepared of the 2008 SMBRP addressed to  
the SMBRC Governing Board was submitted to Scott Valor. Months later  
Mr. Valor told me he did not give the time critical document to the  
Governing Board members. This is only one example of several deliberate  
and documented actions to exclude and deter me from this process.

Also, the SMBRC has recently approved the development of Parcel OT, a  
parking lot adjacent to the Oxford Lagoon a.k.a. the Oxford Retention



Basin and the Oxford Retention Basin Multi-Use Enhancement Project, both of which are under the County's control. The Oxford Lagoon is part of the historical Ballona Wetlands that is primarily used for urban flood control discharge and retention prior to entering the Marina Del Rey (MDR) harbor through mechanical gates.

The Oxford Retention Basin Multi-Use Enhancement Project increases/enhances public access, which in turn reduces terrestrial habitat value. There is no significant aquatic habitat value due to the drastic variation of salinity levels that are catastrophic to most marine animals. This shows that their actions are based on politics, not science and sound restoration principles.

Current management practices of the Oxford Lagoon contradict SMBRP Goals and Objectives A. PRIORITY ISSUE: WATER QUALITY Goal 1: Improve water quality through treatment or elimination of pollutant discharges, Goal 2: Improve water quality through pollution prevention and source control, B. PRIORITY ISSUE: NATURAL RESOURCES Goal 4: Create and support policies and programs to protect natural resources.

Questions: Are these acceptable practices in the eyes of the Corps and CDFG? Please explain and elaborate if needed.

Are other documents being censored without the Governing Board's knowledge jeopardizing their abilities to evaluate and vote on proposed projects? Please explain and elaborate if needed.

What policies and programs to protect natural resources have been created by the SMBRC and implemented by government agencies and municipalities within the Santa Monica Bay watershed? Please explain and elaborate if needed.

What is the "commission's proposed restoration project"?

Comment: I do not see a link to a website in this document, or have detailed knowledge of the commission's proposed restoration project, which makes it difficult, if not impossible to comment on with an acceptable degree of accuracy.

Recommendation: Reverse your decision to accept the request by the SMBRC and proceed with the existing 2005 process. Provide ample opportunities for the public to be educated and engaged in drafting a restoration project through the existing process. Assure the public that the non-profit Santa Monica Bay Restoration Foundation (SMBRF) and SMBRC will not be controlling the process.

Investigate any wrong doings to members of the public including, but not limited to, misappropriation of public funds.

2. Corps Public Notice: SPL-2010-1155, Date: August 24, 2012

#### SUMMARY:

Comment: Historical maps show breaching of sand and full tidal exchange in the Del Rey Lagoon area of the coastline.

Questions: Is the restoration of this historic exchange in the proposed Ballona Wetlands Restoration Project (BWRP)?

If, and I quote, "The proposed project is intended to return the daily ebb and flow of tidal waters", then why wouldn't the first step to a restoration be limited to restoring the historical breaching?

What is the percentage of the proposed project's intended return of daily ebb and flow of tidal waters compared to historical levels within the wetlands?

Comment: I attended a lecture by Dr. Travis Longcore on May 22, 2012 entitled, "Closure Dynamics of Southern California Estuaries and Implications for Restoration."

Recommendation: View this lecture, reference it in the EIS/EIR, and answer the following questions. If you cannot easily obtain a copy, I will provide a copy upon request.

Questions: Do you agree that the historical photos, maps, and plant life show that the Ballona Wetlands were primary a fresh water to brackish wetlands? Please explain your answer and elaborate if needed.

Is there any historical data that shows the Ballona Wetlands ever had full tidal flow (ocean levels of salinity) throughout the proposed project area (approximately 600 acres)? Please explain your answer and elaborate if needed.

Is there any historical data that shows natural berming/levees adjacent to the Ballona Creek and around the parameter of the proposed project? Please explain your answer and elaborate if needed.

Is preservation of the historical Ballona Wetlands a concern? Please

explain and elaborate if needed.

#### SUPPLEMENTARY INFORMATION:

Comment: This document states, "The Corps intends to prepare a joint EIS/EIR to assess the environmental effects associated with the proposed project. CDFG is the state lead agency for the EIR pursuant to the California Environmental Quality Act (CEQA)."

Questions: Is the Corps the Federal lead agency for the project, the EIR, or just the EIS?

Is CDFG the State lead agency for the project, the EIS, or just the EIR?

If CDFG is the lead agency, are they required to act as stewards of the public?

If so, why are the SCC, SMBRF, SMBRC, DRP, and others, appearing to be dominating all aspects of the proposed BWRP process with limited/controlled public input?

If the Corps and CDFG intend to jointly prepare a Draft EIS/EIR for the proposed BWRP, is one Scoping Meeting all that is legally required?

Comment: The Scoping Meeting(s) schedule was limited to 3 hours on 1 day. I was unable to attend due to a conflicting work schedule. Scott Valor told me the minimum that State law requires will be all that is provided throughout this process. I'm assuming this is true if the SMBRF, that Mr. Valor is associated with, is influencing the process.

Questions: If public participation is critical then shouldn't there have been more than one Scoping Meeting?

Comment: This document states, "7. Availability of the DEIS/EIR. The DEIS/EIR is expected to be published and circulated in late 2012. A public hearing will be held after its publication to field comments on the document."

Questions: Is one public hearing on the DEIS/EIR sufficient?

Will it be limited in time?

Will there be opportunity for question and answer sessions?

Will speaker time during public comment be limited?

If public participation is critical then shouldn't there be more than one Public Hearing?

1. Background.

Comment: The background description is limited and vague.

Question: Where are the "attached figures"?

Comment: There were not any attached figures in the Corps SPECIAL PUBLIC NOTICE download.

Questions: If the Ballona Creek a.k.a. Ballona Flood Control Channel is "a component feature of a federal flood risk management project," could a project increase flood risk?

Who owns the Ballona Creek/Flood Control Channel portion that bisects the State owned Ballona Wetlands?

Who is legally responsible for liabilities associated with altering the alignment of the Ballona Creek/Flood Control Channel?

Will there be special laws and/or regulations drafted specifically for the proposed project?

Has a Federal/State wetlands project partnership similar to this proposed project been completed before?

Comment: If so, please describe with references.

Recommendations: Study and describe all of the water bodies associated with the Ballona Wetlands and the development adjacent to the proposed project and adjacent water bodies, including, but not limited to, industrial, commercial, residential, recreational, flood plain, polluted waters, and Native American data.

Study and describe how an alteration of what I am assuming are Federal waters/land/boundaries with State land/waters/boundaries will be conducted including, but not limited to, jurisdiction, law enforcement, management, maintenance, funding and liability.

## 2. Project Purpose and Need.

Comments: Regarding the statement, “In addition, the wetland habitat and natural hydrological functions in the area have been substantially degraded.”

Questions: How have the natural hydrological functions been substantially degraded? Please explain your answer and elaborate if needed.

Who is responsible? Please explain your answer and elaborate if needed.

Is the degradation of the natural hydrology of the project area ongoing? Please explain your answer and elaborate if needed.

If so, is the degradation legal or illegal?

Comment: Regarding the statement, “Restoration of coastal wetlands is needed in order to increase available nursery and foraging habitat for wildlife and to provide recreational and educational opportunities to the public.”

Questions: Will a comprehensive plan including all coastal waters and water sources originating inland be more effective at maintaining and increasing biodiversity than limiting the scope of study to coastal wetlands within the proposed project site? Please explain your answer and elaborate if needed.

What does CEQA require?

What are the recreational and educational opportunities proposed?

Comment: I’m told my grandfather and father hunted ducks in the Ballona Wetlands area.

Questions: Will regulated hunting and fishing be allowed publicly in the proposed project area?

Will Native Americans be allowed to hunt and fish in the proposed project area? Please explain your answer and elaborate if needed.

Comment: Regarding the statement, “A restored, optimally functioning wetland would also benefit the adjacent marine environment and enhance

the quality of tidal waters.”

Questions: How does a wetland enhance the quality of tidal waters?

Does the proposed project intend to introduce polluted water sources into the wetlands?

How do polluted waters including, but not limited to, waters laden with synthetic chemical compounds affect the health and reproductive cycle of living organisms? Please explain your answer and elaborate if needed.

Are there endangered or threatened species within and/or adjacent to the proposed project area?

Would the proposed project need maintenance and funding to remove introduced pollutants in perpetuity? Please explain your answer and elaborate if needed.

Comments: Not mentioned in the Project Purpose and Need is the need, or should I say intent, to construct flood and tsunami control levees in an effort to mitigate and protect recently developed structures. Also, the significant amount of earth/soils, that are proposed to be moved, to build the massive levees, will significantly increase the amount of ocean waters, and thereby decrease the need to restore fresh water sources that have been depleted.

Questions: Do any of the proposed project alternatives appear to be flood control mitigation for the Playa Vista development? Please explain your answer and elaborate if needed.

If so, is it an acceptable practice, both morally and financially, by the Corps and CDFG to move forward with an NOI when the preferred restoration project appears to be based on flood control mitigation for adjacent lands?

What is the cost incurred to date to develop what I’m assuming is the preferred proposed project alternative? Please explain your answer and elaborate if needed.

How much of the expenses to date have gone to, or through, CDFG? Please explain and elaborate if needed.

Are you aware that a Santa Monica Bay Restoration Account (SMBRA) exists?

Has any money gone in or out of the SMBRA for this project, or any other project that you are aware of?

Is the proposed restoration funded by grants? Please explain and elaborate if needed.

Does CDFG have detailed accounting records for all financial activities related to the BWRP? Please explain and elaborate if needed.

Are there financial accounting records and/or audits available for public viewing?

If so, how is it accessed? Please explain and elaborate if needed.

If not, why? Please explain and elaborate if needed.

Comment: Regarding the statement, "The purpose of the project is to restore ecological functions of the site, in part, by enhancing tidal flow." When the County introduced/increased urban flood control waters into the Oxford Lagoon, removed sources of fresh water, and manually maintained tidal flushing, the migratory bird population dropped significantly. I have witnessed Mallard ducklings expire in the MDR harbor due to lack of fresh water access.

Question: How do you enhance migratory bird habitat by enhancing tidal flow?

### 3. Proposed Action.

Comment: Regarding the statement: "CDFG is proposing a large-scale restoration of the Ballona Wetlands Ecological Reserve. The proposed project entails restoring, enhancing, and establishing native coastal wetland and upland habitats in the approximately 600-acre Ballona Wetlands Ecological Reserve."

Questions: Is CDFG proposing a large-scale restoration, or is the large-scale restoration proposal coming from the SMBRF and/or other organizations? Please explain and elaborate if needed.

Why is the State Coastal Conservancy (SCC) taking the lead in funding for planning and restoration of the CDFG property? Please explain and elaborate if needed.

What is the roll of California Department of Parks and Recreation (DPR)?

Will CDFG control the proposed “Long-term operations and management activities including inspections, repairs, clean-up, vegetation maintenance, and related activities,” or will they be subcontracted?

If subcontracted to who will they subcontracted to and why? Please explain and elaborate if needed.

Comment: The 2008 SMBRP states, “Determine preferred alternative by 2009.”

Question: Does CDFG have a preferred alternative?

Does the SMBRC have a preferred alternative? Please explain and elaborate if needed.

If so, why hasn’t it been released to the public so we can accurately comment on the NOI?

If a draft has been released, where can I obtain a copy?

#### 4. Alternatives Considered.

Comment: Regarding the statement, “The feasibility of several alternatives is being considered and will be addressed in the DEIS/EIR.”

Questions: What are the alternatives and where did they come from? Please explain and elaborate if needed.

Is the Proposed Ballona Wetlands Restoration Plan (BWRP)(Draft), Prepared in conjunction with the Ballona Wetlands Land Trust, Save Ballona Wetlands, and Rimmon C. Fay, Ph.D. dated June 21, 1995, submitted to the Corps, County, and City of Los Angeles included in the proposed alternatives? Please explain and elaborate if needed.

Is it a document that both the Corps and CDFG have in their possession and has been studied by staff biologists and engineers? Please explain and elaborate if needed.

Recommendation: If not, obtain the BWRP draft document dated June 21, 1995. (I have a copy if needed) Study and describe the viability of



implementing this alternative with acknowledgement of current conditions: ownership, development, etc.

## 5. Scoping Process.

Comments: The Scoping Meeting was conducted on August 16, 2012 from 4:00 to 7:00 p.m. One 3 hour meeting was all that was provided.

Regarding the statement, “providing useful information such as published and unpublished data, and knowledge of relevant issues and recommending mitigation measures to offset potential impacts from proposed actions.”

Questions: What is being done to improve the diminishing water quality within the MDR harbor? Please explain and elaborate if needed.

What is proposed project plan and/or mitigation for being impacted by poor water quality, pollutants, and invasive species originating from within the MDR harbor? Please explain and elaborate if needed.

How many industrial dischargers are permitted into the Santa Monica Bay? Please explain and elaborate if needed.

What are they reportedly discharging? Please explain and elaborate if needed.

What are the locations of discharge? Please explain and elaborate if needed.

What is the reported volume of discharge daily/annually? Please explain and elaborate if needed.

What mitigation measures are in place to ensure there is no negative impact to water quality, and biological diversity and quantities? Please explain and elaborate if needed.

Are there any legal discharge permits issued anywhere within the Ballona Creek Flood Control Channel (BCFCC)? Please explain and elaborate if needed.

Have there been any reported accidental spills into the BCFCC within the past 10 years?

If so, how many and what was spilled? Please explain and elaborate if

needed.

What are the specifics: date, time, estimated quantity, etc. and result: beach closures, number of days, etc.? Please explain and elaborate if needed.

What is the current biological assessment of the Ballona Wetlands? Please explain and elaborate if needed.

What is the current biological assessment of the Marina Del Rey harbor? Please explain and elaborate if needed.

What is the current biological assessment of the Del Rey Lagoon? Please explain and elaborate if needed.

What is the current biological assessment of the Oxford Lagoon? Please explain and elaborate if needed.

What is the current biological assessment of the Ballona Creek including all tributaries? Please explain and elaborate if needed.

What is the current biological assessment of the Venice Canals? Please explain and elaborate if needed.

What is the current biological assessment of the Santa Monica Bay? Please explain and elaborate if needed.

What was the annual historic high catch, combined recreational and commercial, in tons, taken from the Santa Monica Bay, include the year and as much data as possible including, but not limited to, variety of fish, shellfish, crustaceans, mammals, and value (adjusted)? Please explain and elaborate if needed.

What is the current annual catch, combined recreational and commercial, in tons, taken from the Santa Monica Bay, include the year and as much data as possible including, but not limited to, variety of fish, shellfish, crustaceans, mammals, and value? Please explain and elaborate if needed.

What plants and animals, both terrestrial and marine, are currently proposed to be restored and/or introduced to the above listed waterbodies directly related to the proposed project including, but not limited to, the Ballona Wetlands, MDR harbor, Del Rey Lagoon, Oxford Lagoon, Ballona

Creek flood control channel including all tributaries, the Venice Canals, and the Santa Monica Bay? Please explain and elaborate if needed.

What is the current percentage of annual take/catch, combined recreational and commercial, within the Santa Monica Bay, as a percentage of historical recorded highs? Please explain and elaborate if needed.

What is the estimated annual take/catch, combined recreational and commercial, within the Santa Monica Bay, increase over a 10 year period, with the currently proposed Ballona Wetlands Restoration project when completed? Please explain and elaborate if needed.

What is the annual consumption cost of seafood imported and sold within the Santa Monica Bay watershed? Please explain and elaborate if needed.

Would it be better for our local economy to reduce our dependence on imported seafood? Please explain and elaborate if needed.

Would implementing a comprehensive Santa Monica Bay Restoration Plan that strives to restore biomass to historical levels create a significant amount of new jobs in areas of, but not limited to, research, fisheries, aquaculture, education, scuba industry, hospitality, marine resources management, tourism, etc.? Please explain and elaborate if needed.

Have you read the 2008 SMBRP?

Are you aware of the fact that there is no mention of artificial reefs in the 2008 SMBRP?

Comment: 2 years ago I asked SMBRC Governing Board member and (then) HTB president Mark Gold a question about artificial reefs in the Santa Monica Bay? His reply was something to the effect of, "We didn't discuss them." A year later when I repeated what I thought I heard he corrected me saying something to the effect of, "No, the definition of artificial reefs!"

Questions: Does the Corps and/or CDFG have knowledge of artificial reefs in the Santa Monica Bay? Please explain and elaborate if needed.

Does the Corps (Federal) and CDFG (State) have a uniform definition for "artificial reefs" that can be included in the proposed project glossary of terms? Please explain and elaborate if needed.

Are you aware of the fact that there is no language whatsoever in the 2008 SMBRP to do enhancement projects within the Santa Monica Bay, even though that it is worded into the mission statement of the SMBRF?

Are you aware of the fact that the majority of restoration projects funded by the SMBRC/SMBRF have been improperly classified as enhancement projects? Please explain and elaborate if needed.

Have pilot tide pools at varying depth, configurations, material, size, etc. within the existing Ballona Creek flood control channel to test the viability of removing the existing levees been proposed? Please explain and elaborate if needed.

Comments: I was invited by a member of the SMBRC to attend and participate in the annual Bay Watershed Council (BWC) working group to draft the annual work plan held on Feb. 12, 2012. When I arrived I was told I could not participate. SMBRF staff Mark Abrams was present and hired to prevent members of the public from participating in the working groups. I attempted to suggest the pilot tide pools during public comment while attending this humiliating experience.

This unacceptable behavior of members of the SMBRC/SMBRF that authorized and enforced this action completely contradicts the "Letter From the Director" SMBRC Executive Director Shelley Luce in the SMBRC Annual Report 2011 which states, "We are planning new workshops and other mechanisms for getting public input on the BRP and annual work plans."

Question: What actions will the Corps and CDFG take to assure the public that the behavior of this magnitude will not continue to occur throughout the proposed project process? Please explain and elaborate if needed.

Comment: Other actions that contradict sound science and restoration principles surround decisions made aware to me by Dr. Wang. Dr. Wang told me he did not read the Montrose Settlement Restoration Plan (MSRP). Specifically, Appendix A1 Construct Artificial Reefs and Fishing Access Improvements and Appendix A3 Restore Full Tidal Exchange Wetlands. There was \$40 million in Federal MSRP grant money available in 1995.

Questions: Did the SMBRC and/or SMBRF apply for MSRP grant(s) for the Ballona Wetlands and/or Santa Monica Bay projects? Please explain and elaborate if needed.

Did CDFG or any State agency apply for MSRP grant(s) for the Ballona Wetlands and/or Santa Monica Bay projects? Please explain and elaborate if needed.

Comments: Dr. Wang also told me the SMBRC did not propose/apply to incorporate the County's Parcel OT (the parking lot adjacent to the Oxford Lagoon) to expand the Oxford Lagoon which would have increased the viability of wildlife significantly. The County is planning to build a massive luxury senior living facility that will abut the Oxford Lagoon further reducing wildlife viability.

This action contradicts SMBRP B. PRIORITY ISSUE: NATURAL RESOURCES Goal 5: Acquire land for preservation of habitat and ecological services.

Question: Is development of vacant land adjacent to coastal wetlands that are compromised through management practices in the best interest of sound restoration principles?

Other actions that concern me are the Total Maximum Daily Loads (TMDLs), imposed by a Heal The Bay (HTB) lawsuit, that may not reflect natural occurring levels of waterways and waterbodies. For example, the TMDL approved for the Malibu Lagoon may be much cleaner than what naturally occurs within a healthy lagoon triggering an approval for a restoration project based on false and/or misleading information.

What is the scientific opinion of the Corps and CDFG on the establishment and enforcement of TMDLs that may not reflect naturally occurring water quality standards of all waterbodies and waterways associated with the proposed project? Please explain and elaborate if needed.

## FINAL SUMMARY AND RECOMMENDATIONS

Why am I so concerned about the outcome of the historical Ballona Wetlands and Santa Monica Bay area you might ask?

I was born in Santa Monica, Ca at St. Johns Hospital in 1962 and raised on Howard Street adjacent to the railroad tracks and the Oxford Lagoon. There was so much wildlife present in the area when I was young. Dozens of ducks would land in our yard. Salamanders, lizards, and snakes could easily be found. Cancer crabs could be caught in the MDR harbor by the bucket full. Catching your limit of fish in the Bay seemed much easier. The tidepools at Palos Verdes and Paradise Cove were abundant with life. Now 40 years later, the effects of urban development and associated

pollution without sufficient mitigation have significantly compromised all life forms.

My father was Dr. Rimmon C. Fay, a second-generation Santa Monica Bay fisherman who, through education and experiences, became a leading expert of the Santa Monica Bay and California coastal pollution issues starting in the 1950s. His independence and contributions to environmental protection and education were epic, including his contributions to save the Ballona Wetlands.

With PhDs in Chemistry and Oceanography, countless California ocean dives, hours at sea, days on the beach growing up and fifty years as an ocean lifeguard, as owner/operator of Pacific Bio Marine biomedical research, supply & education, as a founding member of the CCC, and many more contributions worthy of honor and respect, Rim's input in the 1995 Proposed BWRP Draft deserves recognition.

I have a lifetime of experience learning from my father, have served on a land use advisory committee in Monterey County, CA, have several professional certifications in multiple fields including PADI Master Scuba Diver Trainer, Emergency First Response Instructor, ASE Master Technician, Toyota Expert Technician and a BAR Smog Technician License. I have traveled throughout the Pacific region, have hundreds of logged dives, survived the 2004 Asian Tsunami, and have ten years of experience with upper watershed management including over 500 hours of heavy equipment operation and maintenance.

My knowledge of the Santa Monica Bay may never eclipse my fathers. I do believe that I have a better general knowledge than most and have an exceptional ability to identify and fix problems that are obviously broken. The library of Dr. Rimmon C. Fay is in storage awaiting a location where it can be housed, digitized, and made available for all academia on a website. Valuable historical data pertaining to the proposed project may be in his library. Funding to make this information accessible has not been secured.

What are the additional recommendations and desired outcome that I would like to see for the Ballona Wetlands and Santa Monica Bay?

Strongly consider the history of the Tongva Native Americans and respect the current concerns of Johntommy Rosas. If he has registered the Ballona Wetlands as a Sacred Site, the massive alterations proposed should not be allowed in perpetuity. Any enhancements should be harmonious, based on time proven science independent of the SMBRC/SMBRF influence, and focused on restoring an ecosystem that is as natural and maintenance free as possible.

Restore the historical levels of fresh water to the aquifer below the

wetlands through natural recharge and/or injection wells.  
Restore the historic levels of fresh surface water  
Restore the native terrestrial animals to historical levels to the greatest extent possible including deer and bats.  
Explore creating the habitat necessary to allow for greatest diversity of terrestrial animals with minimal change to existing conditions.  
Ban domestic animals, especially cats and dogs, from the Ballona Wetlands and adjacent walking/viewing areas.  
Install fencing and/or concrete barriers to prevent wildlife from entering roadways.  
Install large culverts with solar lighting for animals to cross under existing roadways. Raise the roadways if needed to allow reasonable mobility.  
Do not remove the Ballona Creek flood control levees.  
Implement pilot test tidepools throughout the Ballona Creek flood control channel with varying designs, locations, and conditions.  
Cut openings into the concrete of the existing Ballona Creek levees to allow for native trees to grow, providing habitat and shade for wildlife.  
Do not consider opening the wetlands to full tidal flush until the source of ocean water is of the highest quality. The current water quality of the MDR harbor and Playa Del Rey nearshore waters are unacceptable at this time.

Research and implement restoring staff and funding to CDFG so that they truly are the lead agency in this process. I'm told that CDFG funding has been reduced which reduces their effectiveness to educate and enforce locally is reduced. I recently read where the non-profit Santa Monica Baykeeper were making transects across the Bay looking for illegal activity in the Marine Protected Areas (MPAs) in an effort to warn boaters of a potential CDFG citation. This behavior is not a cost effective way to manage marine resources.

Remove the SMBRF from this process. If they have research and recorded data through grant funding acquired from the public, this information shall be given to CDFG. Allowing a non-profit to have the amount of control and influence over State agencies and commissions, with limited public accountability, is not in the general public's or the environment's best interest including the Ballona Wetlands.

Implement partnerships with local educational institutions in an effort to recruit students from Kindergarten to College to participate in research, education, restoration, maintenance, monitoring and management programs, including SCUBA training and certification.

Create and nonpartisan independent review board with membership that is

not financially associated to the proposed project and has term limits for members.

Make restoring the abundance and diversity of marine life in the Santa Monica Bay to historical levels a top priority. This can be achieved by: Removing all forms of industrial pollution (thermal, sewage waste, and desalination brine) discharged directly into the Bay and ban in perpetuity. Fully mitigating for all of the sand historically placed on the shoreline through natural rock and artificial reefing to replace the lost nearshore habitat.

Fully mitigating the sediment discharged from Hyperion in mid to deep waters through natural rock and artificial reefing to restore and possibly enhance the lost habitat diversity that biomass requires.

Establish and manage a significant amount of kelp forest in the Santa Monica Bay from El Segundo to north of the Santa Monica Pier.

Restore the historical breach to the Del Rey Lagoon.

Drastically change how the waters within the MDR harbor are managed including, but not limited to: mandatory nets on all docks to remove floating debris, developing and implementing a vacuum system for in-water boat bottom cleaning, and stronger enforcement of illegal spills.

## IN CONCLUSION

My family has been in this process for three generations. My grandfather instilled the love and respect of nature and all that it has to offer to my father. My father shared that experience with me. And now I'm nurturing the values taught to me into my young son and daughter.

It was at my father's memorial that I promised Tom Hayden, the only politician to finally stand beside my father and fight for healing the Santa Monica Bay rather than treat it as a dumping ground. It was a surprise and pleasure to see him this morning in passing to say hello and thanks.

If there was one quote that sets the tone for why I'm fighting for the historical Ballona Wetlands it would be, "so preservation of a historic wetland is not a concern."

You'll find that quote on page 4 of the HTB letter to the CCC in support of the controversial Malibu Lagoon Restoration project.

Please judge wisely and favor restoring nature over alternatives influenced by huge sums of money and those that can easily lose their way.

Respectfully submitted,



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**From:** Margot Griswold [<mailto:mgriswold@newfields.com>]  
**Sent:** Tuesday, October 23, 2012 3:06 PM  
**To:** McCormick, Donna; [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil)  
**Subject:** Comment on Ballona Wetland NOP

To Whom It May Concern:

Please consider the following comments in preparation of the Draft Environmental Impact Report/Environmental Impact Statement for the Ballona Wetlands Restoration Project. These comments are submitted as a concerned citizen and practicing restoration ecologist. I have participated in many restoration project, revegetation and reclamation projects in California for the past 18 years.

First, the project description should be corrected to describe the project as wetlands “creation” not “restoration.” According to the International Society for Ecological Restoration, the term restoration properly used describes the process that will return a site to historical conditions with ecological functions that likely occurred in the past. Most of the alternatives that are described for the 'restoration' of Ballona wetlands include full daily tidal connection. According to the historic ecology of the area described in *Historical Ecology of the Ballona Creek Watershed* ( Dark et al. 2011) this condition was unlikely. Quoting from the fact sheets on the Santa Monica Bay Restoration Commission website, " The loss of the historic connections between wetlands, its natural freshwater sources and the ocean ...return the daily ebb and flow of tidal waters" appears mistaken. There was not a daily connection for much of the year in the historic Ballona wetlands. The 'restoration' alternatives generally being considered seem to be more appropriately termed 'creation'. These alternatives look like so many other coastal wetland plans that have been undertaken south of Los Angeles in Orange County and San Diego County.

Second, I have reviewed the baseline studies, and I find that the soil studies are not sufficient to make any decisions of the scope being discussed for the plans. And, further in reviewing the vegetation and avian studies, the areas where there is the least cover by exotic vegetation is found, coincidently with the greatest number of a rare and listed bird species is exactly where the most grading will occur in the alternatives presented. This makes no sense for a 'restoration' plan. The plan must preserve the existing and rare the Belding Savannah Sparrow population within the Ballona wetlands. There is no alternative that can mitigate for the loss of this population or its habitat.

Third, if the plan alternative preparer's have some idea for how the creek water, released from the engineered banks for the last mile, or so, run to the ocean will be managed, they have not indicated how this water will be cleaned of trash and toxic components coming down the creek.

Finally, I do not think that the restoration of Ballona wetlands needs to be this drastic based on the information presented thus far. I believe that the existing functions and values of the wetlands and adjacent upland areas could be restored and enhanced without such an expenditure of cash in the immediate future, to say nothing of the long term management will cost the tax payers of California. The goals of the project should be clearly stated. The draft plans should account for long term management and the cost of such management.

Sincerely,

Margot Griswold, Ph.D

Restoration Ecologist

3773 Moore Street

Los Angeles, CA 90066

**From:** Susan Herrschaft [<mailto:sherrschaft@yahoo.com>]

**Sent:** Tuesday, October 23, 2012 12:26 PM

**To:** McCormick, Donna

**Cc:** [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil)

**Subject:** Ballona Wetlands Restoration Project - Comments for Environmental Review Process

Dear Ms. McCormick:

Thank you for this opportunity to submit comments on the scope of the environmental review for the Ballona Wetlands Restoration Project. I am writing as a resident of the Villa Marina neighborhood, a community of 685 townhouses located directly adjacent to the Area C parcel.

I would like to provide comments on three specific issues that would directly affect our neighborhood.

1. Construction traffic during the restoration process.

We have heard mention that construction traffic during the restoration of Area C as well as the transportation of excess material from Areas A and B for stockpiling in Area C would be directed through the gateway entrance at La Villa Marina. Please analyze and explain, for each of the proposed alternatives you review, the impact of this scenario on surrounding neighborhoods (traffic, noise, air quality, parking), as well as how construction will impact commuter traffic on Lincoln Blvd., Culver Blvd., the 90 Marina Freeway, Mindanao, Fiji Way, Jefferson Blvd., or other adjacent roadways.

2. Public access following the restoration.

The addition of hiking/biking trails in Area C following the restoration will require points for the public to gain access. The availability of adequate parking for our neighborhood residents is already an issue – due to overflow from the nearby shopping center and weekend recreational traffic. Please analyze and explain, for each of the proposed alternatives you review, the impact on the Villa Marina neighborhood (traffic, noise, air quality, parking, littering, vandalism) of providing public access and/or parking at the La Villa Marina gateway, as well as alternatives using Culver Blvd. or other adjacent roadways.

3. Displacement and/or expansion of wildlife populations

The transportation and stockpiling/disposal of excess excavated material in Area C from the restoration of Areas A and B, as well as the restoration of Area C itself could disturb or displace wildlife. It is also expected that following restoration, native wildlife populations will increase. Please analyze and explain, for each of the proposed alternatives you review, the impact on surrounding neighborhoods of migrating wildlife due to displacement or expansion. Please also consider adopting a plan to educate neighborhood residents on what species they may begin to encounter and guidance on how to co-exist.

Again, thank you for this opportunity to respond.

Sue Herrschaft  
Villa Marina

-----Original Message-----

From: maryknight [<mailto:kathy.knight@verizon.net>]  
Sent: Tuesday, October 23, 2012 11:08 AM  
To: Swenson, Daniel P SPL; David Lawhead  
Subject: Additional Ballona Restoration NOI Comments

October 23, 2012

TO: Dr. Daniel P. Swenson, U.S. Army Corps of Engineers, Los Angeles District P.O. Box 532711, Los Angeles, CA 90053-2325

Mr. David Lawhead, California Dept. of Fish & Game, 3883 Ruffin Road, San Diego, CA 92123

FROM: Kathy Knight, (310) 613-1175, [kathy.knight@verizon.net](mailto:kathy.knight@verizon.net)

RE: Additional Comments Re: Ballona Restoration NOI Comments

Dear Mr. Swenson and Mr. Lawhead:

I have these additional comments to add to the record regarding the proposed restoration of the Ballona Ecological Reserve. Please add them to the comments I have already mailed/delivered to you.

#### ALTERNATIVE RESTORATION PLAN

Please study seriously an ALTERNATIVE plan for restoration of the Ballona reserve. This plan would NOT entail major bulldozing and removing levees from the LA River.

This plan would have the following components:

- 1) Plan approved by Tongva Native Americans for their sacred site.
- 2) Plan may allow for minor earthmoving to make a couple of small channels for fresh water.
- 3) No water from Ballona Creek allowed into the wetlands until it is cleaned up to a tertiary level.
- 4) Use Bond funds available, from not doing an expensive major bulldozing/dredging/levee-building project, to buy buffer lands around the reserve to reduce road kill of Ballona wildlife in the area, and allow larger more stable populations of wildlife. Additional land would also make limited public trails less disturbing to wildlife, as they would have additional places to live.
- 5) Study the value of this plan for 5-10 years. Some alterations could be made during that time, based on the results.
- 6) Utilize local citizens who have been documenting/photographing this area for the past 20-30 years in the active science committee. Do not continue to relegate them to public comments of 2-3 minutes at infrequent meetings, but rather make them integral participants in the science committees where they can communicate more fully with the other members. Some of them see wildlife that is never documented on the science cameras. Their input is CRITICAL to a well-done evaluation of this area.
- 7) Continue to bring Los Angeles area students out to the wetlands to help clean-up the area, document flora and fauna, etc. so that they are interested in helping to watch over this land in the future.
- 8) Follow the natural course of the land/water. Please consult with Dr. Travis Longcore and his researchers on this.
- 9) Use this plan to teach the public that the first rule of restoration is to "Do No Further Harm". Teach the public that big expensive industrial solutions are not always the best, most permanent way to protect nature. A slower alternative that teaches people to respect nature, and allow its natural tendency to balance itself.

IF YOU WANT FURTHER INFORMATION ON SUCH A PLAN, LET ME KNOW AND I WILL WORK ON GETTING YOU MORE DETAILS. A PLAN LIKE THIS WOULD GIVE THE PUBLIC A REAL CHOICE, AND validate what the public is being told - that there IS NO preferred plan, that it is wide open on what will happen at Ballona.

OTHER COMMENTS:

1) I do not agree at all with bulldozing this site. But if you do, please reveal any background information regarding any bulldozing of Ballona, and if any company will benefit from mitigation credits, and any other financial connections to the restoration efforts, so that there is transparency on how and why these decisions are made.

2) REGARDING WATER STUDIES: Please study the impact of the water from Marina Del Rey on ANY proposed alternative for restoration. Marina Del Rey water is highly polluted from toxics from many boats (I have been told there are 7,000 boats there!). These boats have toxic chemicals applied to them to preserve them, and to run them, that leak into the water, plus people using the boats have been seen to dump liquids and trash into the water. Please test the water of Marina Del Rey very carefully and assess how that water will impact the wetlands, and how it could be kept separate from the wetlands.

2) Remove the trash (local groups and citizens can help on this issue) and find somewhere for homeless people to sleep. Don't make these issues a reason why the restoration has to be hurried.

Thank you very much.

Kathy Knight, MSW

(Have been volunteering and donating funds for 20 years to save and protect this precious ecosystem)

(310) 613-1175

P.S. Please confirm that you have received this email. Thank you.

Classification: UNCLASSIFIED

Caveats: NONE

**From:** Jim Lamm [<mailto:jim.lamm@sbcglobal.net>]  
**Sent:** Tuesday, October 23, 2012 1:18 PM  
**To:** McCormick, Donna  
**Subject:** Ballona Wetlands Restoration Comments

To: Ms McCormick, representing the Ballona Wetlands Restoration Project (SCH number: 2012071090)

From: Jim Lamm, Culver City resident (310-839-6896, [jim.lamm@sbcglobal.net](mailto:jim.lamm@sbcglobal.net))

## **Introduction**

At this time, I am submitting a few comments as an individual for consideration in the Ballona Wetlands Restoration Draft EIS/EIR.

For purposes of identification, I currently serve as president of Ballona Creek Renaissance ([www.ballonacreek.org](http://www.ballonacreek.org)), adjunct instructor in wetlands ecology at Antioch University-Los Angeles, and BCR's representative in long-running restoration planning process and on the Bay Restoration Advisory Committee, the Ballona Creek Watershed Task Force, and the Assembly District 47 Environmental Cabinet. A retired architect and Culver City Planning Commissioner, my past experience includes working with many similar processes and stakeholders as a project unit manager on the consultant team for Metro's Universal City Red Line Station and Mid-City Extension Preliminary Design for tunnels and stations above underground Ballona Creek and a related subterranean gas-triggered Reassessment Study.

## **Comments on Process**

1. For starters, I strongly encourage an ongoing process that is open, flexible, transparent, inclusive and responsive to the diverse array of stakeholders as well as the unfolding data and analyses.
2. From my perspective as one who values active listening, clear communication, and consensus-building to the greatest extent possible, I request that major concerns be fully heard, acknowledged, addressed, and, where appropriate, taken into account in the Draft and Final EIS/EIR and the restoration design and implementation.

## **Comments on Studies, Plans, and Implementation**

The following brief comments start with my overall view and touch on some concerns which I share to various degrees with other stakeholders with whom I have talked:

3. Moving from all-important process issues, I personally appreciate the depth and breadth of the studies, site investigations, and conceptual planning to date. However, there are some areas which warrant further development and/or communication. As stated publicly in one of the last public planning workshops at Loyola Marymount University, I am intrigued by the concept of allowing Ballona Creek to interact more fully with the adjoining wetlands. That, in turn, could allow the wetlands to provide more ecological function and benefit to the entire Ballona Creek Watershed and beyond.



4. However, to help ensure the success of that or another restoration plan, please fully consider and analyze both the above-noted process points and the following:
  - a. the potential impact on and/or integration of the partially restored existing dunes and salt marsh. This could include further consideration of larger and/or more diverse zones, such as muted tidal, and a possible reduced amount of full tidal.
  - b. the legal and ecological ramifications of allowing the urban runoff-affected Ballona Creek waters to interact with the wetlands for both wet weather and dry weather conditions. My hope and understanding is that the current water quality efforts underway through TMDLs, capture devices, rain gardens, and such will enable Ballona Creek to meet the targeted standards by the time of the restoration implementation and that this will help ensure that the wetlands will not be overwhelmed by pollution and trash. What if this is not the case?
  - c. the relative sustainability and appropriateness of a restored wetlands with an wide open channel to the ocean vs. a possibly more historically and geographically accurate intermittent inland-ocean connection as has occurred here and elsewhere along the coast through dunes and lagoons.
  - d. The characteristics of constructed wetlands, restored wetlands, and constructed-restored hybrids vs. the options under consideration

At this point I will leave more detailed or additional comments to the next phase. Thank you very much for your consideration.

**Jones, Tanya**

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**From:** keith linker [<mailto:keithlinker@gmail.com>]  
**Sent:** Tuesday, October 23, 2012 11:40 AM  
**To:** McCormick, Donna  
**Subject:** Ballona Wetlands Restoration Project Comments

Good Morning Ms. McCormick,

In response to the attached flier, please find, also attached, my comment letter and 2 enclosures. I appreciate the opportunity to offer input on this amazing project and look forward to seeing additional progress toward restoration.

Regards,  
Keith Linker  
Playa Vista Resident

October 23, 2012

Ballona Wetlands Restoration Project  
C/O Donna McCormick (Donna.McCormick@icfi.com)  
1 Ada, Ste. 100  
Irvine, CA 92618

Via Electronic Mail Only

**Subject: Ballona Wetlands Restoration Project Comments**

I first want to express my appreciation for the work that has been done in developing and vetting the different alternatives for the restoration of Ballona Wetlands, and for the coordination that has gotten the project to this point in the planning process. I also appreciate the efforts to solicit and collect comments on this important project.

I am offering my input, under cover of this letter, in the attachment titled "Ballona Wetlands Restoration Project Comments, Keith Linker, October 23, 2012". However, I would first like to emphasize three main points, offered below in three bullet items, before delving into the detail provided in the attachment:

- First and foremost I strongly support this restoration and specifically the current alternative selected (attached, Figure 1a, dated 2012). As a resident of Playa Vista, I am far less concerned about short term truck traffic or other temporary construction related impacts to local residents/businesses or existing flora & fauna, and far more interested in and supportive of as full a restoration of the historic marsh and its function as is reasonably possible.
- Secondly, in the same vein, I fear the following goal: *"Refined alternatives should include preservation and enhancement of some upland and freshwater wetland habitat but should emphasize contiguous estuarine wetland habitat. Opportunities to create regionally significant habitat including vernal pools and native grasslands should be pursued, but not at the expense of the restoration of estuarine habitat."* has been compromised. Perhaps the reduction in the footprint of tidally influenced areas is due to pressure from opponents who may prefer to limit the minimal, short term impact of truck traffic removing excess soil, over the long term positive effect of increased wetland habitat. Whatever the reason, I want voice my concern over the potential of losing the opportunity to maximize the estuarine wetland habitat, as this is the primary driver of this project. To compromise the potential acreage that could be restored is to lose sight of the fundamental goal of this effort. It would be a loss to the vast number of species – including humans – that stand to benefit by regaining what was lost decades ago.

- Lastly, while the ecosystem functioning of this wetland is my primary interest, I believe it is critical to provide access (trails, boardwalks and overlooks) for people to see, first hand, the habitat that will exist in order to advance appreciation for and protection of this and other critical habitats. While there are many access areas planned, there are also many opportunities where access is not included, but could easily be offered.

Thank you again for the opportunity to comment on this incredible project.

Sincerely,



Keith Linker  
13031 Villosa Pl. #128  
Playa Vista, CA 90094  
(310) 804-1139

# Ballona Wetlands Restoration Project Comments

## Keith Linker, October 23, 2012

### ACCESS

#### TRAIL LINKAGES:

In order to encourage area residents and visitors to walk or bike through the wetland and better appreciate the natural beauty it has to offer, trails should connect to adjacent surrounding areas and should access each of the different ecosystem types at one or more location. This will encourage visitors to appreciate the wetland and increase the number of visitors who visit and appreciate the area and presumably care for and advocate for it.

Examples include:

- In Area B: Linking the westerly terminus of the existing northerly path adjacent to West Jefferson Boulevard and the Freshwater Constructed Wetland to the south side of the intersection of Nicholson Street and Culver Drive or to a crossing of Jefferson and Culver near the existing signalized intersection; then linking the north side of Culver at that intersection to the beach either at Argonaut Street, 62<sup>nd</sup> Street or other reasonable location.
- In Area B: Linking the north side of the intersection of Nicholson Street and Culver Drive to the beach either at Argonaut Street, 62<sup>nd</sup> Street or other reasonable location.
- In Area B: Linking the west side of PCH, just north of West Jefferson Boulevard, to existing signalized intersection of Jefferson and Culver Boulevard; then linking the north side of Culver at that intersection to the beach either at Argonaut Street, 62<sup>nd</sup> Street or other reasonable location.
- In Area C: Linking the north side of Culver Boulevard near the 90 Freeway to the east side of PCH near Fiji Way.

#### RECREATIONAL TRAILS:

The trail system should not only offer access to hikers and nature enthusiasts, but should be open and accessible to joggers, bikers and dog walkers (on leash, of course). Trails should be wide enough to allow not only opposing traffic to safely pass with comfort but should allow for people traveling by different modes to overtake others traveling in the same direction safely and comfortably (suggested 12 foot wide DG or mulch pathways, either confined or unconfined with 2 foot shoulders). Include periodic widened areas ("Turnouts") along trails to facilitate passing, stopped travelers and parked maintenance vehicles. Alignment, sight distances and signage should consider all users with a focus on safety.

The opportunity to utilize this area for recreation and exercise is one that should not be missed, since those who are drawn for exercise – for example – may return to appreciate the natural habitat. The more people who appreciate the many aspects of the area, the better it will be protected and maintained, either through community advocacy, direct volunteer support or other formal or informal mechanism.

# Ballona Wetlands Restoration Project Comments

## Keith Linker, October 23, 2012

### SCENIC OVERLOOKS:

As already mentioned, to encourage visitors who might not otherwise visit the wetland if they were not provided the opportunity to “get up close and personal” with the different ecosystems, the proposed overlooks, boardwalks and piers, should be expanded provided so each of the multiple ecosystem can be reasonably accessed. Not only will this offer an educational opportunity for students and casual visitors alike, it will reduce the potential for un-permitted access into areas that could both damage/disturb the flora and fauna and create safety/liability concerns. It would also minimize the disturbance of the resident species (particularly if signs or placards are placed strategically to indicate what activities are and are not permitted [e.g. take photos, but no fishing]). Specifically it is suggested that the following locations be considered:

- Include a boardwalk and scenic overlook in Area B near the Constructed Freshwater Wetland similar to the one offered in Area A for viewing both the Brackish Marsh and the Estuarine Low Marsh.
- Include a boardwalk and scenic overlook in west Area B to view the Estuarine Low Marsh at its interface with Ballona Creek. It is recognized however that flood control requirements and results of scour could preclude this option. Alternately, if an overlook were located on the north side of the Culver Blvd. crossing in Area A, this could accomplish the goal of offering an observation area in reasonable proximity to Ballona Creek.

### PARKING AREAS:

While it makes sense to advocate for access generally, it is recognized that many “natural” areas can be “loved to death”. In other words, habitat can clearly become compromised with too many people visiting the site, which not only can disturb the resident species, but can increase the potential for inappropriate use/access. Therefore, while a “formal parking/staging area (referenced on page 10 of the January 15, 2010 PWA Memo) is referenced for Areas A and B , it seems to make sense to limit the size/number of spaces to account for this possibility. It is also likely already considered, but worth making note that restrictions on time of use (e.g. dawn to dusk) and other controls be clearly established and strictly enforced (perhaps with the exception of permitted research work or Native American ceremonies) to prevent potential unintended uses. Presumably, LAPD & LA Sherriff Dept, CHP etc. will have input on this, which should be given due attention.

### HABITAT

#### MAXIMIZING ESTUARINE HABITAT:

The interest/need to attempt to balance the soil onsite (i.e. minimize soil export [spoils]) is understood and appreciated. However, the primary goal of this project is restoring habitat and natural wetland functions. Therefore, it is critical to not lose sight of this goal and

# Ballona Wetlands Restoration Project Comments

## Keith Linker, October 23, 2012

continue to strive to maximize the potential areas for tidal influence, specifically “Intertidal Channels” and various “Marsh” areas.

### MAXIMIZING “CRITICAL” HABITAT:

Early in the scoping process, a matrix was developed to rank the various benefits of each of the original 5 Alternatives. It is very important not to lose sight of this and particularly with regard to the most endangered habitats/species. It would be unforgivable to chip away at the many acres of tidal flats habitat that can be realized in certain alternatives by simply attempting to balance the soil movement onsite. Additionally, there appears to be two primary areas of lost opportunity. These are:

- Area B bounded by Jefferson, Culver and Lincoln. A culvert connects this area to Ballona Creek but virtually no Marsh habitat is created. Even if a small area of a couple acres adjacent to the proposed channel were lowered to allow tidal flows, this would be an easy way to improve the impact of this project. It would also reduce the isolation of the upstream marsh habitat (which already will be separated by a fairly lengthy culvert).
- North Area C, adjacent to Lincoln and Fiji Way. A culvert exists in this location, seawater will be introduced and available on the west side of Lincoln and could easily be connected to the east side of Lincoln. In fact, all the early alternatives (1-5) include a link for flow to pass under Lincoln, but in the current Proposed Restoration it does not. Discussion of why this change occurred has not been found.

### WATER QUALITY

#### FULL TIDAL RESTORATION VIA OPEN TIDAL CHANNEL:

There seem to be two conflicting lines of thought regarding opening the marsh areas to full tidal influence. There is discussion of the potential for more “polluted” water from Ballona Creek impacting the wetlands, as well as discussion of the cleansing affect that wetlands have on these flows. I would like to weigh in on the side of favoring allowing the marsh areas to act as treatment for a portion of the flow from Ballona Creek. The alternative is discharge to the ocean and there is far less control on the fate of contaminants in that environment than there is in the wetland areas. Additionally, improving the quality of water discharged from Ballona Creek reduces negative impacts on local wildlife, thereby improving the opportunity for re-habitation of the wetlands themselves with the full diversity of flora and fauna anticipated.

Additionally, one means of combating ocean level rise is through siltation/deposition. The more areas which are sloped gently and receive an influx of water, the better, since these areas will tend toward keeping up with sea level rise (while perhaps not at the same rate, reducing the potentially dramatic effects is still a benefit.

# Ballona Wetlands Restoration Project Comments

## Keith Linker, October 23, 2012

### LOCAL STORMWATER CAPTURE AND TREATMENT

Firstly I must enthusiastically applaud the inclusion of *“A small treatment wetland would also be constructed along the north boundary of Area C to treat off-site stormwater runoff that flows through this area before draining to Ballona Creek”*. This is a wonderful addition and a forward thinking approach to utilizing what is considered a liability (roadway and urban runoff) by making it an asset (source-water for wetland habitat) and having a positive overall impact on the quality of water in Ballona Creek.

To the degree that this approach can be applied elsewhere, I would like to strongly encourage it. Surface flow and even underground storm drains in adjacent roads and paths (Pacific Coast Highway, West Jefferson Boulevard, Culver Boulevard, Fiji Way, 90 Freeway, and Ballona Creek Bike Path) should be routed where possible into restored areas (seasonal wetlands, treatment wetlands, tidal areas, etc.). Not only will this offer additional treatment of storm water, improvement of quality of water in Ballona Creek, but would increase the flow/volume of water in seasonal wetlands, potentially increasing the habitat value by effectively increasing the depth and duration of seasonal influent water.

### **CARBON SEQUESTRATION**

#### MAXIMIZING TREE COVER AND WETLAND VEGETATION

Recognizing that one of the major unknowns of this project is the impact that sea level rise will have on the functioning of the project in the long term. Also, recognizing that, while it is not a stated goal of the project, maximizing the potential to sequester carbon dioxide in trees and wetland vegetation (cattails, bulrush, and similar salt/brackish water counterparts) should be a considered a positive potential project impact. While considering the constraints of including native plant materials, it makes sense to include trees or large shrubs in the upland habitat, which not only offer shade to the trail users but potentially offer habitat and foraging opportunities for targeted species. This may also offer opportunity to mound some of the deposit sites to allow for root systems of larger varieties of vegetation to become established and mature.

It would also make sense to maximize similar opportunities in the lower lying areas to realize multiple benefits. Including larger areas where wetland plans can become established, sequester carbon dioxide both above and below ground in the plant material, and potentially “build ground” by establishing root systems, collecting sediment, dying back and re-growing at higher levels as the organic and inorganic materials accumulate. The multiple benefits of this approach include carbon sequestration; fine sediment/pollutant removal, benthic habitat creation, ground building to offset sea rise, and simple aesthetic value to visitors.



# Ballona Wetlands Restoration Project

## Overview



California's coastal wetlands support a wealth of precious wildlife habitat and play a crucial role in improving coastal water quality and reducing the harmful effects of floods and erosion on surrounding communities. Today, more than 95% of Southern California's wetlands have been lost due to human development – the largest loss of any state in the nation.

Rooted in years of scientific research and guided by community input, the Ballona Wetlands Restoration Project will revive critical wetland habitat and offer a remarkable natural space for the public's use and enjoyment. One of the most promising coastal wetland restoration opportunities in southern California, the Ballona Wetlands Restoration Project will return this highly degraded habitat into a thriving wildlife reserve and unique community asset.

### The Ballona Wetlands

Stretching from Playa del Rey to Venice, the Ballona Wetlands once occupied a 2,000-acre expanse of critical coastal habitat. Now covering a 600-acre area, the Ballona Wetlands Ecological Reserve represents the largest opportunity for coastal wetland restoration in Los Angeles County. The site is owned by the state of California and managed by the California Department of Fish and Game as an ecological reserve. The State Coastal Conservancy and the California State Lands Commission are participating partners in the planning and restoration of the wetlands.

### Why Restore the Ballona Wetlands?

More than a century of human neglect and abuse have left the Ballona Wetlands in a highly degraded state. Dredge spoils dumped on the wetlands during the construction of Marina del Rey and the Ballona Creek Flood Control Channel have severed the historic connection between the ocean and the freshwater creek. As a result, the site has lost many of the ecological functions of an estuarine wetland and it no longer supports many of the native species that once lived there.



Restoring the intrinsic structure and function of the Ballona Wetlands will give native species a chance to recover and thrive. The Ballona Wetlands Restoration Project will return the daily ebb and flow of tidal waters, maintain freshwater circulation, and support a more natural and healthy ecosystem. Creating suitable habitats and conditions will allow wetland vegetation to flourish and attract the insects, reptiles, amphibians, fishes, birds, and mammals that call wetlands home. As a restored site, the Ballona Wetlands will play a critical role as a migratory refuge for the millions of birds traveling from South America to Alaska each year. Further, this revitalization will provide the community with a valuable educational resource and an opportunity to create meaningful connections with the natural environment.

### Who Is Planning the Project?

The Department of Fish and Game owns the land and is ultimately responsible for any changes to it. The Project Management Team includes the State Coastal Conservancy, the Department of Fish and Game, the State Lands Commission and the Santa Monica Bay Restoration Commission, the U.S. Army Corps of Engineers, and the Los Angeles County Department of Public Works. This team is working together to plan and design the restoration project. The Project Management Team also obtains input from the Ballona Wetlands Restoration Working Group, the Ballona Wetlands Science Advisory Committee, the Santa Monica Bay Restoration Commission Technical Advisory Committee, and the Agency Advisory Committee.

### Who Is Funding the Restoration Project?

In 2004, the Coastal Conservancy approved state board funds to support the planning and restoration of the Ballona Wetlands.



**Ballona Wetlands Restoration Project**  
*Advancing ecosystem health. Connecting communities with nature.*



# Ballona Wetlands Restoration Project: Environmental Process

## What are NEPA and CEQA and How Do They Apply to the Restoration Project?

The National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) are federal and state laws, respectively, that require federal, state, and/or local agencies to identify the significant environmental impacts of a project and to provide documentation of these impacts.

Under NEPA and CEQA, the Ballona Wetlands Restoration project is required to prepare a rigorous Environmental Impact Statement (EIS) and Environmental Impact Report (EIR) to thoroughly evaluate all short-term and long-term environmental impacts and benefits of the project and project alternatives, so that a successful and comprehensive project can be implemented. As the land owner, the California Department of Fish and Game is the lead agency for CEQA. The federal process, NEPA, will be led by the U.S. Army Corps of Engineers.

## How Do I Get Involved in the Project?

The CEQA/NEPA process provides multiple opportunities for the public to provide input on the alternative designs for evaluation in the environmental review process. Your first opportunity is during scoping under both CEQA and NEPA. During scoping, you can tell the lead agencies what topics and issues you believe need to be addressed in the environmental document and propose design alternatives for consideration.

Written comments on the scope of environmental review may be submitted at the scoping meeting or sent to the addresses listed below. **Comments will be accepted until October 23, 2012.**

## Where Can I Get More Information About the Project?

Please visit [www.ballonarestoration.org](http://www.ballonarestoration.org) to learn more and find out how you can get involved. Here you will be able to access links to the project social media pages, read project informational documents, find answers to frequently asked questions, and sign up for the project newsletter and email updates.



**For more information, contact:**

Donna McCormick, ICF International, (949) 333-6611, [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)

David Lawhead, California Dept. of Fish & Game, (858) 627-3997, [DLawhead@dfg.ca.gov](mailto:DLawhead@dfg.ca.gov)

Dr. Daniel P. Swenson, U.S. Army Corps of Engineers, Los Angeles District, (213) 452-3414, [Daniel.P.Swenson@usace.army.mil](mailto:Daniel.P.Swenson@usace.army.mil)

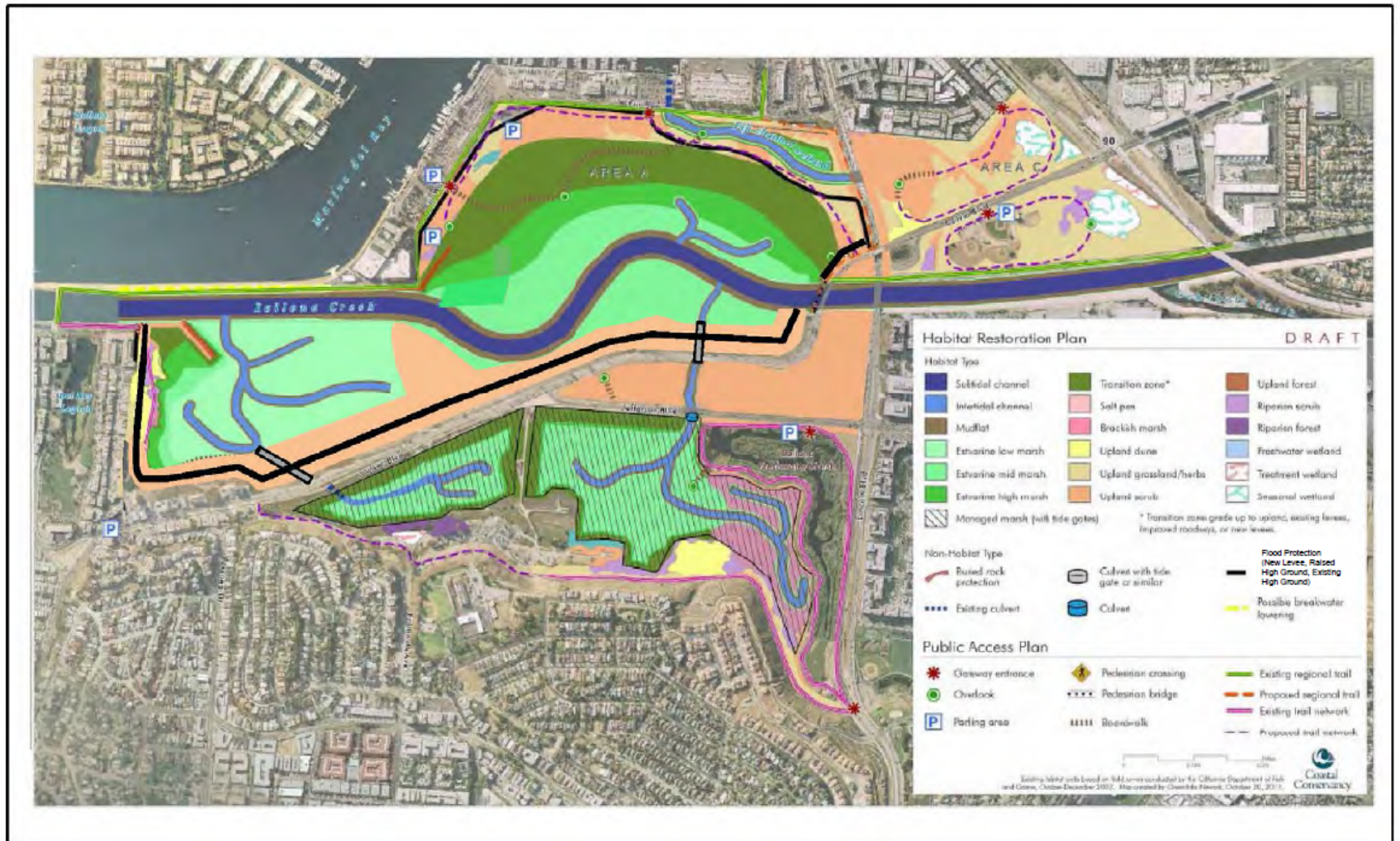
## Send Comments To:

Ballona Wetlands Restoration Project, C/O Donna McCormick, 1 Ada, Suite 100, Irvine, CA 92618  
or  
[Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)



**Ballona Wetlands Restoration Project**  
*Advancing ecosystem health. Connecting communities with nature.*





NOT TO SCALE



Ballona Wetlands Restoration

**Figure 1a**  
Proposed Restoration  
Preliminary Sketch

**Jones, Tanya**

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**From:** Barbara Lonsdale [<mailto:barblonsdale@yahoo.com>]

**Sent:** Tuesday, October 23, 2012 4:00 PM

**To:** McCormick, Donna; [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil); [Elise.Swanson@mail.house.gov](mailto:Elise.Swanson@mail.house.gov); [lisa.pinto@mail.house.gov](mailto:lisa.pinto@mail.house.gov); [theodate.cline@sen.ca.gov](mailto:theodate.cline@sen.ca.gov)

**Subject:** re: Ballona Wetlands Restoration Project

Ballona Wetlands Restoration Project

LEAD AGENCIES:

United States Army Corps of Engineers

California Dept. of Fish & Game

c/o Donna McCormick

1 Ada, Suite 100

Irvine, CA 92816

What is the purpose and need of this project? It is obviously thriving and diverse environment as you can see here <http://www.flickr.com/photos/stonebird/sets/447673/> with endangered and endemic species so why fix what's not broke (bulldoze nests, aquatic life, native plants etc.)? If you don't want to sit thru this guys hour presentation <http://www.youtube.com/watch?v=1viLaZaVhQY&feature=share> some key points are made at :43 Dr. Longcore discusses fresh water benefits vs open to the ocean n closure protects beaches from bacteria from city runoff n bird crap; :40 and :25 talks about how historically it wasn't always all water n was closed to the ocean which can be healthy as having an upland habitat full of native plants is natural there.

Has "restoration"

worked for the nearby Oxford Flood Control Basin on Washington or the Bolsa Chica wetlands just south of here that has to be dredged out EVERY YEAR with taxpayers money which uses a lot of energy (And it's open to the ocean so there's dolphins there now that are not supposed to be n sometimes they even get stuck). Go look at Malibu Lagoon where they jut bulldozed--it's a disaster!

Where is the public participation? A friendlier alternative such as that done at the Grand Canal between Washington and the Marina can be done (there a judge ruled in favor of our less destructive restoration).

And besides all of this environmental crap - it will exacerbate traffic n pollution in the area as whats happening now with construction.

You will be however, sold on THIS video which I believe is propaganda <http://www.youtube.com/watch?v=0nGYnpWs-uU> of course building the Marina piled excess dirt upon the wetlands but these water "experts" (they are not habitat or species experts) behind this are getting paid a lot of money which I believe that this is a waste of taxpayers money for a levee system that will only benefit Playa Vista built on a flood plain which is why some of the walls are to be 20 feet high! Even in their video the wetlands it is depicted as a highly functioning ecosystem--let's look into CEQA NEPA and Fish & Game sections 404 & 408 clean water acts as this project will flood these limited wetlands with polluted water as they can only filter so many toxins out.

Does State Parks even have the funds to do this? The Army Core of Engineers? Look what they did to the LA River-water that should be going underground aquifers to be able to tap into that source later n instead it's channeled out into the ocean while we spend billions a year transporting water to LA. Let's do a friendlier less invasive restoration with volunteers and school groups pulling the few invasive weeds n replanting natives while learning about estuaries. SAVE THE OWLS FROGS SNAKES COYOTES RABBITS. The Sierra Club agrees! 95% of California's wetlands gone--don't bulldoze this one! Use the money for

viewing platforms, a trail for public access n a ranger.

I have done the research and am very involved in the community as is my family in Santa Monica, CA.

Sincerely,

Barbara Lonsdale

The Venice Neighborhood Council Board member & Environmental Committee Chair

Vice President, The Venice Historical Society

Events Coordinator, The Venice Chamber of Commerce

Cultural Liaison, The Gabrieleno Band of Mission Indians

The Topanga Docents

The Sierra Club

Owner, AllTourNative

Sales, Yo! Venice!

**Jones, Tanya**

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**From:** Jack Neff [<mailto:jackneff01@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 4:49 PM  
**To:** [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil); [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)  
**Cc:** McCormick, Donna  
**Subject:** Scoping Comments - Ballona Wetlands

The below text is from Ms. Ramona Merryman, 223 F Strand, Santa Monica, CA 90404

Dr. Daniel P. Swenson  
[daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil)  
US Army Corps of Engineers

David Lawhead  
California Dept. of Fish & Game  
[dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)

Ballona Wetlands Restoration Project  
C/O Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92816  
or by email to [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)

Re: Scoping Comments re Santa Monica Bay Restoration Commission ("SMBRC")  
April 2012 Notice of Preparation of Draft EIR on Ballona Wetlands

To Interested Parties:

My interests are in the people and the land of the 2012 Ballona Wetlands. I am a native American woman who cares deeply for what is happening to people, especially woman, who have historically always been underserved by the powers which operate things like heavy equipment, a use inferred in SMBRC's proposed "restoration" alternatives. The land and women always suffer first and the most. The SMBRC's process in this regard shows there are severe differences of opinion in this political issue. The controversy is sufficient to demand that alternatives outside the interests of the SMBRC Project Management Team be included going forward.

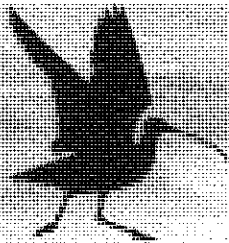
The public has a right and we demand we be heard on the issue of end-of-pipeline treatment at Ballona Wetlands. The wetlands have served the public for millenia, right now we are not be able to be on them or even to see them. With proposed

"restoration" alternatives all will be lost, but for the political controversy, which is adequate to demand alternatives outside the interests of the SMBRC Project Management Team.

Public hearings are necessary so the public can share our input to state objections or agreements thereto.

Ramona Merryman





# Ballona Wetlands Restoration Project

Advancing ecosystem health. Connecting communities with nature.

## Comment Card

Name: \_\_\_\_\_

Anita Miller

Email: (optional) \_\_\_\_\_

☐

Add me to the mailing list (please provide email or mailing address): \_\_\_\_\_

Comments/Issues: (Use additional sheets if necessary) \_\_\_\_\_

What will be the impact on  
the bike path?

Anita Miller

Submit written comments by October 23, 2012 to:

Mail: Ballona Wetlands Restoration Project

C/O Donna McCormick

1 Ada, Suite 100

Irvine, CA 92618

Email: [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)

**\*\*All comments submitted will become part of the Public Record**

A-1985



Tape Here  
Do Not  
Staple

Fold Here

Place Stamp  
Here



**Ballona Wetlands Restoration Project**  
**C/O Donna McCormick**  
**1 Ada, Suite 100**  
**Irvine, CA 92618**

A-1986

**Jones, Tanya**

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**From:** Cliff Moser [<mailto:cliff.moser@gmail.com>]

**Sent:** Tuesday, October 23, 2012 3:22 PM

**To:** McCormick, Donna

**Subject:** Ballona Wetlands comment

Hi, I'd like to comment on the wetlands scope.

I currently bike the creek bikepath and would like to see an extension and addition as part of the restoration.

Add a path that parallels the 91 freeway to the development that runs near culver blvd and then intersect with the existing path to venice beach.

also add a bridge at the old centinela creek railroad creek pylons to connect to the south side of the creek which would then create a circle around the entire wetland (fresh and salt).

a connection to the bluff paths below Loyola Marymount through playa vista, with connections down to playa del rey,

this would create a network of usable bike paths that would support rediscovery of the wetlands once recreated.

thanks

Cliff Moser

Culver City

310.947.8509

**Jones, Tanya**

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**From:** Jack Neff [<mailto:jackneff01@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 4:38 PM  
**To:** [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil); [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)  
**Cc:** McCormick, Donna  
**Subject:** Scoping Comments - Ballona Wetlands

Jack Neff's footnoted, illustrated version of below text is attached to this email.

Via Email

October 23, 2012

Dr. Daniel P. Swenson  
[daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil)  
US Army Corps of Engineers

David Lawhead  
California Dept. of Fish & Game  
[dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)

Ballona Wetlands Restoration Project  
C/O Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92816  
or by email to [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)

Re: Scoping Comments re Santa Monica Bay Restoration Commission ("SMBRC")  
April 2012 Notice of Preparation of Draft EIR on Ballona Wetlands

To Interested Parties:

My interests are in the fresh water flowing from City of Los Angeles storm drains into the 2012 Ballona Wetlands. My interests arise from my role as Vice President/Executive Administrator of the Gabrielino/Tongva Springs Foundation, which works to preserve Kuruvungna Springs, also known as State Historic Site 522, the ancestral home of the descendants of Los Angeles' native Tongva people.

Kuruvungna Springs today consists of numerous aquifers among what were once a series of vast aquifers and fresh water sources in and around Los Angeles. As stewards of Kuruvungna Springs, the Gabrielino/Tongva Springs Foundation monitors

the nourishment of the Greater Ballona watershed (including the Ballona Wetlands) with flowing fresh water. Fresh water from Kuruvungna Springs (and from the aquifers throughout the Los Angeles Basin) ultimately dilutes other sources (including known pollutants) in the ebb and flow of tidal water merging from SM Bay, Marina Del Rey Harbor and the Venice Peninsula in the 2012 Ballona Wetlands.

As the second World Water Forum wisely stated "Water is everybody's business," so I encourage any person interested in the environmental outcome of local water sources like Kuruvungna Springs to demand the scope a Draft EIR be widened from the SMBRC alternatives to include broad-based public interests and the welfare of spiritual seekers, scientific researchers, teachers, students, historians, nature lovers, pet owners, public transit advocates, animal wildlife and plant species (including rare, threatened, endangered and critically endangered animals and plants which now reside in the 2012 Ballona Wetlands).

This image is a proportional representation of the ratio of the volume of fresh water on planet Earth to the planet's entire surface area.

Fortunately for Santa Monica Bay and the 4.5 million residents of the greater Los Angeles Basin, the 2012 Ballona Wetlands continues to be nourished by freshwater from the Greater Ballona watershed, including Kuruvungna Springs, Centinela Creek, Centinela Springs, and run-off from fresh water aquifers including, without limitation of the foregoing, Nicholas, Laurel, Coldwater, Benedict and Stone canyons are now contributing to freshwater habitats in the Ballona Wetlands.

## Summary

The Ballona Wetlands are an impressionable surface area of land which bears continual marks of all impacts upon it, whether originating from the weather, the tides, animal or sea life or from human activity. All of the alternatives now proposed by the SMBRC as wetlands "restoration" are improvements, with the exception of the CEQA-

NEPA-mandated "no action," alternative No. \_\_\_\_\_. Any one of the proposed "restoration" alternatives will result in sustained human impact on the wetlands and the habitats therein. The first impact of the proposed "restoration" are improvements in the form of vehicle tread impressions, then with freshly-dropped petrochemical residues originating from said vehicles, followed by vehicle-driven landscape, habitat and existing infrastructure demolition before improvement for proposed newly paved areas of indeterminate size, locale and purpose. SMBRC alternatives need to be clarified and alternatives outside the interests of SMBRC Project Management Team must broaden out to include recognition of the 2012 Ballona Wetlands as an historic bio-region with cultural and spiritual significance to the community at large. Alternatives which protect the Ballona Wetlands habitat for a large number of threatened and critically-endangered animals and plants (as designated in 1995 by the Santa Monica Bay Restoration Project ("SMBRP") the organization which was formalized into the SMBRC in 2003) must also be included. The Ballona Wetlands are a living eco-system dependent on the unique combination of fresh water provided by the Greater Ballona Watershed, and tidal waters from Santa Monica Bay, Marina Del Rey Harbor and the Venice Peninsula. SMBRC Project Management Team acknowledges the tidal waters are "impaired waterways" and have an interest in mitigating or cleaning up the water impairments, but right now there is a disconnect between what the people employed by the SMBRC Project Management Team, who are thinking about they need to do to keep their jobs, and the call for wider institutional recognition that the alternatives for "restoration" SMBRC now proposes have a vast and troubling impact on long-standing plans for an authentic wetlands restoration.

## Introduction

These scoping comments are submitted as 1) A comment and critique of the proposed 2012 Ballona Wetlands Restoration alternatives published by the Santa Monica Bay Restoration Commission ("SMBRC"), a state entity staffed by public sector employees and appointees partnered with a non-profit private foundation (the Santa Monica Bay Restoration Foundation "SMBRF"), and; 2) As discrete environmental proposals currently outside of the proposed alternatives for consideration for possible inclusion into the upcoming Draft Ballona Wetlands Restoration Plan.

As I understand the situation right now, the SMBRC has requested the Army Corps of Engineers terminate a feasibility study and EIS to evaluate the proposed restoration alternatives published by SMBRC. As a result of the Army Corps of Engineers granting SMBRC's request, the permit applications necessary for any of the action plan alternatives submitted by the Restoration Project Team will now bear the name of the SMBRC as the permit applicant. The substitution of the SMBRC to sit in the place of the original permit applicant, the Army Corps of Engineers, is sufficient reason to include proposals which are outside SMBRC's proposed alternatives. There must be a controversy within the alternatives proposed by the SMBRC, because why else would the Army Corps of Engineers right now abandon the 2012 Ballona Wetlands

"restoration" project during this scoping period and why would the SMBRC walk away from Civil Works cost-shared project funds to pay for the "restoration" alternatives?

The SMBRC alternatives all raise the issue of wetlands restoration, but there is no mention of wetlands restoration impacts, which begins when the first work truck pulls off the pavement. Whether that first "restoration" work truck leaves tire tread marks on dry soil or skid track in a wet puddle, during the subsequent seasons of dry and wet, the land will bear the impact of that first truck for years, whether or not that first track is paved over or not. Core sample teams in Autumn 2012 have recently tracted grades inside the Ballona Wetlands as a part of SMBRC's pre-plan construction traffic access creation, which indicates a very laissez faire attitude by the Project Management Team toward critically endangered habitat.

The SMBRC alternatives all raise the issue of which resources to expend on the proposed wetlands restoration, but there is no credible consideration in any of the restoration alternatives for a true no action alternative, that is the action of keeping work trucks on the pavement and off of the 2012 Ballona wetlands. Whether the chosen alternative ultimately increases expended resources exponentially above a single work truck is cause to broaden the scope of the SMBRC alternatives now proposed because the SMBRC alternatives call for improvements to precede all "restoration" activities.

The SMBRC alternatives as designed will produce significant restoration impacts, not restoration results. For example, the habitat throughout the Ballona Wetlands exists to a large extent that no amount of field monitoring can prevent disruption to the cycle of a nesting Great Blue Heron, at one time a critically endangered species, who is in the middle of a cycle of its own wildlife restoration. This was witnessed in the behavior of a Project Management Team supporter on August 16, 2012, when a group of Herons were "spooked" by this man's wild yelling and wide gesticulations.

The SMBRC Project Management Team

It is a great concern that the Executive Director of the SMBRC, Shelley Luce, is also directing the Project Management Team of the proposed "restoration" alternatives. The narrow choice of alternatives proposed by the Project Management Team places the Executive Director of the SMBRC in a position of conflict of interests. The mission of the SMBRC is of a far wider scope than that of the Project Management Team, which involves each team member to think only about keeping their job, whereas the Executive Director of the SMBRC, Dr. Luce, must have a wider perspective to include the interests of the entire Santa Monica Bay.

I personally questioned several members of the Project Management Team, including Dr. Luce, Dr. Swenson, Mr. Lawhead and Ms. Johnston on subjects including what the current policies are of their respective agencies would be applied to the 2012 Ballona

Wetlands. The answers I received from these Project Management Team members was that controversy exists as to whether build dams and fish ladders. No one would acknowledge the fact the Ballona Wetlands have undergone a successful self-remediation from the time of the creation of Marina Del Rey, in spite of the actions of Playa Vista and its predecessors. A once-polluted bio-region has over time, using naturally available tidal flow combining fresh water, Bay water, Harbor and Peninsula water to provide habitat for many endangered and threatened animals and plants, with no help from trucks or heavy equipment. The proposed "restoration" alternatives need to be widened to include this fact.

SMBRC alternatives propose classic "jobs versus the environment" planning which goes that jobs are good for the economy, the proposed alternatives create "restoration" jobs, therefore, the "restoration" alternatives published by SMBRC are good for the economy. The alternatives now published by SMBRC use this oversimplified calculation to obscure that the millions of dollars proposed for the "restoration" (\$100-\$200 million estimate cost for Ballona Channel alone) act as subsidies to buoy Ballona Wetlands developer Playa Vista's pending liabilities for parkland (B.E.E.P. vs. Playa Vista (2012)), open space set-asides (Culver Boulevard ball fiends), mitigation (aging underground methane gas monitors), storm run-off (silting and dredging 24/7 in a hopeless battle against the sea) and community safety (local natural gas storage wells).

2012 Ballona Wetlands is where Playa Vista sits, mid-project, as a hyped-up private development zone financed by considerable amounts public money, and utilizing resources on public land (the Ballona Wetlands). The promises made by Playa Vista since its beginning in 1997 are now looming as liabilities with significant back-end exposure for a wide open-ended environmental consequence, for which no adequate mitigation could possibly be forthcoming. For Playa Vista their logic has always been to increase the density of the Ballona Wetlands with resources and improvements, beginning with heavy equipment operated by drivers driving in the wetlands without any supervision or plan, which is also business as usual among those employed by SMBRC Project Management Team.

There are miles of trails in the wetlands which the SMBRC alternatives propose to eliminate. The Project Management Team has said pedestrian traffic will damage the land by walking on it, but the proposed "restoration" alternatives call for massive bulldozers to destroy and demolish existing habitat and infrastructure in the name of "restoration". SMBRC has now closed the entire Culver Boulevard area to the public. If the SMBRC wants to keep the public from seeing the thriving natural habitat in the 2012 Ballona Wetlands, this is proof a controversy exists as to the proposed "restoration" alternatives sufficient to broad the scope of alternatives to include an "off-limits" policy for heavy equipment in the critical and endangered habitat areas. SMBRC's Project Management Team has attempted to minimize this controversy by putting out the story that non-opposition to the proposed "restoration"

alternatives signify the public's overwhelming fear of natural disasters and public health emergencies justifies the vast logical leap to bureaucratically-mandated improvements for fast-tracking new linear roadways and infrastructure.

The August 16, 2012 public scoping fair staged by SMBRC's Project Management Team was another step taken to minimize or marginalize any controversy to the proposed "restoration" alternatives. Project manager Donna McCormick said "ICE International is the company that has been hired as the consultant to coordinate and write the environmental report." "Sometimes when we have lots of information already we can provide that, but we don't have alternatives identified yet," McCormick explained. This is untrue. According to the SMBRC Executive Summary to the Bay Restoration Plan 2008 Update the original Bay Restoration Plan was developed in 1995 in "recognition of the need to restore and protect Santa Monica Bay's priceless natural resources." While in 2012 Ms. McCormick said "We could bring some of those things but they are in draft form and they could change, and then people would think that isn't what they saw in the scoping meeting." "So we basically thought that the most important thing was to get people's comments back to us," the project manager continued. "We want to make that available. This type of forum, we think, is much better for getting a lot of discussion coming back to us instead of setting up a microphone and having people speaking one after another."

([http://www.argonautnewspaper.com/articles/2012/08/23/news\\_features/top\\_stories/1.txt](http://www.argonautnewspaper.com/articles/2012/08/23/news_features/top_stories/1.txt)). The truth is that any member of the Project Management Team present on August 16, 2012 speaking at a microphone for the public would have created a firestorm of controversy, and this fact is sufficient to demand that broadened alternatives from outside the Project Management Team which provide for habitat preservation, protection and an off-limits policy for heavy equipment in critical, endangered habitats must be included going forward. Rejection of this idea sends the message that the Project Management Team can use bond money raised for public works project to finance a public relations campaign to steer control of the 2012 Ballona Wetlands solely to the Project Management Team.

In a related matter on the subject of bond money paying for public relations to seize control of public land, members of the Project Management Team have put out disinformation about the Ballona Wetlands since 2004 when they began promoting a "salt water wetland habitat" as a necessity to protect buildings from storm run-off. The 600 acres of open space in the 2012 Ballona Wetlands is a sufficient buffer for El Nino and La Nina sized storms affecting run-off in the Ballona Channel according to a 2005 Notice of Intent. I understand there is a 2012 Notice of Intent pending, but I expect the pending 2012 Notice of Intent to be a self-serving document put out on behalf of the Project Management Team. Any public discussion of this would have created a firestorm of controversy, and this fact is sufficient to demand that broadened alternatives from outside the Project Management Team which provide for habitat preservation, protection and an off-limits policy for heavy equipment in critical, endangered habitats must be included going forward.



The Ballona Channel was built as a project of the federal government built over land condemned by the County of Los Angeles for flood protection. The Project Management Team has publically stated, and the proposed "restoration" alternatives make clear that the Project Management Team wants a lot of dirt from the Ballona Wetlands moved around to create a new 40 foot-high levy around a new fresh water retention basin in wild massive civil works project which may be the ultimate goal for the proposed "restoration." There are more alternatives for the Ballona Wetlands than to re-create the San Gabriel River end-of-pipe "solution" for high-density, high-traffic, high-resource dependent coastal populations masked as a proposed "restoration." Alternatives need to include more than concepts that in advance of a political agenda which do not work.

## Secrecy

SMBRC's Science Advisory Committee has been closed to the public. Its minutes and contracts, however, specify the subject matter of the Committee is "estuary only." How come the Project Management Team's proposed "restoration" alternatives includes no data on the plant and animal, fresh water and salt water species who live in the 2012 Ballona Wetlands. This is evidence of a controversy between the Project Management Team and SMBRC's Science Advisory Committee, which is sufficient to demand the scope of the alternatives should be widened to include recognition of the Ballona Wetlands for its core historic, cultural, scientific role as a habitat and an enormous natural mechanism which is alive. In this regard, I refer you the Pachamama Accords of 2008, recognizing the rights of mother earth as a life form entitled to protection of the law from encroachment and predations of improvements.

Why does the State bureaucracy want to dump L.A.'s polluted urban street drainage into the Ballona Wetlands? Because they are under a court order to comply with a federal law that requires the massive L.A. urban region to stop allowing its storm drain system from funneling urban pollution to our ocean and beaches. But rather than planning and creating their long-promised upstream treatment system. The Ballona Wetlands are very remarkable because the land continues absorb fresh water and exude moisture while also being inundated by impaired waterways saturated with toxins and functions as an estuary for nationally-protected Ballona Creek.

The proposed "restoration" alternatives may include plans for the Ballona Wetlands to divert an already impaired waterway into another waterway which is also impaired. The fact that permitting an impaired waterway to join with another impaired waterway is a violation of the Clean Water Act of 1970 is sufficient reason to demand the scope of alternatives to be broadened to include an analysis of the fresh water species which live in the 2012 Ballona Wetlands because a survey of the fresh water species in the culverts along the northern edge of Culver Boulevard between Jefferson Boulevard and the 90 Freeway will give scientific proof that fresh water from the

Greater Ballona Watershed feeds habitats as far east as Sepuleveda Boulevard along the Ballona Channel.

Is the shape of the Ballona Channel subject to change as a result of any of the "restoration" alternatives published by the SMBRC? Is there a relationship between the SMBRC proposed "restoration" alternative and the needs of Playa Vista Phase II to re-calculate storm-water impacts based on run-off volumes now coming off of Playa Vista Phase I? There are \$25 million worth of studies on water flow studies available to the Project Management Team, most of which concern the current and foreseeable fresh water dewatering of building foundations and sewage infrastructure serving Playa Vista. I also understand that the City of Los Angeles may share Playa Vista's liabilities for damages arising from water-borne pollution running towards the Ballona Wetlands.

#### Public Law 228 (1938)

Jurisdiction over the Ballona Channel was established by Public Law 228 of 1938. None of the proposed "restoration" alternatives recognize the fact that any variance which involves the Ballona Channel requires an Act of Congress to alter Public Law 228 and waive the Clean Water Act of 1970. Estimated costs for changing the course and function of Ballona Channel is \$100-\$200 million to create an under-evaluated flood control alternative. This seat-of-the pants proposed "restoration" alternative adequately show bureaucratic indifference to rare, threatened, endangered habitat and is sufficient to demand the scope of the alternatives should include rigorous application of the Clean Water Act on the Ballona Wetlands in vetting the final alternatives. (See posts on this here: <http://ballona-news.blogspot.com/search/label/Restoring%20and%20Unpaving%20Local%20Open%20Spaces%20to%20Clean%20Up%20Santa%20Monica%20Bay%20Beaches>).

Is the shape of the Ballona Channel subject to change as a result of any of the "restoration" alternatives published by the SMBRC? Is there a relationship between the SMBRC proposed "restoration" alternative and the needs of Playa Vista Phase II to re-calculate storm-water impacts based on run-off volumes now coming off of Playa Vista Phase I? There are \$25 million worth of studies on water flow studies available to the Project Management Team, most of which concern the current and foreseeable fresh water dewatering of building foundations and sewage infrastructure serving Playa Vista. I also understand that the City of Los Angeles may share Playa Vista's liabilities for damages arising from water-borne pollution running towards the Ballona Wetlands. These questions all reveal a source of great controversy as political powers seek to re-shape the landscape at the cost of throwing off older values, which in this case is a California Ecological Preserve, sufficient reason to greatly widen the scope of alternatives going forward to include plans not of the SMBRC Project Management Team, but from scientists, students, community members and nature lovers.

When did SMBRC's mission of "improve water quality, conserve and rehabilitate natural resources, and protect the [Santa Monica] bay's benefits and values" change to "wants narrow range of alternatives limited to vehicle intrusions into sensitive critical fresh water and salt water habitats"? Questions about how the SMBRC changed that position is enough to open out the scope of alternatives to include the mission of maintaining the wildlife habitats (as to the State Ecological Preserve) and current fresh water flows onto the 2012 Ballona Wetlands.

## The SMBRC Project Team and Playa Vista

Ballona is a biodiverse ecosystem which has had three natural habitat types persist since at least 1995: salt marsh, freshwater marsh and wildflower and sage covered uplands. Although since 1995 the total area of salt marsh, freshwater marsh and wildflower and sage covered uplands has been reduced (salt marsh, freshwater marsh areas have been by 2/3 reduced by Playa Vista development, wildflower and sage covered upland area reduced 95% by the Catellus housing development west of Lincoln south of Jefferson). Despite the reduction in habitat-available area, annually, and in cycles which have been observed for millennia, rare, endangered and critically-threatened species continue to reproduce in Ballona.

Under the proposed "restoration" alternatives, the freshwater marsh and the last remaining wildflower and sage covered uplands and their wildlife will be mostly eliminated. "Restoration" alternatives have plans for creating an urban pollution street drainage dump, and ignores the impact of the plan and execution of the proposed "restoration" on the rare, endangered and critically-threatened animals and plants of Ballona. The conclusion is that the designation of the Ballona Wetlands by the SMBRP in 1995 occurred when institutional values favored a relationship with existing animal and plant species who live in the Ballona Wetlands. In 2012 the institutional values of Playa Vista have been adopted by the SMBRC Project Management Team and only did so throughout a firestorm of controversy. There is a dream state which must come over a person who decides that the institutional values which form our work lives must somehow also aspire to provide a "higher good" to justify strong-arming the defenseless for a contractor-driven out-of-control mission from day one. This is sufficient reason to demand that alternatives outside the control of the SMBRC Project Management Team be included in every plan going forward from this time.

In the SMBRC Executive Summary to the Bay Restoration Plan 2008 Update the original Bay Restoration Plan was developed in 1995 in "recognition of the need to restore and protect Santa Monica Bay's priceless natural resources." Note that "The Santa Monica Bay Restoration Commission continues the mission of the Bay Restoration Project and the collaborative approach of the National Estuary Program but with a greater ability to accelerate the pace and effectiveness of Bay restoration efforts." ([http://www.smbrc.ca.gov/about\\_us](http://www.smbrc.ca.gov/about_us)). The thinking that goes on in the heads

of people who work at their jobs with the SMBRC Project Management Team has devolved the Bay Restoration Plan to suit the needs of Playa Vista. This conceptual vacuity shows a controversy existed and still exists around the "greater ability to accelerate the pace and effectiveness of Bay restoration efforts." A "no action" alternative needs no acceleration to create an effective restoration, nature does that using wind, weather, tides, water, all substances which are found in the natural abundance in the 2012 Ballona Wetlands. This is an overwhelming reason to have a consensus that alternatives outside the control of the SMBRC Project Management Team be included in every plan going forward from this time.

The proposed "restoration" alternatives have risk of creating a ripple effect of restoration impacts from tires on the wetland to foreseeable newly paved areas.

The Project Management Team failed in the past to identify relationships between plants and animals in assessing the viability of habitat, for example the reproduction of endangered Blue Butterflies was attributed by advocates for the SMBRC to wildly speculative causes, but when a real-life scientific study was done, the reason the Blue Butterflies struggled was because tires on the ground had squashed and torn up the wild buckwheat the Blue Butterflies have eaten for thousands of years.

The Project Management Team has \$6.2 million but have not assessed the risk to present day value. The scope of the "restoration" alternatives needs to be expanded to create accountability within the Project Management Team for their present insufficient species analysis.

Flood Control: Mandate or Raison D' Etre For the Project Management Team?

The proposed "restoration" alternatives published by SMBRC do not support a range of alternatives. "Dredge and fill" wants to widen the connection between the ocean and the 2012 Ballona Wetlands using vehicles, petrochemicals and pavement, all of which change the fundamental character of the wetlands, which is absorb fresh water at high tide and off-gas moisture during low tide and during the dry season.

## Grave Desecrations

During construction of Playa Vista Phase I, Playa Vista unearthed long-buried human bodies belonging to members of the native Tongva people. Playa Vista attempted to cover up the number of graves it unearthed and its subsequent careless handling of human remains. Through political maneuverings and favorable reporting in the media Playa Vista was able to avoid bad publicity. However during this period of public relations spin, Playa Vista promised to restore the remains to the site of their original interment. Right now the ancient graveyard of hundreds human bodies is still an open ditch, one mile long by 3 feet wide, 3 million cubic yards of soil disrupted and

removed. According to coverage in the May 31, 2012 "Argonaut" "several dozen fragile remains, were re-interred at Ballona Discovery Park in Playa Vista." There must be an alternative to the SMBRC alternatives which call for using heavy equipment to move massive amounts of water and earth and only give Playa Vista-grade promises to responsibly handle human remains.

### Proposed Alternatives Outside the SMBRC Proposed "Restoration" Alternatives

New alternatives are needed in the interests of preserving and protecting the Ballona Wetlands:

1. Soil - New topsoil is habitat to rare, threatened and endangered plant life, including critical micro biota.
2. Ground water - Necessary for cyclical resurgence of seasonal life forms
3. Tidal inflow onto the Wetlands
4. Tidal outflow into the Bay, Channel, MDR Harbor and Venice Peninsula
5. Fresh water inflow from the Greater Ballona Watershed
6. Fresh water outflow from the Ballona Wetlands
7. Animal species (including migratory fowl and seasonal sea life) which rely on fresh water
8. Animal species (including migratory fowl and seasonal sea life) which rely on brackish water
9. Plant species (including annuals) which rely on fresh water
10. Plant species (including annuals) which rely on brackish water
11. As the site of the native Tongva village of Sa-Angna
12. For use as a natural outdoor sacred site for spiritual rites
13. For use as a natural outdoor classroom for students K-12, through post-doctorate studies
14. For use as an historic site illustrating the impact of human habitation on the wetlands

The current eco-system now in place in the Ballona Wetlands has value as a viable habitat for endangered and threatened animals and plant life.

Doing no harm to the habitat of the Ballona Wetlands means preserving the existing wildlife habitat for the Western Shrike, Kites, Harriers which are unique examples of wildlife in an urban setting.

The Ballona Wetlands are a native American sacred site, the location of "Sa-Angna," one-time village of the Tongva people native to Los Angeles. The Ballona Wetlands are also acknowledged for their significance as an intact local resource for outdoor classrooms for students studying a wide range of scientific disciplines.

Restoration results, for example, would further facilitate the habitat throughout the Ballona Wetlands to prevent disruption to the cycle of a nesting Great Blue Heron, at one time a critically endangered species, who is in the middle of a cycle of its own wildlife restoration.

## The Vision

The action of doing nothing, means the SMBRC would stay conscious of the resources provided to it, without expending the earth and water resources which were ceded to the SMBRC. The action of establishing an "off-limits" policy to cyclical resources periodically available through atmospheric seasonal change.

Going forward a plan needs to protect the three existing wildlife habitats and existing trails and allows for fresh water inflow onto portions of the wetlands. If the SMBRC is doing their job, the results will that one day clean water will enter the Ballona Wetlands from the ocean--like it was 200 years ago.

Your very truly,

Jack Neff  
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**Via Email**

October 23, 2012

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US Army Corps of Engineers

David Lawhead  
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dlawhead@dfg.ca.gov

Ballona Wetlands Restoration Project  
C/O Donna McCormick  
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Irvine, CA 92816  
or by email to Donna.McCormick@icfi.com

Re: Scoping Comments re Santa Monica Bay Restoration Commission  
("SMBRC") April 2012 Notice of Preparation of Draft EIR on Ballona Wetlands

To Interested Parties:

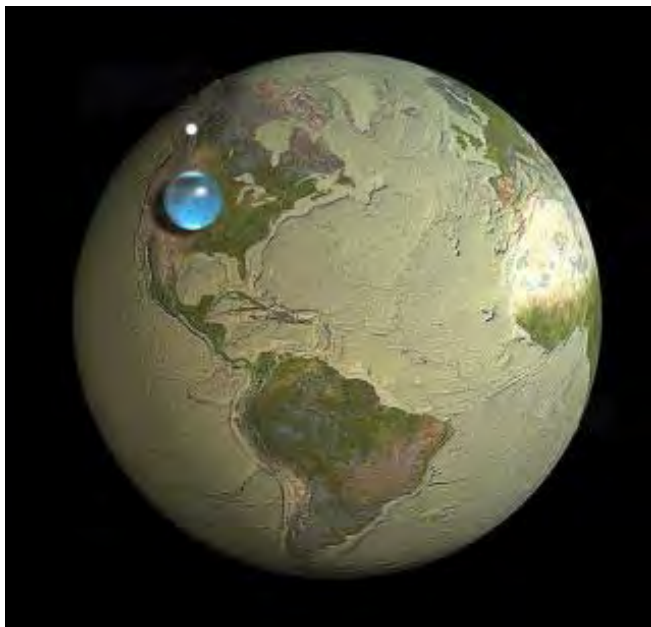
My interests are in the fresh water flowing from City of Los Angeles storm drains into the 2012 Ballona Wetlands. My interests arise from my role as Vice President/Executive Administrator of the Gabrielino/Tongva Springs Foundation, which works to preserve Kuruvungna Springs, also known as State Historic Site 522, the ancestral home of the descendants of Los Angeles' native Tongva people.

Kuruvungna Springs today consists of numerous aquifers among what were once a series of vast aquifers and fresh water sources in and around Los Angeles. As stewards of Kuruvungna Springs, the Gabrielino/Tongva Springs Foundation

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monitors the nourishment of the Greater Ballona watershed (including the Ballona Wetlands) with flowing fresh water. Fresh water from Kuruvungna Springs (and from the aquifers throughout the Los Angeles Basin) ultimately dilutes other sources (including known pollutants) in the ebb and flow of tidal water merging from SM Bay, Marina Del Rey Harbor and the Venice Peninsula in the 2012 Ballona Wetlands.

As the second World Water Forum wisely stated "Water is everybody's business," so I encourage any person interested in the environmental outcome of local water sources like Kuruvungna Springs to demand the scope a Draft EIR be widened from the SMBRC alternatives to include broad-based public interests and the welfare of spiritual seekers, scientific researchers, teachers, students, historians, nature lovers, pet owners, public transit advocates, animal wildlife and plant species (including rare, threatened, endangered and critically endangered animals and plants which now reside in the 2012 Ballona Wetlands).



This image is a proportional representation of the ratio of the volume of fresh water on planet Earth to the planet's entire surface area.

Fortunately for Santa Monica Bay and the 4.5 million residents of the greater Los



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Angeles Basin, the 2012 Ballona Wetlands continues to be nourished by freshwater from the Greater Ballona watershed, including Kuruvungna Springs, Centinela Creek, Centinela Springs, and run-off from fresh water aquifers including, without limitation of the foregoing, Nicholas, Laurel, Coldwater, Benedict and Stone canyons are now contributing to freshwater habitats in the Ballona Wetlands.

### Summary

The Ballona Wetlands are an impressionable surface area of land which bears continual marks of all impacts upon it, whether originating from the weather, the tides, animal or sea life or from human activity. All of the alternatives now proposed by the SMBRC as wetlands "restoration" are improvements, with the exception of the CEQA-NEPA-mandated "no action," alternative No. \_\_\_\_\_. Any one of the proposed "restoration" alternatives will result in sustained human impact on the wetlands and the habitats therein. The first impact of the proposed "restoration" are improvements in the form of vehicle tread impressions, then with freshly-dropped petrochemical residua originating from said vehicles, followed by vehicle-driven landscape, habitat and existing infrastructure demolition before improvement for proposed newly paved areas of indeterminate size, locale and purpose. SMBRC alternatives need to be clarified and alternatives outside the interests of SMBRC Project Management Team must broaden out to include recognition of the 2012 Ballona Wetlands as an historic bio-region with cultural and spiritual significance to the community at large. Alternatives which protect the Ballona Wetlands habitat for a large number of threatened and critically-endangered animals and plants (as designated in 1995 by the Santa Monica Bay Restoration Project ("SMBRP") the organization which was formalized into the SMBRC in 2003) must also be included. The Ballona Wetlands are a living ecosystem dependent on the unique combination of fresh water provided by the Greater Ballona Watershed, and tidal waters from Santa Monica Bay, Marina Del Rey Harbor and the Venice Peninsula. SMBRC Project Management Team acknowledges the tidal waters are "impaired waterways" and have an interest in mitigating or cleaning up the water impairments, but right now there is a

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disconnect between what the people employed by the SMBRC Project Management Team, who are thinking about they need to do to keep their jobs, and the call for wider institutional recognition that the alternatives for "restoration" SMBRC now proposes have a vast and troubling impact on long-standing plans for an authentic wetlands restoration.

### Introduction

These scoping comments are submitted as 1) A comment and critique of the proposed 2012 Ballona Wetlands Restoration alternatives published by the Santa Monica Bay Restoration Commission ("SMBRC"), a state entity staffed by public sector employees and appointees partnered with a non-profit private foundation (the Santa Monica Bay Restoration Foundation "SMBRF"), and; 2) As discrete environmental proposals currently outside of the proposed alternatives for consideration for possible inclusion into the upcoming Draft Ballona Wetlands Restoration Plan.

As I understand the situation right now, the SMBRC has requested the Army Corps of Engineers terminate a feasibility study and EIS to evaluate the proposed restoration alternatives published by SMBRC. As a result of the Army Corps of Engineers granting SMBRC's request, the permit applications necessary for any of the action plan alternatives submitted by the Restoration Project Team will now bear the name of the SMBRC as the permit applicant. The substitution of the SMBRC to sit in the place of the original permit applicant, the Army Corps of Engineers, is sufficient reason to include proposals which are outside SMBRC's proposed alternatives. There must be a controversy within the alternatives proposed by the SMBRC, because why else would the Army Corps of Engineers right now abandon the 2012 Ballona Wetlands "restoration" project during this scoping period and why would the SMBRC walk away from Civil Works cost-shared project funds to pay for the "restoration" alternatives?

The SMBRC alternatives all raise the issue of wetlands restoration, but there is no mention of wetlands restoration impacts, which begins when the first work truck

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pulls off the pavement. Whether that first "restoration" work truck leaves tire tread marks on dry soil or skid track in a wet puddle, during the subsequent seasons of dry and wet, the land will bear the impact of that first truck for years, whether or not that first track is paved over or not. Core sample teams in Autumn 2012 have recently tractored grades inside the Ballona Wetlands as a part of SMBRC's pre-plan construction traffic access creation, which indicates a very laissez faire attitude by the Project Management Team toward critically endangered habitat.

The SMBRC alternatives all raise the issue of which resources to expend on the proposed wetlands restoration, but there is no credible consideration in any of the restoration alternatives for a true no action alternative, that is the action of keeping work trucks on the pavement and off of the 2012 Ballona wetlands. Whether the chosen alternative ultimately increases expended resources exponentially above a single work truck is cause to broaden the scope of the SMBRC alternatives now proposed because the SMBRC alternatives call for improvements to precede all "restoration" activities.

The SMBRC alternatives as designed will produce significant restoration impacts, not restoration results. For example, the habitat throughout the Ballona Wetlands exists to a large extent that no amount of field monitoring can prevent disruption to the cycle of a nesting Great Blue Heron, at one time a critically endangered species, who is in the middle of a cycle of its own wildlife restoration. This was witnessed in the behavior of a Project Management Team supporter on August 16, 2012, when a group of Herons were "spooked" by this man's wild yelling and wide gesticulations.

### The SMBRC Project Management Team

It is a great concern that the Executive Director of the SMBRC, Shelley Luce, is also directing the Project Management Team of the proposed "restoration" alternatives. The narrow choice of alternatives proposed by the Project Management Team places the Executive Director of the SMBRC in a position of conflict of interests. The mission of the SMBRC is of a far wider scope than that

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of the Project Management Team, which involves each team member to think only about keeping their job, whereas the Executive Director of the SMBRC, Dr. Luce, must have a wider perspective to include the interests of the entire Santa Monica Bay.

I personally questioned several members of the Project Management Team, including Dr. Luce, Dr. Swenson, Mr. Lawhead and Ms. Johnston on subjects including what the current policies are of their respective agencies would be applied to the 2012 Ballona Wetlands. The answers I received from these Project Management Team members was that controversy exists as to whether build dams and fish ladders. No one would acknowledge the fact the Ballona Wetlands have undergone a successful self-remediation from the time of the creation of Marina Del Rey, in spite of the actions of Playa Vista and its predecessors. A once-polluted bio-region has over time, using naturally available tidal flow combining fresh water, Bay water, Harbor and Peninsula water to provide habitat for many endangered and threatened animals and plants, with no help from trucks or heavy equipment. The proposed "restoration" alternatives need to be widened to include this fact.

SMBRC alternatives propose classic "jobs versus the environment" planning which goes that jobs are good for the economy, the proposed alternatives create "restoration" jobs, therefore, the "restoration" alternatives published by SMBRC are good for the economy. The alternatives now published by SMBRC use this oversimplified calculation to obscure that the millions of dollars proposed for the "restoration" (\$100-\$200 million estimate cost for Ballona Channel alone) act as subsidies to buoy Ballona Wetlands developer Playa Vista's pending liabilities for parkland (B.E.E.P. vs. Playa Vista (2012)), open space set-asides (Culver Boulevard ball fiends), mitigation (aging underground methane gas monitors), storm run-off (silting and dredging 24/7 in a hopeless battle against the sea) and community safety (local natural gas storage wells).

2012 Ballona Wetlands is where Playa Vista sits, mid-project, as a hyped-up private development zone financed by considerable amounts public money, and

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utilizing resources on public land (the Ballona Wetlands). The promises made by Playa Vista since its beginning in 1997 are now looming as liabilities with significant back-end exposure for a wide open-ended environmental consequence, for which no adequate mitigation could possibly be forthcoming. For Playa Vista their logic has always been to increase the density of the Ballona Wetlands with resources and improvements, beginning with heavy equipment operated by drivers driving in the wetlands without any supervision or plan, which is also business as usual among those employed by SMBRC Project Management Team.

There are miles of trails in the wetlands which the SMBRC alternatives propose to eliminate. The Project Management Team has said pedestrian traffic will damage the land by walking on it, but the proposed "restoration" alternatives call for massive bulldozers to destroy and demolish existing habitat and infrastructure in the name of "restoration". SMBRC has now closed the entire Culver Boulevard area to the public. If the SMBRC wants to keep the public from seeing the thriving natural habitat in the 2012 Ballona Wetlands, this is proof a controversy exists as to the proposed "restoration" alternatives sufficient to broad the scope of alternatives to include an "off-limits" policy for heavy equipment in the critical and endangered habitat areas. SMBRC's Project Management Team has attempted to minimize this controversy by putting out the story that non-opposition to the proposed "restoration" alternatives signify the public's overwhelming fear of natural disasters and public health emergencies justifies the vast logical leap to bureaucratically-mandated improvements for fast-tracking new linear roadways and infrastructure.

The August 16, 2012 public scoping fair staged by SMBRC's Project Management Team was another step taken to minimize or marginalize any controversy to the proposed "restoration" alternatives. Project manager Donna McCormick said "ICE International is the company that has been hired as the consultant to coordinate and write the environmental report." "Sometimes when we have lots of information already we can provide that, but we don't have alternatives identified yet," McCormick explained. This is untrue. According to the SMBRC Executive Summary to the Bay Restoration Plan 2008 Update the original Bay Restoration

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Plan was developed in 1995 in "recognition of the need to restore and protect Santa Monica Bay's priceless natural resources." While in 2012 Ms. McCormick said "We could bring some of those things but they are in draft form and they could change, and then people would think that isn't what they saw in the scoping meeting." "So we basically thought that the most important thing was to get people's comments back to us," the project manager continued. "We want to make that available. This type of forum, we think, is much better for getting a lot of discussion coming back to us instead of setting up a microphone and having people speaking one after another."

([http://www.argonautnewspaper.com/articles/2012/08/23/news\\_-\\_features/top\\_stories/1.txt](http://www.argonautnewspaper.com/articles/2012/08/23/news_-_features/top_stories/1.txt)). The truth is that any member of the Project Management Team present on August 16, 2012 speaking at a microphone for the public would have created a firestorm of controversy, and this fact is sufficient to demand that broadened alternatives from outside the Project Management Team which provide for habitat preservation, protection and an off-limits policy for heavy equipment in critical, endangered habitats must be included going forward. Rejection of this idea sends the message that the Project Management Team can use bond money raised for public works project to finance a public relations campaign to steer control of the 2012 Ballona Wetlands solely to the Project Management Team.

In a related matter on the subject of bond money paying for public relations to seize control of public land, members of the Project Management Team have put out disinformation about the Ballona Wetlands since 2004 when they began promoting a "salt water wetland habitat" as a necessity to protect buildings from storm run-off. The 600 acres of open space in the 2012 Ballona Wetlands is a sufficient buffer for El Nino and La Nina sized storms affecting run-off in the Ballona Channel according to a 2005 Notice of Intent. I understand there is a 2012 Notice of Intent pending, but I expect the pending 2012 Notice of Intent to be a self-serving document put out on behalf of the Project Management Team. Any public discussion of this would have created a firestorm of controversy, and this fact is sufficient to demand that broadened alternatives from outside the Project Management Team which provide for habitat preservation, protection and an off-

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limits policy for heavy equipment in critical, endangered habitats must be included going forward.

The Ballona Channel was built as a project of the federal government built over land condemned by the County of Los Angeles for flood protection. The Project Management Team has publically stated, and the proposed "restoration" alternatives make clear that the Project Management Team wants a lot of dirt from the Ballona Wetlands moved around to create a new 40 foot-high levy around a new fresh water retention basin in wild massive civil works project which may be the ultimate goal for the proposed "restoration." There are more alternatives for the Ballona Wetlands than to re-create the San Gabriel River end-of-pipe "solution" for high-density, high-traffic, high-resource dependent coastal populations masked as a proposed "restoration." Alternatives need to include more than concepts that in advance of a political agenda which do not work.

### Secrecy

SMBRC's Science Advisory Committee has been closed to the public. Its minutes and contracts, however, specify the subject matter of the Committee is "estuary only." How come the Project Management Team's proposed "restoration" alternatives includes no data on the plant and animal, fresh water and salt water species who live in the 2012 Ballona Wetlands. This is evidence of a controversy between the Project Management Team and SMBRC's Science Advisory Committee, which is sufficient to demand the scope of the alternatives should be widened to include recognition of the Ballona Wetlands for its core historic, cultural, scientific role as a habitat and an enormous natural mechanism which is alive. In this regard, I refer you the Pachamama Accords of 2008, recognizing the rights of mother earth as a life form entitled to protection of the law from encroachment and predations of improvements.

Why does the State bureaucracy want to dump L.A.'s polluted urban street drainage into the Ballona Wetlands? Because they are under a court order to comply with a federal law that requires the massive L.A. urban region to stop allowing its storm

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drain system from funneling urban pollution to our ocean and beaches. But rather than planning and creating their long-promised upstream treatment system. The Ballona Wetlands are very remarkable because the land continues absorb fresh water and exude moisture while also being inundated by impaired waterways saturated with toxins and functions as an estuary for nationally-protected Ballona Creek.

The proposed "restoration" alternatives may include plans for the Ballona Wetlands to divert an already impaired waterway into another waterway which is also impaired. The fact that permitting an impaired waterway to join with another impaired waterway is a violation of the Clean Water Act of 1970 is sufficient reason to demand the scope of alternatives to be broadened to include an analysis of the fresh water species which live in the 2012 Ballona Wetlands because a survey of the fresh water species in the culverts along the northern edge of Culver Boulevard between Jefferson Boulevard and the 90 Freeway will give scientific proof that fresh water from the Greater Ballona Watershed feeds habitats as far east as Sepuleveda Boulevard along the Ballona Channel.

Is the shape of the Ballona Channel subject to change as a result of any of the "restoration" alternatives published by the SMBRC? Is there a relationship between the SMBRC proposed "restoration" alternative and the needs of Playa Vista Phase II to re-calculate storm-water impacts based on run-off volumes now coming off of Playa Vista Phase I? There are \$25 million worth of studies on water flow studies available to the Project Management Team, most of which concern the current and foreseeable fresh water dewatering of building foundations and sewage infrastructure serving Playa Vista. I also understand that the City of Los Angeles may share Playa Vista's liabilities for damages arising from water-borne pollution running towards the Ballona Wetlands.

#### Public Law 228 (1938)

Jurisdiction over the Ballona Channel was established by Public Law 228 of 1938.



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None of the proposed "restoration" alternatives recognize the fact that any variance which involves the Ballona Channel requires an Act of Congress to alter Public Law 228 and waive the Clean Water Act of 1970. Estimated costs for changing the course and function of Ballona Channel is \$100-\$200 million to create an under-evaluated flood control alternative. This seat-of-the pants proposed "restoration" alternative adequately show bureaucratic indifference to rare, threatened, endangered habitat and is sufficient to demand the scope of the alternatives should include rigorous application of the Clean Water Act on the Ballona Wetlands in vetting the final alternatives. (See posts on this here: <http://ballona-news.blogspot.com/search/label/Restoring%20and%20Unpaving%20Local%20Open%20Spaces%20to%20Clean%20Up%20Santa%20Monica%20Bay%20Beaches>)

Is the shape of the Ballona Channel subject to change as a result of any of the "restoration" alternatives published by the SMBRC? Is there a relationship between the SMBRC proposed "restoration" alternative and the needs of Playa Vista Phase II to re-calculate storm-water impacts based on run-off volumes now coming off of Playa Vista Phase I? There are \$25 million worth of studies on water flow studies available to the Project Management Team, most of which concern the current and foreseeable fresh water dewatering of building foundations and sewage infrastructure serving Playa Vista. I also understand that the City of Los Angeles may share Playa Vista's liabilities for damages arising from water-borne pollution running towards the Ballona Wetlands. These questions all reveal a source of great controversy as political powers seek to re-shape the landscape at the cost of throwing off older values, which in this case is a California Ecological Preserve, sufficient reason to greatly widen the scope of alternatives going forward to include plans not of the SMBRC Project Management Team, but from scientists, students, community members and nature lovers.

When did SMBRC's mission of "improve water quality, conserve and rehabilitate natural resources, and protect the [Santa Monica] bay's benefits and values" change to "wants narrow range of alternatives limited to vehicle intrusions into sensitive critical fresh water and salt water habitats"? Questions about how the

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SMBRC changed that position is enough to open out the scope of alternatives to include the mission of maintaining the wildlife habitats (as to the State Ecological Preserve) and current fresh water flows onto the 2012 Ballona Wetlands.<sup>2</sup>

### The SMBRC Project Team and Playa Vista

Ballona is a biodiverse ecosystem which has had three natural habitat types persist since at least 1995: salt marsh, freshwater marsh and wildflower and sage covered uplands. Although since 1995 the total area of salt marsh, freshwater marsh and wildflower and sage covered uplands has been reduced (salt marsh, freshwater marsh areas have been by 2/3 reduced by Playa Vista development, wildflower and sage covered upland area reduced 95% by the Catellus housing development west of Lincoln south of Jefferson). Despite the reduction in habitat-available area, annually, and in cycles which have been observed for millennia, rare, endangered and critically-threatened species continue to reproduce in Ballona.

Under the proposed "restoration" alternatives, the freshwater marsh and the last remaining wildflower and sage covered uplands and their wildlife will be mostly eliminated. "Restoration" alternatives have plans for creating an urban pollution street drainage dump, and ignores the impact of the plan and execution of the proposed "restoration" on the rare, endangered and critically-threatened animals and plants of Ballona. The conclusion is that the designation of the Ballona Wetlands by the SMBRP in 1995 occurred when institutional values favored a relationship with existing animal and plant species who live in the Ballona Wetlands. In 2012 the institutional values of Playa Vista have been adopted by the SMBRC Project Management Team and only did so throughout a firestorm of controversy. There is a dream state which must come over a person who decides that the institutional values which form our work lives must somehow also aspire to provide a "higher good" to justify strong-arming the defenseless for a contractor-driven out-of-control mission from day one. This is sufficient reason to demand

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<sup>2</sup> SMBRC Bay Restoration Plan 2008 Update, p.2, SMBRC.

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that alternatives outside the control of the SMBRC Project Management Team be included in every plan going forward from this time.

In the SMBRC Executive Summary to the Bay Restoration Plan 2008 Update the original Bay Restoration Plan was developed in 1995 in "recognition of the need to restore and protect Santa Monica Bay's priceless natural resources." Note that "The Santa Monica Bay Restoration Commission continues the mission of the Bay Restoration Project and the collaborative approach of the National Estuary Program but with a greater ability to accelerate the pace and effectiveness of Bay restoration efforts." ([http://www.smbrc.ca.gov/about\\_us](http://www.smbrc.ca.gov/about_us)). The thinking that goes on in the heads of people who work at their jobs with the SMBRC Project Management Team has devolved the Bay Restoration Plan to suit the needs of Playa Vista. This conceptual vacuity shows a controversy existed and still exists around the "greater ability to accelerate the pace and effectiveness of Bay restoration efforts." A "no action" alternative needs no acceleration to create an effective restoration, nature does that using wind, weather, tides, water, all substances which are found in the natural abundance in the 2012 Ballona Wetlands. This is an overwhelming reason to have a consensus that alternatives outside the control of the SMBRC Project Management Team be included in every plan going forward from this time.

The proposed "restoration" alternatives have risk of creating a ripple effect of restoration impacts from tires on the wetland to foreseeable newly paved areas.

The Project Management Team failed in the past to identify relationships between plants and animals in assessing the viability of habitat, for example the reproduction of endangered Blue Butterflies was attributed by advocates for the SMBRC to wildly speculative causes, but when a real-life scientific study was done, the reason the Blue Butterflies struggled was because tires on the ground had squashed and torn up the wild buckwheat the Blue Butterflies have eaten for thousands of years.

The Project Management Team has \$6.2 million but have not assessed the risk to

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present day value. The scope of the "restoration" alternatives needs to be expanded to create accountability within the Project Management Team for their present insufficient species analysis.

#### Flood Control: Mandate or Raison D' Etre For the Project Management Team?

The proposed "restoration" alternatives published by SMBRC do not support a range of alternatives. "Dredge and fill" wants to widen the connection between the ocean and the 2012 Ballona Wetlands using vehicles, petrochemicals and pavement, all of which change the fundamental character of the wetlands, which is absorb fresh water at high tide and off-gas moisture during low tide and during the dry season.

#### Grave Desecrations

During construction of Playa Vista Phase I, Playa Vista unearthed long-buried human bodies belonging to members of the native Tongva people. Playa Vista attempted to cover up the number of graves it unearthed and its subsequent careless handling of human remains. Through political maneuverings and favorable reporting in the media Playa Vista was able to avoid bad publicity. However during this period of public relations spin, Playa Vista promised to restore the remains to the site of their original interment. Right now the ancient graveyard of hundreds human bodies is still an open ditch, one mile long by 3 feet wide, 3 million cubic yards of soil disrupted and removed. According to coverage in the May 31, 2012 "Argonaut" "several dozen fragile remains, were re-interred at Ballona Discovery Park in Playa Vista." There must be an alternative to the SMBRC alternatives which call for using heavy equipment to move massive amounts of water and earth and only give Playa Vista-grade promises to responsibly handle human remains.

#### Proposed Alternatives Outside the SMBRC Proposed "Restoration" Alternatives

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New alternatives are needed in the interests of preserving and protecting the Ballona Wetlands:

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2. Ground water - Necessary for cyclical resurgence of seasonal life forms
3. Tidal inflow onto the Wetlands
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13. For use as a natural outdoor classroom for students K-12, through post-doctorate studies
14. For use as an historic site illustrating the impact of human habitation on the wetlands

The current eco-system now in place in the Ballona Wetlands has value as a viable habitat for endangered and threatened animals and plant life.

Doing no harm to the habitat of the Ballona Wetlands means preserving the existing wildlife habitat for the Western Shrike, Kites, Harriers which are unique examples of wildlife in an urban setting.

The Ballona Wetlands are a native American sacred site, the location of "Sa-Angna," one-time village of the Tongva people native to Los Angeles. The

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Ballona Wetlands are also acknowledged for their significance as an intact local resource for outdoor classrooms for students studying a wide range of scientific disciplines.

Restoration results, for example, would further facilitate the habitat throughout the Ballona Wetlands to prevent disruption to the cycle of a nesting Great Blue Heron, at one time a critically endangered species, who is in the middle of a cycle of its own wildlife restoration.

### The Vision

The action of doing nothing, means the SMBRC would stay conscious of the resources provided to it, without expending the earth and water resources which were ceded to the SMBRC. The action of establishing an "off-limits" policy to cyclical resources periodically available through atmospheric seasonal change.

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Your very truly,

Jack Neff  
(310) 478-2835

**Jones, Tanya**

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**From:** Leslie Purcell [<mailto:lesliepurcell@gmail.com>]

**Sent:** Tuesday, October 23, 2012 11:47 PM

**To:** [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil); [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov); McCormick, Donna

**Subject:** NOI Scoping comments

Please see attached comments.

thanks,  
Leslie Purcell

Dr. Daniel P. Swenson,  
Los Angeles Section, U.S. Army Corps of Engineers (ACOE)  
915 Wilshire Blvd., Los Angeles, CA 90017

Mr. David Lawhead  
California Dept. of Fish & Game  
3883 Ruffin Road, San Diego, CA 92123

Ms. Donna McCormick, ICF International

October 23, 2012

RE: Comments on NOI to Prepare Joint EIS/EIR for Ballona Wetlands Restoration.

Following are my comments/questions for the Ballona Wetlands scoping process:

1. Please address what happened to the 1995 and 2005 EIS process.
2. Please address what happened to the lower Ballona Creek Watershed Ecosystem Restoration Study, with its recommendation to "proceed into the feasibility phase to develop an ecosystem restoration and watershed management plan for the lower Ballona Creek watershed", signed by LT Col. John V. Guenther, ACOE, Sept. 2002. Where is this plan, and the feasibility study? Is it being used in this current effort?
3. Many studies have been done on the Ballona wetlands and are available, such as the Ballona Creek Watershed Management Plan:  
([http://www.swrcb.ca.gov/water\\_issues/programs/nps/docs/conference2003/01mar\\_khorne.pdf](http://www.swrcb.ca.gov/water_issues/programs/nps/docs/conference2003/01mar_khorne.pdf))  
and Historical ecology:  
([ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/671\\_BallonaHistoricalEcology.pdf](ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/671_BallonaHistoricalEcology.pdf))

Will the current EIS/EIR process utilize all such previous works?

4. Much public funding has already been expended on such studies, yet there is \$6.25 million allocated for new engineering studies and alternative designs. Is this a good and necessary use of taxpayer dollars and/or bond monies? Who receives this funding, who disburses it, and what is the oversight as to the value of services provided and results delivered? Are restoration project proponents linked to those disbursing or receiving funding—is there impropriety or even the appearance of such?
5. What are the relationships between the various public and private entities involved in this current restoration planning process, including consultants, and how are they



related to adjacent developer interests such as Playa Vista/Playa Capital, as well as developments in the Marina del Rey and Playa del Rey areas?

6. Are the proposed levees to protect developers' interests rather than for ecological function and restoration? Could there be unintended consequences to other areas of the Ballona valley, the wetlands or Playa del Rey--as in New Orleans recently where rebuilt higher levees caused unforeseen flooding in outlying parishes.
7. I understood the previous EIS process to be an integrated comprehensive watershed-wide plan, including more of the watershed, addressing water quality upstream as well. Wouldn't this be a more ecologically sound approach than piecemealing parts of the Ballona watershed?
8. Ballona Creek is an impaired water body—shouldn't water be cleaned up along the way and before entering the proposed wetlands restoration area?
9. Please analyse the needs of existing wildlife before, during, and after the proposed restoration process, including crossing opportunities above or below roadways, possibly lifting parts of the roadways (Culver, Jefferson) to provide such crossings for animals and water. 3500 animals killed annually at Ballona, according to Dr. Sean Anderson, CSUCI. Playa Vista was required to create a Lincoln Blvd. wildlife undercrossing, which has not been adequately done. Please investigate this failure.
10. Consider how to work with and protect existing habitat, plants and wildlife. From Lessons in Native American Plant Gathering: "...how to live *with* nature...Native American cultures acquired vast experience in how to use, manage, respect, and coexist with other forms of life" (referencing *Before the Wilderness*, anthology documenting environmental management practices of California Indians, M. Kat Anderson, coeditor). Please consult with local Tongva as to how to restore this land.
11. Please consider gradual, natural restoration, by hand, using small equipment and tools. This would be an opportunity for school and community groups to be actively involved in restoration, increasing participation and education, with social and psychological benefits.

12. The video, "Restoring Southern California Wetlands", is a biased production promoting a severe and destructive engineering project as restoration, by people who have an interest in such an engineered restoration. Unbiased scientific analysis is needed as to restoration goals and methods. Restoration is not an engineering project! It is a labor of love for the community.
13. Go slow—listen, look, learn. Protect and create nesting habitat, rookeries, perches. Assess the overall health of the ecosystem, use the Precautionary Principle to preserve what is there, work to enhance it.
14. Analyse impacts of SoCalGas/Sempra's storage, facilities, pipelines, wells. Are there gases escaping into the air? Is there toxic residue in the soils and leaching into the water? Please consider potential for shutting down these operations in the future. Consider long-range possibility of acquiring bluff for upland habitat, to mitigate for loss of West bluff upland habitat, including vernal pools, above wetlands.
15. Please investigate the defective process of earlier EIRs for Playa Vista: CDFG granted a streambed alteration permit to create "Riparian Corridor" which feeds into "Freshwater Marsh", thereby enabling the digging up of a Tongva sacred site and burial area. In a conversation with DFG staff, I was told that the permit would not have been granted had they known of the burials there (over 1000 destroyed). Was the knowledge of the burials hidden or not disclosed to CDFG--a material misrepresentation? The SRI archaeologist knew of the significant burials, having told me prior to the excavation that there was a large burial area there.
16. Please address another defect in the earlier Playa Vista EIR—the Programmatic Agreement (PA) between ACOE and Tongva tribal representatives was more than 10 years old, and was not properly updated or agreed to by current tribal members. Two of the original signators were deceased at the time of the purported updating. The PA was therefore not valid. The State Native American Heritage Commission wrote several letters to this effect, asking for a cease-and-desist on the burial destruction.
17. Please analyse earthquake and liquefaction potential in regard to proposed restoration, including tsunami risk and predicted sea-level rise.

18. The Ballona aquifer is a potential drinking water source—how might this be affected by proposed large-scale earthmoving, and possible salt-water intrusion
19. Dredging off Ballona Creek channel brings up highly toxic material. How will the wetlands and waters be protected and cleaned-up, particularly if such proposed large-scale earth-moving occurs?

Leslie Purcell

lesliepurcell@gmail.com  
310-570-6569

**Jones, Tanya**

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**From:** Kerry Rasmussen [<mailto:kerrymrasmussen@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 8:28 PM  
**To:** Keith linker; McCormick, Donna  
**Subject:** Re: Ballona Wetlands Restoration Project Comments

This is great! Thanks for sharing, Keith.

Take care,  
Kerry

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**From:** Keith linker <[keithlinker@gmail.com](mailto:keithlinker@gmail.com)>;  
**To:** <[Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)>;  
**Bcc:** <[kerrymrasmussen@yahoo.com](mailto:kerrymrasmussen@yahoo.com)>;  
**Subject:** Ballona Wetlands Restoration Project Comments  
**Sent:** Tue, Oct 23, 2012 6:40:02 PM

Good Morning Ms. McCormick,

In response to the attached flier, please find, also attached, my comment letter and 2 enclosures. I appreciate the opportunity to offer input on this amazing project and look forward to seeing additional progress toward restoration.

Regards,  
Keith Linker  
Playa Vista Resident

**Jones, Tanya**

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**From:** Gary Stickel [<mailto:dregarystickel@att.net>]  
**Sent:** Tuesday, October 23, 2012 4:20 PM  
**To:** McCormick, Donna  
**Cc:** [comdlawhead@dfg.ca.gov](mailto:comdlawhead@dfg.ca.gov); [daniel.p.swenson@us.ace.army.mil](mailto:daniel.p.swenson@us.ace.army.mil)  
**Subject:** Ballona Wetlands Restoration Project and Cultural Resources

Please see attached letter regarding the Ballona Wetlands Restoration Project.

Thank you,

E. Gary Stickel, Ph.D.  
Tribal Archaeologist  
Gabrielino Band of Mission Indians

October 23, 2012

**Ballona Wetlands Restoration Project**  
**LEAD AGENCIES:**  
**United States Army Corps of Engineers**  
**California Dept. of Fish & Game**  
c/o Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92816

Re: Ballona Wetlands Project  
cultural resources impacts

Dear Ms. McCormick,

It has come to my attention that the California Department of Fish & Game (CDFG) is planning large-scale grading and construction on the Ballona Wetlands Ecological Reserve for the purpose of "restoration." If due diligence is carried out with the proper agencies (SHPO, NAHC, etc.) it will be noted that cultural resources on this land have been negatively impacted within the past 25 years, with numerous prehistoric Native American remains disturbed in the process. Needless to say, local Native Americans consider this to be a sacred site.

Rather than proceeding with an overhaul of questionable necessity, it is strongly urged that the lead agencies explore less invasive restoration measures. In light of the extreme cultural sensitivity therein, the remaining integrity of the Wetlands Reserve should be preserved and protected. I thank you for your consideration in this matter.

Sincerely,

E. Gary Stickel, Ph.D.  
Tribal Archaeologist  
Gabrieleno Band of Mission  
Indians

**From:** L Terrell [<mailto:fingersfly@ca.rr.com>]  
**Sent:** Tuesday, October 23, 2012 3:34 AM  
**To:** McCormick, Donna  
**Subject:** Comments on the Scoping of Ballona  
**Importance:** High

Dear Ms. McCormick,

As you surely know, many of us who helped 'save' the Ballona Wetlands, do not want what we call 'industrial development' in the 600 acres. Over the 60 years since the outfill from the development of the Marina was dumped there, a whole ecosystem has developed, and what we have there already is quite amazing, if one takes the time to look, explore, see, enjoy, live with. One person who has helped document the great diversity, color, variety, and astonishing life that is the Ballona Wetlands, is Jonathan Coffin. If one just goes to his site on flickr "stonebird" you will find thousands! of beautiful photos of the ecosystem, and wildlife that make it their home. How can one go in there and bulldoze this life, these gifts from nature? If anyone in our midst knows these wetlands like the back of their hand, loves them as his own, (and they are our own', all of ours), it is Jonathan. Many of us don't believe in 'industrial development' of these wetlands. We didn't work so hard to save them, to have them bulldozed! That is just what we were against for them then, and are now, wanting very much to avoid any industrialized machinery, extreme re-making, large disturbances of the Lives and ecosystems, that have been doing fine, thank you.

We believe in gentle, hand tool type 'restoration' done carefully and s l o w l y, so as to disturb as little as possible the lives and homes of the abundance of plants, soils, critters, etc. that make Ballona their home. And each phase of any such 'restoration' as we envision, will be done with utmost caution and study of exactly What is There, from the tiniest ant/bug/spider/bacteria, to the largest mammals, which are probably the coyotes. I implore you to listen to those who have lived close by for many years, have walked the area for surely many thousands of days combined, and know it. These are the folks any agency that has designs on this area need to be consulting with, meeting with, listening to! This only makes common sense! One cannot learn about and get to know a piece of land by a 'survey', by spending days, even months in such an area. It takes Years to get to know and love and appreciate a piece of land and what is born, flowers, lives, dies, grows, spawns, nests, feeds, on it and in it.

No one who knows and loves a piece of land the way many of us do, could possibly be approving of literally bulldozing it! It feels/seems/is unconscionable to us. That is where many of us come from. Changing the 'character' of the place, at this point, just seems too much like man thinking he can come in and make better, something that now only exists on paper.

So I implore you to please listen, and listen carefully, to those who would not bulldoze. Take a walk with them, and see it how they do, learn all you can about what is there, before one shovel



of dirt is moved. Maybe then you can have/will begin to have, such a deep appreciation of what is already there, and maybe then there can be a real dialogue about how to proceed in as gentle and non-disturbing way as possible...over time, not in a bulldozing, destructive, violent way, but in a way that respects what is already there as much as possible. We have salt flats, we have 'prairie' where the great blue heron feed until they are a year old, where gray foxes make their homes, and thousands of other living things that have filled niches that those who would bulldoze could well know nothing of. Only the people who intimately know Ballona discovered the rare, and we thought forever gone, native flower popping up! Along with other discoveries over time.

Thank you for taking my words to heart, and know that we are not totally against 'restoration'. But it needs to be gentle, slow, and with human hands and tools, using the knowledge of the ones who best know and love this wonderful piece of land and open space within our midst.

Sincerely,  
Lola Verdurer Terrell  
Ballona advocate

**From:** Jack Neff [<mailto:jackneff01@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 4:55 PM  
**To:** [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil); [dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)  
**Cc:** McCormick, Donna  
**Subject:** John Ulloth - Scoping Comments-Ballona Wetlands

John Ulloth's paginated scoping comments re Ballona Wetlands are attached and as text below.

John Ulloth/ Ulloth Graphics  
181 East Culver Boulevard, C  
Play del Rey, California 90293

[donna.mccormick@icfi.com](mailto:donna.mccormick@icfi.com)  
[dlawhead@dfg.ca.gov](mailto:dlawhead@dfg.ca.gov)  
[daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil)

RE: **my official Scoping comments** to Scoping for Kill-It-To-Save-It Bulldozing Plans for La Ballona  
August 20, 2012 revised/ extended October 20, 2012  
**(Bold type indicates subject matter to be addressed in detailed responses to this Scoping)**

**On behalf of nature:** To whom it may concern: non-profit "partner" Santa Monica Bay "Restoration" Commission (SMBRC), Department of Fish & Game, California Coastal Commission, State Parks, and State of California

About a decade ago, I heard an outrageous debate on a L.A. area radio station over development vs. environment, both sides claiming to know best for the environment. The *place* that argument was over was La Ballona, the last large remaining refuge of wildness on Los Angeles' west side- I'd noticed on my way to the airport as one of the few places where traffic moved, the only place dark at night, the best place to hear a frog chorus... I concluded that was surely protected park land...

The first presenter in that radio debate said in essence: this was wasted land, it was going to be developed, and *if* environmentalists were smart, they'd work with developers to save those few westernmost acres worth saving. What? I couldn't believe I was hearing such pro-developer greenwashing tripe said out loud, on-air! Until another presenter argued it was *all* worth fighting for- to save it as a natural place.

I'd soon find out this was Los Angeles county's last, largest, & best surviving wetlands/ uplands complex, once ~3,000 acres in size, was tragically already "developed"- whittled down by that time to ~1,200 undeveloped acres, but not one inch of it had any protection of any kind from bulldozing & developer speculators intent on destroying it. That saving La Ballona was crucial for the survival of California's endemics (species that occur nowhere else), because only ~5% of the state's coastal wetland areas remained that hadn't been "developed" (almost always exclusively for human use). That saving the largest contiguous block of it, in as wild condition as possible, was essential for animals higher on the food chain (needing larger territories) to survive here. That Ballona was a critical stop for Monarch Butterflies, Snow Geese, & other migrating species. Along with many others, I got personally involved... community/ environmental/ church/ & political groups got involved... >126 groups formed a loose Coalition... to try to save La Ballona from bulldozers with press conferences, demonstrations/ movie pickets/ marches, street theatre, community education, a hunger strike- trying to find an pro-environmental way ahead, meeting with politicians, the would-be developers, & would-be tenants of Playa

Vista. Some local journalists risked their reputations to cover this "David vs. Goliath"-style story in a balanced way.

In the end, the city of Playa Vista got built despite community objection, killing plants & animals, sacrilegizing ancient native American gravesites- illegally removing the remains of hundreds of individuals to & from Santa Barbara- before reburying them elsewhere in Playa Vista, destroying remaining hydrology & habitat, and surrounding about half that remaining land. Playa Vista's sound-alarms do nothing to abate the endless burping of gasses that keep bubbling up, like they do at the Las Brea Tar Pits: Hydrogen Sulfate (stunting cognitive development in children), and leaking Natural gas that's already led to at least one death (a 1st-responder who illogically lit a match in an enclosed area that smelled of gas)- Natural gas that The Gas Company injects back into the salt domes beneath La Ballona for cheap-but-leaky storage. Playa Vista's earth movers heaped earth then ran over/ smashed possibly hundreds of capped gas/ oil well heads from the 1920's-1930's to make building pads. The Frenemies sold out to the developers, taking (a never-disclosed amount of) money to bless Playa Vista & defend its developers whenever they're attacked (to this day). The State bought half of what was left, paying way too much from the State's coffers (which only enabled developers cash to build quicker, when much of this land was wet & unbuildable anyway, and bank financing was otherwise hard for them to get)...

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**SMBRC is incompetent, and the process SMBRC started is already wrong; REMOVE THEM FROM THIS PROJECT AND IT'S LIKELY TO COLLAPSE FOR GOOD: Should the public idly stand by now that SMBRC/ other Frenemies of Ballona are trying to bulldoze & radically reshape the Public's 600 acres- "to kill it to save it" in the name of nature-annihilating "restoration"?... these same acres we fought to save from developers' bulldozing "Save it! Don't Pave It!"... when SMBRC's precedents (Steal-the-Bay) and its allies did little (or threw up obstacles) to save Ballona in the first place? SMBRC's "Kill it to save it" mentality, or Playa Vista's apologists' "Only 125 acres are worth saving", or developers' "Road lane expansion is necessary for all the traffic that's coming" (Hello! Frogs don't drive cars!) are among many incomprehensible nonsequiturs (the watershed is polluted; we must bulldoze downstream to clean it up), lies ("we don't have any plan yet"), and mis-conclusions based on mis-understandings (delta meander shapes observed at one point in time means that building fixed, randomly-curved concreted channels would be good at Ballona) propagated about nature ("It's so degraded/ the invasives so bad that nothing in there is worth saving") & coastal wetlands generally (big salty holes for water storage are top priority (yet cleaning up or saving natural habitat at Marina del Rey is avoided, the Marina a bigger, saltier hole than ever existed in historic times that shares Ballona Creek's inlet/ outlet)... Since the State paid a record \$139,000,000 per acre for these lands, doesn't that mean they extremely valuable in the condition they are in? This should completely disqualify SMBRC from doing anything at La Ballona, writing or sponsoring any of the Restoration Alternatives; the Community should be allowed to write at least half the total number of Final Alternatives, especially those emphasizing "Non-Bulldozer Phased Management," "Wildlife-Friendly," and "Historic" Alternatives; combining elements of these will automatically be more humane than the disasters that follow:**

Having an argument about the highest & best use of land is one thing, having ASYMMETRICAL power & control of bulldozers & State backing to destroy LAND forever is another; SMBRC should be ineligible, particularly & completely disqualified, removed from any coastal or wetlands restoration project based on its track record:

And by "bulldozers/ bulldozing" I mean power & equipment emblematic of any mechanization regime for "industrial-scale habitat restoration;" this scale is almost always appropriate for permanently destroying/ altering/ degrading land; and almost never appropriate for restoring land back to natural conditions! Whether a Developer or Greenwashing "environmentalist" is in the cab of the bulldozer makes no difference to the flora & fauna being squished & maimed; widespread death is the same result. Having SMBRC, its predecessors, & allies in the driver's seat already has led to environmental crimes that are completely unacceptable & inappropriate for these 600 acres:

- 1) The creation of a toxic drain, funneling runoff from Playa Vista's parking lots & rooftops into a "Freshwater (sic) Marsh"- spewed into stolen wetlands (not internally: east of Lincoln, but greedily: west of Lincoln Boulevard), cutting down La Ballona's oldest & best mature native

willow grove (habitat needed to attract rare/ endangered birds) to do what?- plant willows! This is the "restoration" model of SMBRC, designed for & by humans; this may be professional landscaping, but THIS IS NOT restoration! Nature knows best, and we'd best get ourselves out of the way.

2) The total annihilation of the Malibu Lagoon west of the main channel of Malibu Creek, wrecking 3 bridges used as outdoor classrooms (over arms of a lagoon dug in 1983) and shortest route for Coastal (beach) Access. Of the many plants & animals (2 endangered species, & ~200 species of birds alone) that used Malibu Lagoon, nearly nothing lives there today, and won't for many years- nothing except bulldozers, and maybe MRSA bacteria (SMBRC was afraid to test for!) Both are environmental crimes, senseless "man-made" catastrophes based on ignorance and miscategorization of wetlands (Malibu & La Ballona Lagoons were seasonally-closed & brackish, not full-time-tidally-open deep salty estuary SMBRC is trying to build at Malibu) both will now never be the same. While the State is "under water" financially, the rape of Malibu Lagoon drained millions of dollars to execute wildlife, in a State Park; this is just criminal. The byproduct of a fatally flawed analysis (that high-organic, low-oxygen, brackish water that ducks use doesn't belong in coastal lagoons), and that alleged problems the rape of Malibu Lagoon intended to cure won't recur (where do fish & birds go to the bathroom?) Meanwhile, the rape of Malibu Lagoon did nothing to remove the upstream, human-caused sources of water pollution, or wildlife barriers (removal of Rindge Dam to give steelhead & other

Page 3

fish a chance at upstream habitat as far as Ahmanson Ranch wasn't included); the same would be true at La Ballona.

As a foretaste of the "attractive nuisance" would happen all over Ballona, I've observed wide swaths recently cut through the plant material for the on-site coring operations (I believe this was done in support of this proposal) have opened avenues for unauthorized vehicle forays, trash & furniture dumping, and homeless encampments deeper in the wetlands. The width is excessive- looks like a road; Gas Company trucks seldom leave behind such an opening, or ensure locked gates close their driveways.

**THE TOLL ON NATURE TAKES ITS TOLL ON THE PUBLIC:** Malibu Lagoon was ~12 acres... La Ballona is ~600 acres but headed toward 0 if bulldozers have their way; there is just no "somewhere else" for coastal wetland dependent species in California to go- especially brackish (non-salt) wetlands- have almost all been wiped out! The coastal human community (that appreciates nature) in Malibu is exhausted, confused, angry, and broke from fighting these battles- that ultimately wind up in court out of the public's reach, because only a court ruling can knock sense into the thick skull of determined developers, and no level of government can really be trusted to keep tax money from being squandered, and keeping electeds constantly reminded to protect the environment,

**Once in the cab of the bulldozer, the developers of what's now Playa Vista** (City of Soviet-style prison blocks with neo-historic facades painted on, a future ghost town after the next large earthquake/ tsunami/ or after the state realizes it can't pay claims from children getting brain damage from hydrogen sulfide & Natural gas leaking from the salt dome under Ballona/ south Marina) **could not be trusted... neither can SMBRC be trusted.**

"There is no right way to do a wrong thing!" SMBRC is now asking for the public's participation in the process of designing a "restoration" of acreage of La Ballona, but this is "putting the cart before the horse": Instead of producing a Purpose & Need, then Scoping, SMBRC has been disingenuous: hasn't officially "shown us their cards." During the scoping phase, SMBRC staffers denied in plain English that any "fix is in", or that SMBRC already has a plan. Without a doubt this is a lie: a range of at least 7 preliminary plans from bad to worse are already prepared (tellingly, a rough aerial sketch labelled "5A" illustrated a hardscaped Ballona Creek meander on an easel during SMBRC's initial August Scoping meeting- oops!) Choosing or blessing any of those pre-Scoping schemes cannot be allowed- if Malibu Lagoon's un-credible environmental documents were any guide, they are 1) Alternatives of unmitigatable damage to the environment ranging from bad to worse, 2) the current Coastal Commission's precedent for this will be to reject a pro-environmental compromise designed by

scientists: like one that met SMBRC's flawed Purpose & Need, retained direct coastal access, phased-in very small-scale channel dredging to allow native species to survive with room to move around its impacts, and retain a balance of seasonally brackish & seasonally salty wetlands. At the Scoping, SMBRC's staff urged us to put down everything we were thinking on an 8-1/2" x 11" paper for inclusion (that's enough?), but other staff told us right away there are several things "off the table": removing any roads, removing any structures, taking the Gas Company, acquiring any more land from Playa Vista or elsewhere. While their unwitting, unselfconscious, unvarnished honesty was delicious (as it's as surely a portal into SMBRC's covert "restoration" plans, as it is an index to its allied backers!) SMBRC might consider *professional* staff/ staff behavior next time...or not. There were at least 2 such "loose cannon" staffers (who also used the word "I" frequently at the Scoping!) But this was supposed to be Public Scoping Phase, not Public Self-Editing Phase: it is our job, not SMBRC's! to set the parameters. Of course, these "off the table" ideas staff mentioned would be the *top implementation priorities* of anyone designing Real Restoration (road traffic alone being the #1 cause of ~3,000 annual wildlife fatalities at Ballona). So I really can't help SMBRC because they're not really interested in hearing what the public has to say...

What kind of appropriate things a *qualified* lead agency should be doing *if Real Restoration was "on the table"*: (or more appropriately, because it's already so shriveled from its original size, Ongoing Management) for LaBallona:

Page 4

1) "First, do no harm." Using this Precautionary Principle would have stopped the rape of Malibu Lagoon all at once, cold.

1A) "The first rule of intelligent tinkering is to save all the pieces," said Aldo Leopold. Just leave Ballona alone- for nature to continue its work- is not the worst thing for Ballona. Leaving it alone may be the best thing, yet somehow so hard to understand/ think straight once the bulldozer's keys have been turned, and bulldozer power's in *anyone's* hands.

On the Intelligent Tinkering front, I know slow, by-hand restoration can work because I've done it- part of the team managing "The Big Plant-In", a multi-year (2008-present) all-volunteer community restoration on the east bank of Grand Canal Lagoon on the east bank just south of Washington Boulevard Bridge, Venice. And I've tried to grow other beneficial Ballona Natives (like Ballona-native narrow-leaved Milkweed used by migrant & resident Monarch Butterflies) at our nurseries. Though not perfect, this tidally-influenced canal bank site (near the northern end of La Ballona's natural historic channel), was replanted with a self-sustaining community of tall native shrubs, wildflowers, herbs & grasses, the plant palette professionally designed, sourced & grown from Ballona-native genetics. Stored & growing in plant nurseries at 2 nearby schools, prescribed erosion control & native plants were placed at the lagoon- not by bulldozers- but all by volunteers using hand-tools: neighbors, school kids & collegians, service organizations, church groups, political campaigners... even foreign tourists, that generates community buy-in bulldozing never does. Dense non-native myoporum bushes that housed homeless people are gone, as are broken concrete slabs, Chilean pepper trees, castor bean, iceplant, annual garden flowers planted by under-educated locals... Existing native plants & grassy areas already there were retained, which paid off during a planting in 2010 when our volunteers discovered a mallard & nest under one of the retained shrubs on the site (she came back after about 1/2 an hour, successfully hatched & raised that brood). I've also noticed plant succession after we put the natives back in many areas at the Big Plant-In. From our mostly-random planting, nature sorted things out: coyote bush engulfed surrounding smaller plants. Telegraph Weed & Coast Buckwheat at the highest & northern half gave way to Goldenbush, while pickleplant dominated closest to the (tidally-influenced) water's edge. Everlasting & Spiny Rush were overtaken by larger plants many places, but survived where other plantings perished in poor, gravelly soil. Weeds which plagued us from the 2nd year (mustard & non-native mallow) diminished, now choked out in most places by dense, self-seeding natives.

1B) Since the rape of Malibu committed in June 2012, the State would be foolish not to insist there be no project & no money-wasting at La Ballona or any other Southern California wetlands complex *Unless & Until* SMBRC/ State Parks/

Project contractors prove their ability to quickly grow back/ rapidly re-attract native, rare, & endangered species to re-inhabit to a thriving Malibu Lagoon. It took decades for nature to reclaim Malibu Lagoon and progressively bring natural diversity back since bulldozers carved lagoon channels out of ball fields built over earlier CalTrans' spoils (dumping grounds) in 1983. Even if this works and Malibu Lagoon were to look & function like it did before June 2012, supporting the same number of plant & animal species within say 2 years (this would be a miracle), this is not justification to bulldoze everything all at once; only small parts of La Ballona should be restored at a time, and experimentally, over a period of years in case anything goes wrong, taking no more than say 10% of a habitat or species so there are no extirpations at La Ballona. The animal capturing effort at Malibu was pathetic. And large & numerous quantities of native plants could have been boxed & kept at offsite nurseries for regrowing Malibu Lagoon quickly, but this was not done. Bulldozing everything at the same time -as if laying the foundation for an inanimate warehouse building- to instantly achieve all elements shown in the "ICF" plan is "magical thinking" that will not work and must not be allowed in any scheme. Do you know where Burrowing Owl habitat is for instance? I'm told they no longer live full-time in Ballona as they did until recently, but now only visits seasonally; what bulldozer power-take-off (PTO) attachment is going to dig enough owl-acceptable replacement rodent holes for a sustainable population of them to live in after you've caved in all the rodent holes with bulldozers?

1C) Instead, SMBRC's likely to find catastrophic lagoon destruction encourages catastrophic foreign & weedy species invasion. Evidence of this is found at the industrial-scale "restoration" on west bank of the severed Ballona Lagoon in the Marina Peninsula (in City of LA, north of Lighthouse Bridge): as part of its "restoration", its 'genius' designers disturbed much of the upper canal bank soil & piled wood chip mulch on top (as lagoon soils are often alkaline, this probably tipped topsoil chemistry sharply toward

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acidic). This spring, castor bean and other weeds exploded, growing more thickly than ever, choking & towering over the native plants. But this invasion did not happen in adjacent areas south of Lighthouse bridge, where discovery & confirmation of the extremely rare Orcutt's Yellow Pincushion prevented both the scraping & mulching, as well as preventing the explosion of weeds. (For Malibu, SMBRC/ State Parks originally wanted to poison anything that escaped bulldozing with Agent Orange derivative "Round-up", but verbally removed it on the spot from the Malibu bulldozing hearing during the 2010 Coastal Commission due to audience outrage... yet had the proposers read the manufacturer's label, Round-up's prohibited from use anywhere near open water-courses).

2) FOR ECOLOGICAL HEALTH, CUT BACK ON SALT! We've already dug more salty holes (= harbors & channels) along the coast than nature'll ever need! So where is the apparent "need" for stormwater storage coming from? Southern California harbors & channels have displaced more brackish wetlands for salty- than ever existed in historic times. Nature has no need for more of this, so (Army Corps'/ L.A. County- driven) counterproductive element of floodwater storage posing as natural restoration should be scrapped. Instead, nature needs more of the brackish wetlands over the salty.

2A) DOES TABULA RAZA WORK? PROVE IT FIRST! *Besides* restoring Malibu Lagoon to pre-rape conditions, *before* running away to wreck Ballona on a large scale, the applicants' contractors should be required to *demonstrate they can "play God" for nature's benefit offsite*: Let the proposers prove the truth of their abiding faith in Tabula Raza (clean slate/ clean sheet of paper/ as if there was nothing there before) to those of us who don't believe it: Buy & close a distressed shopping center, excavate 2-12 acres of its parking lot, filling the bottom with a pond liner and salt water (with a pump for emergency drainage) to mimic the water column at La Ballona. Then, turn the contractors' bulldozers loose, filling the hole from sediment layers up to topsoil to plants & predators on top- to build the best mature brackish wetland & surrounding uplands money can buy. Setting the timeclock at "zero", and verifying their water column balancing success with regular corings, let's find out, if it can be done, how many years it will take to build a lush brackish wetland over salt table, and compare the quality of the resulting nature life support system. Let the contractors demonstrate their ability to build seasonal vernal pools, salt panne, crusty in the dry season, that support specialized animal communities, alkali flats, and stable drainage channels with bulldozers. Let them build vernal pools (recreating sediments laid down over millennia, & stock them with native seedbanks using bulldozers) like those lost to prior habitat destruction (such as the lost ones existing on the Ballona- adjacent 75 acre Westchester Blufftop field

west of Lincoln once used by raptors, now blanketed by contractors' houses. I'll predict the conclusion now: Recreating & balancing brackish wetlands above salty with bulldozers may be well-nigh impossible. If it even works, bulldozing champions will admit bulldozers & industrial-scale techniques don't do a good job, and most of the successful work will have been done slowly by hand. Habitat quality & species population & diversity will not match the original, and may be self-sustaining. Every honest bulldozer champion will concede minor repairing of the original La Ballona would be much easier. But this Tabula Raza project should be a mandatory prerequisite before bulldozing one inch of Ballona.

2A) Not one more inch of salt-water habitat type is needed! The creation of Marina del Rey itself (c. 1958-60) displaced 804 mostly-brackish acres, bringing far more salty water intrusion deeper & further inland than ever existed before Europeans arrived; (spectacular wetland losses at what's now Dana Point Harbor also comes to mind... that, to add insult to injury, also cost recreational users an irreplaceable surf break...)

2B) Global warming/ rising sea levels are on the way (3'- 4' higher by mid-21st Century) this means salt water is moving inland anyway. Farmers who grew celery, possibly beans there allegedly dumped "a couple feet on soil" on parts of Ballona in the past (those who use this as a hammer to justify bulldozing everything can't tell me where it is, where it came from (most likely native local soil dredging from other parts of Ballona) or how deep!) But what we actually need to do with that fill now is: Nothing! To wait! Admit our hubris & restrain our human urge to fool with it- if we just leave nature to work out the plant palette & its animals there, it will be *just right* as the sea levels rise over the next 40 years.

2C) The north Marina's polluted "Duck Pond" needs massive help: (unbelievably, it drains through to Mother's Beach!) including re-conversion to native plantings; this is another place for limited wetlands

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restoration experimentation!

### 3) SPEND MONEY ON ACQUIRING MORE LAND FOR BALLONA INSTEAD OF WASTING MONEY TO DESTROY WHAT WE'VE GOT:

Because so much of historic Ballona has already been destroyed (from ~3,000 acres, down to ~600), and wildness succeeds best (higher levels of the food chain) with the largest blocks of contiguous land possible, direct all efforts to acquire State funding to "Complete the Park": Add as many land parcels as possible for wild native plants & animals inside historic Ballona. Examples of this include a parcel of land at the north end of the southern remnant of Ballona Lagoon in Playa del Rey; currently within sight of its northern half, cut off by construction of Ballona Creek channelization (c.1938-40) Marina del Rey that extends to Venice. This land is for sale, and should be acquired by the state so this eminently "buildable" land doesn't become a 40' high wall of development that cuts off this viewshed. Another example is a long strip of land- a ~40' wide railway right of way adjacent to the southwest edge of western end the 90 Freeway that contains wetland (ditch with wetland plants) & upland species; if the Toyota dealership that owns it decides to culvert & pave it to maximize parked cars (the neighbors don't want this), Ballona plants & animals (like frogs that sing there, wading birds that eat them) would lose their habitat forever. Likewise, the retail garden center to the northeast, between the lanes of the 90 freeway, along with all other unpaved pieces within the CalTrans right of way should be merged or acquired to raise native plants for CalTrans & Coastal restorations, or made wild to extend the reach of native habitat... Unnecessary, useless, and destructive of native sites in the first place, travelers of the 90 freeway have nowhere to go; like the beneficial removal of San Francisco's Embarcadero Freeway, its complete dismantling west of the I-405 would save highway maintenance dollars, quiet our neighborhoods, be a great benefit to nature in the Ballona Valley, and never be missed in the future.

### 4) LAUNCH A COMMUNITY SUPPORT & EDUCATION program to enlist the public's help raising & maintaining sustainable populations of rare & native species from local genetics with organic methods in containers or yards.

I know the people of greater Ballona are interested in helping nature communally (group projects like the Big Plant-In) & individually (asking for native planting advice). This could extend to the greater Ballona valley as well (for cleaning projects on upstream watershed):

4A) Research and document Ballona Plant Lists & Ranges with coded & separate lists for: Recently extinct/ extirpated (last 100 years)/ Rare/ Endangered Native, Natives, Native American Plants (yerba mansa, tree tobacco, chia, etc.) Non-Native Beneficials (Anise, for its flower clusters that support butterflies.) Research and document Ballona Plant Lists & Ranges with coded & separate lists for: Invasive Pest Plants (Pampas Grass whose seed can blow 17 miles), & Weedy plants (non-native mustards & radish). Share Sourcing, Propagation, & Eradication methods for weedy & pest plants. Issues (ex.: using local biotic genetic material, & issues when it can't due to extirpation)

4D) Develop strategies to help nature offsite: (ex. planting native Narrow-leaved milkweed for Monarch butterflies. Jim K., one of our admirable neighbors on the Westchester Bluffs raises mass quantities of another species of milkweed plant in support of Monarch butterflies; he hosts resident & migrant populations around his yard.) (El Segundo Blue Butterflies. Bees or other "beneficial insects" (like pollinators or sensitive indicators of wild flora health). Hummingbirds. Other Wildlife-support: Cavity boxes (for bats, or bluebirds the Audubon Society wants to bring back) to make up for the loss of cavities in large-trunked trees. Feeders. Birdbaths. Reclaim & protect as much as possible of La Ballona real estate dominated by humans, focusing maximum benefits on species most at risk.

4E) Expand Education opportunities: Show tableau of plant groupings from each range type (from dunetop prairie to alkali flat), for use in grouping similar-need plants for gardeners, or educational garden (a long bed at area schools could sample a cross-section of Ballona's dune, lagoon, mineral flats, riparian, consolidated sandy bluff, prairie blufftop, vernal pools.)

5) GET THE WRONG PEOPLE & THEIR BAGGAGE OUT & the RIGHT PEOPLE IN.

5A) Homeless camps out of Ballona: I have nothing against homeless people- some are my friends. But the lone ranger who works Ballona has 3 or 4 other park properties to manage... For the time she's seen here, Ballona is not her favorite, and she doesn't like to patrol on foot. Slow- or No- action is taken on reports of chronically-occupied sites occupied by homeless individuals, small group camps,

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& campfires (which also seem to attract large quantities of discards blanketing the ground that could literally send any present and future plan for Ballona up in smoke). More staff and a different mandate is needed to cover Ballona ground, and the homeless problem can only be solved by getting out of the truck for confrontation if necessary, & prompt eviction.

5B) BUST the dumpers: Tracking serial numbers on discarded televisions for instance can lead to the former owner, or unauthorized dumper, who can pay high fines or perform community service (hauling others' dumped junk) that can leverage the cleanup and spread the word that free dumping in Ballona is over.

5C) BRING IN RESEARCHERS & OBSERVERS: This is the way to conduct Scopings: by authorizing in appropriate people with minimal impact, to maximize beneficial knowledge of Ballona.

5D) CLEAN OUT THE RESERVE: A number of groups who worked hard to save Ballona used to do tours, cleanups, & abatement of invasives have been locked out of Ballona for several years by the Frenemies, who use this public land as their own estate; this is public land, their locks need to be cut, and their defacto taking needs to be reversed ASAP; an one-site storage container of theirs is in prime habitat, and needs to be hauled away now.

5E) BUILD THE VISITOR CENTER OFF THE RESERVE! The land area is so shrunken, we need every inch to work for nature; like all parkland, plopping a large building in the middle of the space- surrounded by a parking lot that will inevitably expand, is no good! At the east end of Playa del Rey are several building lots that might work well.

5F) FEND OFF PROPERTY ATTACKS ON THE RESERVE: An unauthorized gravel parking lot in Playa del Rey north of Gordon's Market & east the Matilla Center sits entirely on Ballona reserve lands. An unauthorized Friday carwash business conducts business there with hoses in the parking lot behind the Matilla Center, operating entirely on the State reserve; not only does the State receive no income from this, the car wash soap, dirt, and automotive fluids sink through the gravel into the wetlands; where's the EIR for that? Local architect Craig Fraulino publicly proposed using State lands (for free) to build an alley/ parking to serve the north "backs" of Culver Boulevard businesses, converting adjacent Titmouse Park (Los Angeles City) for a parking lot, and building a multi-storey parking garage over the



unauthorized gravel lot to accommodate businesses and Reserve visitors. As property lines begin immediately at the "backs" of these buildings, this is entirely on State lands. Several of these businesses have already dumped gravel on State Lands anyway- a defacto unauthorized alleyway for which they pay nothing... and because when nothing is done, the assumption is the owner (in this case, the State) doesn't care. When it was pointed out they haven't paid any money for this land, it's not for sale, their schemes have no scientific standing, they had no answer. Really, this property line should be immediately surveyed, fenced, closed, and lands restored by the State (there is a seasonal wetland just north of the buildings, & Silvery legless lizards have been found at the backs of the buildings). The ICF plan shows a black area along the backs of these businesses; the Legend describes it as "Other;" there is another large black block at the southe-central edge of the site where below The Gas Company property; this cannot go unexplained.

6) PROGRESSIVE Transportation NOW! Another large black mark slashing through the middle of La Ballona ICF map is the Culver Boulevard right-of-way, the main killing-grounds of La Ballona wildlife, whose speed limit is soon to be raised. Progressive Transportation here means: building a "complete street", upending the dominance of cars everywhere, and reordering/ inverting our priorities to 1) Walking 2) Biking 3) Transit 4) Automobiles. Opportunities to apply this at La Ballona should be integral to nearly every Alternative, as they stop the slaughter of the *prime thing* people would visit want to see: WILDLIFE! First, put a stop sign at Culver & Pershing to slow the cars down. Convert 2 traffic lanes eastward from Culver Boulevard to parking lanes for Ballona visitors. 2nd, Sawcut & remove the foolish "Culver Loop." Divert all eastbound car traffic on Culver onto Jefferson with a row of steel bollards (only Fire & Police Departments can open), and another row of same bollards closing westbound Culver at the 91 freeway ramps. Sawcut & remove all but 1 lane (= 2 bike lanes) of existing paving between these 2 points; this is the new 2-way Culver bike trail. On the center top of the bridge over Lincoln, build a bike service station with water & parts, and binoculars for wildlife observation. 3rd, Provide a decomposed granite (d.g.) trail next to the bike trail. Rebuild the Los Angeles Pacific Railway (later Pacific Electric) on its historic alignment to Playa del Rey as a slow-moving, quiet

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platform to observe wildlife from. Rebuild its bridge spanning its existing Art Deco abutments over Lincoln Boulevard. Store the rail cars (build copies of the ones at the Port of LA, built for the Waterfront Red Cars in San Pedro, which are exactly correct) into EZ storage (North side of Culver Boulevard, where it can meet the Culver City bus there. Skip the sight of roadkill, and enjoy the wildlife experience.

On behalf of nature- who knows best,

(John Jay Ulloth)

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RE: **MY OFFICIAL SCOPING COMMENTS** to Scoping for Kill-It-To-Save-It Bulldozing Plans for La Ballona  
August 20, 2012 revised/ extended October 20, 2012  
**(Bold type indicates subject matter to be addressed in detailed responses to this Scoping)**

**On behalf of nature:** To whom it may concern: non-profit "partner" Santa Monica Bay "Restoration" Commission (SMBRC), Department of Fish & Game, California Coastal Commission, State Parks, and State of California

About a decade ago, I heard an outrageous debate on a L.A. area radio station over development vs. environment, both sides claiming to know best for the environment. The *place* that argument was over was La Ballona, the last large remaining refuge of wildness on Los Angeles' west side- I'd noticed on my way to the airport as one of the few places where traffic moved, the only place dark at night, the best place to hear a frog chorus... I concluded that was surely protected park land...

The first presenter in that radio debate said in essence: this was wasted land, it was going to be developed, and *if* environmentalists were smart, they'd work with developers to save those few westernmost acres worth saving. What? I couldn't believe I was hearing such pro-developer greenwashing tripe said out loud, on-air! Until another presenter argued it was *all* worth fighting for- to save it as a natural place.

I'd soon find out this was Los Angeles county's last, largest, & best surviving wetlands/ uplands complex, once ~3,000 acres in size, was tragically already "developed"- whittled down by that time to ~1,200 undeveloped acres, but not one inch of it had any protection of any kind from bulldozing & developer speculators intent on destroying it. That saving La Ballona was crucial for the survival of California's endemics (species that occur nowhere else), because only ~5% of the state's coastal wetland areas remained that hadn't been "developed" (almost always exclusively for human use). That saving the largest contiguous block of it, in as wild condition as possible, was essential for animals higher on the food chain (needing larger territories) to survive here. That Ballona was a critical stop for Monarch Butterflies, Snow Geese, & other migrating species. Along with many others, I got personally involved... community/ environmental/ church/ & political groups got involved... >126 groups formed a loose Coalition... to try to save La Ballona from bulldozers with press conferences, demonstrations/ movie pickets/ marches, street theatre, community education, a hunger strike- trying to find an pro-environmental way ahead, meeting with politicians, the would-be developers, & would-be tenants of Playa Vista. Some local journalists risked their reputations to cover this "David vs. Goliath"-style story in a balanced way.

In the end, the city of Playa Vista got built despite community objection, killing plants & animals, sacrilegious ancient native American gravesites- illegally removing the remains of hundreds of individuals to & from Santa Barbara- before reburying them elsewhere in Playa Vista, destroying remaining hydrology & habitat, and surrounding about half that remaining land. Playa Vista's sound-alarms do nothing to abate the endless burping of gasses that keep bubbling up, like they do at the Las Brea Tar Pits: Hydrogen Sulfate (stunting cognitive development in children), and leaking Natural gas that's already led to at least one death (a 1st-responder who illogically lit a match in an enclosed area that smelled of gas)- Natural gas that The Gas Company injects back into the salt domes beneath La Ballona for cheap-but-leaky storage. Playa Vista's earth movers heaped earth then ran over/ smashed possibly hundreds of capped gas/ oil well heads from the 1920's-1930's to make building pads. The Frenemies sold out to the developers, taking (a never-disclosed amount of) money to bless Playa Vista & defend its developers whenever they're attacked (to this day). The State bought half of what was left, paying way too much from the State's coffers (which only enabled developers cash to build quicker, when much of this land was wet & unbuildable anyway, and bank financing was otherwise hard for them to get)...

**SMBRC IS INCOMPETENT, AND THE PROCESS SMBRC STARTED IS ALREADY WRONG; REMOVE THEM FROM THIS PROJECT AND IT'S LIKELY TO COLLAPSE FOR GOOD: Should the public idly stand by now that SMBRC/ other Frenemies of Ballona are trying to bulldoze & radically reshape the Public's 600 acres- "to kill it to save it" in the name of nature-annihilating "restoration"?... these same acres we fought to save from developers' bulldozing "Save it! Don't Pave It!"... when SMBRC's precedents (Steal-the-Bay) and its allies did little (or threw up obstacles) to save Ballona in the first place? SMBRC's "Kill it to save it" mentality, or Playa Vista's apologists' "Only 125 acres are worth saving", or developers' "Road lane expansion is necessary for all the traffic that's coming" (Hello! Frogs don't drive cars!) are among many incomprehensible nonsequiturs (the watershed is polluted; we must bulldoze downstream to clean it up), lies ("we don't have any plan yet"), and mis-conclusions based on mis-understandings (delta meander shapes observed at one point in time means that building fixed, randomly-curvy concreted channels would be good at Ballona) propagated about nature ("It's so degraded/ the invasives so bad that nothing in there is worth saving") & coastal wetlands generally (big salty holes for water storage are top priority (yet cleaning up or saving natural habitat at Marina del Rey is avoided, the Marina a bigger, saltier hole than ever existed in historic times that shares Ballona Creek's inlet/ outlet)... Since the State paid a record \$139,000,000 per acre for these lands, doesn't that mean they extremely valuable in the condition they are in? This should completely disqualify SMBRC from doing anything at La Ballona, writing or sponsoring any of the Restoration Alternatives; the Community should be allowed to write at least half the total number of Final Alternatives, especially those emphasizing "Non-Bulldozer Phased Management," "Wildlife-Friendly," and "Historic" Alternatives; combining elements of these will automatically be more humane than the disasters that follow:**

**HAVING AN ARGUMENT ABOUT THE HIGHEST & BEST USE OF LAND IS ONE THING, HAVING ASYMMETRICAL POWER & CONTROL OF BULLDOZERS & STATE BACKING TO DESTROY LAND FOREVER IS ANOTHER; SMBRC SHOULD BE INELIGIBLE, PARTICULARLY & COMPLETELY DISQUALIFIED, REMOVED FROM ANY COASTAL OR WETLANDS RESTORATION PROJECT BASED ON ITS TRACK RECORD: And by "bulldozers/ bulldozing" I mean power & equipment emblematic of any mechanization regime for "industrial-scale habitat restoration;" this scale is almost always appropriate for permanently destroying/ altering/ degrading land; and almost never appropriate for restoring land back to natural conditions! Whether a Developer or Greenwashing "environmentalist" is in the cab of the bulldozer makes no difference to the flora & fauna being squished & maimed; widespread death is the same result. Having SMBRC, its predecessors, & allies in the driver's seat already has led to environmental crimes that are completely unacceptable & inappropriate for these 600 acres:**

- 1) The creation of a toxic drain, funneling runoff from Playa Vista's parking lots & rooftops into a "Freshwater (sic) Marsh"- spewed into stolen wetlands (not internally: east of Lincoln, but greedily: west of Lincoln Boulevard), cutting down La Ballona's oldest & best mature native willow grove (habitat needed to attract rare/ endangered birds) to do what?- plant willows! This is the "restoration" model of SMBRC, designed for & by humans; this may be professional landscaping, but THIS IS NOT restoration! Nature knows best, and we'd best get ourselves out of the way.**
- 2) The total annihilation of the Malibu Lagoon west of the main channel of Malibu Creek, wrecking 3 bridges used as outdoor classrooms (over arms of a lagoon dug in 1983) and shortest route for Coastal (beach) Access. Of the many plants & animals (2 endangered species, & ~200 species of birds alone) that used Malibu Lagoon, nearly nothing lives there today, and won't for many years- nothing except bulldozers, and maybe MRSA bacteria (SMBRC was afraid to test for!) Both are environmental crimes, senseless "man-made" catastrophes based on ignorance and miscategorization of wetlands (Malibu & La Ballona Lagoons were seasonally-closed & brackish, not full-time-tidally-open deep salty estuary SMBRC is trying to build at Malibu) both will now never be the same. While the State is "under water" financially, the rape of Malibu Lagoon drained millions of dollars to execute wildlife, in a State Park; this is just criminal. The byproduct of a fatally flawed analysis (that high-organic, low-oxygen, brackish water that ducks use doesn't belong in coastal lagoons), and that alleged problems the rape of Malibu Lagoon intended to cure won't recur (where do fish & birds go to the bathroom?) Meanwhile, the rape of Malibu Lagoon did nothing to remove the upstream, human-caused sources of water pollution, or wildlife barriers (removal of Rindge Dam to give steelhead & other**

fish a chance at upstream habitat as far as Ahmanson Ranch wasn't included); the same would be true at La Ballona.

As a foretaste of the "attractive nuisance" would happen all over Ballona, I've observed wide swaths recently cut through the plant material for the on-site coring operations (I believe this was done in support of this proposal) have opened avenues for unauthorized vehicle forays, trash & furniture dumping, and homeless encampments deeper in the wetlands. The width is excessive- looks like a road; Gas Company trucks seldom leave behind such an opening, or ensure locked gates close their driveways.

**THE TOLL ON NATURE TAKES ITS TOLL ON THE PUBLIC:** Malibu Lagoon was ~12 acres... La Ballona is ~600 acres but headed toward 0 if bulldozers have their way; there is just no "somewhere else" for coastal wetland dependent species in California to go- especially brackish (non-salt) wetlands- have almost all been wiped out! The coastal human community (that appreciates nature) in Malibu is exhausted, confused, angry, and broke from fighting these battles- that ultimately wind up in court out of the public's reach, because only a court ruling can knock sense into the thick skull of determined developers, and no level of government can really be trusted to keep tax money from being squandered, and keeping electeds constantly reminded to protect the environment,

Once in the cab of the bulldozer, the developers of what's now Playa Vista (City of Soviet-style prison blocks with neo-historic facades painted on, a future ghost town after the next large earthquake/ tsunami/ or after the state realizes it can't pay claims from children getting brain damage from hydrogen sulfide & Natural gas leaking from the salt dome under Ballona/ south Marina) **could not be trusted... neither can SMBRC be trusted.**

**"THERE IS NO RIGHT WAY TO DO A WRONG THING!"** SMBRC is now asking for the public's participation in the process of designing a "restoration" of acreage of La Ballona, but this is "putting the cart before the horse": Instead of producing a Purpose & Need, then Scoping, SMBRC has been disingenuous: hasn't officially "shown us their cards." During the scoping phase, SMBRC staffers denied in plain English that any "fix is in", or that SMBRC already has a plan. Without a doubt this is a lie: a range of at least 7 preliminary plans from bad to worse are already prepared (tellingly, a rough aerial sketch labelled "5A" illustrated a hardscaped Ballona Creek meander on an easel during SMBRC's initial August Scoping meeting- oops!) Choosing or blessing any of those pre-Scoping schemes cannot be allowed- if Malibu Lagoon's un-credible environmental documents were any guide, they are 1) Alternatives of unmitigatable damage to the environment ranging from bad to worse, 2) the current Coastal Commission's precedent for this will be to reject a pro-environmental compromise designed by scientists: like one that met SMBRC's flawed Purpose & Need, retained direct coastal access, phased-in very small-scale channel dredging to allow native species to survive with room to move around its impacts, and retain a balance of seasonally brackish & seasonally salty wetlands. At the Scoping, SMBRC's staff urged us to put down everything we were thinking on an 8-1/2" x 11" paper for inclusion (that's enough?), but other staff told us right away there are several things "off the table": removing any roads, removing any structures, taking the Gas Company, acquiring any more land from Playa Vista or elsewhere. While their unwitting, unselfconscious, unvarnished honesty was delicious (as it's as surely a portal into SMBRC's covert "restoration" plans, as it is an index to its allied backers!) SMBRC might consider *professional* staff/ staff behavior next time...or not. There were at least 2 such "loose cannon" staffers (who also used the word "I" frequently at the Scoping!) But this was supposed to be Public Scoping Phase, not Public Self-Editing Phase: it is our job, not SMBRC's! to set the parameters. Of course, these "off the table" ideas staff mentioned would be the *top implementation priorities* of anyone designing Real Restoration (road traffic alone being the #1 cause of ~3,000 annual wildlife fatalities at Ballona). So I really can't help SMBRC because they're not really interested in hearing what the public has to say...

**WHAT KIND OF APPROPRIATE THINGS A QUALIFIED LEAD AGENCY SHOULD BE DOING IF REAL RESTORATION WAS "ON THE TABLE":** (or more appropriately, because it's already so shriveled from its original size, Ongoing Management) for LaBallona:

1) "FIRST, DO NO HARM." Using this Precautionary Principle would have stopped the rape of Malibu Lagoon all at once, cold.

1A) "THE FIRST RULE OF INTELLIGENT TINKERING IS TO SAVE ALL THE PIECES," said Aldo Leopold. Just leave Ballona alone- for nature to continue its work- is not the worst thing for Ballona. Leaving it alone may be the best thing, yet somehow so hard to understand/ think straight once the bulldozer's keys have been turned, and bulldozer power's in *anyone's* hands.

On the Intelligent Tinkering front, I know slow, by-hand restoration can work because I've done it- part of the team managing "The Big Plant-In", a multi-year (2008-present) all-volunteer community restoration on the east bank of Grand Canal Lagoon on the east bank just south of Washington Boulevard Bridge, Venice. And I've tried to grow other beneficial Ballona Natives (like Ballona-native narrow-leaved Milkweed used by migrant & resident Monarch Butterflies) at our nurseries. Though not perfect, this tidally-influenced canal bank site (near the northern end of La Ballona's natural historic channel), was replanted with a self-sustaining community of tall native shrubs, wildflowers, herbs & grasses, the plant palette professionally designed, sourced & grown from Ballona-native genetics. Stored & growing in plant nurseries at 2 nearby schools, prescribed erosion control & native plants were placed at the lagoon- not by bulldozers- but all by volunteers using hand-tools: neighbors, school kids & collegians, service organizations, church groups, political campaigners... even foreign tourists, that generates community buy-in bulldozing never does. Dense non-native myoporum bushes that housed homeless people are gone, as are broken concrete slabs, Chilean pepper trees, castor bean, iceplant, annual garden flowers planted by under-educated locals... Existing native plants & grassy areas already there were retained, which paid off during a planting in 2010 when our volunteers discovered a mallard & nest under one of the retained shrubs on the site (she came back after about 1/2 an hour, successfully hatched & raised that brood). I've also noticed plant succession after we put the natives back in many areas at the Big Plant-In. From our mostly-random planting, nature sorted things out: coyote bush engulfed surrounding smaller plants. Telegraph Weed & Coast Buckwheat at the highest & northern half gave way to Goldenbush, while pickleplant dominated closest to the (tidally-influenced) water's edge. Everlasting & Spiny Rush were overtaken by larger plants many places, but survived where other plantings perished in poor, gravelly soil. Weeds which plagued us from the 2nd year (mustard & non-native mallow) diminished, now choked out in most places by dense, self-seeding natives.

1B) SINCE THE RAPE OF MALIBU COMMITTED IN JUNE 2012, THE STATE WOULD BE FOOLISH NOT TO INSIST THERE BE NO PROJECT & NO MONEY-WASTING AT LA BALLONA OR ANY OTHER SOUTHERN CALIFORNIA WETLANDS COMPLEX *UNLESS & UNTIL* SMBRC/ STATE PARKS/ PROJECT CONTRACTORS PROVE THEIR ABILITY TO QUICKLY GROW BACK/ RAPIDLY RE-ATTRACT NATIVE, RARE, & ENDANGERED SPECIES TO RE-INHABIT TO A THRIVING MALIBU LAGOON. It took decades for nature to reclaim Malibu Lagoon and progressively bring natural diversity back since bulldozers carved lagoon channels out of ball fields built over earlier CalTrans' spoils (dumping grounds) in 1983. Even if this works and Malibu Lagoon were to look & function like it did before June 2012, supporting the same number of plant & animal species within say 2 years (this would be a miracle), this is not justification to bulldoze everything all at once; only small parts of La Ballona should be restored at a time, and experimentally, over a period of years in case anything goes wrong, taking no more than say 10% of a habitat or species so there are no extirpations at La Ballona. The animal capturing effort at Malibu was pathetic. And large & numerous quantities of native plants could have been boxed & kept at offsite nurseries for regrowing Malibu Lagoon quickly, but this was not done. Bulldozing everything at the same time -as if laying the foundation for an inanimate warehouse building- to instantly achieve all elements shown in the "ICF" plan is "magical thinking" that will not work and must not be allowed in any scheme. Do you know where Burrowing Owl habitat is for instance? I'm told they no longer live full-time in Ballona as they did until recently, but now only visits seasonally; what bulldozer power-take-off (PTO) attachment is going to dig enough owl-acceptable replacement rodent holes for a sustainable population of them to live in after you've caved in all the rodent holes with bulldozers?

1C) INSTEAD, SMBRC'S LIKELY TO FIND CATASTROPHIC LAGOON DESTRUCTION ENCOURAGES CATASTROPHIC FOREIGN & WEEDY SPECIES INVASION. Evidence of this is found at the industrial-scale "restoration" on west bank of the severed Ballona Lagoon in the Marina Peninsula (in City of LA, north of Lighthouse Bridge): as part of its "restoration", its 'genius' designers disturbed much of the upper canal bank soil & piled wood chip mulch on top (as lagoon soils are often alkaline, this probably tipped topsoil chemistry sharply toward

acidic). This spring, castor bean and other weeds exploded, growing more thickly than ever, choking & towering over the native plants. But this invasion did not happen in adjacent areas south of Lighthouse bridge, where discovery & confirmation of the extremely rare Orcutt's Yellow Pincushion prevented both the scraping & mulching, as well as preventing the explosion of weeds. (For Malibu, SMBRC/ State Parks originally wanted to poison anything that escaped bulldozing with Agent Orange derivative "Round-up", but verbally removed it on the spot from the Malibu bulldozing hearing during the 2010 Coastal Commission due to audience outrage... yet had the proposers read the manufacturer's label, Round-up's prohibited from use anywhere near open water-courses).

**2) FOR ECOLOGICAL HEALTH, CUT BACK ON SALT! We've already dug more salty holes (= harbors & channels) along the coast than nature'll ever need! So where is the apparent "need" for stormwater storage coming from? Southern California harbors & channels have displaced more brackish wetlands for salty- than ever existed in historic times. Nature has no need for more of this, so (Army Corps'/ L.A. County- driven) counterproductive element of floodwater storage posing as natural restoration should be scrapped. Instead, nature needs more of the brackish wetlands over the salty.**

**2A) DOES TABULA RAZA WORK? PROVE IT FIRST! Besides restoring Malibu Lagoon to pre-rape conditions, before running away to wreck Ballona on a large scale, the applicants' contractors should be required to demonstrate they can "play God" for nature's benefit offsite: Let the proposers prove the truth of their abiding faith in Tabula Raza (clean slate/ clean sheet of paper/ as if there was nothing there before) to those of us who don't believe it: Buy & close a distressed shopping center, excavate 2-12 acres of its parking lot, filling the bottom with a pond liner and salt water (with a pump for emergency drainage) to mimic the water column at La Ballona. Then, turn the contractors' bulldozers loose, filling the hole from sediment layers up to topsoil to plants & predators on top- to build the best mature brackish wetland & surrounding uplands money can buy. Setting the timeclock at "zero", and verifying their water column balancing success with regular corings, let's find out, if it can be done, how many years it will take to build a lush brackish wetland over salt table, and compare the quality of the resulting nature life support system. Let the contractors demonstrate their ability to build seasonal vernal pools, salt panne, crusty in the dry season, that support specialized animal communities, alkali flats, and stable drainage channels with bulldozers. Let them build vernal pools (recreating sediments laid down over millennia, & stock them with native seedbanks using bulldozers) like those lost to prior habitat destruction (such as the lost ones existing on the Ballona- adjacent 75 acre Westchester Blufftop field west of Lincoln once used by raptors, now blanketed by contractors' houses. I'll predict the conclusion now: Recreating & balancing brackish wetlands above salty with bulldozers may be well-nigh impossible. If it even works, bulldozing champions will admit bulldozers & industrial-scale techniques don't do a good job, and most of the successful work will have been done slowly by hand. Habitat quality & species population & diversity will not match the original, and may be self-sustaining. Every honest bulldozer champion will concede minor repairing of the original La Ballona would be much easier. But this Tabula Raza project should be a mandatory prerequisite before bulldozing one inch of Ballona.**

**2A) NOT ONE MORE INCH OF SALT-WATER HABITAT TYPE IS NEEDED! The creation of Marina del Rey itself (c. 1958-60) displaced 804 mostly-brackish acres, bringing far more salty water intrusion deeper & further inland than ever existed before Europeans arrived; (spectacular wetland losses at what's now Dana Point Harbor also comes to mind... that, to add insult to injury, also cost recreational users an irreplaceable surf break...)**

**2B) GLOBAL WARMING/ RISING SEA LEVELS ARE ON THE WAY (3'- 4' HIGHER BY MID-21ST CENTURY) THIS MEANS SALT WATER IS MOVING INLAND ANYWAY. Farmers who grew celery, possibly beans there allegedly dumped "a couple feet on soil" on parts of Ballona in the past (those who use this as a hammer to justify bulldozing everything can't tell me where it is, where it came from (most likely native local soil dredging from other parts of Ballona) or how deep!) But what we actually need to do with that fill now is: Nothing! To wait! Admit our hubris & restrain our human urge to fool with it- if we just leave nature to work out the plant palette & its animals there, it will be *just right* as the sea levels rise over the next 40 years.**

**2C) THE NORTH MARINA'S POLLUTED "DUCK POND" NEEDS MASSIVE HELP: (unbelievably, it drains through to Mother's Beach!) including re-conversion to native plantings; this is another place for limited wetlands**

**restoration experimentation!**

**3) SPEND MONEY ON ACQUIRING MORE LAND FOR BALLONA INSTEAD OF WASTING MONEY TO DESTROY WHAT WE'VE GOT:** Because so much of historic Ballona has already been destroyed (from ~3,000 acres, down to ~600), and wildness succeeds best (higher levels of the food chain) with the largest blocks of contiguous land possible, direct all efforts to acquire State funding to "Complete the Park": Add as many land parcels as possible for wild native plants & animals inside historic Ballona. Examples of this include a parcel of land at the north end of the southern remnant of Ballona Lagoon in Playa del Rey; currently within sight of its northern half, cut off by construction of Ballona Creek channelization (c.1938-40) Marina del Rey that extends to Venice. This land is for sale, and should be acquired by the state so this eminently "buildable" land doesn't become a 40' high wall of development that cuts off this viewshed. Another example is a long strip of land- a ~40' wide railway right of way adjacent to the southwest edge of western end the 90 Freeway that contains wetland (ditch with wetland plants) & upland species; if the Toyota dealership that owns it decides to culvert & pave it to maximize parked cars (the neighbors don't want this), Ballona plants & animals (like frogs that sing there, wading birds that eat them) would lose their habitat forever. Likewise, the retail garden center to the northeast, between the lanes of the 90 freeway, along with all other unpaved pieces within the CalTrans right of way should be merged or acquired to raise native plants for CalTrans & Coastal restorations, or made wild to extend the reach of native habitat... Unnecessary, useless, and destructive of native sites in the first place, travelers of the 90 freeway have nowhere to go; like the beneficial removal of San Francisco's Embarcadero Freeway, its complete dismantling west of the I-405 would save highway maintenance dollars, quiet our neighborhoods, be a great benefit to nature in the Ballona Valley, and never be missed in the future.

**4) LAUNCH A COMMUNITY SUPPORT & EDUCATION PROGRAM TO ENLIST THE PUBLIC'S HELP** raising & maintaining sustainable populations of rare & native species from local genetics with organic methods in containers or yards.

I know the people of greater Ballona are interested in helping nature communally (group projects like the Big Plant-In) & individually (asking for native planting advice). This could extend to the greater Ballona valley as well (for cleaning projects on upstream watershed):

**4A) RESEARCH AND DOCUMENT BALLONA PLANT LISTS & RANGES** with coded & separate lists for: Recently extinct/ extirpated (last 100 years)/ Rare/ Endangered Native, Natives, Native American Plants (yerba mansa, tree tobacco, chia, etc.) Non-Native Beneficials (Anise, for its flower clusters that support butterflies.) Research and document Ballona Plant Lists & Ranges with coded & separate lists for: Invasive Pest Plants (Pampas Grass whose seed can blow 17 miles), & Weedy plants (non-native mustards & radish). Share Sourcing, Propagation, & Eradication methods for weedy & pest plants. Issues (ex.: using local biotic genetic material, & issues when it can't due to extirpation)

**4D) DEVELOP STRATEGIES TO HELP NATURE OFFSITE:** (ex. planting native Narrow-leaved milkweed for Monarch butterflies. Jim K., one of our admirable neighbors on the Westchester Bluffs raises mass quantities of another species of milkweed plant in support of Monarch butterflies; he hosts resident & migrant populations around his yard.) (El Segundo Blue Butterflies. Bees or other "beneficial insects" (like pollinators or sensitive indicators of wild flora health). Hummingbirds. Other Wildlife-support: Cavity boxes (for bats, or bluebirds the Audubon Society wants to bring back) to make up for the loss of cavities in large-trunked trees. Feeders. Birdbaths. Reclaim & protect as much as possible of La Ballona real estate dominated by humans, focusing maximum benefits on species most at risk.

**4E) EXPAND EDUCATION OPPORTUNITIES:** Show tableau of plant groupings from each range type (from dune-top prairie to alkali flat), for use in grouping similar-need plants for gardeners, or educational garden (a long bed at area schools could sample a cross-section of Ballona's dune, lagoon, mineral flats, riparian, consolidated sandy bluff, prairie blufftop, vernal pools.)

**5) GET THE WRONG PEOPLE & THEIR BAGGAGE OUT & THE RIGHT PEOPLE IN.**

**5A) HOMELESS CAMPS OUT OF BALLONA:** I have nothing against homeless people- some are my friends. But the lone ranger who works Ballona has 3 or 4 other park properties to manage... For the time she's seen here, Ballona is not her favorite, and she doesn't like to patrol on foot. Slow- or No- action is taken on reports of chronically-occupied sites occupied by homeless individuals, small group camps,

& campfires (which also seem to attract large quantities of discards blanketing the ground that could literally send any present and future plan for Ballona up in smoke). More staff and a different mandate is needed to cover Ballona ground, and the homeless problem can only be solved by getting out of the truck for confrontation if necessary, & prompt eviction.

**5B) BUST THE DUMPERS:** Tracking serial numbers on discarded televisions for instance can lead to the former owner, or unauthorized dumper, who can pay high fines or perform community service (hauling others' dumped junk) that can leverage the cleanup and spread the word that free dumping in Ballona is over.

**5C) BRING IN RESEARCHERS & OBSERVERS:** This is the way to conduct Scopings: by authorizing in appropriate people with minimal impact, to maximize beneficial knowledge of Ballona.

**5D) CLEAN OUT THE RESERVE:** A number of groups who worked hard to save Ballona used to do tours, cleanups, & abatement of invasives have been locked out of Ballona for several years by the Frenemies, who use this public land as their own estate; this is public land, their locks need to be cut, and their defacto taking needs to be reversed ASAP; an one-site storage container of theirs is in prime habitat, and needs to be hauled away now.

**5E) BUILD THE VISITOR CENTER OFF THE RESERVE!** The land area is so shrunken, we need every inch to work for nature; like all parkland, plopping a large building in the middle of the space- surrounded by a parking lot that will inevitably expand, is no good! At the east end of Playa del Rey are several building lots that might work well.

**5F) FEND OFF PROPERTY ATTACKS ON THE RESERVE:** An unauthorized gravel parking lot in Playa del Rey north of Gordon's Market & east the Matilla Center sits entirely on Ballona reserve lands. An unauthorized Friday carwash business conducts business there with hoses in the parking lot behind the Matilla Center, operating entirely on the State reserve; not only does the State receive no income from this, the car wash soap, dirt, and automotive fluids sink through the gravel into the wetlands; where's the EIR for that? Local architect Craig Fraulino publicly proposed using State lands (for free) to build an alley/ parking to serve the north "backs" of Culver Boulevard businesses, converting adjacent Titmouse Park (Los Angeles City) for a parking lot, and building a multi-storey parking garage over the unauthorized gravel lot to accommodate businesses and Reserve visitors. As property lines begin immediately at the "backs" of these buildings, this is entirely on State lands. Several of these businesses have already dumped gravel on State Lands anyway- a defacto unauthorized alleyway for which they pay nothing... and because when nothing is done, the assumption is the owner (in this case, the State) doesn't care. When it was pointed out they haven't paid any money for this land, it's not for sale, their schemes have no scientific standing, they had no answer. Really, this property line should be immediately surveyed, fenced, closed, and lands restored by the State (there is a seasonal wetland just north of the buildings, & Silvery legless lizards have been found at the backs of the buildings). The ICF plan shows a black area along the backs of these businesses; the Legend describes it as "Other;" there is another large black block at the southe-central edge of the site where below The Gas Company property; this cannot go unexplained.

**6) PROGRESSIVE TRANSPORTATION NOW!** Another large black mark slashing through the middle of La Ballona ICF map is the Culver Boulevard right-of-way, the main killing-grounds of La Ballona wildlife, whose speed limit is soon to be raised. Progressive Transportation here means: building a "complete steet", upending the dominance of cars everywhere, and reordering/ inverting our priorities to 1) Walking 2) Biking 3) Transit 4) Automobiles. Opportunities to apply this at La Ballona should be integral to nearly every Alternative, as they stop the slaughter of the *prime thing* people would visit want to see: WILDLIFE! First, put a stop sign at Culver & Pershing to slow the cars down. Convert 2 traffic lanes eastward from Culver Boulevard to parking lanes for Ballona visitors. 2nd, Sawcut & remove the foolish "Culver Loop." Divert all eastbound car traffic on Culver onto Jefferson with a row of steel bollards (only Fire & Police Departments can open), and another row of same bollards closing westbound Culver at the 91 freeway ramps. Sawcut & remove all but 1 lane (= 2 bike lanes) of existing paving between these 2 points; this is the new 2-way Culver bike trail. On the center top of the bridge over Lincoln, build a bike service station with water & parts, and binoculars for wildlife observation. 3rd, Provide a decomposed granite (d.g.) trail next to the bike trail. Rebuild the Los Angeles Pacific Railway (later Pacific Electric) on its historic alignment to Playa del Rey as a slow-moving, quiet



platform to observe wildlife from. Rebuild its bridge spanning its existing Art Deco abutments over Lincoln Boulevard. Store the rail cars (build copies of the ones at the Port of LA, built for the Waterfront Red Cars in San Pedro, which are exactly correct) into EZ storage (North side of Culver Boulevard, where it can meet the Culver City bus there. Skip the sight of roadkill, and enjoy the wildlife experience.

On behalf of nature- who knows best,

(John Jay Ulloth)



Wetlands Defense Fund

October 23, 2012

**Ballona Wetlands Restoration Project**

**LEAD AGENCIES:**

**United States Army Corps of Engineers**

**Colonel Mark Toy c/o Daniel Swenson**

**California Dept. of Fish & Game**

**Director Charlton H. Conham, c/o David Lawhead**

and c/o Donna McCormick

consultant hired by the Santa Monica Bay Restoration Foundation and/or  
CA State Coastal Conservancy

1 Ada, Suite 100  
Irvine, CA 92816

Re: NOP for Ballona Wetlands “restoration project”

Dear Colonel Toy DFG Director Bonham, and Ms. McCormick,:

Please accept these comments as part of the public response for scoping comments called for by the US Army Corps of Engineers and the California Dept. of Fish & Game. We understand that, as a result of requests by U.S. Congressman Janice Hahn, CA Senator Ted Lieu and LA City Councilman Bill Rosendahl, that comments are still being accepted until 5 pm today. We are, thus, submitting these comments via email by 5 pm pacific time. We also understand you will accept comments from the Venice Neighborhood Council (VNC) tomorrow, based on an agreement made verbally between Mr. Lawhead and Marc Saltzberg of the VNC.

We have read and are in agreement with the official comments submitted by Sierra Club’s authorized voice on this topic – Sierra Club’s Ballona Wetlands Restoration Committee. Please include their comments in our submission, and also please reply to the following in your draft EIR/EIS documents so that the public can be fully informed about the plans for this project and any alternatives that might be considered.

1. Most importantly, please consider the Wildlife-Friendly Alternative that was developed by Playa del Rey-based Ballona Institute. Ballona Institute’s naturalists and biologist have been the most consistent and persistent observers and documenters of wildlife

and habitat in the Greater Ballona Wetlands area since the 600+ acres of coastal lands became public in 2003-2004.

Please also consider this Wildlife-Friendly Alternative as the PREFERRED ALTERNATIVE, since it would adhere to the principles of the “Father of Ecological Restoration,” Aldo Leopold, and would consider the impacts of what we don’t know in terms of species which may not have been yet observed or documented, as well as the interdependency and connectedness of food webs and the equilibrium that has evolved during the past 50-80 years.

2. Please analyze and explain how the seasonal pond soil crusts will be protected during the proposed restoration and how, if not protected, what the loss will be to the various ecological systems which depend on them.
3. Please analyze and fully consider the ground-nesting bee species. Document them, explain their roles in the ecosystem as pollinators and describe the losses to the ecology of the various coastal mosaics of habitats that the destruction of these species’ habitats will translate to.
4. Please apply the rejuvenation principles that our organizations, as well as Sierra Club and several other groups have supported to each of the proposed alternatives and proposed projects in the EIR/EIS process.
5. Please analyze and explain how each of the following bird species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem, explain their foraging, roosting, breeding and shelter needs and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached to this email message.)
  - a. White-tailed Kite (*Elanus leucurus*)
  - b. Western Meadowlark (*Sturnella neglecta*)
  - c. California Gnatcatcher (*Poliophtila californica*)
  - d. Least Bell’s Vireo (*Vireo bellii pusillus*)
  - e. Blue-Gray Gnatcatcher (*Poliophtila carulea*)
  - f. Great Blue Heron (*Ardea herodias*)
  - g. Northern Harrier (*Circus cyaneus*)
  - h. Burrowing Owl (*Athene cunicularia*)
  - i. Great Egret (*Ardea alba*)

- j. Ash-throated Flycatcher (*Myiarchus cinerascens*)
  - k. Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)
  - l. Bullock’s Oriole (*Icterus bullockii*)
  - m. Lazuli Bunting (*Passerina amoena*)
  - n. Blue Grosbeak (*Passerina caerulea*)
  - o. Hooded Oriole (*Icterus cucullatus*)
  - p. Barn Owl (*Tyto alba*)
  - q. Great Horned Owl (*Bubo virginianus*)
  - r. Tree Swallow (*Tachycineta bicolor*)
6. Please analyze and explain how each of the following butterfly species , explain their foraging, roosting, nesting and shelter needs present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, (and any others that should be documented and may be impacted) will be impacted by the proposed restoration plan, explain their roles in the ecosystem, explain their foraging, breeding and shelter needs and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
- a. Western Tiger Swallowtail Butterfly (*Papilio rutulus*)
  - b. Monarch Butterfly (*Danaus plexippus*)
  - c. El Segundo Blue Butterfly (*Euphilotes battoides allyni*)
  - d. Pygmy Blue Butterfly (*Brephidium exile*)
  - e. Wandering Skipper (*Panoquina errans*)
  - f. Painted Lady Butterfly (*Vanessa cardui*)
  - g. Acmon Blue Butterfly (*Plebejus acmon*)
  - h. Mourning Cloak (*Nymphalis antiopa*)
  - i. Buckeye Butterfly (*Junoia coenia*)
  - j. Mormon Metalmark (*Apodemia mormo*)
  - k. Red Admiral (*Vanessa atalanta*)
7. Please document, analyze and explain how the various spider species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
8. Please document, analyze and explain how each of the various moth species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated

adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)

9. Please document, analyze and explain how each of the various mushroom and other fungi species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
10. Please document, analyze and explain how each of the various lichen species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
11. Please document, analyze and explain how each of the various SAV (Submerged Aquatic Vegetation) species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
12. Please analyze and explain how the various ant and ant-like species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, including those documented in Area A (which is proposed for heavy dredging and alteration) in the Ralph Schreiber LA County Natural History Museum report will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
13. Please analyze and explain how the various dragonfly and damselfly species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)

14. Please analyze and explain how the various beetle species present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
15. Please analyze and explain how the various additional insect species (not covered in other requests in this letter) present at Ballona will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)
16. Please analyze and explain the ecological significance of the Ballona Tule Fog, present approximately 1/3 to 2/3 of the mornings each year in the Ballona Valley, and then please analyze and explain how the proposed project, as well as various alternatives, would impact the presence of the Ballona Tule Fog, especially since observations include the non-presence of the Ballona Tule Fog in the deeper Ballona Creek channel, while its presence persists in Areas A, B and C.
  - a. Which species are supported by the presence of the Ballona Tule Fog?
  - b. How does the Ballona Tule Fog impact the ground saturation and ponding of water in seasonal ponds?
  - c. How does the Ballona Tule Fog interact with the soils, the plants, the animals, and how would its diminishment impact these aspects of Ballona?
  - d. How does the Ballona Tule Fog interact with other parts of the Greater Ballona Wetlands Ecosystem, including the Freshwater Marsh, the various City-owned Lagoons, the bluff restoration and LAWA-owned nearby open space, wild areas, and how would its diminishment or other impacts during construction and after impact these various areas?
17. Please analyze and explain how the various small mammal species (including, but not limited to the South Coast Marsh Vole – *Microtus californicus*) present within the 600+ acres of the Ballona Wetlands state-owned land, as well as associated adjacent wild lands, will be impacted by the proposed restoration plan, explain their roles in the ecosystem and then explain how each will be impacted by each of the alternatives considered, including the Wildlife-Friendly Alternative (attached of this email message.)

18. Please analyze and explain all impacts to wildlife and to adjacent neighborhoods the construction traffic, as well as air pollution from diesel fumes and any other environmental impacts from the heavy machinery contemplated for use in the industrial mechanized bulldozing and earthmoving alteration plan, as well as the associated impacts from other alternatives, including the Wildlife-Friendly Alternative.
19. Please detail, analyze and explain all impacts and from hardscape of concrete, steel and other contemplated unnatural features the proposed project would have on the habitat as well as on individual species and imperiled populations of species.
20. Please detail, analyze and explain all impacts to commuter traffic from construction and other associated project components.
21. Please detail, analyze and explain which specific species will be helped by the proposed changes in soil elevation the project contemplates.
22. Please detail, analyze and explain which specific species will be helped by the proposed changes in water and soil salinity the project contemplates.
23. Please detail, analyze and explain which specific species will be helped by the proposed changes in soil elevation the project contemplates.
24. Please detail, analyze and explain which specific species will be helped by the proposed changes in pH the project contemplates.
25. Please detail, analyze and explain which specific species which COULD BE REINTRODUCED to the Ballona Wetlands Ecological Reserve will be helped by the proposed changes the project contemplates. Specifically, these species:
  - a. Los Angeles Sunflower (*Helianthus oliveri*)
  - b. Saltmarsh Bird's Beak (*Cordylanthus maritimus*)
  - c. Pacific Pocket Mouse (*Perognatus longimembris pacificus*)
  - d. Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*)
  - e. California Quail (*Callipepla californica*)
  - f. Greater Roadrunner (*Geococcyx californianus*)
  - g. Bald Eagle (nesting) (*Haliaeetus leucocephalus*)
  - h. Osprey (nesting) (*Pandion haliaetus*)
  - i. Tidewater Goby (*Eucyclogobius newberryi*)
  - j.

26. Please analyze whether or not the above-listed species (in request #25) could be reintroduced to the Ballona Wetlands Ecological Reserve without the proposed project being completed and whether or not
27. Please review and analyze all relevant historical maps and reports related to the Ballona Wetlands and determine whether or not the proposed project and its alternatives protect and maintain features that were historically present on the Los Angeles coast during the last 300-500 years.
28. Please review and analyze all relevant scientific reports and other observations that indicate whether or not year-round full tidal openings to the sea were conditions that the Ballona marsh lands and its inhabitants evolved with.
29. Please review the legal requirements related to whether or not pollution from one impaired water body, i.e., Ballona Creek, is allowed to be diverted into another impaired water body, i.e., the Ballona Wetlands Ecological Reserve areas that are on either side of the Ballona Creek estuary.
30. Please analyze and explain how the interruption of secession of plants and the associated ecological systems will impact various species and habitats that have been healing and evolving since the 1960s when the last heavy alteration of Area A and Area C occurred. Include scientific predictions of how many years this secession will be set back and how many years it will be until a similar ecological equilibrium will be set.
31. Please analyze the equilibrium of the various mosaic of ecosystems present at the state-owned Ballona Wetlands ecosystem lands currently. Note the number of years each ecosystem type has been in a state of relative equilibrium, how many years it took to reach this state, and then predict how many more years it will take to achieve a similar state of equilibrium – if the proposed project proceeds. Please also include which species will be displaced with the proposed project and note how these species will be able to return – will they return on their own? How?
32. Please detail, analyze and explain how all cultural historical and religious resources, including both those from the native First Nation people, as well as those from the past 100 years, will be properly respected and avoided in terms of protection of these resources.
33. Please explain how the avoidance criteria for wetlands protection that the US EPA has often insisted upon will be upheld during the process of carrying out any and all of the alternatives discussed in the EIR/EIS.



Thank you once again for the opportunity to comment. We trust that you will research and reply to each and every one of these comments, as the rare and imperiled ecosystem that the Ballona Wetlands is, including its mosaic of habitat types is unique and irreplaceable.

Please add our organizations to your mailing list:

Wetlands Defense Fund  
322 Culver Blvd., Ste. 317  
Playa del Rey, CA 90293

Ballona Institute  
322 Culver Blvd., Ste. 317  
Playa del Rey, CA 90293

Should you have further questions, feel free to call Ballona Institute at: 310-823-7040 or Wetlands Defense Fund at (310) 821-9045.

Robert Roy van de Hoek

Marcia Hanscom

*Robert Roy van de Hoek /s/*

*Marcia Hanscom /s/*

Conservation Biologist & President  
Wetlands Defense Fund

Executive Director  
Ballona Institute

# Support the Wildlife-Friendly Alternative for Ballona

*"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."*

*~ Aldo Leopold, 1949, A Sand County Almanac*

1. **FIRST DO NO HARM** ~ Detailed, seasonal, unbiased baseline surveys of the species and ecosystem at Ballona are needed in order to know what is here and to know how the ecological processes are interacting with the equilibrium which exists after more than 70 years of the Ballona Creek estuary channel being constructed and after nearly 50 years of the marsh mud having been placed on parts of Areas A & C. Protect all rare and imperiled species, and determine what habitat is needed to support this protection.
2. **ACQUIRE MORE LAND** ~ The Committee to Complete the Park has identified nine open spaces on the Ballona Wetlands Ecological Reserve edges where open space and habitat support the ecological functioning of Ballona. These places are threatened with development and erasure of the existing habitats; this land provides foraging space, wildlife corridors and other important functions for species which call Ballona home.
3. **UNDERGROUND UTILITY WIRES** ~ Current utility wires crisscross the Ecological Reserve, causing injury and death to birds and visual blight to the beautiful landscape.
4. **COMMUNITY-BASED RESTORATION** ~ Community groups have been and want to continue to remove non-native plant species (those which are not providing habitat to native animals) by hand with shovels and other tools (no poisons; no bulldozers.) This sort of go-slow human-involved regime not only enhances ecological education and stewardship values, but provides a far better chance of preservation of sensitive species which might be unknown to those doing the work.
5. **REMOVE DEAD PALMS** ~ These trees along Culver Boulevard; these are fire hazards, harbor nonnative animal species and cause visual blight of the beautiful landscape.
6. **SECURE THE RESERVE** ~ Fence and secure areas immediately adjacent to urbanized, inhabited areas to prevent dog, cat and human unauthorized trampling.
7. **CALM TRAFFIC & ENCOURAGE WILDLIFE CROSSINGS** ~ All roads traversing the Ecological Reserve need to have traffic calming measures implemented by LA DOT and CalTrans. Explore and implement wildlife crossings and other road conversions to decrease road kill of wildlife and to open up bicycle and walking paths.
8. **VIEWING PLATFORMS & WALKING TRAIL** ~ Install viewing platforms at four city-owned properties directly abutting the Ecological Reserve. Designate Cabora Dr. a historical walking trail, install view areas, including scopes and interpretive signage.
9. **PARKING** ~ Work collaboratively with the business and residential communities to create parking that works for everyone.
10. **RESTORE ANIMALS & PLANTS** ~ Build nesting platforms for Bald Eagle & Osprey. Return Roadrunner, Los Angeles Sunflower, Pacific Pocketmouse & California Quail.

**FOR INFORMATION, call 310-823-7040.     [www.ballonainstitute.org/discover.html](http://www.ballonainstitute.org/discover.html)**

## Ballona Ecosystems Rejuvenation “Seven Guiding Principles”

1. 21<sup>st</sup> century, incremental, community involved ecosystem rejuvenation that is in harmony with natural laws . We are opposed to industrial-scale habitat conversion, including major bulldozing, which destroys existing ecosystems.
2. In appreciation of what is there now, recognize the resiliency of the ecosystems and identify areas that require no more than observation for the foreseeable future.
3. In recognition of the importance of gaining control of more acreage before it is built on, or otherwise negatively impacted, give priority to acquisition/addition of additional unprotected parcels of land at a reasonable price to the Ballona Wildlife Refuge, over restoration activities. Such land protection will increase habitat enhancing buffer zones for wildlife and plants, and decrease car trips in the area, which lead to animal road fatalities.
4. Utilize existing opportunities to access the refuge, such as the Ballona Creek bike path, and south earthen levy along Ballona Creek and install a walking/biking path around as much of the perimeter of the refuge as is ecologically feasible.
5. Utilizing existing infrastructure such as the old Pacific Railway bridge supports and other man made structures, along with materials that have the deepest sustainability, create wildlife, bicycle, and walking linkages that connect all areas of the ecosystems in a fashion that allow homo sapiens and animals alike, to safely go over or under all roads and waterways that divide the refuge.
6. In recognition of the importance of enhancing the beauty of the refuge, safety of birds and other mammals, and the reduction of light pollution, move all power, telephone, and cable lines underground, and remove the majority of street lighting.
7. Endangered, threatened, and imperiled species must be given priority for protection in any refuge alteration considerations.

Supported by numerous environmental and community groups, including Ballona Wetlands Land Trust, Sierra Club, Ballona Institute, Ballona Ecosystem Education Project, Grassroots Coalition and Wetlands Defense Fund

1/19/2012

**Jones, Tanya**

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**From:** Ballona Wetlands [<mailto:landtrust@ballona.org>]

**Sent:** Tuesday, October 23, 2012 12:51 PM

**To:** [daniel.p.swenson@usace.army.mil](mailto:daniel.p.swenson@usace.army.mil); [DLawhead@dfg.ca.gov](mailto:DLawhead@dfg.ca.gov); McCormick, Donna; Shelley Luce

**Cc:** Walter Lamb

**Subject:** Scoping Comments for Ballona Restoration Project

Dear Project Team -

Please see the attached PDF file containing the public scoping comments from the Ballona Wetlands Land Trust in response to the NOI for the Ballona Wetlands Restoration Project. Please confirm receipt of this document. Please also do not hesitate to contact me by phone or by e-mail to discuss these comments. We look forward to reviewing the first draft of the EIS/EIR when it is complete.

Sincerely,

Walter Lamb  
President  
Ballona Wetlands Land Trust  
310-839-3436



## Ballona Wetlands Land Trust

**Public Scoping Comments in Response to 7/25/2012 Notice of Intent  
to Prepare a Draft Environmental Impact Statement/Environmental Impact Report for the  
Proposed Ballona Wetlands Restoration Project**

**Submitted by Walter Lamb on 10/23/2012**

**walter.lamb@earthlink.net**

**310-839-3436**

**on behalf of the Ballona Wetlands Land Trust**

**landtrust@ballona.org**

**Confirmation of Receipt Requested**

**To:**

**Dr. Daniel P. Swenson, US Army Corp of Engineers**

**David Lawhead, California Department of Fish and Game**

**Dr. Shelley Luce, Santa Monica Bay Restoration Commission**

**Donna McCormick, ICF International**

[Note: These comments were approved unanimously by our Board of Directors at our October 18<sup>th</sup> meeting.]

Most projects requiring environmental review under federal or state law have primary objectives that are not environmentally oriented, and the review process is designed to mitigate any negative environmental impacts associated with those projects. However, in the case of the Ballona Wetlands Restoration Project, the primary stated objective is to improve the environmental function of the site. Therefore, the EIS/EIR being prepared for this project must meet a higher standard by clearly demonstrating to the public not just that negative environmental impacts will be mitigated, but that the project will lead to a significant and measurable overall improvement in the ecological health of the site. As such, we urge the project team to address all of the important questions and comments being suggested by the public, even those that may not traditionally be within the scope of an EIS/EIR.

As the Santa Monica Bay Restoration Commission's Baseline Monitoring Reports indicate, the Ballona Wetlands already provide habitat for hundreds of species of plants and animals, some of which have special protection status at the state or federal level. To justify the significant cost and risk associated with reconstructing the entire ecosystem, the Environmental Impact Statement/Report must accomplish the following:

- Thoroughly document the incremental costs and risks of each alternative relative to each other alternative. This should include, but not be limited to:



## Ballona Wetlands Land Trust

- Studying and documenting the potential risk of pollutants from the Ballona Creek entering into the wetlands and how that risk will be mitigated.
- Researching and documenting examples of unintended consequences from past restoration efforts and explaining what measures the project team has taken or will take to avoid unintended consequences for this project.
  - See “On the Perils of Ecological Restoration: Lessons from the El Segundo Blue Butterfly” [Longcore et al, 1997] for a specific example of unintended consequences in a restoration.
  - See also “Handbook for Restoring Tidal Wetlands” [ed. Joy Zedler, 2001], Chapter 1, Section 1.3 for additional examples of unintended consequences in a restoration.
- Analyzing and documenting the potential negative impact on any bird species favored by the existing habitat mix.
- Thoroughly document the anticipated incremental benefits to the ecosystem associated with each alternative relative to each other alternative. This should include, but not be limited to:
  - Studying and documenting the potential benefit of enhanced hydrology of the site by allowing greater tidal flow.
  - Analyzing and documenting the potential positive impact to any bird species favored by the proposed habitat mix.
- Demonstrate beyond a reasonable doubt that each anticipated benefit associated with a particular alternative will indeed materialize as a result of executing that alternative, and identify tangible metrics that would be used to determine the ultimate success or failure of the project in that regard. This should include, but not be limited to:
  - Using historical examples, demonstrate the expected improvement in the hydrology of the site for each alternative and document what metrics will be used to determine the extent of improvement achieved.
  - Using historical examples, document the anticipated impact of polluted waters on the ecosystem and document what metrics will be used to determine the success of various mitigation efforts.
- Explain why the incremental benefits for a particular alternative, by themselves, justify the incremental cost and risk of that alternative and demonstrate beyond reasonable doubt that the benefits associated with a particular alternative cannot be achieved by any smaller scale alternative. This should include, but not be limited to:
  - Analyzing the ability of each alternative to provide recreational and educational opportunities relative to other alternatives. For example, the existing site already provides significant educational and recreational opportunities and these activities are constrained primarily by access restrictions that aren’t related to project design. When listing education and recreation as benefits for a particular alternative, the EIS/EIR



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should focus only on what additional benefit that particular alternative makes possible relative to the other alternatives.

- As above, analyzing the relative benefits provided by each alternative for trash removal, removal of invasive species, enhanced hydrology, etc.

### **Costs / Risks:**

In order to provide an objective environmental impact assessment, the project team must be as diligent in uncovering and communicating the various costs and risks associated with the different project design alternatives as they are in communicating the anticipated benefits. This includes:

- Providing examples of other restoration efforts in which the outcome fell short of the stated goals, what factors led to not achieving stated goals, and how the project team will avoid similar outcomes with this restoration project.
- Listing any assumptions and any possible risk factors which could cause the outcome of each particular alternative to fall short of its desired goals.
- Thoroughly documenting any anticipated negative consequences of each particular alternative, such as any loss of native species, habitat type, etc.

### **Benefits Specific to, and Exclusive to, Each Alternative Project Design:**

Because the purpose of this project is to improve the ecological health of the Ballona Wetlands Ecological Reserve, the EIS/EIR must do more than address potential negative environmental impacts. To justify any project alternative, the EIS/EIR must clearly outline the specific benefits that each alternative is expected to achieve. The EIS/EIR must explain why each of these benefits can reasonably be expected to result from a particular alternative, list any assumptions upon which the benefit depends, and demonstrate why no less intrusive alternative could achieve a similar benefit. Sample benefits may include:

- The anticipation of new species that are currently rare or absent in the reserve. Arguments of this nature should provide detailed information on why the new species would be more likely to flourish under the conditions envisioned for a particular alternative. For instance, "Butterfly species X relies almost exclusively on plant Y for survival. Plant Y is expected to increase by 20% within 2 years of project inception."
- Increased recreational and educational opportunities. This type of benefit must be quantified consistently across all alternatives for "apples to apples" comparison.
- Enhanced water quality in the Santa Monica Bay. This type of benefit requires thorough scientific backing. Any assumptions or conditions must be clearly outlined. Alternatives such as upstream pollution mitigation should be studied and documented.

A more detailed listing of specific cost/benefit categories is below.





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### **Risks/Benefits of Replanting and Fertilizer Use, etc.**

The EIS/EIR should analyze and clearly document the details behind any planned replanting efforts, including any use of fertilizers as part of those efforts, and also analyze any potential short and long term impacts of those efforts and how the project team will mitigate against any potential negative impacts.

### **Hydrology Issues**

The EIS/EIR should include a comprehensive hydrology study that analyzes and clearly documents all inflows and outflows of groundwater and surface water and also analyzes the potential impact of existing water usage from local communities on the current hydrology.

### **Species Level Impact Analysis**

To truly understand the environmental impact of the various project alternatives requires a species level impact analysis. Such an analysis forecasts the likely impact of the project design on each individual species within the ecosystem. Since there are hundreds of species of plants and animals, and since resources for this EIS/EIR are limited, the most critical species should be addressed first and as many as possible in order of importance thereafter. If there are insufficient resources to cover a sufficient number of species in the analysis, then either more resources should be considered, or the lack of sufficient analysis should be documented and appropriately factored into the decision making process. After all analyzed species have been addressed, the EIS/EIR should include a list of all other species which currently utilize this ecosystem, or which have a reasonable likelihood of utilizing this ecosystem in the future, under the heading "Species not analyzed in this EIS/EIR" or something to that effect.

It is important to note that the limited species level impact analysis included in the 2010 Preferred Alternatives Memorandum is inadequate because it addresses too few species, contains too little detail, and often lacks any actual projection of the impact on a particular species. For instance, only seven species of birds are listed as target species. Dan Cooper's list of special status bird species includes 12 resident birds, 10 regularly occurring species, 8 non-regularly occurring species, 2 extirpated species, 8 species that were either extirpated prior to 1900 or that were always scarce, and 12 species that are not protected but which are locally significant and which depend heavily on the Ballona ecosystem.

Therefore, the EIS/EIR should include, at a minimum, detailed impact analysis for the following bird species (from [http://www.cooperecological.com/special\\_status\\_speciesweb.htm](http://www.cooperecological.com/special_status_speciesweb.htm)):

F = Federally Endangered/Federally Threatened

S = State Endangered/State Threatened





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C = Calif. Bird Species of Special Concern (see:

<http://www.prbo.org/cms/index.php?mid=230&module=browse>)

FP = "Fully-protected" (see: [http://www.dfg.ca.gov/hcpb/species/t\\_e\\_spp/fullypro/fully\\_pro.shtml](http://www.dfg.ca.gov/hcpb/species/t_e_spp/fullypro/fully_pro.shtml))

I = Near-threatened (per BirdLife International's Red Data Book)

### **Resident (summer, winter or permanent)**

Least Bittern C

California Brown Pelican S,F,FP

Redhead C

Peregrine Falcon S, FP

White-tailed Kite FP

Elegant Tern C,I

California Least Tern S,F,FP

Loggerhead Shrike C

Clark's Marsh Wren C

Belding's Savannah Sparrow S

Large-billed Savannah Sparrow C

Yellow-headed Blackbird C

### **Occurring regularly (but in migration only)**

Brant C

Northern Harrier C

Western Snowy Plover F,C

Long-billed Curlew C

Royal Tern C

Burrowing Owl C



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Vaux' Swift C

Willow Flycatcher C

California Swainson's Thrush C

Yellow Warbler C

**"Locally significant"** (though unprotected/non-sensitive) species particularly dependent on Ballona in coastal L.A. County, either currently or historically.

American Bittern

White-faced Ibis

Common Moorhen

Pacific Golden-Plover (extirpated 1980s)

Red Knot

Wilson's Phalarope

California Quail (extirpated 1980s)

Black-bellied Plover

Bonaparte's Gull

American Pipit

Western Meadowlark

Blue Grosbeak

**Not regularly occurring, but occasionally seen**

American White Pelican C

Black Skimmer C

Marbled Murrelet S,F,I

Short-eared Owl C (formerly wintered; extirpated 1980s)

Horned Lark C (formerly year-round resident; extirpated 1970s)



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Olive-sided Flycatcher C

Bank Swallow C

Yellow-breasted Chat C

### **Totally extirpated (no recent records)**

Light-footed Clapper Rail S,F,FP (two records since 1950s)

Black Tern C (four records since 1950s)

### **Either extirpated prior to 1900, or always scarce (not enough information)**

Bald Eagle S,F,FP

Fulvous Whistling-Duck C

California Black Rail S, FP

Sandhill Crane C,S,FP

Mountain Plover C

Long-eared Owl C

Bell's Sage Sparrow C

California Gnatcatcher F

Additionally, there are many other species of bird, including but not limited to: Snowy and Great Egret, Black-necked Stilt, Red-tailed Hawk, Cooper's Hawk, American Kestrel, Common Yellow-throat, Ash-throated Flycatcher, etc. that are not considered sensitive species but which play an important role in connecting members of the public with the ecosystem via beginner bird walks. Therefore, it is important that as many bird species as possible be analyzed. Dan Cooper's annotated checklist and the Baseline Monitoring reports should be used as guides for species inclusion in this impact analysis.

More detailed analysis that what was offered in the 2010 memorandum is required. For instance, the analysis of the White-tailed Kite simply indicates that "The presence of white-tailed kites in the restored Ballona system *would* indicate functional upland habitats and small mammal populations." (italics added by me for emphasis). It is not sufficient to indicate what the presence of a particular species would indicate. The EIS/EIR must indicate what level of presence of a species is expected in the proposed new habitat mix. Since White-tailed Kites are consistently (albeit seasonally) reported in the ecosystem currently, the EIS/EIR should indicate whether more or fewer should be anticipated (or whether they



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would be expected during a greater or shorter portion of the year, especially breeding) after the restoration.

It is also necessary to analyze potential impact at a more detailed level than habitat type. For instance, in their analysis of the current plan, the Los Angeles Audubon Society noted that "The plan appears to remove all existing habitat for the State-endangered Belding's Savannah Sparrow." However, in the 2010 memorandum's comments on the same species, project consultants predicted that "Restoration of large areas of marsh plain, as currently envisioned for Ballona, should substantially increase the size of the resident population." This makes clear the need for a more careful analysis of not just habitat type, but specific species relationships, such as Pickleweed in the case of Belding's Savannah Sparrow.

The same standards described for birds above also apply to all of the other categories of biological diversity as outlined in the Baseline Monitoring Reports (i.e. vegetation, ichthyofauna, herpetofauna, mammals, benthic invertebrates and terrestrial invertebrates). For instance, the EIS/EIR should analyze and document the impact of the various alternatives on the El Segundo Blue Butterfly, especially the impact of disturbing restored dune habitat in the Southwest corner of the reserve by adding a large dirt berm (as noted by Los Angeles Audubon Society's review of the current preferred alternative). Likewise, the EIS/EIR should analyze the impact on Lewis' Evening Primrose, which has been observed in multiple areas which would undergo significant change under the preferred alternative. These are just selected examples, and the EIS/EIR should analyze the impact on as many plant and animal species as possible, clearly documenting any species which are not studied and the reason they were not studied.

### **Potential Conflict Between Competing Objectives**

It is to be expected that the various project alternatives must meet certain objectives that are not purely ecological in nature. However, any aspect or feature of a particular alternative that does not maximize the ecological potential of the Wetlands should be clearly documented and explained. This should include, but not be limited to, the following:

#### **1. Flood Control**

The EIS/EIR should clearly document every feature that is designed primarily for flood control purposes and should analyze the impact of such features on the ecology of the site. For example, the EIS/EIR should study the ecological impact of several large dirt mounds and berms, depicted on the project map as "upland scrub," as well as the feature described on several grading maps as the "Habitat Peninsula." Which species of plant and animal are expected to flourish in these areas and how does that compare to the potential biodiversity that could be attained if a particular flood control feature were not necessary? [See above example on how the flood control berms could disturb habitat for El Segundo Blue Butterfly]



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The EIS/EIR should analyze the threat of flooding and clearly document what areas and properties are at risk and would be the beneficiaries of the proposed flood control features. This should be depicted with clearly marked maps.

### **2. Pollution**

The EIS/EIR should clearly document every feature that is designed primarily for pollution mitigation purposes and should analyze the impact of such features on the ecology of the site.

### **3. Other**

The EIS/EIR should clearly document every feature that is designed primarily for any other purpose than ecological function and should analyze and document the impact of each such feature on the ecology of the site. This includes any feature or design aspect that relates to property rights/community issues, engineering constraints, infrastructure constraints, legal constraints, political constraints, etc.

Such disclosures and analysis are critical for the public to make informed decisions on the relative risk and reward of each alternative from an ecological perspective.

### **Road Kill**

Studies have indicated that road kill accounts for up to 3,500 road kill deaths per year. This has negative ecological and human safety / public health ramifications. The EIS/EIR should include a study of road kill in and around the BWER and an analysis of how the various project alternatives will impact road kill. For instance, the EIS/EIR should study the impact of the various flood control features described above to determine whether they could lead more animals to cross busy surface streets.

### **Acquisition**

The relatively small size of the reserve (600 acres) has been noted by the project team (*"Ballona Wetlands Restoration Goals and Objectives, Opportunities and Constraints"*, July 2006) as a limiting factor in the restoration. There are still undeveloped parcels of land that could significantly benefit the restoration process. As such, the EIS/EIR should include an analysis of those parcels and the potential impact of acquiring those parcels on the overall health of the ecosystem. There are certainly many practical constraints standing in the way of such acquisition, and those should be included in the analysis, but they are not a valid reason to not conduct the analysis.



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### **Impact on Human Interaction and Appreciation**

The ongoing health of this ecosystem will require significant public support. If the public feels cut off from the ecosystem, they may be less willing to support necessary funding for ongoing maintenance and improvements. Reduced public interaction may also increase the risk of misuse of the ecosystem, such as dirt-bike trails, littering, camping by squatters, etc. This is an important socioeconomic aspect of the proposed restoration.

Therefore the EIS/EIR should study the impact of any feature that might reduce public connection with the land, such as the rerouting of the bike trail and flood control features that might obstruct the public view into the wetlands. An artist's rendering should be included for all project alternatives, especially the "preferred alternative" that clearly shows the various proposed topographical features and their impact on the over aesthetic of the area. Attitudinal surveys of the public should be conducted to gauge whether certain design features would make them more or less likely to appreciate this natural resource.

### **Short and Long Term Maintenance of the Restoration Site**

The EIS/EIR should clearly document the plan for long term maintenance of the restoration site. This should include, but not be limited to:

- Documenting budgetary plans to ensure proper maintenance strategies can be carried out for as long as they are necessary to secure the long term ecological health of the restoration site
- Analyzing the possible need for irrigation and the details behind any possible irrigation plans
- Documenting plans to address herbivore species of birds, mammals and insects
- Documenting plans to address potential macroalgal blooms
- Documenting plans to address potential sedimentation issues
- Documenting plans to address potential exotic plant invasions

### **Modeling Methods**

For every predicted result contained in the EIS/EIR, a detailed description should be included of the modeling methodology used, along with any assumptions, parameters and data inputs used to inform the model. This is necessary for the public to understand the scientific reliability of the findings being presented.

### **Alternative Solutions**

We are reluctant to propose alternative design proposals because we lack the financial resources and expertise to design a complete solution from scratch. We believe that it is the responsibility of the





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various project agencies to reevaluate and modify their preferred alternative as necessary until it meets the high standard that this critical ecosystem deserves.

That said, we are interested in seeing an analysis of the feasibility of partially elevating Culver Blvd and other roads and trails to create greater continuity between the various sections of the ecosystem and request that this analysis be included in the EIS/EIR. We also request that thorough analysis of other design proposals addressing different options for allowing more water into the Wetlands via less intrusive methods be included in the EIS/EIR.

### **Summary**

The Ballona Wetlands currently provide important habitat to numerous species of plants and wildlife. As is true of any project of this scope, the "preferred alternative" carries inherent risk in that it reconstructs much of the ecosystem. Given the importance of this natural resource, it is imperative that the public fully understands the potential risk and rewards of all project alternatives in a way that not only facilitates informed decision making, but allows us to measure the success of the project against tangible metrics.

We recognize that thoroughly analyzing all of the many factors that could impact this complex ecosystem will not be an easy task. However, we also believe that anything less puts this ecosystem at unnecessary risk. We simply cannot afford to wind up with diminished or even equal ecological value at the end of such an expensive project. There must be a clear and substantial ecological benefit for the project to be justified. We wish the project team luck in preparing the draft EIS/EIR and look forward to offering additional comments when it is complete. In the meantime, project leaders should not hesitate to contact our organization for clarification or other guidance.

**Jones, Tanya**

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**To:** McCormick, Donna  
**Subject:** RE: Ballona Wetlands restoration project DEIR-EIS scoping comments

**From:** Rex Frankel [<mailto:rexfrankel@yahoo.com>]  
**Sent:** Tuesday, October 23, 2012 2:43 PM  
**To:** [Daniel.p.swenson@usace.army.mil](mailto:Daniel.p.swenson@usace.army.mil); McCormick, Donna  
**Subject:** Ballona Wetlands restoration project DEIR-EIS scoping comments

October 23, 2012, 2:42pm

Here is a 66 page pdf of our comments on the NOP-NOI for the Ballona Wetlands project.

It explains the need for analysis of a historically accurate alternative that is based upon conditions approximately 200 years ago, as opposed to the State's preferred alternative which is based on returning to conditions 4000 years ago.

If you have trouble reading our attached comments, they are posted here:  
<https://picasaweb.google.com/Rare.Earth.fotos/BallonaAlternativePlan>

Thank you,

Rex Frankel  
President, Ballona Ecosystem Education Project  
6038 west 75th Street  
Los Angeles, CA 90045  
310-738-0861



# IT'S TIME TO SAVE THE BALLONA WETLANDS FROM THE POLLUTERS AND DEVELOPERS, AGAIN



# **IN THIS SLIDE SHOW, WE TRY TO ADDRESS 2 MAJOR ISSUES IN THE STATE'S PROPOSED RESTORATION OF THE BALLONA WETLANDS:**

**1. WHAT IS A RESTORATION?  
SHOULD IT BENEFIT WILDLIFE AND THE PUBLIC  
INTEREST, OR PRIVATE INTERESTS AND  
POLLUTERS?**

**2. WHY FLOODING THE WETLANDS WITH  
POLLUTED WATER IS NOT A RESTORATION**

IN 2003, THE TAXPAYERS OF  
THE STATE OF CALIFORNIA  
PURCHASED THE REMAINING  
UNDEVELOPED 600 ACRES OF  
THE BALLONA WETLANDS  
FROM PLAYA VISTA, L.A.'S  
LARGEST DEVELOPER, AND  
PREVENTED THE  
CONSTRUCTION OF 7000  
CONDOMINIUMS UPON THEM



**UNFORTUNATELY:** Since this land became “ours”, the State’s land managers have decided this land is a massive development opportunity, too. And they propose to dramatically change the land into something it never was.

## WE DISAGREE:

We believe the trash and non-native weeds need to be removed. We believe the wetlands can be returned to what they were before L.A. was developed without unleashing massive bulldozing equipment

**THE STATE'S PUBLICLY  
STATED OBJECTIVE: to  
maximize estuarine habitat—  
meaning flood it all  
(even if historically most of the  
Ballona Wetlands was not under  
water all the time)**

## HIDDEN OBJECTIVE:

- to provide flood protection for Playa Vista's condos at taxpayer expense, and
- to clean up Ballona Creek's massive pollution problem by turning clean wildlife habitat into a massive pollution dumpsite

**ISSUE 1: what date  
should we restore the  
wetlands to?**



TO WHAT YEAR DO WE  
RESTORE TO?  
WHEN EUROPEAN SETTLERS  
ARRIVED, OR  
TO AN ERA THAT COINCIDES  
WITH THE STATE'S OTHER  
OBJECTIVES?

The State's plan would dig out a massive basin in the middle of the wetlands, and remove the levees along Ballona Creek, in order to provide full-time flooding to most of this land. This resembles to situation 4000 years ago.

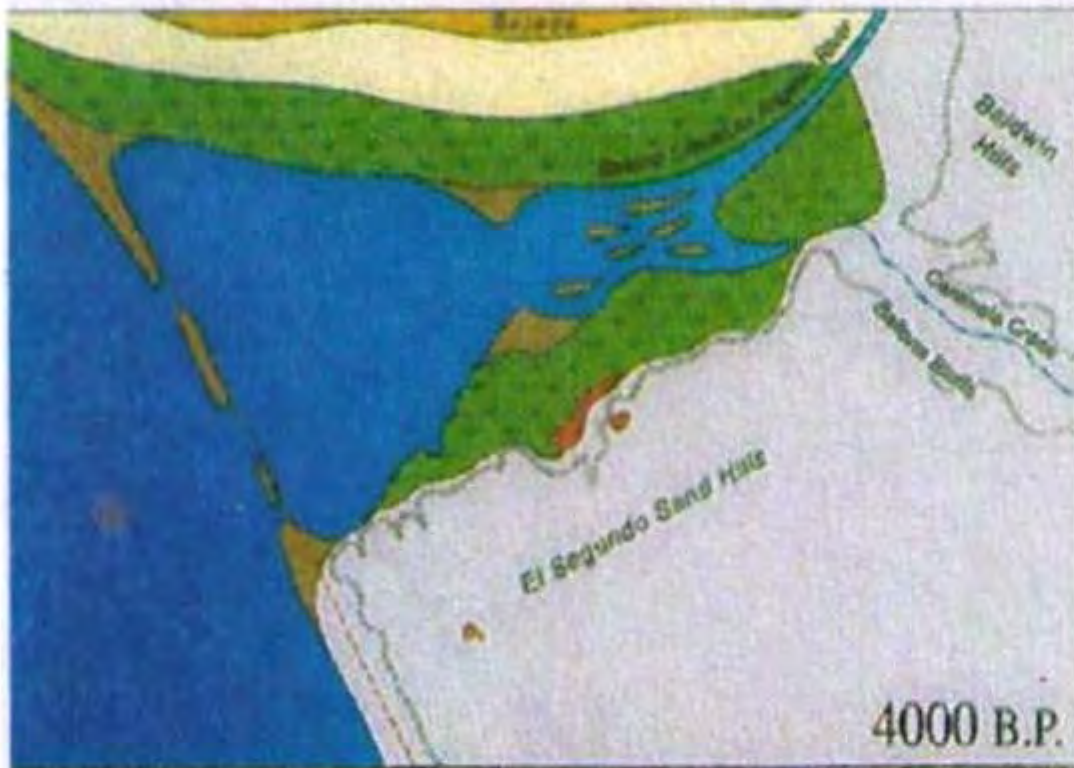
In order to do this, 20 feet of soil would be removed from the northern wetlands parcel, and dumped 20 feet deep east of Lincoln Blvd and south of Culver Blvd. This would bury another 110 acres of wetlands and higher ground that is home to the rare Lewis' Primrose flower



Stacking 20 feet of earth along Culver Blvd. would have the effect of preventing storms and sea-level rise from causing flooding of Playa Vista's condos. Is protecting a developer's flood-plain condos a good use of taxpayer money?



4000 years ago, Ballona  
Lagoon covered most of the  
lands now owned by the State  
and it was open to the ocean all  
year-round



## 4000 B.P.

### Environment

- Sea level stabilizes
- Alluviation in inner bay leads to mudflats and sandbars
- Salt marsh expands to outer bay
- Beach spit barrier nearly closes outer bay
- Oyster and jackknife clams disappear, replaced by horn snails indicative of fresh water

### Culture

- Settlement pattern remains stable
- LAN-62 community grows slowly

However, by 200 years ago, when the urbanization of Los Angeles began, a sand bar naturally formed every spring to keep the ocean out. So the Ballona wetlands dried up in the spring, summer and fall.





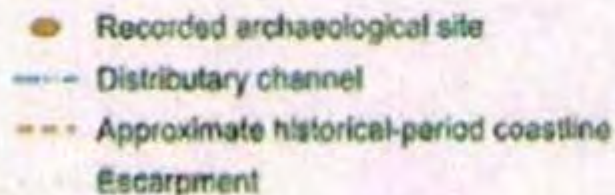
## 200 B.P.

### Environment

- Sediments fill much of the lagoon
- Complex of sand islands and extensive salt and fresh water marshes develop

### Culture

- Population congregates along lower Centinela Creek
- LAN-62 develops into a major village
- *Rancheria* settlements are established along lower Centinela Creek (LAN-211/2)



200 years ago, very little of the original 1700 acres of the wetlands or the 600 acres now remaining was a lagoon. Much of the lands that were lagoons 200 years ago are now saved as the Ballona Lagoon Marina Preserve, Del Rey Lagoon Park, the Venice canals and the Marina Del Rey yacht harbor. And contrary to popular belief, the Marina has substantial wildlife value, providing home to numerous types of shellfish, birds and seals.





With the sandbar forming each spring, the inland wetlands dried up because the upstream Ballona Creek valley absorbed the rainfall. For an hour-long video explaining the history of the wetlands:

See <http://tinyurl.com/longcore-ballona>

So, due to the formation of the sand-bar, 200 years ago the Ballona Wetlands had turned into a balance of three natural habitat communities, rather than just an arm of the ocean.

**THOSE THREE HABITATS  
LARGELY ARE STILL  
PRESENT AT THE WETLANDS  
200 YEARS LATER.**

**THEY ARE:**

Salt marsh: home to fish from the ocean,  
migratory birds and numerous salt-water  
tolerant plants;





**FRESHWATER MARSH:**  
Home to willow groves and  
frogs and numerous insects and  
amphibians;

## **AND UPLAND HABITAT:**

**Home to wildflowers, fragrant sagebrush, dense thickets of Laurel Sumac, and of course, miles of hiking paths**



The State's endorsed plan to go back 4000 years bulldozes away much of the freshwater marsh and upland habitat to replace it with open ocean habitat.

Their plan also fills in 110 acres of wetlands, although they call it a wetland “restoration”

**THE STATE'S PLAN IS NOT A  
RESTORATION TO WHAT  
BALLONA ONCE WAS:**

It looks like 4000 years ago, in that it is open to the ocean all year round and is a mix of “fresh” water draining from the city and seawater. But 4000 years ago, this freshwater was clean, not full of urban pollution

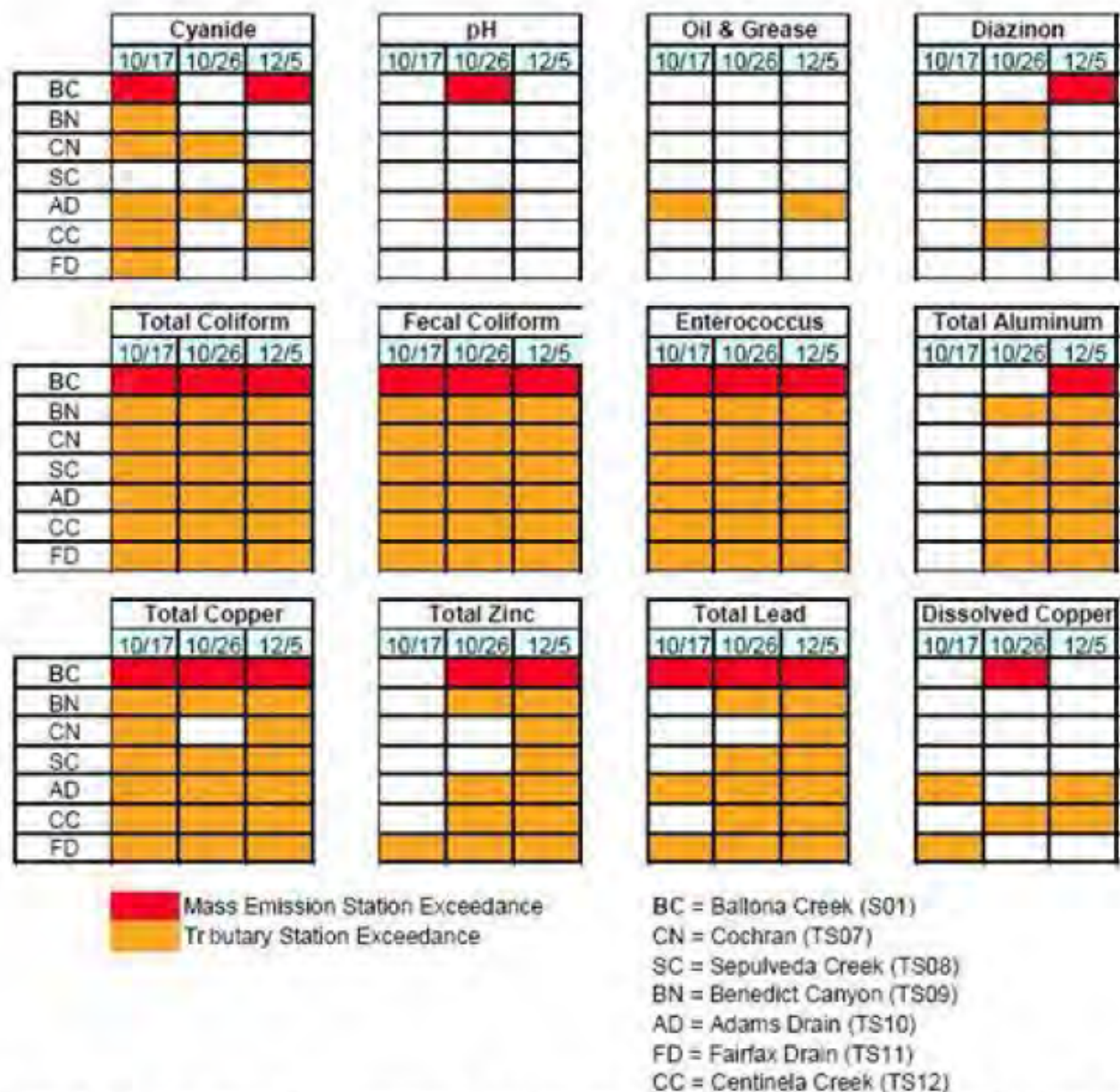
So this is a restoration to  
something Ballona **never was**

**A TRUE RESTORATION OF  
BALLONA IS TO WHAT IT  
WAS 200 YEARS AGO  
BEFORE MAN STARTED  
PLOWING, FARMING AND  
FILLING IN THE WETLANDS**



ISSUE 2: The problem is that we cannot go back to exactly what it was 200 years ago as Ballona Creek is a polluted mess. It would actually harm the wetlands to reconnect them with Ballona Creek. It would not harm them, however, to reconnect them with the ocean.





**Figure 7-3. Comparative Summary of Constituents Frequently Exceeding WQOs at Ballona Creek and its Tributaries**

**ISN'T IT OK TO FLOOD  
WETLANDS WITH POLLUTED  
WATER? ISN'T POLLUTION  
FILTRATION SOMETHING  
WETLANDS ARE SUPPOSED  
TO DO?**



NO. WETLANDS CAN FILTER  
POLLUTION, BUT THAT ISN'T  
NECESSARILY A GOOD  
THING. (JUST BECAUSE YOU  
CAN EAT AT MCDONALDS  
ALL THE TIME DOESN'T  
MEAN IT'S A GOOD THING)

Removing the levees which were built in 1937 would flood the wetlands with billions of gallons of polluted water with every rainstorm. So while the levees are not natural, they actually protect the wetlands today from L.A.'s pollution.

The conversion of the L.A. area from unpaved natural habitat into a concreted-over city means that rainfall mixes with all the oil, grease, trash, and dog-doo that fills our streets and eventually flows down Ballona Creek into the ocean.

This problem was created by developers paving over and filling all the natural wetlands and creeks in the Ballona valley. The natural ability of wetlands to hold and filter water pollutants has been lost in most of L.A.



So, we now have the very dirty Ballona Creek and the relatively clean Ballona Wetlands side by side. The State's proposal is to reconnect the creek and the wetlands.

We believe that with Ballona Wetlands being all that is left of this area's remaining historical wetlands that this would be a big mistake.

It is argued by proponents of the State's plan that the next-door Playa Vista development created a marsh system which they flood with polluted water and it is "just fine".

Actually, this is an apples to oranges comparison. The Playa Vista system has an extensive upstream filtration and treatment system designed to remove the urban pollution from the water before it crosses Lincoln Blvd and flows into this marsh.

The 51 acres of land devoted to pollution treatment totals 5% of the total 1000 acre area draining into the marsh system. Experts in the field of water pollution treatment say that this 5% total is necessary to provide enough natural plant and soil absorption capacity so that the marsh does not become super-toxic to wildlife.

If the levees are removed from Ballona Creek, the entire flow from 130 square miles of urbanized L.A. will pour into the Ballona Wetlands.

5% of this totals over 6 square miles. Unfortunately, the saved Ballona wetlands are just under 1 square mile.

Thus, the pollution from L.A. would overwhelm our fragile wetlands at six times their natural carrying capacity to clean pollution.

**BUT OUR GOVERNMENT HAS  
A PLAN TO CLEAN UP  
BALLONA CREEK BEFORE  
THE LEVEES ARE REMOVED,  
RIGHT?**



No. In order to clean up Ballona Creek so it would be safe to let it flow into the wetlands again means the taxpayers need to fund the removal of development from 5 square miles of urban L.A. in order to create natural wetland filtration systems alongside the creek.

Those of us that remember that it took 30 years to pry the vacant, unoccupied Ballona Wetlands out of the hands of a developer can understand what it would take to kick thousands of people off of 5 square miles of neighborhoods.

The city's own technical reports estimate a project like this citywide would cost \$15 billion for land acquisition and construction. The cost to individual homeowners in L.A. would be \$400 a month to pay for this project.

**WILL VOTERS AND  
TAXPAYERS BE WILLING TO  
PAY THIS?**

**THIS IS WHY TYING  
RESTORATION OF THE  
BALLONA WETLANDS TO  
REMOVING THE LEVEES AND  
THUS TO A MASSIVE  
SPECULATIVE UPSTREAM  
CLEANUP PROJECT IS A BAD  
IDEA.**

So if we had the equivalent of 6 Ballona Wetlands upstream that could filter L.A.'s pollution, then it would be safe to allow Ballona Creek to flow again into the Ballona Wetlands.  
**BUT WE DON'T.**

SO WHILE WE CANNOT RETURN  
EVERYTHING TO AS IT WAS 200  
YEARS AGO, WE CAN COME CLOSE  
AND PRESERVE ALL THAT WE  
LOVE ABOUT BALLONA WHILE  
BRINGING BACK WATER FOR  
BIRDS, FISH AND OTHER WILDLIFE

IT IS FEASIBLE TO BRING  
CLEAN, NOT DIRTY WATER  
BACK INTO THE WETLANDS  
FROM THE OCEAN.

Digging a few small channels to  
bring water into the wetlands again  
is a lot different than removing  
everything and starting over



New small ocean access channels could be dug from Del Rey Lagoon on the south side and through Fisherman's Village on the north side (as was proposed by the Playa Vista developer when they wanted to turn the wetlands into a yacht harbor)

Fisherman's Village is public land, owned by the residents of L.A. County.

And the original outlet of Ballona Creek next to Del Rey Lagoon park is owned by L.A. City.

So there are alternative ways to bring ocean water back into the wetlands without removing the levees and completely ripping out the entire marsh system

## TO SUMMARIZE OUR ALTERNATIVE VISION:

In our plan, the trail system and  
current habitat mix are  
preserved and the water source  
is clean water from the ocean,  
not urban runoff polluted from  
Ballona Creek

Our plan leaves Ballona Creek levees and the bike path where they are. There could, however be places in the levee where smaller channels could lead into the wetlands from the creek close to the ocean where the water is likely to be cleaner.

Also, our region has substantial relatively-unpolluted groundwater which could be tapped into using wells to provide an upstream source of water for historically-accurate, newly-created creeks running through the wetlands

**IN SUMMARY:** Our plan restores the wetlands to their state before the development of L.A. began as much as is possible, but has none of the negative features of the State's proposed plan. It provides clean water to restore our fragile wetlands, without wiping out the entire site and starting over, and protects our beloved hiking trails.



# FINALLY, AND MOST IMPORTANTLY:

Our plan costs much less than  
the \$100 million State proposal.

Based on the State's own  
estimates, our plan would likely  
cost around  $1/3^{\text{rd}}$  of their  
project's price



**SUPPORT THE BEEP ALTERNATIVE VISION:**

**Print out this picture**

**Comments may be submitted until October 23rd, 2012 to**

**[DONNA.MCCORMICK@icfi.com](mailto:DONNA.MCCORMICK@icfi.com)**.

**Or mailed to:**

**Ballona Wetlands Restoration Project**

**C/O Donna McCormick**

**1 Ada, Suite 100**

**Irvine, CA 92816**



FOR MORE INFORMATION ABOUT BEEP'S  
ALTERNATIVE:

<http://ballona-news.blogspot.com/2012/08/first-big-public-hearing-on-ballona.html>

TO SHARE A LINK TO THIS SLIDE SHOW:

<http://tinyurl.com/ballona>

**Jones, Tanya**

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**From:** Rex Frankel [<mailto:rexfrankel@yahoo.com>]

**Sent:** Tuesday, October 23, 2012 4:40 PM

**To:** [Daniel.p.swenson@usace.army.mil](mailto:Daniel.p.swenson@usace.army.mil); McCormick, Donna

**Subject:** supplemental comments on Ballona Wetlands Restoration NOP-NOI

10/23/2012, 4:37 pm

To Ballona restoration project officials,

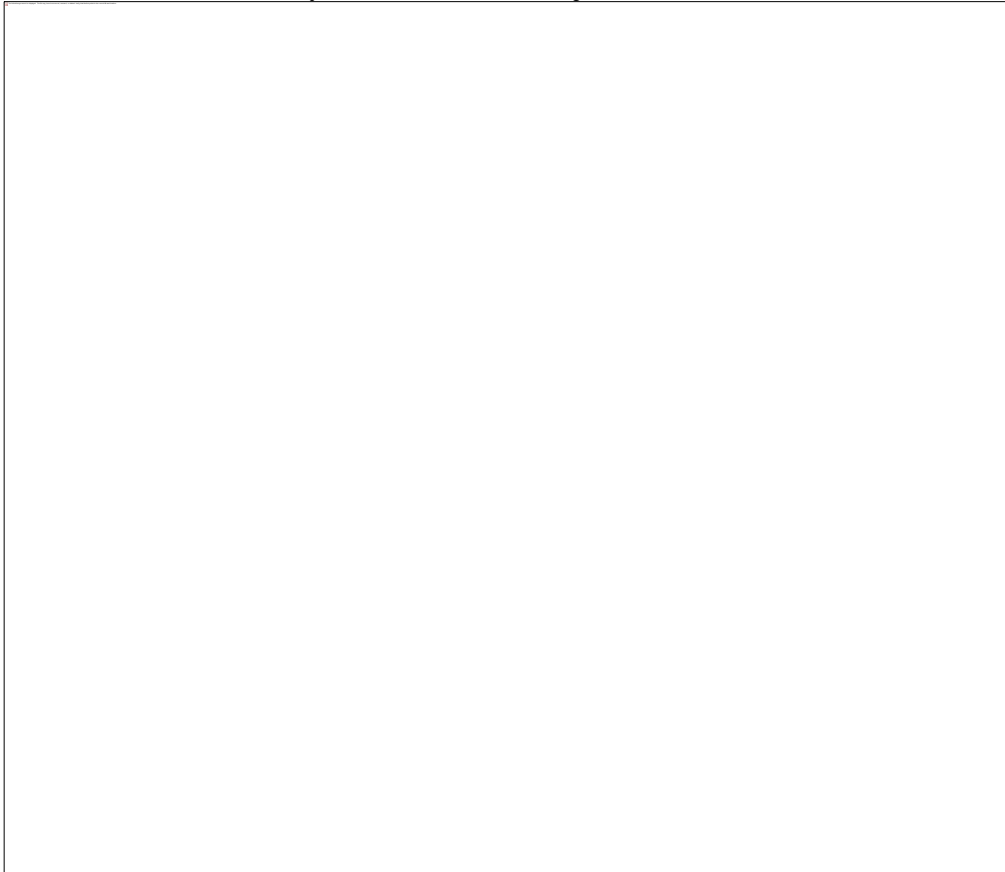
Please see 5 page attachment for my additional comments.

They are in addition to my previously sent comments which are posted here:

<https://picasaweb.google.com/Rare.Earth.fotos/BallonaAlternativePlan>

Rex Frankel

President, Ballona Ecosystem Education Project





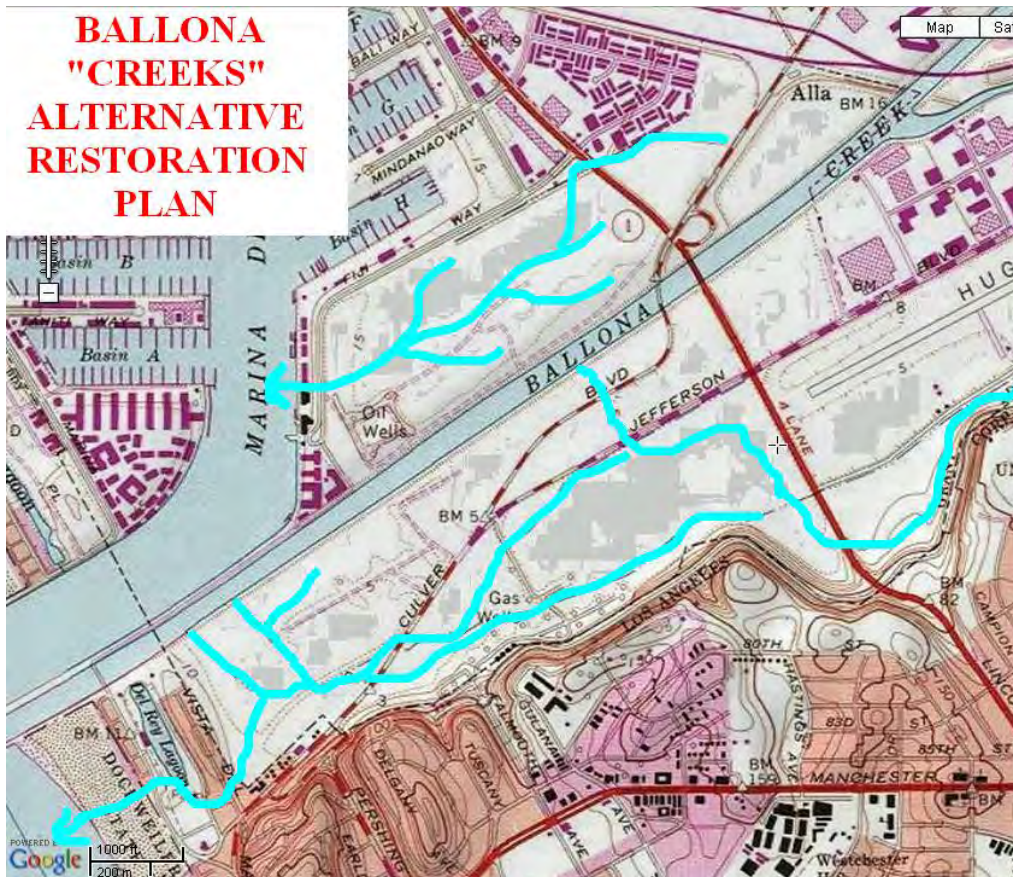
**FROM: Rex Frankel, President, Ballona Ecosystem Education Project**

To: [Daniel.p.swenson@usace.army.mil](mailto:Daniel.p.swenson@usace.army.mil) and [DONNA.MCCORMICK@icfi.com](mailto:DONNA.MCCORMICK@icfi.com)

October 23, 2012, 4:00 pm

We believe the DEIR and EIS must include analysis of an alternative restoration plan based on returning the site to conditions existing before man began altering the land. This means a return to conditions of approximately 200 years ago. Such an alternative would still have room for creation of new estuarine habitat, but would preserve a balance of the three eco-types that are now present on the property: salt marsh, freshwater marsh and upland communities.

In this alternative, water would come through new small channels (approximately 20 feet wide) entering Parcel A through the Fisherman's Village site, and into Parcel B through the L.A. City-owned beach parcel which was the historical mouth of Ballona Creek, through Del Rey Lagoon, going east via a box culvert under Argonaut Place, then east into Parcel B via the alley known as Culver Place, daylighting into the wetlands immediately south of the backdune. Such water sources would be significantly cleaner than the water in Ballona Creek. Use of such sources would not tie the success of the wetlands restoration to yet-to-be-designed or paid-for plans to clean up the Ballona Creek's pollution problems.



Under the “return to the 1800’s Creeks” alternative, Ballona Creek’s levees would remain, and all funding would be spent restoring the wetlands and uplands where they are rather than expending \$100 million to move them around. This plan features preservation of some artificial features, specifically the levees and the fill in parcel A and C, because under the State’s preferred plan, their removal would cause massive pollution impacts to the rest of the wetlands, elimination of long-used walking trails and upland habitat, and fill of other wetlands.



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OUR OBJECTIONS TO THE STATE’S PREFERRED PLAN ARE SUMMARIZED BELOW:

PROJECT IS PRIMARILY DESIGNED TO BENEFIT PRIVATE AND OUTSIDE INTERESTS, NOT THE WILDLIFE AND LOCAL COMMUNITIES

INADEQUATE PROJECT DESCRIPTION: PROJECT INCLUDES UNSTATED BUT OBVIOUS PROJECT FEATURES THAT PROVIDE NO RESTORATION BENEFIT

- removal of levees make wetlands a de-facto end of the pipe pollution treatment basin
- flood protection berms, walls and levees are clearly for Playa Vista’s flood-plain development
- design makes possible a deep water mitigation site providing credits to L.A. Port and “others” who have already stated their interest at public hearings on this project
- and the use of an incorrect date objective makes all these possible

PROJECT USES IMPROPER OBJECTIVE FOR A WETLANDS RESTORATION PROJECT

Uses wrong definition of restoration and wrong date sought to return to

- EIR must analyze a restoration project which uses 200 years ago as its objective, not 4000 years ago

PROJECT UNNECESSARILY FILLS IN 108 ACRES OF WETLANDS AND ‘WATERS OF THE UNITED STATES’, THEN REMOVES FILL FROM AROUND ANOTHER 108 ACRES OF FORMER WETLANDS

--ACCOMPLISHING WHAT THAT WE DON’T HAVE NOW?

- Why is some dredge spoil bad and some good?



## PROJECT ELIMINATES VESTED PUBLIC TRAIL RIGHTS

Many miles of trails cannot be removed from the public trust merely because the landowner is now the State. These trails became prescriptive easements over many years of non-objection and non-posting of “right to pass by permission” signs per state law by the prior private owner. As the preferred project floods the area that includes the trails, the project creates significant and unmitigated impacts to coastal access.

## OUR THREATENED TRAILS



THE PREFERRED PROJECT WHICH FILLS IN WETLANDS IS NOT THE LEAST ENVIRONMENTALLY DAMAGING PROJECT, THUS THE COASTAL ACT IS VIOLATED --Which is why we have proposed the “return to the 1800’s Creeks” alternative.

### PIECEMEALING—

Approval of the preferred plan mandates approval of the larger, more impacting and extremely more expensive upstream creek cleanup project without revealing the upstream project’s impacts and costs, nor providing funds to construct the upstream project

## HOW THE IMPROPER TARGET DATE FOR RESTORATION FACILITATES PROJECTS WHICH HAVE NOTHING TO DO WITH RESTORATION:

### RESTORATION DEFINED:

The U.S. EPA defines restoration as “on the most basic level, restoration is the process of returning a damaged ecosystem to its condition prior to disturbance (Cairns 1991, Berger 1991, and Caldwell 1991).” ...(<http://water.epa.gov/type/watersheds/archives/chap1.cfm>)

Logically, one would not define restoration as to when the dinosaurs were here or when Los Angeles was covered with an inland sea, but to the time when man began dramatically altering it. This coincides with conditions around 200 years ago.

Unfortunately, the Project Management Team’s (PMT) preferred alternative seeks to return the site to conditions of around 4000 years ago, when the entire site was an open arm of the ocean. This appears to be designed intentionally to accommodate 3 outside interests who have their own objectives which are unrelated to the restoration of the Ballona Wetlands to what they were before man’s alteration began.

### HIDDEN OBJECTIVES OF THE STATE’S PREFERRED PROJECT:

1--By merging the Ballona Wetlands and Ballona Creek, this allows the wetlands to filter the massive amounts of urban wet and dry season runoff that now flows from developed Los Angeles to the ocean. Cleaning up Ballona Creek has been ordered by the federal courts by 2021. Yet there is no plan nor funding to accomplish this goal. This is why the levees should remain. Neither pollution filtering nor constant flooding of the wetlands occurred 200 years ago. Filtering was not needed, as the water flowing down Ballona Creek was not polluted. Ballona creek did not regularly flood the entire wetlands area but flowed through small channels into a lagoon that was a quarter mile from the ocean. As the State’s Ballona Wetlands Existing Conditions Final Report has revealed, “By 200 years ago, sediment accumulation almost entirely eliminated the lagoon and formed a complex of salt and freshwater marshes, ephemeral freshwater pools and sandy islands behind the barrier.” (published 8/2006 at page 17.) Much of the small 1800’s era historical lagoons in the Ballona Wetlands remain full of seawater in the publicly owned Ballona Lagoon Marine Preserve, Del Rey Lagoon city park, Grand Canal city park, the city-owned Venice Canals and the county-owned Marina Del Rey.

So, in the 1800’s there was no massively wide Ballona Creek channel flooding the entire area as is in the preferred project.

Such a wide channel was in existence 4000 years ago, as figure 3-1 on page 21 of the Existing Conditions report shows.

However, 4000 years ago is not an appropriate date for any restoration project. Manipulation of the date sought to return to allows justification of virtually anything and is “junk” politicized science.

Filtering urban runoff is not a permitted use of existing wetlands under the Federal Clean Water Act. Government agencies are not allowed to worsen pollution loads of water bodies that are on the CWA 303d list. On the other hand, non-wetlands may be converted into treatment wetlands. But that is not the case here. Both parcels A and B are covered with federally-delineated jurisdictional wetlands. Even more of these 2 parcels are wetlands under the California Coastal Act’s definition. Thus the Ballona Creek levees cannot be removed as long as the creek water violates the Clean Water Act. Cleaning up the water in Ballona Creek until it is clean enough so that it would be allowed to flow into the wetlands

is a long-off project which has no EIR or land acquisition plan nor any funding source. Completion of the project by the current court-ordered deadline 2021 is extremely unlikely.

2--By dredging a deep water basin in Ballona Creek, the PMT is creating an opportunity for the L.A. Port and "others" to purchase mitigation credits to compensate for their own wetland destruction projects. However, the Ballona Wetlands are already saved, thus, a mitigation project means that two areas of public owned wetlands (at public lands at L.A. Harbor and at Ballona) are destroyed in order to re-create 1 of them. Such an outcome is not equitable and flips the no-net-loss wetlands policy on its head.

3--Finally, the PMT's preferred project entails dredging out over 20 feet thick of soil from parcels A and B in order to then dump this soil in 20 foot hills along Jefferson Blvd and parcel C. The unstated objective here seems to be to provide tsunami and tidal surge protection for the lowland Playa Vista condominium development that was built in the last ten years in this flood-plain. Such a flood protection benefit paid for with taxpayer dollars would be an unconscionable gift to wealthy private interests. It is also historically inaccurate, either 4000 or 200 years ago.

Why not just restore the wetlands where they are, and restore the uplands where they are? Why spend \$100 million switching their locations? The short answer is because the uplands are not in the location that blocks flood waters from hitting Playa Vista. And the other obvious reason is that Playa Vista probably does not want a treatment wetland for all of Ballona Creek's pollution across the street from their condos in parcel B.

Basically, the habitat switching in this project, uplands turned into wetlands and wetlands turned into uplands, is not necessary for the successful restoration of the Ballona Wetlands to pre-alteration conditions. There is no need for the massively destructive State preferred project unless your goal is to accomplish the hidden objectives we outlined above.

## **FINALLY,**

Please put us on the notification list for all actions pertaining to the Ballona Wetlands Restoration Project.

Please send all notices to

Rex Frankel  
6038 west 75<sup>th</sup> street  
Loa Angeles, CA, 90045



**Jones, Tanya**

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**From:** Katherine Pease [<mailto:kpease@healthebay.org>]  
**Sent:** Tuesday, October 23, 2012 12:07 PM  
**To:** McCormick, Donna  
**Subject:** Ballona Wetlands Restoration Project scoping comments

Dear Ms. McCormick,

I am attaching Heal the Bay's comment letter on the notice of intent for the Ballona Wetlands Restoration Project.

Thank you.

Sincerely,

Katherine Pease

-----  
Katherine Pease | Watershed Scientist  
Heal the Bay | 1444 9<sup>th</sup> Street | Santa Monica CA 90401  
Tel: 310.451.1500 x 141 | Fax: 310.496.1902 | [kpease@healthebay.org](mailto:kpease@healthebay.org)

Join us for [Fishy Fest](#) at the Santa Monica Pier Aquarium!





1444 9th Street  
Santa Monica, CA 90401

ph 310 451 1500  
fax 310 496 1902

info@healthebay.org  
www.healthebay.org

October 23, 2012

Ballona Wetlands Restoration Project  
c/o Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92618

Via Email: Donna.McCormick@icfi.com

**Re: Ballona Wetlands Restoration Project Scoping Comments**

Dear Ms. McCormick:

On behalf of Heal the Bay, a non-profit environmental organization with over 13,000 members dedicated to making the Santa Monica Bay and Southern California coastal waters and watersheds safe and healthy for people and local ecosystems, we have reviewed the Ballona Wetlands Restoration Project notice of intent and are very supportive of the effort to restore Ballona Wetlands.

Southern California has lost approximately 95% of its historic coastal wetlands. Much of the wetland habitat in this densely urbanized area has been destroyed or highly degraded. Although Ballona Wetlands is designated as an Ecological Reserve, it is severely degraded. The area has been filled with dredge material, effectively separating the creek from its floodplain and damaging the area's ecological function. The Ballona Wetlands restoration project is a historic opportunity to restore critical wetland habitat in the Santa Monica Bay. To ensure the most effective restoration planning and implementation process as possible, we encourage the US Army Corps of Engineers (US ACE) and California Department of Fish and Game (DFG) to evaluate restoration project alternatives that are comprehensive in nature and restore natural processes to the wetlands, including the flow of tidal waters, maintaining freshwater circulation, and supporting a healthy ecosystem that allows native species to recover and thrive. This project has the potential to greatly improve water quality in local streams and waterways, like Ballona Creek and Marina Del Rey harbor, and restore habitat for the endangered and sensitive species in the Ballona Wetlands.

It is important that a full suite of alternatives are evaluated that meet the project goals of restoring hydrological, ecological, and biological functions of the area. Each alternative examined should provide clear linkages between the action taken and improvements to water quality, habitat, and hydrology, as well as justification for any short term disturbance. Of particular concern are sensitive and endangered species that currently exist in the Ballona Wetlands; we urge the US ACE and DFG to address impacts to these species in all alternatives as well as assess how the improvements in habitat may serve to benefit these species, potentially resulting in increased population numbers.



1444 9th Street  
Santa Monica, CA 90401

ph 310 451 1500  
fax 310 496 1902

info@healthebay.org  
www.healthebay.org

Furthermore, we recommend consideration of a tiered approach in the preparation and evaluation of alternatives. Since this is likely to be a large-scale, multi-year project, we would like to see alternatives that prioritize areas that are in greatest need of restoration, and provide a timeline in which those areas will be targeted first.

To ensure the most effective project planning, we encourage the US ACE and DFG to incorporate the following goals in the restoration alternatives preparation and evaluation:

- Focus the project on restoring processes and functions to allow for the long-term health of the ecosystem;
- Use sound scientific studies and recent monitoring data as a basis for understanding the historic and current baseline state of the wetlands;
- Restore Ballona Wetlands to as natural a state as possible;
- Incorporate climate change into project planning so rises in sea level, changes in temperature, and increases in ocean acidity can be accommodated as best possible; and
- Minimize impacts to endangered species and species of special concern.

We strongly support efforts to restore the Ballona Wetlands to a functioning, healthy ecosystem. Ballona Creek, Estuary, and Wetlands suffer from multiple issues, including numerous water quality impairments on the 303(d) list, significant sediment and habitat modifications, and unnatural hydrology. We recommend that the scoping committee consider a range of alternatives, all with the goals of long-term ecosystem health, including improved circulation, water quality, and habitat. We appreciate the opportunity to comment on this project and are excited to be involved as the restoration process gets underway.

Sincerely,

Katherine M. Pease, PhD  
Watershed Scientist

Sarah Abramson Sikich, MESM  
Coastal Resources Director



Ballona Wetlands Restoration Committee

October 23, 2012

**Ballona Wetlands Restoration Project**

**LEAD AGENCIES:**

**United States Army Corps of Engineers**

**Colonel Mark Toy c/o Daniel Swenson**

**California Dept. of Fish & Game**

**Director Charlton H. Conham, c/o David Lawhead**

And c/o Donna McCormick – consultant hired by the Santa Monica Bay  
Restoration Foundation and/or CA State Coastal Conservancy  
1 Ada, Suite 100  
Irvine, CA 92816

Re: NOP for Ballona Wetlands “restoration project”

Dear Ms. McCormick, Colonel Toy and DFG Director Bonham:

We appreciate the opportunity that California and U.S. law allows for the public to be included in scoping comments. While the law may not require actual public hearings during the scoping process, we remain extremely disappointed that there has been no public hearing prior to the draft EIR/EIS preparation. We continue to ask, as our Congressman, the Honorable Jane Harman, our State Senator, The Honorable Ted Lieu and our Los Angeles City Councilmember, The Honorable Bill Rosendahl, have also asked, that you convene a hearing for the public to be able to hear each other, as well as for decision-makers to hear all relevant comments, some of which will not be heard fully when only submitted in writing.

In addition to this request, please respond to the following requests in the draft EIR and draft EIS documents that are prepared for the project you are proposing for the Ballona Wetlands Ecological Reserve, state-owned lands which were paid with bond funds voted on by the public, and which were – at the price of \$139 million – the highest per/acre cost for land preservation in the history of the state of California.

1. Please analyze and explain how construction traffic by all of the proposed alternatives of this project will impact neighborhoods surrounding the ecological reserve, as well as how the construction will impact commuter traffic on Lincoln Blvd., Culver Blvd., the 90 Marina Fwy., Mindanao, Fiji Way and Jefferson Blvd.
2. Please analyze and explain how the rare and endangered species that are dependent in any way for habitat (shelter, resting, food, water or refuge) at the Ballona Wetlands Ecological Reserve will be impacted by the proposed project and any of its alternatives.
3. Please analyze and fully consider the “Wildlife Friendly Alternative” that has been submitted by Ballona Institute, and supported by Sierra Club, as one of your alternatives for this project, and explain fully why it is not the most environmentally preferable and least environmentally damaging alternative.
4. Please apply the rejuvenation principles that Sierra Club and several other groups have supported to each of the proposed alternatives and proposed project in the EIR/EIS process.
5. Please explain why the south levee, in its current state of equilibrium, is not one of the preferred walking trails for public access, given its proximity to the wildlife, its current use by dogwalkers, fishermen and others, and consider this path as one of the proposed major public trails.
6. Please explain why the south levee, in its current state of equilibrium, is not one of the preferred walking trails for public access, given its proximity to the wildlife, its current use by dogwalkers, fishermen and others, and consider this path as one of the proposed major public trails.

7. Please explain why Cabora Dr. is not one of the preferred walking trails for public access, given its proximity to the wildlife, its higher location and consider this path as one of the proposed major public trails.
8. Please explain and analyze the “Lincoln Blvd. fault” which was identified and described by Dr. Victor Jones during the Playa Vista construction approvals, and describe how this fault (which is still a fault, although not called that due to PV’s lobbying activities, yet it still operates as a fault) will possibly impact aquifer activity that relates to flooding of the wetlands via the proposed restoration.
9. Please analyze and explain how the drawdown of the water table by Playa Vista based on its requirement by the LARWQCB to clean up contamination floating atop the groundwater – dumped presumably during the Hughes’ ownership of the land before there were environmental laws – will impact the flooding of the wetlands, explain how the flooding of the wetlands will impact that aquifer, and explain how those waters will be separated, how any mixing will impact wildlife, how it will impact any drinking water portions of the aquifer and how it will impact the settling of the land beneath the Playa Vista residential and commercial buildings, as well as how all of this activity impacts the highly explosive methane seeps documented as present in this region.
10. Please analyze and explain how the underground gas storage at the Ballona Wetlands Ecological Reserve will be impacted by the proposed flooding of the wetlands by seawater and how any construction activities will impact the gas storage field and possible hazards to surrounding residents, as well as to wildlife.
11. Please analyze and explain which species are being managed for in this proposed “restoration,” and how each of these species will be assisted or supported in their life cycles by the proposed restoration. Also please analyze this same topic for each of the alternatives considered, including the “Wildlife Friendly Alternative.”
12. Please analyze and explain how sea level rise will impact the ecological reserve under each proposed alternative considered in the EIR/EIS.

13. Please analyze and explain how many people will be allowed to visit the ecological reserve each day – and how such visits will impact the wildlife. Include any sensitive times of year that might be different in terms of use due to restrictions that might be imposed.
14. Please analyze and explain how the construction of large buildings proposed along Fiji Way – including at the proposed boat storage facility and Fisherman’s Village – may impact the proposed restoration, and considering the restoration alternatives, explain what the differences will be for flights from egrets and herons to and from their rookeries and roosting sites, given the proposed restoration alternatives.
15. Please analyze and explain how the Great Blue Heron and Great Egret rookeries on adjacent public lands will be impacted by the loss of upland habitat contemplated in various alternatives for the “restoration.
16. Please analyze and explain how any proper “restoration” can be planned in the presence of unknown, unregulated, unpredictable interference with the fresh water aquifer, as this aquifer passes under and to the east of Lincoln Blvd. and is underneath the Playa Vista business and residential development?
17. Please analyze and explain how the gas mitigation systems that are in place at Playa Vista, which require continual pumping and disposal of large volumes of fresh water, which is disposed of, will be impacted by the proposed restoration, especially since it is apparent that this process is not properly nor consistently monitored. Also explain the effect on the supply of fresh water to the Ballona Wetlands, given these circumstances. What effects on the natural ecological balance will result?
18. Please analyze and explain how the Playa Vista Treatment Basin, also called the “Freshwater Marsh,” will impact the natural mix of waters in the “restored” Ballona Wetlands, which would presumably received water from the aquifer, the treatment basin’s runoff from Playa Vista and the Pacific Ocean. How much fresh water is pulled out of the fresh water aquifer, and will this water be free from contamination by the time the restoration begins? How can the public be assured of this?

19. Please analyze and explain how much water from off site is injected into the "freshwater marsh" to keep it full in dry times, and how will this input of water impact the Ballona Wetlands "restoration" plans?
20. Please explain how the Native American – First Nation – cultural and religions concerns will be respected – unlike previous situations on related Ballona Valley lands.

Thank you for the opportunity for Sierra Club to comment on the scoping of this proposed project.

Sincerely,

*Marcia Hanscom /s/*

Marcia Hanscom  
Chair, Sierra Club Ballona Wetlands Restoration Committee  
322 Culver Blvd., Ste. 317  
Playa del Rey, CA 90293  
(310) 821-9045



# Support the Wildlife-Friendly Alternative for Ballona

*"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."*

*~ Aldo Leopold, 1949, A Sand County Almanac*

1. **FIRST DO NO HARM** ~ Detailed, seasonal, unbiased baseline surveys of the species and ecosystem at Ballona are needed in order to know what is here and to know how the ecological processes are interacting with the equilibrium which exists after more than 70 years of the Ballona Creek estuary channel being constructed and after nearly 50 years of the marsh mud having been placed on parts of Areas A & C. Protect all rare and imperiled species, and determine what habitat is needed to support this protection.
2. **ACQUIRE MORE LAND** ~ The Committee to Complete the Park has identified nine open spaces on the Ballona Wetlands Ecological Reserve edges where open space and habitat support the ecological functioning of Ballona. These places are threatened with development and erasure of the existing habitats; this land provides foraging space, wildlife corridors and other important functions for species which call Ballona home.
3. **UNDERGROUND UTILITY WIRES** ~ Current utility wires crisscross the Ecological Reserve, causing injury and death to birds and visual blight to the beautiful landscape.
4. **COMMUNITY-BASED RESTORATION** ~ Community groups have been and want to continue to remove non-native plant species (those which are not providing habitat to native animals) by hand with shovels and other tools (no poisons; no bulldozers.) This sort of go-slow human-involved regime not only enhances ecological education and stewardship values, but provides a far better chance of preservation of sensitive species which might be unknown to those doing the work.
5. **REMOVE DEAD PALMS** ~ These trees along Culver Boulevard; these are fire hazards, harbor nonnative animal species and cause visual blight of the beautiful landscape.
6. **SECURE THE RESERVE** ~ Fence and secure areas immediately adjacent to urbanized, inhabited areas to prevent dog, cat and human unauthorized trampling.
7. **CALM TRAFFIC & ENCOURAGE WILDLIFE CROSSINGS** ~ All roads traversing the Ecological Reserve need to have traffic calming measures implemented by LA DOT and CalTrans. Explore and implement wildlife crossings and other road conversions to decrease road kill of wildlife and to open up bicycle and walking paths.
8. **VIEWING PLATFORMS & WALKING TRAIL** ~ Install viewing platforms at four city-owned properties directly abutting the Ecological Reserve. Designate Cabora Dr. a historical walking trail, install view areas, including scopes and interpretive signage.
9. **PARKING** ~ Work collaboratively with the business and residential communities to create parking that works for everyone.
10. **RESTORE ANIMALS & PLANTS** ~ Build nesting platforms for Bald Eagle & Osprey. Return Roadrunner, Los Angeles Sunflower, Pacific Pocketmouse & California Quail.

**FOR INFORMATION, call 310-823-7040.     [www.ballonainstitute.org/discover.html](http://www.ballonainstitute.org/discover.html)**

## Ballona Ecosystems Rejuvenation “Seven Guiding Principles”

1. 21<sup>st</sup> century, incremental, community involved ecosystem rejuvenation that is in harmony with natural laws . We are opposed to industrial-scale habitat conversion, including major bulldozing, which destroys existing ecosystems.
2. In appreciation of what is there now, recognize the resiliency of the ecosystems and identify areas that require no more than observation for the foreseeable future.
3. In recognition of the importance of gaining control of more acreage before it is built on, or otherwise negatively impacted, give priority to acquisition/addition of additional unprotected parcels of land at a reasonable price to the Ballona Wildlife Refuge, over restoration activities. Such land protection will increase habitat enhancing buffer zones for wildlife and plants, and decrease car trips in the area, which lead to animal road fatalities.
4. Utilize existing opportunities to access the refuge, such as the Ballona Creek bike path, and south earthen levy along Ballona Creek and install a walking/biking path around as much of the perimeter of the refuge as is ecologically feasible.
5. Utilizing existing infrastructure such as the old Pacific Railway bridge supports and other man made structures, along with materials that have the deepest sustainability, create wildlife, bicycle, and walking linkages that connect all areas of the ecosystems in a fashion that allow homo sapiens and animals alike, to safely go over or under all roads and waterways that divide the refuge.
6. In recognition of the importance of enhancing the beauty of the refuge, safety of birds and other mammals, and the reduction of light pollution, move all power, telephone, and cable lines underground, and remove the majority of street lighting.
7. Endangered, threatened, and imperiled species must be given priority for protection in any refuge alteration considerations.

Supported by numerous environmental and community groups, including Ballona Wetlands Land Trust, Sierra Club, Ballona Institute, Ballona Ecosystem Education Project, Grassroots Coalition and Wetlands Defense Fund

1/19/2012

**Jones, Tanya**

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-----Original Message-----

From: Klecha, Anthony [<mailto:AKlecha@semprautilities.com>]

Sent: Tuesday, October 23, 2012 1:08 PM

To: Swenson, Daniel P SPL

Subject: SoCalGas' Comments on the Ballona Wetlands NOI, File #SPL-2010-1155

Importance: High

Dr. Swenson,

Please find attached, Southern California Gas Company's comments on the Notice of Intent to Prepare a Draft Environmental Impact Statement/Environmental Impact Report for the Ballona Wetlands Restoration Project.

Should you have any questions or need additional information, please feel free to contact me.

-Tony

Anthony A. Klecha

Principal Environmental Specialist

Southern California Gas Co.

Office: (213) 244-4339

Cell: (213) 393-0568

[aklecha@semprautilities.com](mailto:aklecha@semprautilities.com) <<mailto:aklecha@semprautilities.com>>

Classification: UNCLASSIFIED

Caveats: NONE



Anthony A. Klecha  
Principal Environmental Specialist

555 W. 5th Street  
Mail Location GT17E2  
Los Angeles, CA 90013

Tel: (213) 244-4339  
Fax: (213) 244-8046  
Mobile: (213) 393-0568  
[aklecha@semprautilities.com](mailto:aklecha@semprautilities.com)

October 23, 2012

Sent via Email

Dr. Daniel P. Swenson  
U.S. Army Corps of Engineers – Los Angeles District  
P.O. Box 5327111  
Los Angeles, CA 90053-2325

**Comments on the Notice of Intent to Prepare a Draft Environmental Impact Statement/Environmental Impact Report for the Ballona Wetlands Restoration Project**

Dear Dr. Swenson:

Southern California Gas Company (SoCalGas) appreciates the opportunity to review and comment on the U.S. Army Corps of Engineers' (Corps) *Notice of Intent to Prepare a Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) for the Ballona Wetlands Restoration Project* (Project). We understand that the proposed project will entail restoring, enhancing, and creating native coastal wetland and upland habitats in the approximately 600-acre Ballona Wetlands Ecological Reserve. We also understand that the project would involve removing existing levees and constructing new levees; modifying existing infrastructure and utilities; and long-term operations and management activities. We further understand that the DEIS/EIR will consider several alternatives and is expected to be published in late 2012. Below, please find our comments for your consideration:

The Playa del Rey Storage Facility (Facility) is one of four operational natural gas storage fields within the SoCalGas service territory and has been operated since 1942. Storage fields enable SoCalGas to purchase and store natural gas when demand is low and withdraw gas for delivery when demand is high. Natural gas is stored at the Facility within a depleted oil reservoir of an average depth of 6,200 feet below ground surface. Storage fields like the Facility promote reliable natural gas service and protect customers against price spikes. Gas storage benefits all of SoCalGas' customers, from residential to large commercial and industrial customers. In addition, storage fields like the Facility fuel electric generation by power plants, thereby helping to ensure electric service reliability.

The Facility is located immediately adjacent to the southerly boundary of the Project's Area and is comprised of two general areas naturally divided by the coastal bluffs. The natural



October 23, 2012

Page 2

processing plant site is located at the toe of the bluffs (north side) and contains a number of above ground storage tanks, vessels, production and observation wells, fire protection systems, and process equipment including electrical and piping infrastructure. The office portion of the Facility is located at the top of the bluffs (south side) and contains all of the office space as well as the compressor building, multiple storage areas, garage and workshop space, natural gas processing vessels, and a loading area.

A number of monitoring wells and associated piping are located outside of the boundaries of the Facility within the proposed Project site. A total of 17 active monitoring wells exist within the Project footprint: five within Area A (Del Rey 13, 14, 15, 17 and 19) and eleven within Area B (Del Rey 4, 5, 9, 11, and 12 and Vidor 1, 2, 3, 5, 14, 18). Two plugged and abandoned wells are also located within the footprint: Del Rey 16 in Area A and Vidor 4 in area B. An additional well (Del Rey 18) is located on developed property within the Marina; however, because the pipeline serving this well traverses the wetland, it too could be affected by the proposed Project.

While SoCalGas recognizes and appreciates the importance of this Project, it's critical that the DEIS/EIR fully consider our existing infrastructure and the need to maintain full-time all-weather access for heavy equipment to this infrastructure. It's also imperative that the Project team continue to collaborate with SoCalGas throughout the planning and implementation phases to ensure that we can continue to provide safe and reliable natural gas service to our customers.

We understand that Project scope is still under development, and that certain alternatives may include abandoning, raising and/or relocating SoCalGas facilities. Please note that any modifications to our facilities will have to be mutually determined and agreed upon by the Corps, the California Department of Fish and Game, and SoCalGas.

Once again, SoCalGas appreciates having the opportunity to comment during this scoping process, and we look forward to working together to address our respective important needs. Should you have any questions or require additional information, please feel free to contact me at (213) 244-4339.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Anthony A. Klecha', with a long horizontal flourish extending to the right.

Anthony A. Klecha  
Principal Environmental Specialist  
Environmental Services Department  
Southern California Gas Company

**Jones, Tanya**

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-----Original Message-----

From: Dave Singleton [[mailto:ds\\_nahc@pacbell.net](mailto:ds_nahc@pacbell.net)]

Sent: Tuesday, October 23, 2012 8:21 AM

To: McCormick, Donna

Subject: Ballona Wetlands Restoration Project NOP

October 23, 2012

Dear Ms. McCormick:

The California native American Heritage Commission (NAHC) is the State of California 'trustee agency' for the protection of Native American cultural sites and burial grounds. It is also a 'reviewing agency' for the Stateclearinghouse for CEQA and NEPA environmental documents.

We are concerned that we may not have had an opportunity to review the CEQA NOP for this project with which we have been working, primarily through the California Coastal Conservancy as a participating agency.

Please provide us with the Stateclearinhouse Number so we can research whether or not we were able to respond to the NOP.

Thank you.

Dave Singleton  
Program Analyst for Southern California  
California Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814  
(916) 653-6251

**Jones, Tanya**

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**From:** Valerie Schadt [<mailto:valerieschadt@mac.com>]  
**Sent:** Wednesday, October 24, 2012 10:08 AM  
**To:** McCormick, Donna  
**Cc:** [landtrust@ballona.org](mailto:landtrust@ballona.org)  
**Subject:** BALLONA CREEK

Hello-

My name is Westley, I am eight years old and love Ballona Creek. I go there every weekend to watch birds and other wildlife. It is important to me that you protect the wildlife. Please take care and the necessary steps in the renovation of the Ballona wetlands.





A-2153





A-2154





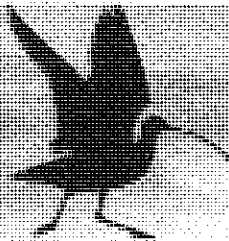


These are two photos I took. One of a Sharp Shined Hawk and the other of a Sanderling.

Thanks for your help.

Sincerely,

Westley Eftekhari



# Ballona Wetlands Restoration Project

Advancing ecosystem health. Connecting communities with nature.

## Comment Card

Name: DONALD OWENS

Email: (optional) \_\_\_\_\_

☒ Add me to the mailing list (please provide email or mailing address): 321 W. QUEEN ST  
#10 INGLEWOOD, CA 90301

Comments/Issues: (Use additional sheets if necessary) WHAT IS BEHIND

THE MOVING OF THE RIVER.

IS THERE AN INTENT OF

MORE URBAN SPRAWL?

THIS IS A MULTI-PURPOSE

AREA. WHY CONTAIN IT FURTHER?

THE RECREATION & WILDLIFE

AREA IS SHRINKING BEYOND WHAT

IS ACCEPTABLE FOR THIS

NEIGHBORHOOD.

Submit written comments by **October 23, 2012** to:

Mail: Ballona Wetlands Restoration Project

C/O Donna McCormick

1 Ada, Suite 100

Irvine, CA 92618

Email: [Donna.McCormick@icfi.com](mailto:Donna.McCormick@icfi.com)

**\*\*All comments submitted will become part of the Public Record**

A-2157

Tape Here  
Do Not  
Staple

A-2158

DONALD OWENS  
321 W. QUEEN ST #10  
INGLEWOOD, CA 90301

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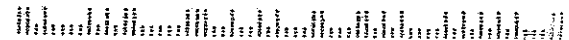
LOS ANGELES CA 900

24 OCT 2012 PM 5 L



**Ballona Wetlands Restoration Project**  
**C/O Donna McCormick**  
**1 Ada, Suite 100**  
**Irvine, CA 92618**

92618+5338



**Jones, Tanya**

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-----Original Message-----

From: patricia mc pherson [<mailto:patriciamcpherson1@verizon.net>]

Sent: Wednesday, October 24, 2012 12:44 PM

To: Swenson, Daniel P SPL; David Lawhead

Cc: [jd@johnanthonydavis.com](mailto:jd@johnanthonydavis.com); Knight Kathy; Douglas Fay

Subject: Ballona Restoration EIS/R Comments-Grassroots Coalition

Dear Mr. Swenson,

Thank you for accepting the hard copies of NOI comments for Ballona from Grassroots Coalition(GC) ; John Davis; Kathy Knight/ Sierra Club; and Douglas Fay-- at the USACE Los Angeles offices.

And, in particular, thank you for reassuring us that the attachments that were given to you as part of our submissions from GC and J.Davis--would be copied and sent to CDFG by USACE personnel and not sent to outside entities to fulfill that purpose.

Thank you also for assuring us that USACE would retain the original materials we brought to you.

Included herein is a PDF of the GC comments without the attachments provided yesterday.

Should USACE or CDFG have any questions regarding any of the materials, please feel free to call.

Thank you,

Patricia McPherson, Grassroots Coalition

310 397 5779

ps A hard copy of the GC comments and 3 cd/dvd(s) were mailed to CDFG yesterday.

Classification: UNCLASSIFIED

Caveats: NONE

**Oct. 22, 2012**  
**TO: USACE, Daniel.P.Swenson @ USACE.ARMY.MIL**  
**CDFG David Lawhead**

**FROM: GRASSROOTS COALITION, Patricia McPherson-President**  
3749 Greenwood Ave. Los Angeles, CA. 90066  
PatriciaMcPherson1@verizon.net

*Please extend the Oct. 23rd NOI deadline until a public hearing by the Army Corps and CDFG can be held. This request was made at the August display event, but thus far it has not happened.*

**RE: SCOPING COMMENTS AND QUERIES FOR THE 2012 NOI; JOINT EIS (CWA PERMITS) AND EIR FOR BALLONA WETLANDS RESTORATION PROJECT**

**ISSUE # 1:**

**OILFIELD GAS HAZARDS/ SOCALGAS/PLAYA VISTA/ WILDLIFE AND PUBLIC HAZARDS**

**SCOPING** – High pressure gas storage operations of the Southern California Gas Company (SOCALGAS) operated within the partially depleted oil fields of Playa del Rey and Venice. New information is available that has not been utilized.

-needs to include studies that evaluate environmental harm from Ballona Channel changes (408 permit ) and dredging/ filling of Ballona habitat pertaining to **oilfield gas migration hazards and oilfield gas migration hazards** that may be enhanced due to the SMBRC/COASTAL CONSERVANCY (CC) “PLAN”

**Background and overarching scoping needs-**

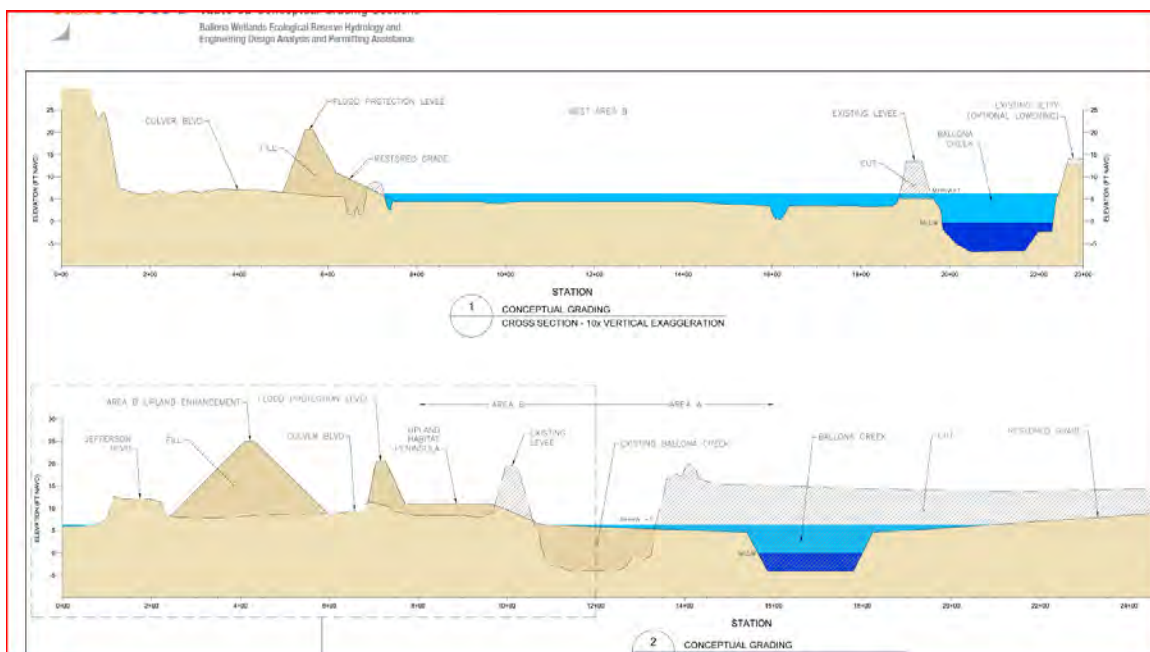
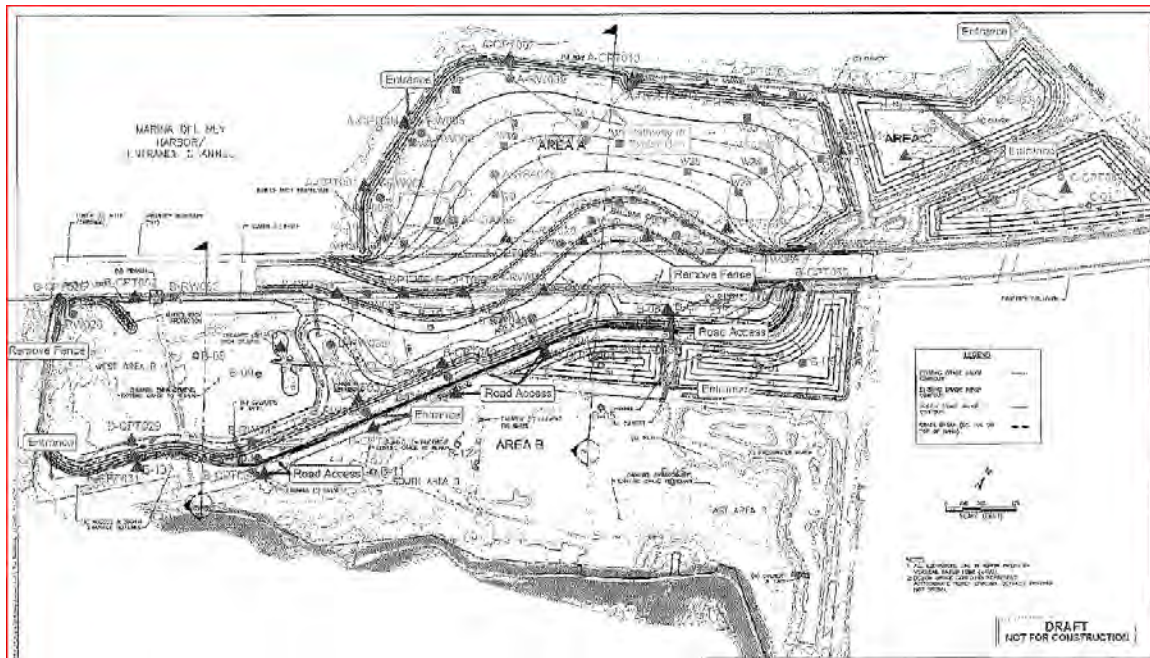
The promised hydrology studies (2005 Joint EIR/EIS—between USACE & the Authority ) of Ballona Wetlands have not been done. Instead, the SMBRC/FOUNDATION -director & staff and the California Coastal Conservancy have interfered with and stopped the areawide ecological studies and geotechnical studies of the federal review for restoration potentials in the greater Ballona region in order to promote a singular ‘Plan’ of destruction and experimental construction upon Ballona Wetlands- Areas A,B,C . This “Plan” excluded groundwater hydrology studies and focused upon hydrolics studies of surface water flows into Ballona Channel .

We believe that this 'Plan' is nothing more than a destruction of endangered species and wildlife habitat that is currently functioning well and that the Coastal Conservancy contracted- Psomas Co. contour maps of the "Plan" reveal that it is a flood control plan that only benefits a private development known as Playa Vista (Playa Capital LLC). The Proposition 12 bond funds have illegitimately been spent on private use protections to a development site that was illegally allowed to build in a flood plain. FEMA was not engaged for oversight comments as needed as the EIR process for Playa Vista was thwarted by failure to utilize the Clearinghouse as a gateway for proper notice to all pertinent agencies. ( ETINA v City of LA; Playa Capital LLC) This failure by the lead agency- the City of Los Angeles- to include and enforce California Environmental Quality Act (CEQA) protocol of Clearinghouse utilization **PLACES THAT BURDEN NOW UPON USACE AND THE California Dept. of Fish and Game and its state agency partners. FEMA MUST NOW BE ENGAGED** and the issues that pertain to flood protection for Playa Vista must now be reviewed in light of the flood control devices and the preordained 'Plan' of development and construction proposed by SMBRC/Foundation and the California Coastal Conservancy.

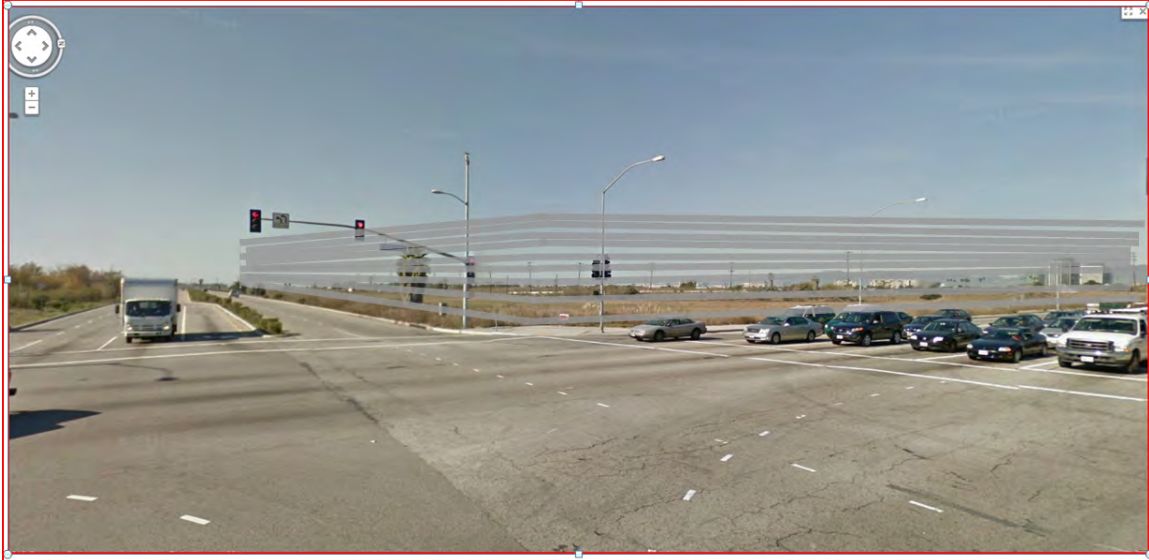
The giant berms and levees-approximately 20 feet above current road level as shown in the contour plans – are NOT habitat; are NOT RESTORATION but instead are civil works flood protection devices to benefit Playa Vista. Furthermore, the 'Plan's' intent to DREDGE Ballona is NOT RESTORATION but instead is simply an experimental attempt at an end of pipe solution to the toxic water and sediment flow down the Ballona Channel. The catch-basin shown in the 'Plan' does NOT enhance or restore Ballona but instead destroys the very habitat that the public has spent over 20 years to protect. The effects of the 'Plan' as a catch-basin and flood control project have not been studied. Current roadways, Marina del Rey and other beach front areas appear to be put in jeopardy from the project.







State ‘Plan” –note the structural pyramids of berm/ levee and respond to how structures will be ‘habitat’? Please include response for nearly vertical levee structures and how is this habitat? Or habitat protection?



**View destroyed towards SM Bay AND height of NON-“restoration upland”- aka engineered flood control berm to protect Playa Vista –GC approximate visual**

#### **SCOPING:**

Issues of safety, failure to utilize the bond funds as approved by the public; failure to work with and include the public’s participation in restoration concepts and planning; the legitimacy of process -- promised and paid for by bond dollars v the exclusionary and preordained outcome plan by the SMBRC/Foundation and the Coastal Conservancy must be addressed in the SCOPING AND DRAFT EIS/R.

Response to conflict of interest allegations, illegal use of bond funds, lack of transparency issues raised and failure to perform in good faith toward restoration, acquisition of more of Ballona, and enhancement issues that would protect and utilize the freshwater resources of Ballona onsite must be addressed and raised for public awareness of these and other challenges leveled at the lead agencies and their ‘partner’ agencies.

**SOCALGAS – Playa del Rey operations have not been adequately addressed. Migration of oilfield gas issues have not been addressed.**

For example:

#### ***“GROUNDWATER MOVEMENT***

*The movement of local groundwater can greatly influence both the upward and lateral migration of the oilfield gases. For these reasons, a detailed hydrogeological study of the area is necessary. For purposes of environmental assessment, groundwater influences are crucial in the evaluation and interpretation of the experimental data.*



*For example, many of the environmental studies to evaluate soil contamination are carried out using relatively shallow soil probes that do NOT penetrate below the near surface aquifer zones. Accordingly, before proper experimental interpretations can be given to the gas concentrations, **the hydrogeological conditions must be well known. A profound example, is where the aquifer conditions are being continually influenced by the nearby tidal forces of the Pacific Ocean.***

*Furthermore, each of the oil field gas constituents has a different level of solubility in water.”p.3*

*BTEX chemicals (benzene, toluene, ethylbenzene, p-xylene, o-xylene) and hydrogen sulfide (H<sub>2</sub>S) are chemicals known to be part of the oilfield gases surfacing in the Ballona Wetlands and Playa Vista. (Exploration Technologies(ETI) / City of Los Angeles 2000-1 gas reports; Still Workin On It – ETI)*

*And per SOCALGAS-PDR operations:*

*“...once upward migrating leaking gases, associated with each well, reaches the gravel zone it rapidly spreads out laterally within the highly permeable gravel zone.*

*The gravel zone extends easterly along the path of the ol Los Angeles Riverbed, and follows the current path of the county flood control channel. In terms of permeability, **this gravel zone provides an excellent conduit for the gas to move easterly, and directly under the Playa Vista** real estate development currently under construction.*

***This movement has been facilitated by the tidal action of the ocean, which acts as a “piston” (by analogy to an automobile engine) in providing a periodic, and pulsating, energy source in moving the gas from the location of the leaking wells, easterly under the Playa Vista development. At low tide, oil field gas rapidly moves up the old oil field well bores. At high tide the gas is “pushed” easterly as the rising ocean level influences the pressures within the gravel zone.”** P. 16 ENVIRONMENTAL AND HEALTH HAZARDS DUE TO METHANE AND OTHER OIL FIELD GAS MOVEMENT THROUGH SOILS Bernard Endres, PhD*

*Additionally, it is well known that both H<sub>2</sub>S and salt water have proven corrosive effects upon the casings and sealings of well bores. Numerous wells have been identified by SOCALGAS as having holes due to salt water corrosion in the PDR field. (See attachments of internal SOCALGAS documents citing leakage of SOCALGAS wells)*

*Example:*

*SCG-Playa del Rey operations:*

*“Historical drilling records reveal serious problems with achieving a competent cement seal when the surface casing was being cemented to the surrounding rock formation. This was especially serious for the Townlot Wells that were closer to the Pacific Ocean beach. ....**Furthermore, saltwater intrusion from the nearby Pacific***

***Ocean is also highly corrosive to the steel surface casing, and is known to cause significant deterioration of the concrete shoe materials."***

CPUC LITIGATION Grassroots Coalition v SOCALGAS/ Bernard Endres PhD  
consulting expert of record

The Playa del Rey Gas Storage Facility Gas Migration Hazards; And The Duties  
Imposed To Monitor And Mitigate These Dangerous Conditions Mar. 24,2007  
Case 00-05-010; 011;012



The area is just across from Playa Vista on west side of Lincoln Blvd. Note the tire tracks and site vacated after exposing gas and fluids broiling up in closeup provided below. Why wasn't this borehole and effluent contained? This wetland portion filled with pickleweed- a wetland indicator species- will be destroyed by the State's Plan by filling up to 20' above road level in order to create what? A giant flood control mountain of vertical earth. The public paid for Ballona to be restored and enhanced ---not to use public dollars to provide private protection to Playa Vista. Please respond.





Image reveals recent borings left to broil up with oil and gases. Please provide discussion/ explanation/ testing data of this boring along with the rest of the boring done on Ballona in 2012.

**SCOPING-** Studies need to include evaluations of how monitoring will occur for gas leakage and contamination, where and what mitigation will need to occur regarding oil/gas wells or other wells acting as conduits for oilfield gas migration.

- Who will be responsible for enhanced gas migration throughout the area due to the construction of the catch-basin (treatment wetland) and flood control protection to Playa Vista of the berms and levees ?
- -What mitigation will take place to prevent enhanced gas movement through the area due to the proposed tidal inundation and flows?
- What studies will be done to illuminate the potential gas movement changes?
- How and what mitigation measures will offset the enhanced liquefaction potentials caused by gas migration upon the proposed levees, berms and other construction devices of the channel changes and proposed experimental treatment basin?
- What liabilities and responsibilities do the state agencies including CDFG ; the Coastal Conservancy (CC); Santa Monica Bay Restoration Commission (SMBRC) and its individual personnel and the USACE have

**for affects upon the infrastructure and the environment for failure to evaluate the gas migration pathways?**

- **Evaluation needs to take place -**
- **How will the proposed channel change/ berm and levee construction and dredging and increased tidal flow facilitate the migration of oilfield gases and dangerous accumulation of these gases—especially in light of the current failure to investigate and/or monitor at least one Playa Capitall LLC oilwell- University City Syndicate (freshwater marsh) that is off gassing millions of cubic feet of oilfield gases daily and numerous other SOCALGAS wells that have recently leaked reservoir gases to the surface?(DOGGR 1008 Order & SOCALGAS/ Grassroots Coalition Settlement Agreement gas studies showing 900,000 ppm of oilfield gases surfacing)**
- **-Since the riparian corridor and the catchbasin (freshwater marsh) are also part of the Ballona ecosystem and directly and/or indirectly affects the region via gas contamination and/or other contamination—what liabilities do the agencies of the EIR/EIS have for failure to include and address the overlapping environmental issues and their mitigation?**
- **The Playa Vista site- including the riparian corridor and the catch basin (freshwater marsh) need to be included in the EIS/EIR for the issues of gas migration/mitigation ; dewatering-hydrology as the areas directly and indirectly affect the region.**
- **Playa Vista was built in a flood plain without oversight -via CEQA clearinghouse notification- of FEMA. (ETINA v City of LA/Playa Capital LLC) Scoping now needs to include these issues of buildout in a flood plain and the ramifications of that buildout.**
- **-**

**SCOPING- Gas migration evaluations need to be performed throughout the restoration area to update and map current oilfield gas migration patterns. The joint EIR/EIS must include available information pertaining to the oilfield gas migration hazards of Ballona.**

**-What soil gas and hydrology issues were discovered in 2012 as a result of the boring operations for berm and levee placement ?**

**- What geotechnical issues regarding the gravel zone and other underlying zones and aquifers were addressed and acknowledged as part of the same boring operations? These issues and scientifically legitimate answers by qualified and UNBIASED scientists must be included as part of the scoping issues.**

**- It appears that most if not all of the consultants utilized for work studies on Ballona have a lengthy and conflicted history of working for the Playa Vista, Playa Capital LLC; SOCALGAS- SOCAEdison (affiliated with SOCALGAS via gas storage needs and contracts) entities that have vested and monetary interests in Ballona both directly and indirectly.**

**- Why does the federal government and state agencies allow for such apparent conflict of interest to occur?**

**-Why aren't companies without such past and current financial ties to the Playa Vista development site and SOCALGAS/Edison being contracted for work on Ballona by the federal government and state agencies??**

**See-** California Public Utilities Commission (CPUC)- Safety Branch Report citing the high likelihood of SOCALGAS reservoir gas leaking to the surface throughout Ballona and Playa Vista. The Nov. 2004 Consumer Protection and Safety Division report cites major concerns for SOCALGAS reservoir gas leakage:

*"C. 22 PPM . Helium from a shallow probe sample by John Sepich and Associate. Isotech Laboratory performed an isotopic analysis of a gas sample submitted by Sepich & Associates on 3/25/99. Sepich and Associates was working for Playa Vista developers (developers of residential and business properties around the PDR Storage field. The isotopic analysis report indicates the gas sample was collected from Playa Vista Project Area –D. The analysis report also revealed presence of Ethane and 22 PPM Helium in the gas sample. The significance of this isotopic analysis report is the presence Storage Reservoir gas or Native PDR gas signature and the location where the gas sample was collect (Area—D of Playa Vista Project)."*

*-“My opinion is that the probability of Storage Reservoir gas sample from PDR area containing Ethane and 22 PPM Helium is greater than 50 percent (>50%). Furthermore, the location where the sample was collected should be of major concern. Please see Appendix # C.” p.6.*

### *“III. Recommendations*

*A review of the aforementioned facts and findings suggest the existence of a potential safety hazard.” P.9*

The report recommends further study and investigation on pages 9-10 that includes but are not limited to :

*3-dimensional geologic computer model that provides “(well records, soil gas investigations, geo-technical borings, geophysical data, environmental borings, site contamination data, groundwater data, etc) to fully integrate and visually display geologic data 9strata and discontinuities) and other subsurface information (gas and groundwater locations) at the storage field.”pg. 9*

**SCOPING-**These studies have not been performed and should be part of the scoping review for the federal and state review of Ballona.

Because of the vested financial interests of Playa Vista (Playa Capital LLC) and SOCALGAS and SOCAEdison (gas storage use of PDR field) ; Grassroots Coalition



believes that only contractors with no conflicted financial ties to these corporate entities should be allowed to perform geotechnical and environmental studies upon the Ballona region in order to perform unbiased studies.

GC is also concerned about the financial and conflicted interests of staff and board members of SMBRFoundation who provide direct and indirect influence upon both the SMBRC and the Coastal Conservancy.

**SCOPING-** Transparency does not exist in the Ballona restoration process and needs to be included in the scoping issues for the DEIR. Full public disclosure of the financial and economic issues must be addressed and addressed individually for all staff and board members of the private SMBRFoundation—including those that simultaneously hold positions of authority within the SMBRC, the Coastal Conservancy, other state or federal agencies.

Concerns regarding use of bond funds for the ‘SMBRProject’ which in 2002 became the SMBRCommission. The SMBRFOUNDATION claims in IRS documents that IT IS THE PROJECT. Thus, the SMBRFoundation takes in funding that is cited as being given to the SMBRC.

- Therefore, it is important for public awareness and participation for both the USACE and CDFG to address and make clear to the public---who actually is legally able contractually to receive and spend federal and state funds which are derived from the public.

- Conflict of interest issues must be addressed specifically by the USACE and CDFG that are responsive to specific queries raised by the public—including but not limited to the John Davis March 28, 2012 –REQUEST TO HOLD EMERGENCY MEETING TO RESCIND APPROVAL ACTION ON FILE NO. 04-088 ; the GC Amended Complaint to the Ca. Coastal Conservancy of August 2, 2012. Neither of these documents has had any response from the lead agencies partner—the Ca. Coastal Conservancy. The public has a right to know in order to make informed decisions.

See- 1008 Order -Division of Oil and Gas and Geothermal Resources (DOGGR) 2011  
DOGGR 2011 Order for shut down of SOCALGAS gas injection operations pending investigation and control of escaping and surfacing reservoir gases.  
The escaping reservoir gases utilized relatively new wells of SOCALGAS/PDR operations.

See- SETTLEMENT AGREEMENT (CPUC litigation Grassroots Coalition v SOCALGAS)

**SCOPING -The EIS/EIR should contain information relative to the ongoing status of the SA.**

Health and safety issues are critical to restoration of Ballona. SOCALGAS has not abided by the terms of the SA and GC has been working to ensure...

See-

The 2005 EIS/EIR scoping included the potential and likely negative environmental effects of eg. Poland Report issues identified by USACE in the construction of the Marina del Rey marina such as potential negative effects to the groundwater (classified as potential drinking water) due to breaching clay layers from dredging the marina areas. The USACE cited likely salt water intrusion enhancement and needs for protection of freshwater from salt water contamination. The Poland Report cites the connection of the Ballona area to the west basin aquifer.

**SCOPING- The 2012 EIS/EIR should include the Poland Report and the USACE 2005 EIS (House Document 389) issues raised regarding concerns of Ballona aquifer / West Basin contamination. For instance:**

**-what effects will dredging have upon further saltwater contamination in the area.**

**-how will freshwater resources of the area be protected? The House Document 389 cautioned against breaching a clay layer protecting deeper freshwater zones at Ballona.**

**Additionally, clay layers can contain secondary collector zones of oilfield gases.**

**Example- from the Fairfax explosion 1985-Ross-Dress-For-Less.**

The pathway of gas migration to the surface included the 3rd Street Fault and an old abandoned well (Chilingar, personal communication). A shallow collector zone (large pocket) of trapped oilfield gas was discovered at a depth of approximately 15 m with pressures of approximately 1.8 kg/cm<sup>2</sup>. This collector zone had sufficient porosity and permeability to serve as a temporary trap for the large quantities of upward migrating gases. **A clay layer served as a seal until its threshold pressure was exceeded.** After the explosion, permanent soil gas probes were installed to a depth of approximately 4.6 m in order to perform ongoing monitoring of the upward migrating gases  
p 1446. 2012 Migration of Gas from Oil /Gas Fields

J. O. Robertson, G.V.Chilingar, L.F. Khilyuk, B. Endrea

**-what mitigation will take place for preservation of the freshwater aquifers and streams?**

**-Freshwater zones must be protected from the invasion of oilfield gas chemicals; alternative restoration concepts must include options that provide absolute protection from exacerbation of oilfield gas migration contamination.**

**- SOCALGAS pipelines have not been acknowledged or addressed. Multiple SCG pipelines that surround and pass through Areas A and B have not had any evaluation and must be considered and mitigated and/or removed to prevent**

**further contamination to the area. (SEE Public Record Act requests to County and Beaches and Harbor)**

- **new directional SCG wells that bottom out under Area A are, according to SCG- being used for fluid injection. What potential for direct or indirect harm to the environment exists now? And, what direct or indirect harm may occur to the environment and ecosystem due to potential fracturing of the formation from the fluid injection? What mitigation is proposed and who will maintain liability for harm to the environment?**

**SCOPING:**

**PLAYA VISTA**—There are numerous issues of potential for harm and diversion of groundwater that Playa Vista development project poses to the restoration of Ballona.

1. Groundwater diversion- see Groundwater Issues. Playa Vista must dewater the groundwater in order to keep gas evacuation pipes free of clogging from silt and water. The groundwater flow is toward the ocean thus any dewatering is depriving the wetlands from that groundwater and diverting water that would recharge the underlying aquifers.  
-The volumes of groundwater diversion and its potential harm to the wetlands has not been performed and needs to be performed.  
The potential for use onsite of Ballona must be part of any restoration analysis for Ballona.

“What is missing is any review of actual data from the Los Angeles Department of Sanitation. There are no Department of Sanitation documents in the Record which show actual or potential permitted groundwater discharges into the City Sewer System. “

. “Impacts of the project must be measured against the real conditions on the ground.” (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal. App. 4th 99, 121 (citations omitted).) The City cannot simply rely on modeling data provided by Playa Vista, which has a vested interest in downplaying, limiting and minimizing the potential impacts of dewatering. (See *Id.* at 126 (discussing problems with relying solely on applicant generated data).) The City cannot delegate the duty to Playa Vista (or the public) to gather the necessary baseline information. (*Id.* at 122.)

“Petitioners specifically requested the City review its files from the Department of Sanitation in its "Notice of Information Required for Adequate CEQA Review" (5 RR 986.) In addition, a number of comments questioned the lack of actual data from the Department of Sanitation. (See e.g., 2 RR 428; 7 RR 1328; 1357.) In fact, five months before the final decision, Patricia McPherson stated at a public hearing “The Department of Sanitation has 65 - - 65 groundwater dewatering permits for the site

at Playa Vista. You chose five building to look at. You didn't give [the Peer Reviewers] a fair model to begin with." (7 RR 1357:line 24 to 1358: line 3.) The City simply ignored such comment and pretended that the Department of Sanitation did not exist. " page 5 of brief

It is the City's duty, not the public's to do the proper environmental investigation. (*Save Our Peninsula, supra*, 87 Cal. App. 4th at 122; *Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d 296, 311.) The City violated the information disclosure provisions of CEQA by not providing records from the Department of Sanitation to the City Council and the public for review.

**C. The City Abused Its Discretion By Failing to Inform the Regional Water Quality Control Board of its CEQA Review and Gathering the Appropriate Data.**

Informing other governmental agencies that CEQA review is occurring is an incredibly important step in the CEQA process. Section 21080.3 of CEQA states:

Prior to determining whether a negative declaration or environmental impact report is required for a project, the lead agency shall consult with all responsible agencies and trustee agencies. Prior to that required consultation, the lead agency may informally contact any of those agencies.

(Pub. Res. Code § 21080.3(a).)

Obviously, such consultation will only occur if the responsible or trustee agency that it is informed that it is evaluating a project (or a portion of a project) under CEQA. There is nothing in the record which demonstrates the City informed the Regional Water Quality Control Board (RWQCB) that it was participating in a CEQA process. The failure to inform a lead or trustee agency of the CEQA process is a prejudicial an abuse of discretion. (*Fall River Wild Trout Found. v. County of Shasta* (1999) 70 Cal. App. 4th 482, 492.)

This is not to imply that the RWQCB did not participate in the CLA process. However, the CLA process, according to the City's was not prepared under CEQA. As noted by Attorney Susan Pfann, "There's no requirement of how you about doing [a peer review] or whether or not you have to senditso certain agencies...its simply a study." (2 RR 403.) In this case, the City failed to inform the Regional Water Quality Control Board (RWQCB) of its CEQA process, instead simply requesting the RWQCB simply review Playa Vista's modeling program. Petitioners' specifically objected to the City's failure to notify the RWQCB of the process thereby triggering full CEQA review. (5 RR 943.) By solely requesting a review of the modeling study prepared by CDM, the City prevented the RWQCB from fully participating in a manner

required in a CEQA review process, and violated the information disclosure requirements of CEQA. (Pub. Res. Code 21005.)

The City may argue that its failure to inform the RWQCB that it was participating in a CEQA process was not a prejudicial because the RWQCB did make comments. Perhaps if the City had requested all the relevant data regarding dewater at Playa Vista and Ballona Wetlands possessed by the RWQCB, the City would have an argument. However, there is no evidence in the record that the City requested even basic data, such as NPDES permits or actual metering data, despite the fact that Petitioners specifically requested the City review NPDES permits in its study of significant effects. (5 RR 986.)

**D. The City Failed to Gather or Present Data Necessary for Determining Whether Dewatering Activities Were Cumulatively Considerable.**

The lack of information from the RWQCB and Department of Sanitation is especially egregious when one considers the lack of analysis of cumulative impacts. A lead agency must determine not only direct and indirect effects of a project are significant, but must also consider whether such impacts are cumulatively significant. (Guidelines section 15064.) As noted in the case law discussing cumulative impacts, “the outcome may appear startling once the nature of the cumulative impact problem has been grasped.” (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 721.) The City, by limiting its review solely to the five buildings identified by Playa Vista in its modeling data, failed to consider whether all dewatering activities taken together, may be cumulatively significant.

Phase I of the Playa Vista Development consists of 3,426 residential units, 1.25 million square feet of office and light industrial space, 35,000 acres of retail space and 300 hotel rooms on 246.3 acres of land. ((*Environmentalism Through Inspiration and Non-Violent Action, et. al. v. City of Los Angeles*, 2005 Cal. App. Unpub. LEXIS 9697, at 3.) (“ETINA v. LA”) Despite the massive size, there is no description in the 2007 CLA Report of how many buildings are a part of Playa Vista Phase I, nor how many buildings have dewatering systems. This data should have been easily obtainable from

the Department of Sanitation, which issued industrial water permits for the dewatering systems. (3 RR 502.) Yet, it was not presented to the public.

If one were to search exhaustively through the administrative record, one would find a table described as "Construction and Vesting Status of Playa Vista Phase I" that was apparently submitted by Playa Vista on the date of the hearing. (2 RR 226.) The table identifies 39 Buildings in the "west end of the first phase" (2 RR 226-29.) Of those 39 buildings identified by Playa Vista, 18 of such buildings are identified as having "ground-water dewatering system" Yet, the table fails to identify how much dewatering is occurring at each site. Such information is crucial to knowing whether the dewatering at Playa Vista is cumulatively considerable.

In addition, other dewatering activities independent of buildings must be evaluated to determine whether there is a significant impact. It was incumbent on the City to request dewatering data from the RWQCB, the agency responsible for managing the states' water. Despite petitioners' request that such data be evaluated, there is no indication in the record that the City requested such information from the RWQCB. (3 RR 486.)

Of course, as indicated by the description as "Playa Vista Phase I", there is also Playa Vista Phase II. Despite this well-known fact, there is no analysis in the 2007 CLA report of Phase II. The 2007 CLA report indicates that the peer reviewers solely reviewed reports analyzing the potential impacts installed in Phase I of the Playa Vista development. (3 RR 473.) There is no analysis of the dewatering activities expected in Phase II of the Playa Vista Development.

For a proper analysis of the potential cumulative impacts requires an analysis of all dewatering activities at Playa Vista. This information is available from the RWQCB. But, the City failed to request such information. There is not information in the record which describes NPDES permits of the Playa Vista site or actual discharge volumes into Ballona Wetlands. Without providing the total volume of all dewatering activities, neither the City nor the public can properly evaluate or participate in the public process. “

Additional Objections In Opposition To Return To Writ—**ETINA v City of Los Angeles, Playa Capital LLC**

**A. Evidence From the Los Angeles Department of Sanitation and the Regional Water Quality Control Board Demonstrates the City and Playa Vista Violated Information Disclosure Requirements of CEQA.**

Public Resources Code section 21005 states,

[N]oncompliance with the information disclosure provisions of this division which precludes relevant information from being presented to the public agency . . . may constitute a prejudicial abuse of discretion.

There a number of ways that an applicant or a lead agency may fail to comply with the information disclosure requirements. (*See e.g. Fall River Wild Trout Found. v. County of Shasta* (1999) 70 Cal. App. 4th 482, 493 (failing to notify DFG); *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal. App. 4th 74, 95 (failing to identify size of aquifer); *Sierra Club v. State Bd. of Forestry* (1994) 7 Cal. 4th 1215 (failing to study endangered species); *Save Our Peninsula, supra*, 87 Cal. App. 4th at 122 (failing to use actual data).) In fact, many cases which have sought to strike down environmental impact reports have sought to establish, through omission, that there has been non-compliance with the information disclosure requirements of CEQA. (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal. App. 4th 1383, 1391.)

However, suppression of evidence is also a form of non-compliance. Evidence which clearly should be in the record, but has been improperly excluded, should be admissible to demonstrate a violation of Public Resources Code section 21005. Clearly evidence which has been withheld from the public, despite requests from the public for inclusion of such information, cannot be provided by the public. In addition, the public should be able to assume the lead agency will include documents which are required to be part of the administrative record under CEQA, such as documents in its own files on a project. (Pub. Res. Code 21167.6(e)(10).)

Such interpretation is supported by *Western States* which notes that extra-record evidence should be admissible to demonstrate procedural unfairness and agency misconduct. (*Western States Petroleum Ass'n v. Superior Court* (1995) 9 Cal. 4th 559, 575 n.5 & 579.) In *Western States*, the petroleum association attempted to introduce newly created expert evidence, prepared after the close of the public hearing, to demonstrate that the Air Resources Board failed to consider all relevant factors. The Supreme Court held, "extra-record evidence can never be admitted merely to contradict the evidence the administrative agency relied on in making a

quasi-legislative decision or to raise a question regarding the wisdom of that decision." In contrast, in this case Petitioners seek the court to consider documents which were in the agency's files or trustee agency's files to demonstrate a procedural defect in the City's CLA process.

In this case, there is extra-record evidence from the Department of Sanitation which demonstrates that the level of dewatering is almost five-fold greater than that which was presented in Playa Vista's modeling study. (Notice of Lodgment, Ex. 1.)<sup>1</sup> Brief pgs 9-10

**SCOPING:**

**-The duty of cumulative groundwater dewatering now falls upon the state and federal agencies in the performance of this NEPA/ CEQA process.**

**- The duty of full disclosure with regard to state and federal agency behavior and process is also required in this NEPA/CEQA process- as cited above in the brief . Thus response to the John Davis and GC Complaints to the COASTAL CONSERVANCY regarding failure of due process, conflict of interest, prejudice - --require full evaluation and response.**

" Still all the cases appear to agree that "[a] prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decisionmaking and

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#### **IV. MOTION TO AUGMENT**

##### **A. This Court May Consider Relevant and Improperly Excluded Extra-Record Documents Because Petitioners Have Proven Such Documents Fall Under the Exception Enunciated by the Supreme Court of California.**

Respondents contend that this Court may not consider two sets of relevant, extra-record documents: (1) documents from the LA City Department of Sanitation, including a table showing permitted discharges of up to 72,000 gallons per day, and (2) documents from the RWQCB showing permitted discharges of 950,000 gallons per day ("gpd"). (16 CT 3696-3700.) Though extra-record evidence is generally inadmissible, the Supreme Court of California has enunciated an exception to this general rule. "Extra-record evidence is admissible if the proponent shows that the evidence existed before the agency made its decision, but that it was impossible in the exercise of reasonable diligence to present it to the agency before the decision was made." (See *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal. App. 4th 74, 119 quoting *Western States Petroleum Assn. v. Superior Court*, *supra*, 9 Cal. 4th 559, 576-578.) This exception corresponds with Code of Civil Procedure section 1094.5, subdivision (e), which grants the court discretion to remand the case for reconsideration if the court finds "there is relevant evidence, which, in the exercise of reasonable diligence, could not have been produced at the administrative hearing or which was improperly excluded." (CCP § 1094.5.) Also, arguably, "extra-record evidence may be admissible to show 'agency misconduct.'" (*Id.* at 119 quoting *Western States Petroleum Assn.*, *supra*, 9 Cal. 4th at pp. 575-576, fn. 5.)

The Court may properly consider the extra-record documents at issue



informed public participation, thereby thwarting the statutory goals of the EIR process." (*Id.*; See also, *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal. App. 4th 99, 118; *Sierra Club v. State Bd. of Forestry* (1994) 7 Cal. 4th 1215, 1235.) "The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure" (*County of Amador, supra*, 76 Cal. App. 4th at 954.) " Brief p. 3

here because the documents demonstrate the City failed to consider maximum permitted discharges, even though such documents were in existence prior to the City's decision. Maximum permitted discharges are relevant both to an analysis of cumulative impacts, and to an analysis of potential worst-case scenario impacts for methane dewatering. Though Petitioners exercised reasonable diligence in requesting access to and inclusion of these documents, the City failed to comply. (Code Civ. Proc. § 1094.5(e).) This failure to include or consider these documents amounts to suppression of evidence and agency misconduct. Accordingly, the extra-record documents at issue here fall under the narrow exception articulated in *Western States* and Code of Civil Procedure section 1094.5(e). (*Western States Petroleum Assoc. v. Superior Court* (1995) 9 Cal. 4th 559, 576-578.)

**i. The Record of Proceedings Under Public Resources Code Section 21167.6(a) is Broad and Inclusive.**

Pursuant to Public Resources Code Section 21167.6(a), the record of proceedings shall include a broad array of documents "relating to the subject of the action or proceeding." Public Resources Code Section 21167.6(e) is inclusive, providing a list of items that "shall be included," but specifying that the record "is not limited to" those items. The statute "contemplates that the administrative record will include pretty much everything that ever came near a proposed development or to the agency's compliance with CEQA in responding to that development." (*County of Orange v. Superior Court* (2003) 113 Cal. App. 4th 1, 10.)

JOINT REPLY BRIEF- ETINA et al Appellate District Case No. B213967

2. **The 2007 Methane Mitigation AUDIT performed by the City of Los Angeles (City Controller- Laura Chick) needs to be included and analyzed** for determination of the effects of the gas mitigation dewatering. The AUDIT reveals that methane mitigation measures –including the critical 50' deep vent wells (that but for their ability to vent and not clog—the site was considered too dangerous to build (CLA Report)—  
Had no mitigation monitoring and no proof that the systems were implanted or implemented in a fashion that they actually work. The Audit also shows that Playa Capital LLC and the City of LA were and are unable to identify where the 50' vent wells are.

3. Department of Sanitation records need to be evaluated for analysis of groundwater dewatering that has direct and indirect impacts upon the restoration of Ballona and current groundwater movement across the Ballona habitat.
- Playa Vista and the City of LA have irresponsibly failed to provide Best Management Practices for the groundwater of Playa Vista and thus upon the sensitive ecological areas of Ballona. Instead, Playa Vista has been improperly and potentially illegally allowed to discharge Ballona groundwater (classified as potential drinking water) into the Sanitary Sewer via WASTEWATER DISCHARGE APPLICATIONS AND SOME PERMITS.

4. **GRAVEL COLLUMNS:**

No 408 permits were given to Playa Capital LLC for installation of hundreds of gravel collumns along Ballona Channel- the north side of Fountain Park Apts.

-This 408 permit issue needs to be evaluated for potential illegalities of insertion of the gravel collumns- without permitting as well as evaluated for The known and established actions of the stone collumns to act as cross contamination and groundwater movement features for groundwater and gases.

-GC supplied pictures to the City of Los Angeles and to the LA County Flood Control that depicted CRACKING along Ballona's south levee- on the north side of Fountain Park Apts. GC herein submits a video- BURNING QUESTIONS- that supplies video of the insertion process of those stone collumns and the apparent outgassing and vibration.

- What effects do the collumns have upon the integrity of the Ballona levee to the east of Lincoln Blvd.?

- Did Playa Capital LLC have to secure a 408 permit for insertion of the stone collumns since the collumns align along the fence line of the Ballona levee? And, potentially have the ability to undermine the earth of the levee itself due to the constant rise and fall of tidal action upon the ground waters?

-The City of Los Angeles and County Flood Control only performed a visual inspection as was discussed during a Building and Safety Commission Hearing during the 2000 -1 timeframe. To GC's knowledge no alert was provided to the Army Corps of Engineers for input into this issue of present concern. The collumns while providing stability from liquefaction for the apartment complex appear to be potentially undermining the integrity of the Ballona levee to the east of Lincoln Blvd.

5. **CDFG HISTORIC LACK OF OVERSIGHT OF KEY HEALTH AND SAFETY ENVIRONMENTAL ISSUES THAT CDFG must address in the 2012 EIS/EIR;**

Including its role or lack thereof of prudent oversight of health and safety issues.

Example of why clarification is needed- this GC letter to CDFG from 2003:

*September 4, 2003*

*TO: THE CALIFORNIA DEPARTMENT OF FISH & GAME-  
Mr. Raisbrook, Regional Manager  
San Diego, California fx 858 467 4201*

*FROM: GRASSROOTS COALITION-  
Patricia McPherson*

***RE: ECOLOGICAL ASSESSMENT OF AREAS B AND D- PLAYA VISTA, 6775  
CENTINELA AVENUE, LOS ANGELES, CALIFORNIA &***

***PHASE 2 EIR- PLAYA VISTA***

*Dear Mr. Raisbrook,*

***Grassroots Coalition respectfully requests that the California Department of Fish & Game clarify, in writing, its scope of review and involvement regarding the Playa Vista site.***

*The EIR for the Playa Vista Phase 2 is now available for review, as I am sure that you are aware. Also, the Los Angeles Regional Water Quality Control Board (LARWQCB) sent Grassroots an Ecological Assessment (EA) of Areas B and D of the Playa Vista site for review. The deadline for comments was mid-August. I have included the LARWQCB letter with its cc list. Grassroots did respond but also notified various Fish & Game personnel, including Brad Henderson- our local CA. Dept. of Fish & Game (DFG) biologist, of the EA. In my comments to the LARWQCB, I noted that DFG had not been given the EA. Apparently, the LARWQCB has now sent the EA to DFG and given the DFG a September 15, 2003 deadline (attached letter).*

*While Grassroots would appreciate comments from the DFG regarding the EIR and the EA, we believe it is vitally and fundamentally important to clarify, in writing, the DFG role and scope of review at the Playa Vista site. In particular, our concern is that the oilfield gas issues at Playa Vista have not been assessed by any independent state agency.*

***It is vitally important for the DFG to clarify that it has played no role in the oversight for and/or evaluation of the newly discovered oilfield gas contamination problems of the Playa Vista site as they relate to the biology and ecosystems of the area and/or any other capacity.***

*The California Environmental Protection Agency- Department of Toxic Substances Control (DTSC) did respond, in writing, to the LARWQCB regarding the City of Los Angeles' / Playa Capital gas study(May 2001), wherein DTSC stated the City study was incomplete and that:*

*-soil gas studies needed to be performed in native, undisturbed soils (studies performed thus far were done in soils that were predominantly disturbed from construction activities and had other problems noted by DTSC) and that,*

- an ecological risk assessment needed to be performed (LARWQCB does not perform ecological risk assessments);*
- the DTSC sister agency, the LARWQCB, has not requested or required Playa Capital to fulfill the DTSC recommendations.*

*Because the oilfield gases, including benzene, toluene and xylene (BTEX) and oilfield generated hydrogen sulfide (H<sub>2</sub>S) are not issues within the scope of review for the LARWQCB, and because the LARWQCB has not adhered to the DTSC recommendations, or requested DTSC to step in for oversight of the oilfield issues (of CAL EPA agencies, DTSC has oilfield toxics within their scope of review and expertise) , there continues to be no independent state oversight for evaluations of the oilfield issues.*

#### **DFG HISTORY**

*I have requested of the DFG, through numerous DFG personnel, including those in OSPR, of any ability of the DFG to engage in a biological study of the potential negative consequences of the oilfield operation gas migration hazards that we now know exist at the Ballona Wetlands, the site of Playa Vista. Furthermore, the impacts of the construction activities creating enhanced gas migration and H<sub>2</sub>S production are also issues that potentially affect the ecosystems of Ballona. Thus far, there has been no response from the DFG that it has the ability to engage in any way regarding any of these matters.*

*In conclusion, if the DFG does not clarify the fact that it has played no role in the oilfield gas issues and apparently cannot engage these issues under its scope of review and study, then any action and/or response the DFG does engage in at the Playa Vista site will leave and, has left a biological gap of oversight that needs to be clarified. **It would be entirely misleading to the public** if the DFG were to continue involvement at the Playa Vista site and not clarify exactly what it does and does not include within its scope of review, with regard to its conclusions and/or recommendations regarding the Playa Vista site.*

***Mr. Raisbrook, Grassroots Coalition respectfully requests a written clarification of the DFGs role in oversight of the newly discovered oilfield gases that are migrating to the surface at Playa Vista.***

*I'm sending along a Public Record Act request for your help in our providing a formal request for the information requested above and also because of our need for a copy of the Habitat Mititgation and Monitoring Plan (HMMP) for Playa Vista.*

**SCOPING: It is vitally important for CDFG AND OTHER AGENCIES TO MAKE CLEAR TO THE PUBLIC WHAT OVERSIGHT THEY DO AND DON'T HAVE.**

## **ISSUE #2**

### **SUBSIDENCE AND UPLIFT**

**SCOPING----SUBSIDENCE issues have not been addressed and must be addressed .**

State law requires the avoidance of subsidence in coastal areas from oilfield fluid production..

- What are the effects and potential negative impacts due to ongoing subsidence?
- Why has this issue not been address and no monitoring has been done by the state even though it is a policy of this state in coastal areas.

-

#### **"SUBSIDENCE IS CAUSED BY FLUID WITHDRAWAL:**

*"Fluid withdrawal from a petroleum reservoir or aquifer leads to the inevitable result of causing land subsidence at the surface, and compaction of sands at the reservoir level. The compaction is due to a pressure decrease in the reservoir or aquifer, and causes the overlying formations and the land surface to sink. This deformation leads to fracturing of the geological formations in the surrounding areas, causes movement along existing fault structures, and damages the oil and gas well casings and seals. This gives rise to the upward migration of gas from the petroleum reservoir. The interaction between subsidence and gas migration is illustrated in Exhibit 1.*

*The geological deformation is greatest at the reservoir level and propagates to the surface as a bowl shaped configuration, as illustrated in Exhibit 2. The maximum subsidence is at the center of the bowl. For a petroleum reservoir, the extent of the subsidence bowl at the surface is approximately twice the areal extent of the reservoir.*

....

*As a general rule, the amount of subsidence experienced at the surface correlates directly with the volume of fluid production within the reservoir. ...*

#### **2. FLUID WITHDRAWAL HAS CAUSED SIGNIFICANT SUBSIDENCE AT PLAYA VISTA, PLAYA DEL REY AND THE MARINA PENINSULA AREAS:**

*Fluid production of oil and brine water from the Playa del Rey and Venice oil fields caused nearly two feet of surface subsidence between 1927 and 1970. The California*

*Division of Oil and Gas (DOG) documented this in their Sixtieth Annual Report published in 1974. ..(exhibit 3)*

*...SOCALGAS has operated an extensive oil field dewatering program with the 'Del Rey Hills Area' and the 'Venice Area' for many years. This has been necessary since the gas storage operations requires continuous pumping of brine water from these areas to prevent invasion of the water into the primary storage zone reservoir.*

*The average daily production from their dewatering wells is approximately 2,500 barrels of brine water per day. This would equate to over 90,000 barrels per year, or over 27 million barrels of fluid production between 1970 and the present. It is inevitable that this has contributed to the subsidence problem, additional geological fracturing, and additional damage to the oil and gas well casings and seals.*

### *3. CITY OF LOS ANGELES SURVEY DATA HAS CONFIRMED THE EXISTENCE OF A SERIOUS SIBSIDENCE PROBLEM:*

*I utilized survey data generated by the City of Los Angeles to evaluate the extent of the subsidence problem in the Playa Vista Area (near Jefferson Blvd. and Lincoln Blvd.) in the vicinity of the Playa del Rey oil field. The data utilized is presented in Exhibit 5.*

*...In summary, these data establish that the Jefferson/Lincoln area subsided .267 feet over a 14-year interval from 1956 to 1970. The Pacific /Lighthouse area, a well known subsidence prone area, subsided .265 feet over a 15-year interval from 1955 to 1970. Accordingly, these data confirm that the subsidence problems caused by oil field production are widespread, and extend to the areas that are under development at Playa Vista. No systematic monitoring of these problems has been undertaken since 1970.*

### *4. THE SUBSIDENCE PROBLEMS IMPACT THE INTEGRITY OF THE OIL AND GAS WELLS THROUGHOUT THE AREA:*

*Fracturing of the geological formation and damage to the well casings from subsidence will cause upward migration of gas to the surface, exacerbating the near surface soil gas conditions. In the referenced area, over 200 oil wells were drilled and completed prior to the onset of the significant subsidence discussed in this document. Accordingly, subsidence must be recognized as a major contributor to the gas migration problems that have been documented at Playa Vista.*

*...It is apparent that the gas migration problems at Playa Vista are strongly interrelated with the movement of leaking gas easterly within these gravel zones as a result of being 'swept' by the tidal forces and wave energy within these permeable zones.*

## 5. SURFACE DEFORMATION:

*Deformation due to compression and extension at and near the land surface causes fissures in the soil and damages buildings, pipelines, and other structures. In the subject areas, these problems are complicated by the 100% liquefaction prone region that has been identified in the Seismic Hazards Map published by the Division of Mines and Geology, and by the near surface water table.*

*Regionally water tables will remain at nearly the same elevation after local subsidence lowers the land surface. The effect is to decrease the depth to the water level. If the water table rises (relative to the land surface), higher than the bottom slab of a building, the uplift pressure on the structure will be noticeably increased. This could cause the slab to eventually rupture.*

*Likewise, the below-slab installation of a gas membrane barrier for gas control purposes could be adversely impacted by these same uplift pressure conditions.....*

*City of Long Beach....an elaborate water injection program to mitigate the consequences of surface sinking and water incursion in this coastal area. ...*

*The city of Redondo Beach failed to impose such a requirement on oil field operations conducted under the King Harbor Boat Marina. Approximately two feet of subsidence, which occurred over a period of 20 years of oil production, caused the breakwater rubble barrier, constructed by the U.S. Army Corps of Engineers, to sink. A winter storm in 1988 destroyed the rubble barrier, and the city of Redondo Beach and the U.S. Army Corps of Engineers were held liable for the millions of dollars of damage that resulted to the shoreline structures. They were found to have been negligent for failing to monitor for the subsidence and for their failure to take protective measures to minimize the risk of injury.*

*It is significant to point out that the level of subsidence measured in the Playa del Rey and Venice coastal areas through 1970 is similar to the subsidence that caused the destruction of the King Harbor at Redondo Beach.*

*( Society of Petroleum Engineers Paper 83504 Environmental Hazards Posed By The Los Angeles Basin Urban Oilfields: An Historical Perspective Of Lessons Learned- Bernard Endres PhD; George V. Chilingar PhD)*

***...A systems engineering approach is necessary in evaluating the interactive consequences of subsidence, gas migration and movement of gas through the near surface aquifers from the locations of the leaking wells. This requires a detailed evaluation of the hydrology and the tidal actions that are responsible for moving the gases easterly within the aquifers and under the Playa Vista development."pgs 1-8***

**Bernard Endres PhD to LOS ANGELES BUILDING AND SAFETY**

## **REGIONAL GROUND SUBSIDENCE AT PLAYA VISTA, PLAYA DEL REY AND THE MARINA PENINSULA, AND RELATED GAS MIGRATION PROBLEMS**

( See also SOCALGAS- PDR p.768-9 ; 2012-The Environmental Aspects of Oil and Gas Production Subsidence by J.O. Robertson, G.V. Chilingar; L.F. Khilyuk, and Bernard Endres)

NOTE: The Settlement Agreement (SA) between SCG and Grassroots Coalition (GC) includes INSAR subsidence monitoring . However, SCG has not complied with the SA as it has not provided INSAR subsidence monitoring imagery of a high resolution necessary for expert review of the data. We are still requesting the imagery.

### **SCOPING-- The EIS/EIR needs to include a systems engineering approach for evaluation of the subsidence issues that are ongoing in the Ballona area.**

(SOCALGAS has implemented a water injection program under Area A according to PDR –SOCALGAS officials however, no correlation or explanation has been provided by SOCGALGAS experts.)

-The EIS/R needs to provide thorough evaluations of this issue which overlaps the tidal influences and detriment to the freshwater aquifers that the ‘estuarine’ PLAN promotes.

-The EIS/R needs to provide ALL REASONABLE ALTERNATIVES of Ballona’s restoration which has not been done. The public has been cut out of the process of alternative planning. Thus, the current EIS/R process is a ruse and a process that has fundamentally abused the taxpayers funding of review through bond money intended for a legitimate restoration process providing PUBLIC INCLUSION prior to this end point that has a predetermined outcome by the state agencies engaged.

-The newly adopted City of Los Angeles Methane Ordinance imposes a condition of dewatering in order to prevent the shallow water table---existing throughout the subject area—from invading the perforated pipes and gravel layer. The perforated pipes and gravel layer are required to passively vent the upward migrating oilfield gases from invading buildings and creating an explosion hazard.

If the perforated pipes and gravel layer are invaded by groundwater the gas venting systems become dysfunctional. Thus, dewatering becomes an essential part of implementing the City of LA Methane Ordinance. However, subsidence may result upon pumping the groundwater, necessary to achieve the dewatering, especially because numerous other ongoing decontamination dewatering is ongoing at Playa Vista. **The cumulative dewatering effects have not been addressed at the site since the ordinance was adopted by the City. This imposes a higher duty upon those responsible for protecting public safety.**



## 10.0 ENVIRONMENTAL CONCERNS

### Cleanup and Land Disposal Sites

Within less than one mile of the Study Area, as shown on Figure 9, twenty-three sites with environmental concerns were identified on GeoTracker (SWRCB, 2010). Of these sites, 12 are leaking underground storage tanks sites (LUSTs), 10 are other clean-up sites, and 1 is a DTSC clean-up site. Sites identified as still active under regulatory oversight include 7 LUSTs, 7 other clean-up sites, the DTSC clean-up site, and the land disposal site. Table 2 provides a summary of the information available from GeoTracker for each site.

The active cleanup sites located up-gradient from the Study Area may pose a risk to the soil and water quality of Ballona Wetland.

### Underground Methane Storage Reservoir

The Playa del Rey storage field, a large natural gas storage reservoir that is owned and operated by the Gas Company, is located at depth beneath most of Study Areas A and B, including the southern half of Marina del Rey, most of Playa del Rey, and the terminus of Ballona Creek (see Figure 10). The limits illustrated on Figure 10 include a quarter mile radius measured around the outer limits of the storage field, where the air and ground surface may be effected by fugitive gas or odors released from the natural gas storage reservoir or where subsidence may occur due to changes in pressure from within the reservoir. This radius is termed the area of potential influence by the Gas Company. Formerly an oil field that produced during the 1930s, it was converted to a natural gas storage reservoir when the pressure in the field dropped below optimal levels for oil production. The Playa del Rey storage field is located approximately 6,100 feet below the ground surface in Tertiary-age sandstone, which is capped by approximately 1,500 feet of impermeable shale. Fifty-four active wells and three compressors are used to inject and withdraw methane gas into and from the formation.

On December 20, 2007, a settlement agreement was approved by the California Public Utilities Commission (CPUC) in response to complaint cases against the Gas Company and its operation of the Playa del Rey storage field. This settlement includes an odor program, which involves routine patrols in the area for vagrant odors from the field, natural gas venting, engine and exhaust odor minimization, reduction of fugitive emissions, and the installation and maintenance of a meteorological station. Monitoring of the soil gas, subsidence, gas pressure, withdrawn gas chemistry, and released liquids are also included in the settlement agreement.

The Playa del Rey storage field poses an uncertain risk to Ballona Wetland and the habitat alternatives, with regard to possible release of methane gas and possible ground subsidence related to the operations of the storage reservoir.

### **SCOPING:**

**-The issues of thermogenic gas hazards and subsidence concerns raised herein by GC in detail have not been evaluated and need to be.**

**The CITY OF LOS ANGELES expert- Victor Jones of Exploration Technologies v Inc. current and past data production needs to be included in the SCOPING ASSESSMENTS.**

**-Still Workin On It must be included as it refers to the actual failures of the experimental gas mitigation systems which give rise to needs of groundwater withdrawal and the effects of that groundwater withdrawal.**

**--Include Jones' response to SOCALGAS regarding gas sampling and gas migration in the freshwater marsh (catch-basin) via the currently leaking well --University City Syndicate-(this well was last abandoned by Playa Capital LLC. With financing from the City of Los Angeles taxpayers.)**

[YouTube - Playa Vista Ga#18A265](#)

[YouTube - playa vista ga#18A23D](#)

**Reference below to University City Syndicate by Victor Jones- ETI**  
**As part of overall review of the URS gas studies assessment for SOCALGAS.**  
(URS engagement with both Playa Vista and SOCALGAS should be considered a conflict of interest in any work performance of the restoration of Ballona.)

*"It is particularly significant to note that this response is associated with an abandoned dry hole that is not a gas storage well, and has never produced oil or gas. The ETI data discussed above was collected in 2001 before the well was re-abandoned by Playa Vista. Following re-abandonment the leakage around this well has significantly increased and today is reported by DOGGER to be vigorously bubbling around the casing and includes additional vents more than 100 feet away from the casing. Actual Youtube videos*

*http://www.youtube.com/watch?v=LR1r9X2VGZo&feature=geosearch and  
http://www.youtube.com/watch?v=NNA2f3GvUPg&NR=1) show these gas bubbles. An excellent report on this extensive gas leakage from the Syndicate-1 well is discussed in a 12 July 2010 letter report (Geoscience Seep Gas Analysis.pdf) submitted by Lewis Pandolfi.*

*A similar response to this could be found around any well in the general Playa del Rey area, regardless of whether it is, or was a gas storage well, or an abandoned oil and gas well. **All old well casings are potential leakage conduits and all of the known wells, whether abandoned or not, should have been included in the planned phase I soil gas survey.** This increase in leakage activity is obviously related to the re-abandonment of the well. It can never be assumed that a re-abandonment of any well will always be successful. Follow-up soil gas surveys are the only way to prove that the re-abandonment was successful. " Exploration Technologies Inc., Victor Jones 2011*

Please also respond to the following comments:

The comments raised above (part of a FOIA response from USACE- GeoPentech Report) acknowledges uncertain risks to Ballona and the 'Plan'(s) but thus far the SMBRC/ COASTAL CONSERVANCY AND CDFG and USACE have ignored GC's

concerns and refused to allow GC to provide public presentations at SMBRC meetings or at Ballona watershed meetings--regarding these concerns. Once again, failure to communicate and share with the public , lack of transparency—is the proven objective with the agencies. The Ballona land was acquired with public bond money, the land belongs to the public and the agencies are supposed to be providing stewardship that includes feasibility of alternatives WITH the public. This has not occurred. Thus far, the state is acting as though Ballona is a residential development site owned by the state and that the public must respond TO ONLY WHAT THE STATE TELLS IT TO RESPOND TO AND OTHERWISE BUTT OUT!

This is apparently the state's attitude for its 'supposed' request for the USACE to disengage from the 2005 Joint EIS/R process and stop including the regional Ballona ecological areas and biological values.

According to USACE –FOIA'D documents, the state did not fulfill its contractual agreements. This failure causes the state to also lose the financial support of the federal government that are cited as 65% of restoration costs.



### **SCOPING:**

This is just one example of high volume oilfield gas leaks to the surface—shown here are gas leaks leading to the shut down of the SOCALGAS gas injection operations. (DOGGR 1008 Order)

-The Settlement Agreement and the follow up studies and the GC response to SOCALGAS and the CPUC need to be addressed and analyzed due to the extreme health and safety issues.

### **SCOPING:**

- Needs to include recent DOGGR 1008 Order responsive documents and historic SOCALGAS documents (currently the state has provided only hearsay discussion from SOCALGAS). Some of those documents are included in this submission to alert regarding the oilfield gas migration hazards that SOCALGAS continues to avoid as it fails to abide by the Settlement Agreement between Grassroots Coalition and SOCALGAS.

Example document:

*InterOffice (GAS COMPANY) CORRESPONDENCE*

*Playa del Rey- Gas Migration\_*

*"The area where storage gas is currently surfacing is in the flat area. Sound logs suggest gas movement from a depth of about 1000' below sea level. The temperature anomaly in Del Rey 18 is approximately 1100' below sea level."*

(Del Rey 18 is located at Fisherman's Village and the 'flats' are the land areas below the bluffs- GC)

*"We have also had reports this year of gas containing helium present in the surface casing annulus of 26 wells. "*

(Helium is often used as a marker for SOCALGAS reservoir gas migration since the gases piped in from Texas, Oklahoma ...contain helium and the PDR field has no historic helium within the oilfield according to the City and DOGGR records. No native gas samples exist of the field from prior to injection of foreign gases. (CPUC discovery queries upon SOCALGAS)

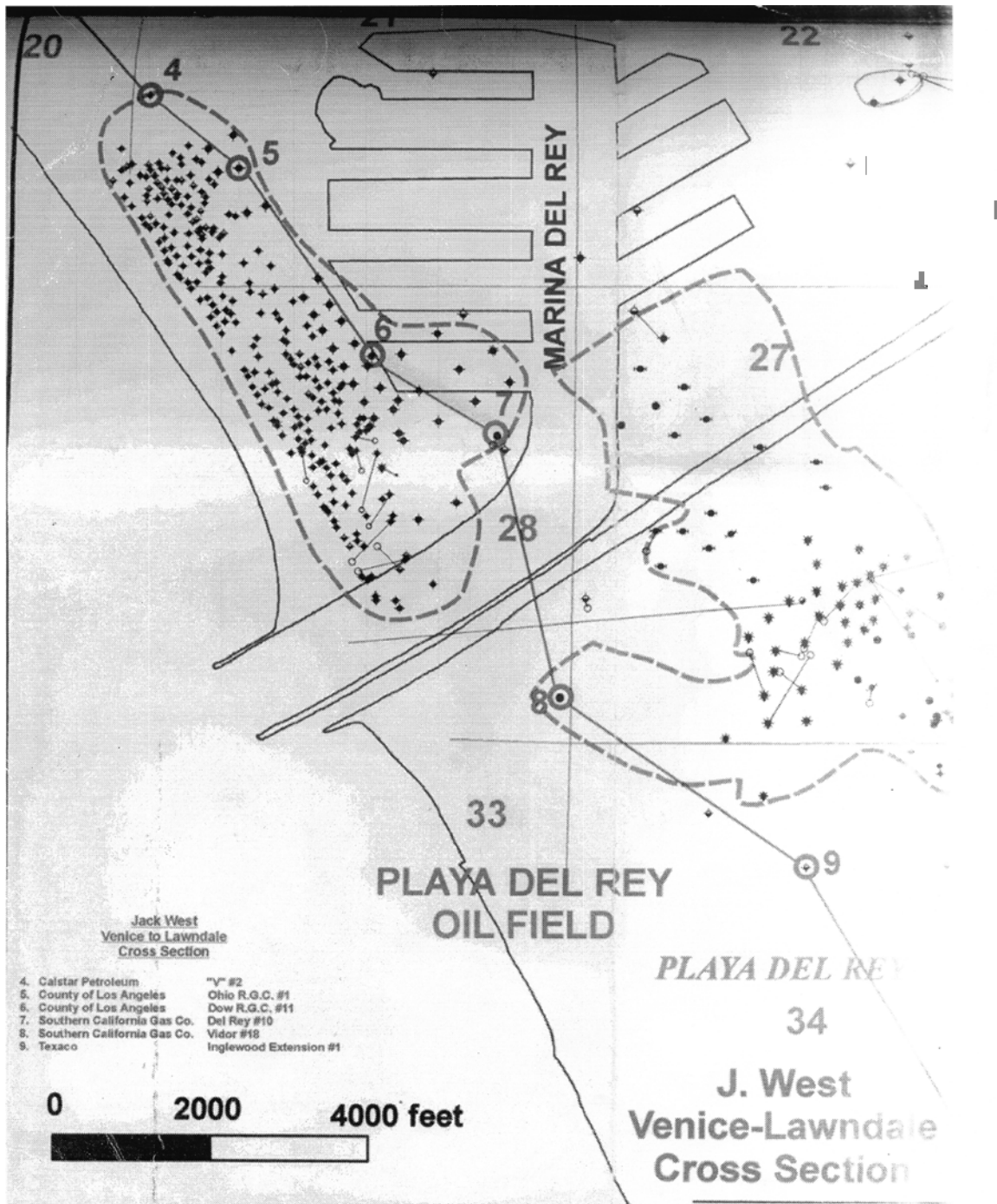
#### **SCOPING:**

**-Please provide accountability and legal legitimacy for withdrawing from the 2005 Joint EIS/R process.**

**-Please provide all financial accountability for federal funds already spent. How was the money spent and what was the outcome of the expenditures?**

**As can be seen in the diagram below, there are numerous active and abandoned wells that must be tested for leakage regularly. Further saltwater intrusion will present not only a potential for casing leakage due to that salt water corrosion but will also pose a more difficult circumstance within which to REPAIR and STOP the leakage and furtherance of at least the GREENHOUSE GASES.**

- **Mitigation measures and monitoring of all wells must be part of the scoping of issues needing study and response. What is planned for such study and monitoring of these issues by the state and federal government?**
- **Thus far studies have not occurred. What assurance that these health and safety issues WILL be addressed and mitigation provided?**



### **ISSUE # 3**

#### **HYDROLOGY & DEWATERING**

-Why have the state and federal agencies failed to provide the iterative process that was promised to the public for use of public bond money and federal taxpayer funding? Scoping needs to include the history of what has occurred and respond to

why and how the public has not been allowed to cross share information and be part of the planning process for restoration alternative planning of Ballona.

- Address why no hydrology studies of the near surface aquifers and streams have been done during the so-called 'feasibility' phase.

- During the 'feasibility' phase GC and others of the public requested an ACES program study be performed upon Ballona in order to fully understand the hydrology of the area which includes the underlying groundwaters and its surface waters.

- The ACES study needs to be performed.

[PDF]

### **ACES: Analytical Framework for Coastal and Estuarine Study**

[proceedings.esri.com/library/userconf/proc08/papers/.../pap\\_2183.pdf...](http://proceedings.esri.com/library/userconf/proc08/papers/.../pap_2183.pdf)

- Why has there been no response from SMBRC/ Coastal Conservancy on this issue of concern and why was this request not provided to USACE AND CDFG?

- Provide hydrology studies that reveal the current levels, locations and sources of groundwater in Ballona.

- How have the groundwater levels changed over the past 20, 50, 100 years? What has caused those changes? And, how can the freshwater resources be restored and utilized for Ballona?

- What studies provide review of protection of the groundwater sources in Ballona?

- Why has the ACES, sanctioned by the USACE, program for estuary mapping not been employed as requested by the public at Ballona?

- What freshwater resources are available for restoration purposes at Ballona and how can they be utilized?

- How much groundwater of Ballona is being diverted and/or otherwise not being allowed to recharge the area?

- What are the cumulative volumes of groundwater that Playa Vista is diverting from the wetlands and why is this allowed to occur?

- What studies have been done to assure the fresh groundwaters are not negatively impacted by the proposed 'Plan' and how can the "Plan" be implemented when diversion of contaminated and toxic Ballona Channel waters and sediments ( as cited in the Weston Report on Coastal Conservancy CD) and further contaminated saltwater intrusion provides for one impaired water way into another. Is this not a violation of the Clean Water Act and Porter-Cologne?





This GC visual aid shows an approximate amount of water permitted by the Dept. of Sanitation- daily to Playa Vista for 'wastewater' dewatering. The removal and throwing away into the sanitary sewer system of this precious groundwater that is classified as 'potential drinking water' should not be allowed. This same volume would/could create a half acre pond at 1 foot deep---in one day.

#### SCOPING:

- Provide analysis of the actual volumes of groundwater being diverted from Ballona by Playa Vista and provide an analysis of how this water can be utilized onsite for restoration purposes. Especially, in light of the fact that Ballona is historically dominated by freshwater flows.

- WHY is this water not being utilized onsite and for restoration purposes?

Is it not illegal for Playa Capital LLC to divert this volume of groundwater and throw it into Hyperion sewer treatment plant?

- CDFG's response regarding potential harm has thus far been---they do not know. That answer is unacceptable. Find out.

Documents from LARWQCB showing permitted discharges of 950,000 gallons per day (gpd)(16 CT 3696-3700) and LA City Department of Sanitation, including a table showing permitted discharges of up to 72,000 gpd.

- Why is this water being allowed to be diverted and thrown away and not utilized for groundwater recharge and/or a source of freshwater for BALLONA restoration purposes?

- Diagrams included herein, reveal that utilizing the LARWQCB permitted discharge rate of 950,000 gallons per day; this volume of water would provide approximately 1/2 inch of water across the surface of most of Ballona Wetlands -south of the Ballona Channel. The same volume could provide in one day—a foot of water to a ponded area approximately 1/2 acre in size. The large volumes described would provide a source of freshwater to Ballona's restoration that would be incredibly valuable.

- Why have these sources of groundwater not been evaluated?

-How is it possible that Playa Vista can divert much needed groundwater away from Ballona? Especially in light of the 1993 EIR for Playa Vista requires for an groundwater discharge:

-a preapproved beneficial plan for any such extraction and discharge (EIR Vol. 26 p 014945)

-tertiary treated groundwater from NPDES provides primary supply of freshwater for the wetland system (EIR Vol. IX- Executive Summary 1-2.

-"ongoing remediation of the known existing groundwater contamination in Area D and utilization of the resulting treated water for the beneficial use of supporting onsite vegetation, would result in a beneficial impact on ground water." P. 12- Exhibit B- Certification of EIR and Adoption of Mitigation and Monitoring and Reporting Program.

And,

"Culverts under Lincoln Boulevard should be of sufficient size to permit wildlife movement between Areas B and D without risk of injury or death from traffic hazards." P. 18. Mitigation and Monitoring Report

The EIR o Playa Vista also requires the

-avoidance of any long term dewatering due to negative environmental consequences

however, no cumulative analysis of groundwater extraction has been done, impacts of that groundwater dewatering have not been done and, no enforcement of metering requirements has occurred.

-SCOPING:

-The Ballona region requires hydrologic review .

NOP of CDFG cites on page 1:

Project Summary and Proposed Action

The project entails restoring, enhancing, and creating native coastal wetland and upland habitats in the

approximately 600-acre Ecological Reserve. The reserve comprises previously filled and dredged coastal

wetland and upland habitat that would be restored by increasing tidal flow throughout the project area,

removing invasive species, and planting native vegetation. Figure 3 shows a conceptual design of the

proposed restoration. The main components of the project are:

1 Habitat restoration of estuarine wetland and upland habitats connected to a realigned Ballona Creek.

1 Removal of existing Ballona Creek levees and realignment of Ballona Creek to restore a more meandering channel.

1 Construction of new levees to replace the existing Ballona Creek levees and to allow restoration of

tidally influenced wetlands while providing flood protection for Culver Boulevard and surrounding areas.

1 Installation of water control structures, including culverts with self-regulating tide gates or



similar structures, to provide a full range of tides up to an elevation acceptable for flood management and storm drainage, while protecting against some storm events.  
Maintenance of existing levels of flood protection for areas surrounding the Ballona Wetlands site and inclusion of flood hazard management measures into the restored wetlands.

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This description is of a preordained outcome.

The premise of restoring estuarine flow is false advertising. The CDFG already has the T-sheets –the historical studies of Ballona including that done by Travis Longcore PhD. The T-sheets and the Longcore and other scientific studies remove any doubt that Ballona was historically a wetland that utilized freshwater and was not primarily the estuarine environment that is being touted as the PROJECT.

**Please review the T. Longcore lecture, entitled "Closure Dynamics of Southern California Estuaries and Implications for Restoration" simply google as it can be found on u-Tube.**

-WHY does the CDFG mislead the public and not provide full disclosure?

- Provide the data to show what CDFG utilizes in order to claim restoration of historical functions of Ballona will occur. If not, why not?
- Provide the data to show 'restoration' a restoring of historic tidal influences will be occurring if the 'Plan /Project' is allowed to occur.
- Provide the ratio of current deep and mid-tidal – with tidal flux that already exists at Ballona- including the Marina del Rey, Del Rey lagoon, Ballona Lagoon, and the Ballona Channel itself as compared with the past 100 -200 years.

**SCOPING:**

-Realignment of Ballona's "meandering channel" is also false advertising by CDFG since the Ballona Channel never had to historically carry the high volumes of storm and runoff water that it currently carries. There is no 'restoration' of the historic Ballona Creek, only the forced entry of toxic LA City waters and sediment into what is now habitat for endangered species and rare native plants.

Why does the CDFG fail to provide a historically accurate account of what is proposing upon Ballona?

**SCOPING:**

-Why has CDFG not provided for Public participation and information sharing in the planning of alternatives for Ballona and instead is promoting a non-historical conversion project that creates a catch-basin end of pipe solution and flood control devices- NOT HABITAT-upland or otherwise—that protects ONLY PLAYA VISTA?

- Since the USACE has stated that it will no longer pursue the 2005 restoration process via the Joint EIS/EIR- and since the USACE is not requesting Ballona Channel changes, please discuss why the CDFG provides a false allusion of need for flood control for Culver Blvd. and what 'other areas'? Or, if CDFG believes there is a

current need to change the Channel for protection to the public from flooding--- please list those needs and provide the data support.

**SCOPING:**

-PLEASE PROVIDE studies that determine ANY PROTECTION TO CULVER BLVD. OR OTHER AREAS ARE NECESSARY if the Ballona Channel is left in its current location.

CDFG provides false and misleading information in the NOP via omission of historical facts.

**SCOPING:**

**\_ Please discuss and provide** any and all data that provides validation of CDFG's claims that the enormous –approximately 20' above road level with sides that must be ENGINEERED TO REMAIN VERTICAL 'upland habitat' is enhancing or restoring Ballona. Provide discussion and data support to show what can survive in the giant berms that are shown on the Psomas contour maps in Area C and south of the Ballona Channel and west of Lincoln Blvd. (Psomas-2012 contour maps)

-GC wishes to see multiple restoration alternatives that do not involve changing the Ballona Channel and that do not involve the massive bulldozing and dredging that is the singular 'Plan' or 'Project' cited in the CDFG NOP and is finalized by Psomas on its 2012 contour map.

- GC wishes to be engaged and provided with multiple alternatives that would embrace freshwater sources for protection and utilization for streams/ponds etc. This alternative has not been explored and needs to be explored, analyzed and presented for public review. Such alternatives would require less money to create and would/ could be self sustaining. Such alternatives would be respectful of the Native American heritage of the site and provide for habitat closely aligned with historic Ballona and its inhabitants—both human and wildlife and flora.

- Why has CDFG not allowed for public participation and sharing of data and information for the public to be engaged in alternative planning??

**ISSUE # 4 PROCESS**

**Background and overarching scoping needs-**

The promised hydrology studies (2005 Joint EIR/EIS—between USACE & the Authority ) of Ballona Wetlands have not been done. Instead, the SMBRC/FOUNDATION -director & staff and the California Coastal Conservancy have interfered with and stopped the areawide ecological studies and geotechnical studies of the federal review for restoration potentials in the greater Ballona regio in order to promote a singular 'Plan' of destruction and experimental construction upon Ballona Wetlands- Areas A,B,C . This "Plan" excluded groundwater hydrology studies and focused upon hydrolics studies of surface water flows into Ballona Channel .

We believe that this 'Plan' is nothing more than a destruction of endangered species and wildlife habitat that is currently functioning well and that the Coastal Conservancy contracted- Psomas Co. contour maps of the "Plan" reveal that it is a flood control plan that only benefits a private development known as Playa Vista (Playa Capital LLC). The Proposition 12 bond funds have illegitimately been spent on private use protections to a development site that was illegally allowed to build in a flood plain. FEMA was not engaged for oversight comments as needed as the EIR process for Playa Vista was thwarted by failure to utilize the Clearinghouse as a gateway for proper notice to all pertinent agencies. ( ETINA v City of LA; Playa Capital LLC) This failure by the lead agency- the City of Los Angeles- to include and enforce California Environmental Quality Act (CEQA) protocol of Clearinghouse utilization **PLACES THAT BURDEN NOW UPON USACE AND THE California Dept. of Fish and Game and its state agency partners. FEMA MUST NOW BE ENGAGED** and the issues that pertain to flood protection for Playa Vista must now be reviewed in light of the flood control devices and the preordained 'Plan' of development and construction proposed by SMBRC/Foundation and the California Coastal Conservancy.

The giant berms and levees-approximately 20 feet above current road level as shown in the contour plans – are NOT habitat; are NOT RESTORATION but instead are civil works flood protection devices to benefit Playa Vista.

Furthermore, the 'Plan's' intent to DREDGE Ballona is NOT RESTORATION but instead is simply an experimental attempt at an end of pipe solution to the toxic water and sediment flow down the Ballona Channel. The catch-basin shown in the 'Plan' does NOT enhance or restore Ballona but instead destroys the very habitat that the public has spent over 20 years to protect. The effects of the 'Plan' as a catch-basin and flood control project have not been studied. Current roadways, Marina del Rey and other beach front areas appear to be put in jeopardy from the project.

#### **SCOPING:**

Issues of safety, failure to utilize the bond funds as approved by the public; failure to work with and include the public's participation in restoration concepts and planning; the legitimacy of process -- promised and paid for by bond dollars v the exclusionary and preordained outcome plan by the SMBRC/Foundation and the Coastal Conservancy must be addressed in the SCOPING AND DRAFT EIS/R.

Response to conflict of interest allegations, illegal use of bond funds, lack of transparency issues raised and failure to perform in good faith toward restoration, acquisition of more of Ballona, and enhancement issues that would protect and utilize the freshwater resources of Ballona onsite must be addressed and raised for public awareness of these and other challenges leveled at the lead agencies and their 'partner' agencies.

A gross compartmentalism has taken place by the steward agencies in order to create a predetermined outcome – the 'Plan' that excluded the public and its participation.

The current Notice of Preparation by the CDFG provides appearance of –just starting- the process for restoration at Ballona. This is false and CDFG fails again to act in good faith and provide accurate history. Instead, the CDFG while stating verbally at the ‘scoping meeting’ (which was not a scoping meeting conducive to public awareness and cross sharing of information) that all alternatives are being considered—instead the NOP shows the story of preordained outcome of ‘estuarine’ environment ONLY AND CHANNEL CHANGES AND DREDGING ONLY.

- **SCOPING NEEDS** to address the NOP and its showing of a preemption of the iterative process as promised and bond funds provided for.
- **SCOPING NEEDS** to address and respond to why CDFG and its partner agencies have NOT abided by public participation in the planning of restoration concepts and are –instead promoting the SINGULAR PLAN of the construction of a flood control basin and flood protection device(es) to protect Playa Vista.

#### **SCOPING NEEDS TO INCLUDE :**

-Response to comments and questions within the Jan. 2012—Bond approval for \$6,490,00. by John Davis to California Coastal Conservancy must be addressed.

- The John Davis to Ca. Coastal Conservancy document of March 28, 2012 entitled- Request to Hold Emergency Meeting to Rescind Approval Action on File No. 04-088 must be addressed and provided response since the issues pertain directly to the restoration of Ballona and the Coastal Conservancy’s; USACE’s, SMBRC’s/FOUNDATION; CDFG ‘s in partnership---lack of adherence to stipulated use of public bond money for the publically owned Ballona Wetlands.
- Include response to the Amended Complaint to the Ca. Coastal Commission by Grassroots Coalition, dated August 2, 2012. The three documents ,490,00.are attached to this response.
- The partner agency – Ca . Coastal Conservancy has thus far provided no response whatsoever to these Complaints that have attached data support.
- The Amended Complaint by GC has an attached CD that contains Public Record Act documents from the Coastal Conservancy that provide the data support to the Amended Complaint. The contents of the CD should be part of this record and provided in full to the public for informed decision making. No agency is the ‘owner’ of Ballona Wetlands but instead the agencies play a role in stewardship of land OWNED BY THE PUBLIC. The public process has been hijacked by these stewards apparently to fulfill private corporate interests. This is not acceptable behavior by our state and federal agencies. Therefore, any attempt to obfuscate the history of Ballona and its ‘restoration’ path – a path that was to fully include the public to provide alternative planning via informed decision sharing and making—is considered further proof of hostile hijacking of due process.

#### **SCOPING:**

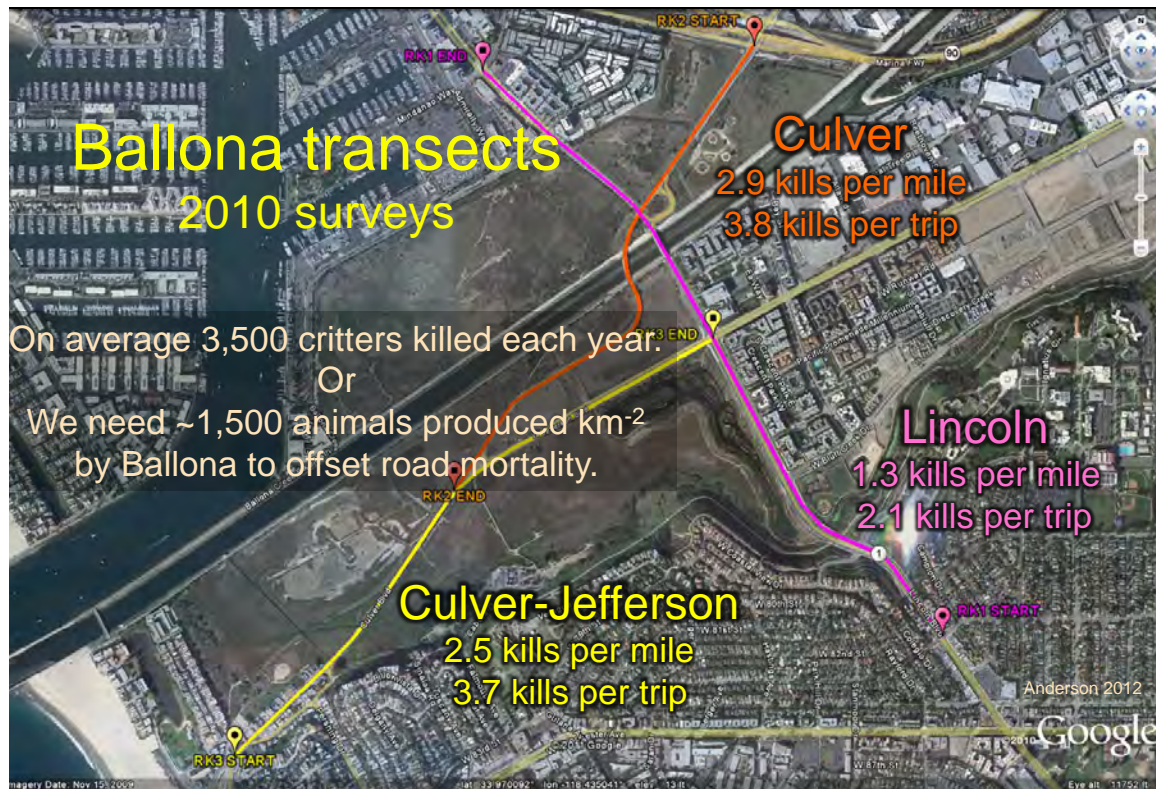
Needs to include the history of the “restoration” process of Ballona, including but not limited to the 1995 and 2005 Notice of Intent and the contractual agreements between the USACE and the Authority- SMBRC/County Flood Control. The history must include CDFG’s participation in that process and acknowledge for accountability purposes- why that process is not being adhered to at present.

-Acknowledgement of the congressional issues of House Document 389 and any and all Feasibility Reports need to be accounted for as to intent and outcome.

Wildlife Issues:

Credit for Graphic:

Anderson, Sean. 2012. Splatter Spotter: Exploring and Predicting Elevated Vertebrate Road Kill Across the Santa Monica Mountains and Beyond. Chautauqua Lecture. Temescal Canyon Park, Pacific Palisades. August 22.



The EIR process with Playa Vista –mitigation provided for culverts for wildlife movement to prevent roadkill. Playa Vista has not honored this EIR requirement of mitigation and CDFG and the City of Los Angeles refuse to enforce it. Thus, how can the public expect CDFG to promote and protect the wildlife interests in the 2012 EIS/EIR? History reveals itself with our state and federal agencies failing to protect the environment and its wildlife. Corporate interests and money appear to be the driving force behind the state’s “Plan” of Ballona destruction and construction into a

flood control project to protect Playa Vista and as an experimental end of pipe solution to the toxic waters and sediments of Ballona Channel. Please address these allegations.

Endangered Species habitat and nesting areas will be destroyed. The Belding Savannah Sparrow –as one example- is a non migratory bird that utilizes both side of the Ballona Channel for nesting and foraging. The intended massive bulldozing /dyking and filling of Ballona will destroy its habitat. See the Coastal Conservancy – Public Record Act requested CD for documents pertaining to wildlife issues.

Vague comments by state agency personnel vaguely recite in emails and minutes of private meetings—that the Beldings will just have to move. This attitude is excruciatingly unscientific and it is painful to read such callous rubbish but it does reveal the throw away mentality that the state agents have. Thus far, the taxpayers have not been included in any alternative planning as required and thus far their money has been spent –apparently in its entirety of Prop. 12- for hydraulics studies for their singular end goal of creation of a catch-basin and flood control construction for Playa Vista.

Page 13- Additional Complaint –GC to Coastal Conservancy—August 2 2012  
The next paragraph, written by the note-taker- cited by CC as being CC or SMBRC staff- states the goal-

**“Estuarine biodiversity is the primary objective of the analysis.”**  
(CD- June 23, 2008 SAC Conference Call Memo)

*“The project goal is to create functional estuarine habitat...”;*

***“1. Maximize area of estuarine habitat.”;***

*Opportunities to create regionally significant habitat including vernal pools and...should be pursued but **not at the expense of restoration of estuarine habitat.**”p. 14 Additional GC Complaint to Coastal Conservancy*

The public/Working Group was not allowed to participate in the decision making and was not advised as to the differing opinions rendered by the SAC team.

Pages 16-17 of the Additional Complaint of GC to the Coastal Conservancy:  
(the Coastal Conservancy continues to be nonresponsive)

**“Rare ecosystems of the coastal marsh area are discussed internally by the SAC team with the CC project manager and staff of the Foundation; the information is not broadcasted for public awareness, inclusion of discussion and decision making as promised.**

*“Rich noted that the discussion of grasslands should include mention of the historical native grassland prairie ecosystems that previously existed in the area. The rarity of native grasslands should be discussed,,,”* (CD- 6/28/08 SAC Conference Call)

*"Rarity section...complex of prairie and vernal pool... Wet grasslands formed extensive areas were also palustrine wetlands above highest high tide.." (CD- SAC Call 6/23/08)*

*"...there is native biodiversity in the non-tidal saline soils. .... At Ballona, these wetlands at Area A, for example, are the only habitat where Alkali Barley (*Hordeum depressum*) is known to occur in the Ballona Ecosystem. This annual grass was probably the dominant native annual grass in naturally occurring non-tidal saline soils at Ballona." (CD- 11/23/08, Wayne Ferren communication to Mary Small...)*

And,

*"The region has a shortage of mudflat for shorebirds, high marsh for animals and salt marsh bird's beak, marsh-upland transition for rare shrubs (eg. , box thorn) that are used by animals,...*

*The region has a shortage of dune habitat and back – dune depressions that support clean-water brackish marsh for aquatic plants and animals.*

*One could also list maritime scrub, which remains in several places "... ( CD- Joy Zedler (SAC) correspondence)*

Thus , without public /Working Group inclusion and input into the formation of the alternatives and later failure to include the public /Working Group comments and concerns regarding the PWA Alternatives that are presented at one public meeting-- the CC and Foundation staff continue to work behind publically closed doors to focus upon the 'Preferred Alternative', now known as Alternative 5 presented in the 1/19/12, Staff Recommendation request for funding. Alternative 5 requires massive, non-historic, extraordinary, experimental and knowingly toxic changes to occur on the land masses of Area A and B so that **"biodiversity = highest richness of estuarine dependent species."**

**And also from the Additional Complaint—GC to Coastal Conservancy-p 17-18:**

**Contrary to the 8/13/04 CC Memo which promised transparency and public inclusion in the alternative planning process** which would "restore and enhance" a mix of wetland habitats....and that would implement a technically feasible, cost effective, ecologically beneficial and sustainable restoration.

Instead, the public was shut out of the planning process; and SAC knowledge regarding the **needs and dangers posed by Alternative 5 are not made public:**

*"This alternative makes the greatest change to the site, would be the hardest to reverse and consequently has the most risk." (CD- 9/12/08 MEMO from SAC to PMT )*

*" ..this alternative would **require reliance on upstream flood control and pollutant removal**, and could necessitate periodic removal of accumulated pollutants for some portions of the restored wetlands. Furthermore, it is unknown how the flow and*

*sediment yield from the upper watershed would affect the sustainability of the marsh in terms of scour or sediment deposition.” CD, P. 4 of 9, 10/15/08 SAC MEMO, emphasis added.*

There is no evidence of any such large scale BMP (Best Management Practice) planning or proposals for ‘flood control and pollutant removal” occurring upstream on Ballona Creek.

And,

*“Eric suggested that there be a statement up front indicating that this site will not be self-sustainable, but will need to be actively managed in perpetuity. ” CD- 7/7/08 SAC Conference Call)*

Discussion and comments made from key federal agencies were withheld from the public, including but not limited to **NOAA communications regarding concern of toxicity of Ballona Creek upon the remaining wetlands should the levy removal and dredging take place.** (CD- National Oceanic Atmospheric Association email)

Studies that discuss the toxicity of the Ballona Creek waters and sediment to life in the waters and sediment were not released or shared with the public:

*“These sediments were toxic to aquatic organisms, potentially from organic compounds in these sediments. Ballona Creek has been identified as a potential source of tidal flows into Areas A, B, and C in each of the proposed restoration alternatives. Therefore, there is concern to tidal marsh areas, resulting in a negative impact to the habitats and biological resources.” (CD- Weston –Technical Memorandum 11/26/07; Water Quality Data Gap Investigation Ballona Wetlands Restoration Project- Pohl , P.E., Ph.D.)*

And,

*“ The July 2006 report by Weston also concludes that there are concerns related to water and sediment quality adjacent to the tidal channels. Consequently there is a need to develop a strategy to evaluation the potential ecological risk associated with influent water or sediment quality to the restored wetlands.*

*The scientific questions regarding sediment and water quality cannot be answered based on the information currently available, and will ultimately depend on the design of the project.” (CD- Memorandum 3/8/08; Subject:*

APPROACH FOR ADDRESSING SEDIMENT AND WATER QUALITY ISSUES)

And;

*“Eric- Conc(ept) D—is it attempt to move water and sediment into system*



*Wayne- breaching levee bringing trash, water pollution and sediment into entire area is problematic.*

*John Dixon-important to describe these NOT as projects, but a directions.*

*Ambrose- maybe D is too extreme—this won't happen anyway.*

*Dixon- do feasible maximum tidal, not D—need to scale back*

*Jeremy- may need to do that, take out realignment Ballona—include realign on Hydrologic options”*

*(CD-10/30/06 SAC Conference Call)*

**Thus, any discussion of any alternative habitat planning for Ballona is suppressed and deep-sixed from any public awareness as the state agents-promote unbeknownst to the public—a singular outcome of the estuarine-“Plan” requiring massive bulldozing and Ballona Channel changes and engineered flood control berms and levees.**

**GC has concerns regarding members of the private non-profit- the SMBR Foundation –who are also in key decision making positions to promote the ‘Plan” that are directors of SMBRC and project planners of the Coastal Conservancy . The SMBRFoundation has past and present strong ties to corporate interests including Playa Capital LLC.**

## **ISSUE- REMEDIATION**

### **SCOPING-**

-What and how will the remediation needs of SOCALGAS be analyzed?

ABANDONMENT/DEMOLITION STUDY- Playa del Rey Storage Field- Nov. 22 1993 cites:

“Phase III-Tank Farm Abandonment and Final Clean-Up

...Environmental remediation may require significant disposal of contaminated soil and the importation of clean fill. There is also a potential for the discovery of ground water contamination. This environmentally sensitive area will no doubt provide significant challenges related to keeping our costs within forecasts. There is a potential for very high clean-up costs beyond current estimates because the Ballona Wetlands are immediately adjacent to our facilities.”

-What studies are planned and how will the potential mitigation be remediated?

-Groundwater studies need to be included in a restoration of Ballona that pertain to SOCALGAS operations. The high potential of groundwater contamination is acknowledged above in the Jacobson Engineering Report prepared for SOCALGAS.

Please include all the attached documents for review and assessment for the public.  
Patricia McPherson, Grassroots Coalition- President



**Jones, Tanya**

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-----Original Message-----

From: David Jacobs [<mailto:djacobs@ucla.edu>]

Sent: Thursday, October 25, 2012 9:31 AM

To: McCormick, Donna

Subject: Comments regarding restoration in Ballona

Please see the attached pdf thank you for your effort.



DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY  
621 CHARLES E. YOUNG DRIVE SOUTH  
BOX 951606  
LOS ANGELES, CALIFORNIA 90095-1606

FAX: (310) 206-3987

October 23, 12

Ballona Wetlands Restoration Project  
C/O Donna McCormick  
1 Ada, Suite 100  
Irvine, CA 92816

To Interested Parties:

As a Biologist and Geologist engaged in research on the estuaries of California and the Gulf of California from Genetic, Geomorphologic and Historical Ecologic perspectives, and as someone who resides in the area, I am pleased to provide comment on the prospective restoration at Ballona. The comments provided include concerns about the current plans, as well as some alternative possible restoration schemes. I hope these provide a useful basis for additional discussion and ultimately improve the final design. I would be more than happy to engage in further discussions of these matters.

Please see the comments below.

Sincerely,

A handwritten signature in blue ink, appearing to read "David K. Jacobs".

David K. Jacobs  
Professor  
Ecology & Evolutionary Biology  
UCLA  
621 Young Drive South  
Los Angeles, CA 90095

## **Restoration Issues at Ballona**

### **Context**

Ballona -Historically Closing System- Now Constrained by Urban Setting

#### *Concerns regarding Current Restoration Plans for a tidal system at Ballona –*

- 1) The proposed restoration plans as they now stand involves type conversion of historically highly varied dynamic/seasonal system with significant fresh water input that was predominantly isolated from the sea, to a tidal system. The restoration does not focus on the heterogenous brackish to fresh, and seasonally variable habitats historically present. And, current restoration plans take a relatively static view of a naturally dynamic landscape. Development of a more process oriented historical treatment would help illuminate the seasonal and episodic dynamics of the historic habitat. Capturing or replicating some aspects of these dynamics may greatly benefit native wildlife. A better understanding of landscape processes would also permit avoidance of potential pitfalls. Historic dynamism also suggests that designs that permit active management may be desirable. One significant concern is the planned establishment of tidal drainage channels, especially near the margin of the system. These will effectively further, extend the drainage effort begun in the early 20<sup>th</sup> century continuing the trend toward desiccation of marginal riparian habitat. Thus the planned restoration may extend rather than mitigate impacts of previous anthropogenic landscape modification. It should be noted that the wetlands historically present at Ballona appears to have been very biologically productive, and the heterogenous fresh to brackish water landscape present historically supported species that are now thought of as exclusively freshwater or saltmarsh as well as species that thrive in brackish water or episodically flooded settings many of which are rare today.
- 2) Consideration of the consequence of sediment supply, and reworking of sediments within the proposed restoration, appears insufficient. Flood-tide delta formation has impacted Ballona historically, and southern California estuarine restorations generally. Flood tide deltas at Ballona are evident from the first T-sheet maps presumably having formed following early 19<sup>th</sup> Century flood opening, and flood tide delta formation followed all attempts at opening the system, as documented from historical records and early 20<sup>th</sup> century aerial photography. More recently, underestimates of sediment delivery from the beach-side, due to flood tide delta formation, have impacted restorations at Batiquitos and Bolsa Chica. Given current restoration plans the added tidal flux associated with the increased tidal prism will likely draw significant sediment into the system, altering the form and process of the estuary in ways that are difficult to predict and control. The alternative is more extensive dredging than currently practiced, including dredging *within* the restoration. Thus the potential for increased dredging cost is a significant concern with current plans. Effort should be made to anticipate these costs relative to any design, so that a formal cost benefit analysis between upfront and ongoing costs can be presented in an inclusive manner.

At the moment there is a very substantial build up of sediments in the flood control channel. Regular, but non-quantitative, observation suggests approximately a meter of sediment has accumulated along about 2km of the channel. Previous reports suggest that no such accumulation occurs. This discrepancy may be a consequence of accumulation followed by episodic flood removal. This issue requires further study, including an assessment of sediments currently present and their sources (upstream, beach-side, or local bed erosion). Episodically removal of sediments from the system during floods appears to be a significant service provided by the current Flood Control channel. Removal of the channel will lead to deposition of

any such sediments in the restoration area potentially dramatically altering its configuration. It seems almost certain that the subtidal habitat currently present in the Flood channel will be eliminated in sediment redistribution. In addition the sediments in the restoration area will be subject to reworking in floods even in the absence of external sources. Given the unpredictability of sediment reworking, the ultimate form of the system is unknown and difficult to determine. This makes the project as currently constituted a significant role of the dice. For example without knowledge of the final form of the estuary the response of the system to flood flows cannot be assessed.

Likely Sites of Flood and Ebb Tide Delta Formation Relative to One Proposed Restoration Plan - with inset of Sediment Accumulation at Batiquitos



3) Current plans are not focused on, and appear unlikely to provide, optimal benefit to the range wildlife historically present and currently of concern. Clear plans for specific wildlife benefits such as accommodation of wintering waterfowl or migrating shore birds do not appear to be addressed. More importantly the habitat needs of native species that are endangered, threatened, or of concern, such as least tern, and rails, or that were associated with the fresher and seasonal habitats historically present, such as tidewater goby, stickleback, as well as reptiles and amphibians, such as the south coast garter snake (a species of concern) do not appear to have been considered in the design. This is a significant issue and should receive focused attention.

4) Proposed designs will no longer bypass “First Flush” contaminants associated with the initiation of rainfall, likely yielding contaminated marshlands. Currently, initial flows are exported through the flood control channel. In combination with the absence of scouring flows, lack of bypass can be expected to result in deposition of fine-grained sediments facilitating eutrophic conditions, in addition to concentrating specific anthropogenic toxins in the restoration area. This problem may well be exacerbated by sediment reworking during the post construction evolution of the system.

5) Plans as currently constituted involve movement of very large amounts of material and construction of extensive marginal dikes to the system. They involve comprehensive rearrangement of the landscape. This raises a number of potential concerns including elimination of natural surfaces and drainage, as well as further isolation by dikes of the system from its marginal upland habitat. Moreover the dikes themselves occupy significant area limiting the area potentially restorable to actual wetland. The scale of material movement required could be more limited if the plans were more responsive to the current landscape configuration. Marginal dikes require rerouting of drainage external to the restoration and make for unusual steep grades and habitat barriers that may further limit access and movement of fish, amphibians, reptiles and invertebrates in an already dissected landscape.

High ground is currently present adjacent to the channel levees especially in area A. Alteration of designs so that they did not require movement of higher ground could potentially significantly reduce material movement and cost. In addition, planning would benefit from more up to date and detailed topographic information. All elevations maps currently associated with the project have significant anomalies relative to the current landscape.

Current plans propose elimination of historic aspects of the landscape that have persisted to date including marsh and pan surfaces in Area B that are much as they were in 19<sup>th</sup> century maps. Very few surfaces in lowland landscapes are preserved in the LA region. Intact landscapes preserve a sedimentary succession which in turn preserves historic information. Such surfaces also maintain established soil process and soil biota. These should not be eliminated without due consideration of the potential loss of scientific information and biological resources.

Current cultural uses of the existing and channel and levee system will also be impacted. This includes UCLA/LMU crew teams which have used protected straight flood control channel for races for the last 70 years. The large relatively inaccessible restoration area may also present issues of access for first responders or vector control. And the loss of current channels and levees could limit egress in an emergency. There are likely other issues of this type that should be directly addressed and balanced against the cultural and recreational benefits conferred by the restoration plan.

6) Of very significant concern is that restoration planning does not appear to have been well integrated with necessary road-work/infrastructure development. Currently, Culver Blvd is designated a "Tsunami Escape Route" despite the fact that it is at about the level of the highest high-tide as it traverses Ballona. Similarly parts of Lincoln Blvd are very low. Much design effort seems to have been put on continuing to protect these features with new levees even as old levees are removed. It would seem that elevating these roads 3 or 4 meters is critically important from a natural hazard standpoint, and would simplify the restoration problem. It also seems that some of the material that would be removed for restoration could serve as road fill. There is a lot of anthropogenic fill that needs to be removed, in addition to clay rich marsh material. The former may be better than the latter for road support. This issue appears to require more coordination and study.

## Design Objectives for Restoration

Given the above list of concerns it seems that the design objectives of the project at Ballona ought to be reconsidered or expanded.

### *Restoration objectives should:*

- a) Specifically address recovery of taxa that were historically present and are now listed of interest or concern.
- b) Replicate process, such as scour, that initially helped form and sustain California estuarine systems.
- c) Maintain beneficial if artificial processes such as sediment expulsion, and contaminant bypass by the flood control channel.
- d) Not unduly penetrate freshwater and riparian areas with new drainage channels.
- e) Work with the existing landscape to mitigate ancillary impacts and undue earth movement.
- f) Coordinate with necessary infrastructure enhancement and roadwork.

### *Historical considerations relative to restoration objectives*

Restoration planning can and should employ historic landscapes processes and habitat information to improve outcomes and avoid risks. Estuaries are the product of a dynamic history. Thus there is no simple way to return to the past. This is especially true given the constraints of the urban setting surrounding Ballona. However consideration of the processes and succession of events that produced the current landscape, as well as comparison to processes at other locations, can help clarify opportunities and risks inherent with various restoration designs. Otherwise the restoration may come into conflict with ongoing or recurring processes. Furthermore, historical information can help clarify the nature of habitats that existed and the processes that sustained them as well as which habitat types have been most impacted by adjacent anthropogenic modification. This in turn can clarify how habitats can be reconstructed so that they sustain or permit the restoration of species which were historically present rather than creating potentially diverse, but largely anomalous or non-endemic communities of organisms.

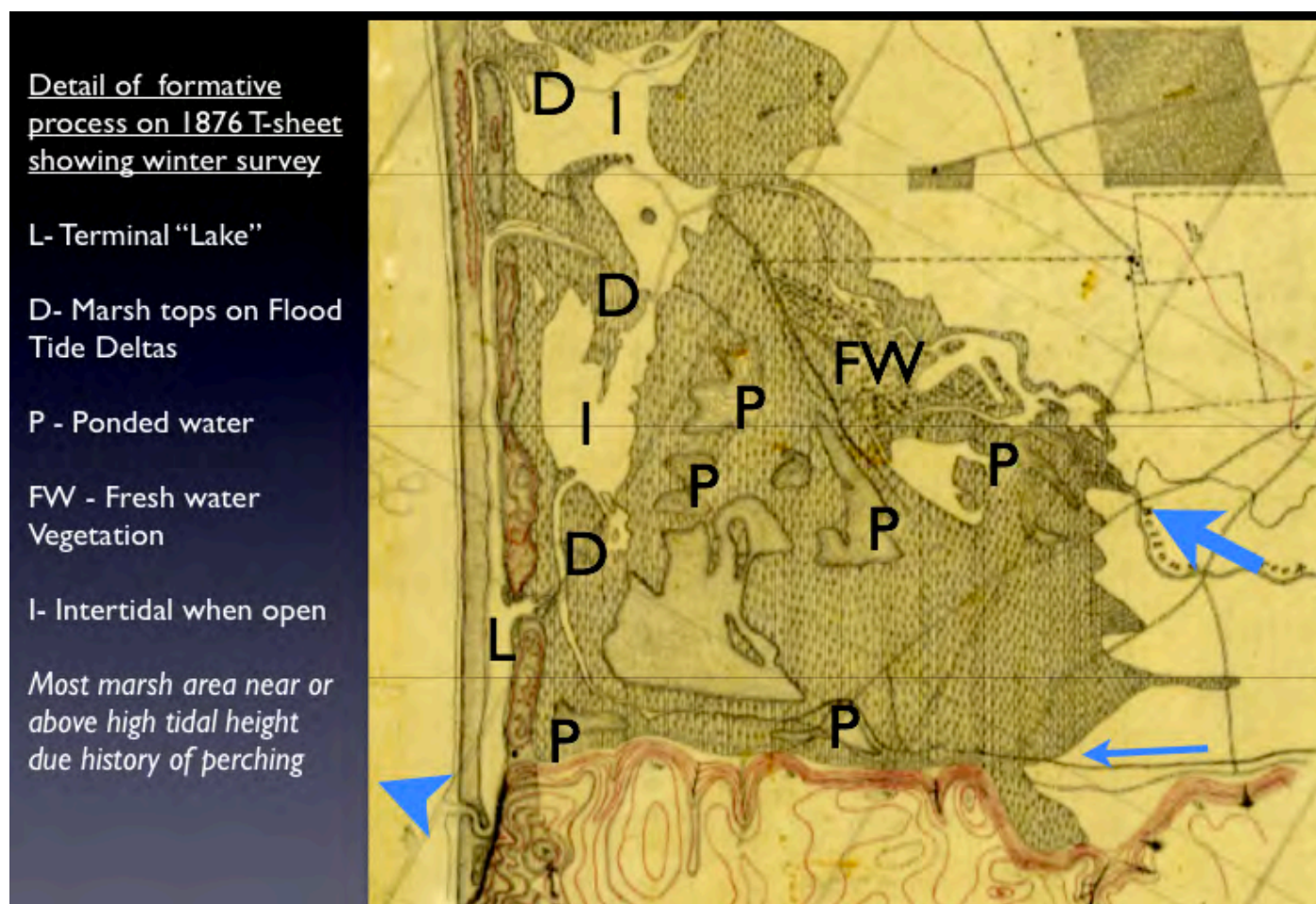
A review of formative history of Ballona (see Jacobs et al. 2011 for detail) provides insights that may help clarify which restoration designs may be more or less sustainable, and which provide the greatest habitat benefits or improvement, relative to wildlife.

Formation of current conditions at Ballona occurred in the following rough succession of steps.

- a) Sea level rise initially flooded the Ballona Creek Valley yielding a marine embayment by approximately 7 or 8000 years ago.
- b) By 4000 years ago coastal evolution involving shoreline retreat, such as formed the shore cliff at Santa Monica, generated a beach and spit that were continuous across the mouth of the bay producing a bar built/closing estuary largely isolated from the sea where freshwater conditions were sustained for long periods of time. Due to the presence of a distributary alluvial fan where the Los Angeles River exits the San Fernando Valley, natural process connected and disconnected the Los Angeles River from the Ballona Creek. Thus fresh water delivery to the system has varied even beyond that which is produced by the dramatic variation in annual precipitation in the region.
- c. Early 19th century Los Angeles River flood flows through Ballona set the stage for the final evolution of the system recorded in the first detailed mapping published in 1876. These flood flows likely yielded the



following dynamic succession. Flood flows exited Ballona through gaps in the coastal duneline scouring out channels such that they were open to the sea. Tidal influence built flood tide deltas immediately inside the duneline at multiple locations. Subsequent spit formation formed an outer Lagoon. This 2 mile long feature was typically or closed to the sea, and is often referred to as a lake in late nineteenth century (Dark et al. 2011). The resultant estuarine system as mapped was multiply subdivided and interconnected internally, had multiple perched and ponded bodies of water as well as desiccated high intertidal flats, and vegetated water bodies supplied by Ballona creek. The surface of Ballona was almost completely above the low-tide waterline behind the dunes as indicated by the mapped low-tide line. Marsh surfaces lack typical tidal channels consistent with long periods of closure. The majority of marsh surface appears to be quite high in the intertidal. High marsh surfaces are consistent with pooling behind the dunes or beach berm, as is typical behavior of comparable west facing systems along the California coast. These observations from Tsheets suggest that the system was subject to a variable hydrography with overflow of much of the landscape, including all of the area available for restoration, by freshwater when stream flows were adequate and beach berms sustained an impounded system. This is consistent with the early 20th century photographic record of Ballona flooding. During lower flow periods much of the landscape would have been partially desiccated with remnant pools and water marshes where freshwater flows continued to enter the system, much as is depicted in 1876. Only immediately following periods of high flow that induced breaching would tidal influence have penetrated the system in the Mid and Late 19<sup>th</sup> Century.



d.) In 1887 the first attempts were made to jetty-open Ballona and sustain a port. These efforts appear to have initially failed due, in part, due to rapid long-shore sand movement and closure of the artificial opening. A sustained jetty maintained opening was finally constructed in 1906. Although managed breaching of the lagoon preceded this date. Early 20th-century imagery documents flood-tide delta formation associated with the tidal conditions produced by this opening. They also record new drainage channels penetrating to the southern margin of Ballona (Area C) for agricultural purposes. Large impoundments were also sustained, presumably for duck hunting, through the midcentury. e) In 1938 the flood control channel was constructed limiting surface flooding in the system and generating a persistent tidal estuary such as had not been present for a number of millenia. Dredging from this construction appears to be primarily responsible for the high ground observed on the south side of area A. The 30s and 40s were also characterized by oil field and road development on the marsh surface. f) Post WW2 rapid development of much of the watershed, changed the nature of the drainage, and was followed by Marina construction in the 1960s. The Marina constitutes a significant alteration of the habitat, introducing extensive hard substrate in the Marina and its jetty system as well as deeper subtidal protected habitat. g) Elimination of significant open land in Playa Vista construction and the establishment of a freshwater wetland complex represent additional substantial changes in the wetland landscape at Ballona this Millennium.

*Given the above historic succession:*

It is important to note that the anthropogenic trend above includes the establishment of significant perennial tidal habitat where tidal habitats were previously only intermittent. Significant perennial tidal habitat is now found in the flood control channel and in the Del Rey and "Ballona" - remnants of the historic frontal lagoon. Thus there is perennially tidal habitat where none previously existed and there is a deeper subtidal aspect to much of this habitat. In addition, although there was likely extensive marsh and willow thickets upstream in the watershed historically (e. g. Dark et al. 2011), it is unlikely that perennial fresh water was much more extensive at Ballona in the 19<sup>th</sup> Century than that supplied by the current freshwater wetland. Thus perennially tidal and perennially freshwater settings are present and comparable or significantly more extensive than what was present historically.

What is missing currently from Ballona, and from restoration planning, is hydrologically complex seasonal and intermittent fresh and brackish water habitats which were clearly very extensive at Ballona historically. These habitats supported a broad suite of native taxa many of which are seriously impacted or absent from the system today.

The importance of scouring events - Historically at Ballona scour from large fresh-water flows served to remove sediments from the system. As noted above the landscape recorded in the 1876 Tsheet is in part a product of major scour events associated with the early 19<sup>th</sup> Century floods. Flooding of the scale required to produce the necessary scour to reduce sediments can no longer operate widely due to urban development and flood risk. *However the hydraulic flood control channel serves to rework and export sediment during high stream- flow events. This will no longer occur in restoration designs which do not maintain the channel – the restoration will instead act as a sediment trap.* In the sketches of restoration alternatives that follow sediment scour is achieved by managing tide through multiple gates so that

outflow velocity can achieve higher than inflow so that scour inducing outflows can be produced intermittently at a variety of locations within estuaries to mitigate the accumulation of fine sediment.

Historically intra-estuarine flood and ebb tide deltas formed at Ballona at every opportunity when the system was connected to the sea. Such deltas form where tidal flows decelerate as they enter wider bodies of water. As noted other California “restorations” have failed to properly anticipate the delivery of sediment to the system from the beach/ocean side. This concern is clearly merited at Ballona as sediment bars are often observed to build to low tide in flood near the mouth of the channel under current dredging regimes (pers observation). Thus in this instance history and regional experience speaks to processes in the region that are likely to conflict with certain estuary designs rendering them difficult to sustain over time.

### **Broad suggestions for restoration at Ballona**

- 1) Retain flood tidal channel and levees to expel sediment from system, bypass contaminants during first flush, as well as flood protection. This maintains the potential for tide gating should be needed in response to sea-level rise.
- 2) Use of Multiple gates (multiple inflow, single outflow) and the drop to the flood channel to provide scour to lateral marsh channels. Multiple open gates on incoming tide would minimize velocity and sediment import. Opening of one gate at a time during an outgoing “spring” tide or tide series would generate scouring flow replicating scouring flow produced historically by stream flooding. This would minimize sedimentation or allow controlled sediment accumulation in response to sea-level rise. Gates should be designed and operated to enhance bypass of first-flush contaminants.
- 3) Gates or closures such as slot- boards or valved culverts should be used to replicate seasonal wetland dynamics consistent with focused habitat and species restoration objectives. In several cases these can use preexisting raised roadbeds as partitions for habitat management.

### **Some specific restoration suggestions**

*Area B- Surround and support the existing freshwater wetland with seasonally variable wetlands similar in function to those historically present. Integrate tidal operation of “North” Area B with existing Ballona flood control channel*

- 1) Avoid draining areas with freshwater resources/potential, with tidal/drainage channels. In particular it would be preferable to manage Area B “South of Culver” Boulevard as a “winter wet” seasonal or intermittent freshwater to brackish water wetland with reduction of current channels, which were extended to this region early in the 20th century for drainage purposes. Fresh water from the adjacent freshwater wetland could then be used generate a seasonal hydrology. A spillway for this purpose is already present at the freshwater wetland.

2) Area B North of Culver – Greater connection to flood control channel by an additional of an upstream tide gate. Gates could be designed and operated to generate scour near openings to the channel, and to integrate with Ballona Creek tidal function as appropriate. In this restoration scheme, removal of roadbeds and oil field structures, to facilitate surface-flow penetration of “spring tides”, may be the only other modification of the within “North Area B” landscape needed. In the suggested design, gates to Ballona Creek channel should be operated to maximize penetration of high tide and perhaps to support seasonal perching of higher water levels, not to effectively drain the landscape by gating out higher tides as is now the case. Intermittently brackish conditions would be enhanced by flow from the Ballona Channel

3) Culver Blvd may need to be raised to accommodate higher water in North Area B. Raising of the Blvd also appears to be essential in the longer term given threats from sea-level rise and tsunamis. Resolution of this issue and negotiations with transportation authorities to this end should proceed sooner rather than later. Fill from restoration could be used to raise the roadbed, limiting costs. Spans along Culver could permit some integration and communication between wetland areas currently separated by the active roads.

4) The Area between Culver Boulevard and Jefferson Blvd could be used as a summer-closed habitat with intermittent opening to the tides in the winter through a gate or valve. Such habitats sustain endangered tidewater gobies. Freshwater for this system could be sourced from the adjacent freshwater wetland. A gate or valve to the flood control channel could be used to generate intermittent tidal conditions

#### *Schematic of options for Area B*

*Produces heterogeneous habitat. Very Little Earth moved- Low cost. Considerable habitat benefit. As numbered on image: 1 North of Culver, multiple gated to enhance scour and avoid periodic contamination, periodic closure possible; 2 Summer closed- 90% closure. 4 winter- spring wet fall dry conditions augment from perennial wetland; 3 More brackish due to High tidal influence and out flow from 4.*





Area C - Recover freshwater flow from Ballona channel to generate a range of intermittent fresh to brackish environments with flow through to Area A.

- 1) Water would be conveyed from Ballona Creek channel (and treated) in the low area immediately west of the 90 freeway and south of Culver Boulevard. These waters could then be transported by gates or pumps, depending on design, to the portion of Area C north of Culver Boulevard.
- 2) Area C north of Culver could replicate a perched/flooded deeper water (@1meter) condition in winter for waterfowl. Spring drawdown could provide forging opportunities for least tern to feed on atherinids or other small fish increasing rearing success in the tern colony. Fill could be used to raise portions of adjacent Culver and Lincoln Blvd.
- 3) Fresh/brackish water outflow could be conveyed to area A by culvert, or ideally under a raised span on Lincoln boulevard to Area A and C could be functionally connected. A range of plans could accomplish these objectives. The Area North of Culver is relatively low in elevation, despite extensive piles of fill, and could contribute to the overall restoration plan with relatively modest movement of material. Such fill could be used to raise Lincoln & Culver Blvds. A range of possibilities that vary in terms of how much earth is moved and whether or not water is lifted mechanically from Ballona Creek should be considered. Location of treatment efforts could also vary. Two such possibilities are shown below

*Schematic of options for Area C*

*First option - surfaces in the upper reaches of tidal range driven from tides in the flood control channels that could be manipulated flow through adjacent treatment marshes& scour channels. These areas could be managed as pooled water for wintering waterfowl, rendered tidal during shore bird migration and/or lowered during tern breeding season to provide forage opportunities.*



*A practical option for Area C would involve lifting water that was treated upstream*



Possible Upstream treatment

or treatment South of Culver with lift to Area C



Area A Gates or connections to Area C, the Flood Control Channel, and the Marina, interconnect the wet landscape. Brackish water flow provided from area Area C permits variable salinity/intermittent brackish conditions. Gates would permit muting tides and allow scour management. Suggested design sketches vary in amounts of "upland" habitat.

- 1) Gates to Flood Control Channel and the marina permit scour and closure. Import of fresher water from Area C also is practical. This permits alternation of tidal and perched brackish conditions.
- 2) Perched or muted conditions seasonally could permit the isolation of a muted tide high marsh suitable for Clapper Rail reproduction in Late Spring.
- 3) Different design options would yield different ratios of upland and wetland at variable cost. Restoration would follow the topography. A priority should be placed on restoration of the lower



North and East portion of Area A. Current High ground adjacent to the levees and around former oil field structures to the Southwest would be maintained as upland lowering cost.

*Schematic of options for Area A*

*Larger restoration option for Area A*



*Smaller restoration option for Area A*



## Refernces

Dark, S., E. D. Stein, D. Bram, J. Osuna, J. Monteferrante, T. Longcore, R. Grossinger, and E. Beller. 2011. Historical ecology of the Ballona Creek watershed. Southern California Coastal Water Research Project. Technical Report #671.

Jacobs, D., E. S. Stein, and T. Longcore. 2011. Classification of California estuaries based on natural closure patterns: templates for restoration and management. Southern California Coastal Water Research Project Technical Publication No. 619a.



Colonel Kimberly Colloton  
Commander and District Engineer  
Los Angeles District  
U.S. Army Corps of Engineers  
P.O. Box 532711  
Los Angeles, CA 90053-2325

November 1, 2013

Attention Mr. Richard Leiffield, Chief of Engineering

Dear Colonel Colloton:

**Grassroots Coalition submits this initial letter as a rebuttal to the 408 Permit Submittal request from the parties cited below for the BALLONA WETLANDS RESTORATION PROJECT.**

**RE: 408 PERMIT SUBMITTAL A (INITIAL SUBMITTAL)  
BALLONA WETLANDS RESTORATION PROJECT and Cover Letter from  
Los Angeles County Flood Control District (LAFCD) and the California  
Department of Fish and Wildlife's Submittal A (Initial Submittal) for a Section 408  
Permit be granted to the LACFCD for the proposed alteration/modification of a  
Federal project...namely the Ballona Channel.**

Prospective Permittees

Ms. Menerva Ariki  
Los Angeles County Flood Control District  
Watershed Management Division, 11th floor  
900 South Fremont Avenue  
Alhambra, CA 91803  
Phone: (626) 458-4316

Mr. Edmund Pert  
California Department of Fish and Wildlife  
4949 Viewridge Avenue  
San Diego, CA 92123  
Phone: (858) 467-4210

Location of the proposed project  
**USGS Quad: Venice Quadrangle, 7.5 Minute  
Township 2S, Range 15W, Unsectioned  
LatLong: 33°58'01.14" N, 118°26'22.21" W**

**This rebuttal and request for denial of the requested permit is based upon:**

- 1. Failure of the prospective permittees to provide true and accurate information in the request.**
- 2. Failure of the prospective permittees to adhere to the bond language qualifications**

for restoration of Ballona Wetlands Ecological Reserve to which the public has provided over \$165 million dollars. Permittee provides false and misleading information to the public per status of EIR/S process and 408, 404 permit requests status.

3. Failure of the prospective permittees to provide qualified studies in order to provide for adequate evaluation, including but not limited to groundwater and surface hydrology studies of the Ballona Wetlands, including but not limited to failure to identify and ameliorate or provide any meaningful attempt at maintaining the historic freshwater aquifers and seasonal surface freshwaters of Ballona Wetlands Ecological Reserve.
4. Failure of the USACE to provide accountability of the close out studies and data pertaining to an ecological review – a Joint EIR/S begun in 2005 and stopped via a questionable signature by Shelly Luce, director of a private business known as the Santa Monica Bay Restoration Foundation. The Luce signature that was theoretically authorized by the Santa Monica Bay Restoration Commission (SMBRC) and the County Flood Control District. However, Public Record Act requests reveal no authorization via notification to the SMBRC or subsequent vote to allow for such signature and subsequent stoppage of the Joint 2005-12 EIR/S.
5. Failure on the part of the USACE to verify authorization of the Luce signature as having authority to request an end to the 2005-20012 Joint EIR/S that was consummated with a contract.

The following includes portions of the 408 request by prospective permittees in *italics* and rebuttal by Grassroots Coalition in bold non-italic :

### *3. Purpose and Need*

*A substantial portion of California's historic coastal wetlands have been lost. Restoration of coastal wetland is needed in order to increase available nursery and foraging habitat for wildlife and to provide recreation and educational opportunities to the public.*

The premise provided above, we consider to be false. The Ballona Wetlands Ecological Reserve is a predominantly seasonal freshwater habitat of upland/ wetland complex that historically is predominantly closed to the ocean. The region, within the last couple hundred years has been opened to the Santa Monica Bay via manmade construction including but not limited to the Del Rey Lagoon, Ballona Lagoon, Marina del Rey and the Ballona Channel. Thus, the area now has a far greater constant nursery and saltwater habitat than historically present in the last several hundred plus years. Furthermore, during the construction of Marina del Rey, the Poland Report warns against further degradation of the clay layers whose disturbance, such as in the creation of the marina, led to unwanted and degrading salt water intrusion. The Poland Report advises the protection of the rest of the Ballona area in order to protect the groundwater.

Historically, there were freshwater wells serving as drinking water wells in the Playa del Rey area. The groundwaters of Ballona are classified as potential drinking water and as such should be protected from further contamination. The Poland Report also cites the connectivity between the West Basin drinking water aquifers with the Ballona aquifers and the need for protection of the water quality.

The 2005-12 Joint EIR/S was to address these issues but has not . The congressional house document 389 and US Public Law 780 was to be addressed and has still not been addressed.

Recent letters from the California Coastal Commission to Playa Vista personnel (Playa Vista is located on the historic Ballona wetlands) address an inquiry regarding non-permitted drains put in by and for Playa Vista. The wetland drainage system has been known to exist by CDFW but has not been removed since the public's acquisition of Ballona in 2003. Ecological reports done on the Ballona Wetlands Ecological Reserve do not reflect any information regarding the drains and thus, do not provide any impact information.

*The Ballona Wetlands Ecosystem is one of the last remaining major coastal wetlands in the County of Los Angeles. It is estimated that historically the wetlands ecosystem spanned more than 2,000 acres in the vicinity of the site. Development occurring over the last century greatly reduced the Ballona Wetland area, now estimated at approximately 600 acres. In addition, the wetland habitat and natural hydrological functions in the area have been substantially degraded.*

While citing hydrological degradation the applicants provide no reason for such and no hydrology studies have been done of the surface and groundwaters of Ballona Wetlands Ecological Reserve. There is no information disclosing the CDFW's participation in the removal of freshwaters of Ballona Wetlands Ecological Reserve that would include but not be limited to :

their failure to disclose the newly discovered drainage devices ;

that Playa Vista has lowered the groundwaters approximately 15 feet ( LARWQCB ) due to dewatering done for contamination clean up on the Playa Vista site as well as constant dewatering to remove the rainwaters and groundwaters from entering the experimental gas intake systems of Playa Vista.

Best Management Practices and Playa Vista EIR measures that cite-- groundwaters will be cleansed at the surface and returned to recharge the groundwaters--**HAVE NOT HAD ADHERENCE TO THIS REQUIREMENT.** Instead, the state is continuing to allow Playa Vista to throw the groundwaters into the sanitary sewers. CDFW has provided no research pertaining to this issue and provided no alternative planning for a historically seasonal freshwater system restoration based upon reclamation and use of its own freshwaters that are currently being removed.

The consequences of the groundwater removal have not been studied however, the California Coastal Commission staff in recent hearings stated that the drainage devices were harmful to the wetlands.

The CCC staff has also stated that removal of Ballona's groundwaters within its jurisdiction of the coastal zone that negatively affect the function of Ballona Wetlands Ecological Reserve is of concern and within their jurisdiction for review. This issue has only recently come to the attention of the CCC. Grassroots Coalition and Sierra Club members are currently engaged in providing the CCC with LA City Dept. of Sanitation records pertaining to this issue of concern.

*The project site provides habitat for a diversity of plants and wildlife species, but most on-site habitat exhibit relatively low physical and biological functions and services.*

The statement above is refutable with evidence showing otherwise. A systematic and skewed assessment of the Ballona site has been perpetrated by CDFW that can be attributed, in part to a failure to protect the site from encampments, fires and vandalism which are instead used in a public relations campaign to mislead and promote the end of pipe catch/basin treatment plan and flood control Project requested in the 408 levee removal Project.

*The proposed project is intended to return the daily ebb and flow of tidal waters,*

Historically incorrect comment. Ballona is predominantly a seasonal freshwater system that did not perform with a daily ebb and flow of tidal waters. Ballona was historically shut off from the Santa Monica Bay unless and until winter storms produced enough water to open the area to the Bay.

*maintain freshwater circulation,*

The statement of maintaining freshwater circulation is false.

The freshwaters of Ballona Wetlands have not had hydrological studies and no studies have been done to quantify the damage already done by CDFW due to the allowance of undisclosed drainage devices in the wetlands –not having been removed since the public acquired Ballona.

There have been no Best Management Practices performed for returning the groundwaters of Ballona Wetlands Ecological Reserve and the groundwaters being removed by the Playa Vista development site. EIR mitigation requirements of the Playa Vista site DO INCLUDE cleansing of the groundwater and its return to the groundwaters of Ballona for recharge however, this has not occurred.

*augment the physical and biological functions and services in the project area while still maintaining the required level of flood protection to the surrounding community.*

There is no need for any further flood control as the Ballona Channel provides that flood control.

The Channel levees are utilized heavily by the public for recreation and viewing into Ballona Wetlands. The Channel is also heavily used by crew teams of multiple universities that have equipment and buildings situated next to the Ballona Channel.

*Restoring the wetland functions and services would allow native wetland vegetation to be reestablished, providing important habitat for a variety of wildlife species. As a restored site, the Ballona*

Please review the information provided that includes quotes from NOAA and other scientists that state that the levee removal will invite toxic pollution of Ballona Wetlands, will be highly risky as a restoration effort and will be the hardest to undo such changes.

Colonel Kimberly Colloton  
July 23, 2013  
Page 3

*Wetlands would play an important role to provide seasonal habitat for migratory birds. A restored and optimally functioning wetland would also benefit the adjacent marine environment and enhance the quality of tidal waters.*

**The end of pipe, catch-basin pollution control that is envisioned in this Plan by the county and CDFW, is a risky venture that is incompatible with the status the public has garnered- Ecological Reserve. CDFW has already excluded the Playa Vista catch-basin from the Reserve as requested by Catherine Tyrrell on behalf of Playa Vista as she states that it is a flood control device and therefore incompatible with an Ecological Reserve.**

**Furthermore, science shows that a 6-square mile area would be needed to attempt to cleanse the toxins of water and sediment of the Ballona Channel. The area where the levees are being requested for removal would allow toxic flows into an area less than 600 acres. Thus, there is no scientific reasoning being applied in this request.**

*The proposed project would provide the community with a self-sustaining, native open space in a highly urbanized area.*

**The documents herein provided cite to quotes from the science advisory panel that state that this requested treatment to Ballona will NOT BE SELF SUSTAINING. Data shows that sites that have undergone such drastic bulldozing and dredging ARE NOT SELF SUSTAINING. Bolsa Chica is such an example. Bolsa Chica now requires regular dredging that creates a constant destruction pattern upon the underwater habitat at great expense to the taxpayer.**

**We request full participation in this USACE 408 review process which has not had transparency or public involvement. It is only due to a Public Record Act request from the public to CDFW that we are even aware of this Letter to USACE.**

**The Conceptual-level plans have not been shared with the public and we have not been made aware of a Preliminary Design Report; Preliminary Hydrology and Hydraulics Report.**

**We ask that you please provide these reports and allow them to be publicly available.**

**We request the same availability for public review of any and all Real Estate Analysis and Anticipated Operations and Maintenance Requirements.**

**Respectfully,  
GRASSROOTS COALITION, Patricia McPherson**



**FROM: Grassroots Coalition,**  
Patricia McPherson, President  
Patriciamcpherson1@verizon.net

**August 2, 2012**

**TO:**  
**California Coastal Conservancy**  
Attn. Executive Director, San Schuchat &  
All Governing Board Member and Alternates

CC  
John Chiang- CA. State Controller  
Matosantos- CA. Dept. of Finance Director  
Bill Lockyer- CA. State Treasurer  
John Laird- Dept. of Natural Resources  
U.S. Army Corps of Engineers Attn. Commander Mark Toy  
U.S. Senator Barbara Boxer  
U.S. Congress Person Maxine Waters  
L.A.Councilman Bill Rosendahl

**RE: Complaint-** Supporting the 3/29/12 REQUEST TO RESCIND APPROVAL FOR  
STAFF RECOMMENDATION APPROVAL ON 1/19/12 awarding \$6,490,00. for: FILE  
NO. 04-088-

**BALLONA WETLANDS RESTORATION ENGINEERING AND TECHNICAL STUDIES**

The following paper from Grassroots Coalition (GC) represents GC's opinion of its findings and data support garnered via the Public Record Act and the Freedom of Information Act.

**This document also requests the Coastal Conservancy to stop its illegitimate interference in the approved and ongoing 2005 Joint EIS/EIR process between the Sponsor-- Santa Monica Bay Restoration Commission (SMBRC)/ LA County Flood Control and, the U.S. Army Corps of Engineers.**

**The Coastal Conservancy, using its control over public bond money, has shut out the public process and taken its influence as a financially powerful board member of the SMBRC and partner of the California Department of Fish & Game (DFG), the lead agency of the publicly owned Ballona Wetlands—to fund a process that is contradictory to the 2005 federal process that was requested by Congress.**

**The Coastal Conservancy is propelling a bait and switch – a NEW Joint EIR/EIS process and a NEW Notice of Intent (NOI) that undermines and attempts to extinguish the current 2005 Joint EIS/EIR APPROVED PROCESS with its attendant safeguards of multiple habitat restoration alternatives.**

**The Coastal Conservancy is instead, illegitimately propelling a singular outcome that stops restoration of Ballona and protection of its endangered species to instead convert the habitat into a non-historical dredged out estuarine habitat that promotes LA Port expansion and other financial deals.**

**Background:**

In 2004, Ballona Wetlands acreage was purchased via PUBLIC funding for approximately \$140 million. **The land is owned by the public** and is currently administered by the California Dept. of Fish and Game (freshwater marsh portion by the State Lands Commission) .

**Important, new information** contained herein reflects a Coastal Conservancy (CC) Public Record Act (PRA) response consisting of numerous heretofore undisclosed CC documents contained on a CD. The CD was provided after the 1/19/12 CC Governing Board Hearing in Los Angeles, CA. and, after the CC Governing Board's Hearing in Ventura, CA. on 3/29/12.

**I.**

**The Coastal Conservancy PRA CD provides evidence to show that misleading and/or incorrect information was presented in the Staff Recommendation of 1/19/12 (File No. 04-088)**

The newly disclosed Coastal Conservancy documents (CD) reveal:

- A. potential misuse of public bond money (Prop. 12, PRC 5096.352 (f) and or (b)(1));
- B. lack of disclosure, lack of public process and transparency of process regarding the Coastal Conservancy's involvement and; associations with other agencies --federal- US Army Corps of Engineers (USACE) and; state agencies and; a private nonprofit- the Santa Monica Bay Restoration Foundation (Foundation) that pertain to Ballona Wetlands in Los Angeles, CA.
- C. Prop. 12 ( Number 172 of Dept. of Natural Resources Listing of Prop. 12 bond grants; 3760-30203-0005(2)(B)07) Coastal Conservancy bond grant to The Southern California Coastal Water Research Project (SCWRP) -Ballona Wetlands Restoration. The Coastal Conservancy, contrary to the bond grant language and intention of allowing for a "scientific advisory committee" (SAC) to review and advise regarding '**enhancement**' plans for the restoration goals of Ballona Wetlands; the Coastal Conservancy instead propelled and directed SCCWRP members and other contractors to perform a singular outcome of '**creation**' of a **full tidal/ estuarine, non-historical , treatment wetland as an end of pipe, experimental solution to the toxic contamination of Ballona Creek.**

The CC Staff Recommendation is a non-historically oriented goal and thus fails to adhere to bond language for "enhancement" of Ballona Wetlands and also fails to adhere to "restoration" as defined by Southern California Wetlands Recovery Project (SCWRP). (See p.3 SCWRP restoration definition) And, contrary to publically stated and written goals of transparency and interchange, the CC and SMBRC precluded the public and Working Group from participating and interfacing with SAC. Thus, the CC and SMBRC, utilizing all public bond dollars have effectively shut the public out of the Ballona Wetland Restoration design process.

Contrary to comments made below in the Staff Recommendation 1/19/12 (File No. 04-088), the conceptual restoration plan was **not** developed in a public process and the public and other parties were **precluded** from participation in all facets of the development of the restoration alternatives

*"Cooperation: The conceptual restoration plan was developed in a public process with input from a Science Advisory Committee, an Agency Advisor Committee, and the Ballona Working Group made up of representatives of local nonprofit organizations, agency staff and members of the public. Individual public members also participated in all facets of the development of the restoration alternatives."*  
(p. 9 of 9 1/19/12 Staff Recommendation; Emphasis added.)

The CD documents reveal that the conceptual restoration plan was developed by the Coastal Conservancy and by the executive director and staff of Santa Monica Bay Restoration Commission- a California state agency.

Note- the SMBRCCommission's executive director and most staff are not state personnel . Since 2005, the executive director and staff of the SMBRCFoundation (a private 501c3) simultaneously act as SMBRC staff and executive director. IRS records reveal payment to the Foundation's executive director and staff from the Foundation. We have found no contractual authority for such private persons to serve as state officers of a state agency or as staff of a state agency. We are currently requesting an assessment and investigation into these matters of great public concern.

The CD documents reveal that the Coastal Conservancy Staff Recommendation was created:

1. in a void of public/ Working Group input acknowledgement and use.
2. in a vacuum of interchange between the Scientific Advisory Committee and the public/ Working Group and the USACE contractual agreements.
3. while failing to disclose scientific findings to all parties and;
4. while failing to provide process as written by the Coastal Conservancy.
5. without adherence to the 2005, contractual agreement between the United States Army Corps of Engineers (USACE) and the Sponsor (aka the Authority- SMBRC & LA County Flood Control) wherein a Joint EIR/ EIS of Corps certified programs of environmental review would take place and;



6. without CC Governing Board authorization and without public disclosure-- the CC Project Manager created an enterprise consisting of a 'new' Joint EIR/EIS process ostensibly intended to circumvent the 2005 approved process. (JD submission to CC 3/29/12)

7.

#### Lack of Disclosure Has Led To An Inability To Make Informed Decisions

##### **I.**

##### **A. Proposition 12 Funds-The Public's Intent - To Acquire, Protect and Restore Is Not Fulfilled.**

The Prop. 12, Public Resource Code (PRC) Section 5096.352 language states, " (f) Twenty-five million dollars (\$25,000,000) of the funds shall be allocated to **acquire, protect, and restore** wetlands projects that are a minimum of 400 acres in size in any county with a population greater than 5,000,000. (Emphasis added. The Ballona Wetlands is distinguished as fulfilling this specific criteria.)

**Restoration**—specifically refers to actions taken to obtain a former state of a **natural condition**. (Southern California Wetlands Recovery Project (SCWRP)- Science Advisory Panel (SAP)- Glossary of Terms)

Estuarine wetlands- are subtidal and intertidal habitats that are semi-enclosed by land, have access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land (Cowardin et. Al. 1979)SCWRP, SAP Glossary)

. Ballona was not historically continually open and connected to the ocean and large, inundating flows of fresh water occurred infrequently only during major flood events (CD- SAC docs; USGS docs provided to CC by J. Davis; CC's T-sheets).

**"The project we are recommending is enormous in scale."** CC- MarySmall  
(JD PRA Response attachment in 3/28/12 CC Hearing-Request )

**Contrary to "protecting and restoring" the Ballona habitat**, the approval of the Engineering and Technical Studies & SMBRC bond awards will specifically promote a singular outcome— massive destruction of currently functioning habitat that will not 'obtain a former state of a natural condition' but, will instead endeavor upon a non-historically oriented, experimental estuarine treatment wetland project expected to encounter yearly flooding and scouring events. The project is not expected to be self-sustaining but instead expected to promote a perpetual money pit of contracts for monitoring and unknown but expected repairs and fixes- - future landscape changes further transfiguring the flora and fauna. (CD/SAC)

A failure to adhere to grant proposal requirements, as dictated by the State of Ca. Finance Dept. in recent audits, continues

NOTE: While the Coastal Conservancy promotes the idea that it provides bond grants to the SMBRC, the Coastal Conservancy has actually never provided any bond money to the SMBRC as per the 2002,

SB 1381 Keuhl bill that established a Treasury Account for the SMBRC. Instead, the Coastal Conservancy provides public bond money grants to the private nonprofit—the SMBRFoundation—typically without a grant proposal having been provided—as is the case in the 1/19/12 grant approval.

Recent audits of the CC by the California Dept. of Finance require that the CC adhere to grant proposal requirements established by the Dept of Finance. However, the CC's failure to adhere continues as is the case in the 1/19/12 grant approval.

The currently clean land (LARWQCB) and functioning habitats—include endangered and rare Southern California native plants and wildlife, which will be destroyed in order to create the end of pipe, treatment wetland for toxic Ballona Creek waters and sediments. ( CD-SAC) The full tidal, estuarine goal also appears to discharge political favors for LA Port expansion(s) approvals that need wetland mitigation credit(s) and/or extensive fill material from Ballona.  
(See e-mails regarding LA Port - letters of support for the Staff Recommendation)

**Contrary to the 8/13/04 CC MEMO (p.4),** the CD -SAC documents reveal wildlife and habitat destruction and dangers, endless and exorbitant financial costs, inability to show sustainability and potential legal quagmires that were not revealed to the public/ Working Group and other parties-- some of whom were asked to sign onto Coastal Conservancy pre-scripted letters of support for the 1/19/12 Staff Recommendation.\*

\*Contrary to the promised 'transparency' of process; CC and SMBRC staff improperly lobbied for letters of support for the 1/19/12 Staff Recommendation prior to a public notification of an agenda and release of the Staff Report thusly, discriminating against all others by failing to provide the same comment opportunity prior to the issuance of the Staff Report.

The public has a right to know the full extent of issues regarding changes to Ballona. Whatever decisions are rendered, they should not be based upon piecemealed, truncated and biased information as has currently been provided.

#### **PROPOSITION 12 Identification of Funds; Status of Funds**

The Staff Recommendation(SR) is unclear which Proposition 12 funds are being requested. Two possible funding sections of Prop. 12 are:

- Proposition 12 bond money discussed in the SR as specifically for Ballona Wetlands is listed under Public Resource Code (PRC) Section 5096.352 (f)). The accounting for these funds was not provided in the Staff Recommendation and remains unknown.

- Other Prop 12 funds include: PRC Section 5096.352(b)(1)—to the Santa Monica Bay Restoration Project/Bay Watershed Council; that account status remains unclear also.

(In 2002, Senate Bill 1381 (Keuhl) transformed the SMBR"Project" into the SMBRCommission. Prop. 12, PRC language utilizes the Bay Watershed Council. The ByLaws of the the Bay Watershed Council (BWC) remained intact which now give rise to

questions regarding the actual existence of the BWC after SB 1381 which may influence the use of the Prop 12 bond funds.)

## I.

### **B. 5-6. The Coastal Conservancy Project Manager and SMBRC Executive Director/ Staff, Have Not Been Forthright With the Public Regarding Disclosure of Process Changes Pertaining to Federal (USACE) Contractual Agreements**

#### **U.S. ARMY CORPS OF ENGINEERS**

1994, Sept.28 Adopted- "Resolved by the Committee on Public Works and Transportation of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on Playa del Rey Inlet and Basin, Venice, California published as House Document 389, Eighty-third Congress, Second Session, and other pertinent reports, to determine whether modifications of the recommendations contained therein are advisable at the present time, in the interest of navigation, hurricane and storm damage reduction, environmental restoration and other purposes at Marina del Rey Harbor, Los Angeles, California, with consideration given to the disposal of contaminated sediments from the entrance channel required under the existing operation and maintenance program at Marina del Rey Harbor."

In 2005, USACE Noticed and embarked upon an areawide ecological review- an EIS- of the historic Ballona Wetlands area that included the U.S. 83th Congress -- House Document 389 under Public Law 780. Map-Enclosure No. 1 (General Plan of Improvement) reveals the entire Ballona region as part of this action including but not limited to Ballona Lagoon, Del Rey Lagoon and the Sanctuary area , Ballona Creek, Centinela Creek etc. (See language of the USACE Lower Ballona Creek Restoration Reconnaissance Study and; Feasibility Study). This EIS was predicated upon having a local Sponsor as part of the review process and to aid in the outreach to the PUBLIC and the creation of the Joint EIR/EIS process.

SMBRC/LA Flood Control (the Authority) aka the Sponsor-- contractually agreed to the Joint EIR/EIS in 2005.

The contract included having the Sponsor (Authority) provide at least 6 public meetings dedicated to providing time for USACE representatives to discuss the USACE status of the Joint EIR/ EIS process. The follow through for such meetings has not occurred.

(In various earlier approved bond requests for Ballona projects; Project Manager Mary Small eliminates reference to the 2005 contractual agreement for a Joint EIR/EIS which jointly provides for the Ballona Restoration Alternatives ( 2005 contract between- USACE and SMBRC/LA Flood Control aka Authority) Instead Ms. Small's staff recommendations inform the CC Governing Board that as of 2005 only the Ca. Dept. of Fish & Game, State Lands Commission and SMBRC are part of the oversight of Ballona and alludes that the Conservancy has the restoration alternatives planning duties:

(Ballona Wetland Improved Public Access; File No. 04-088; 7/21/10)

*"In 2005, the Conservancy initiated conceptual planning and feasibility analysis of restoration alternatives*

for the property. This project is being implemented in partnership with the DFG and the State Lands Commission, the two state agency owners of the property and the Santa Monica Bay Restoration Commission. The feasibility analysis was completed in 2008, after a delay due to the bond freeze, and the project partners are now initiating environmental review and detailed engineering of a long-term, phased restoration project. When the restoration planning began, the Conservancy funded the development of an Interim Site Stewardship Plan to address the pressing concerns related to site management. As discussed above, in 2008 the Conservancy provided a grant to MRCA to fund construction of some site improvements and to fund planning, design and preparation of permit applications for additional access improvements. Based on the completed planning work, the MRCA and the project partners determined that it will be more cost effective and logical to pursue implementation of most access improvements as part of the environmental review and permitting for the long-term phased restoration project.

**PROJECT FINANCING:**

Coastal Conservancy \$280,000

MRCA 120,000

SMBRC, US EPA funds 20,000

Total Project Cost \$420,000"

This is an omission of pertinent and critical fact given in order to garner public bond money. ( See J. Davis 3/28/12 Request to CC Gov. Brd.; USACE/CC minutes of meeting(s) and page 6)

See also File No. 04-088 on page 17.

Additionally, the bond money was approved but accountability for its use has not been forthcoming. And,

No fund award was given to SMBRC from the USEPA as cited above. The Treasury Account set up for the SMBRC under SB1381 was not utilized. Instead, ostensibly the USEPA funds went to the private nonprofit, the Foundation. The Foundation, as a private non-profit 501c3, provides no accountability to the public.

The Coastal Conservancy, had also made promises to the public regarding transparency and public inclusion in the entire process of exploring **all reasonable alternatives for enhancement of Ballona.**

For example in an early Coastal Conservancy MEMO dated 8/13/04 to California Department of Fish & Game (DFG) and the State Lands Commission (SLC), the **GOALS/PRINCIPALS** read in part-

***"The restoration plan will be based on the best science, incorporate technical scientific expertise and will be developed through a transparent planning process that allows stakeholders to provide input and comment on all restoration planning products. The restoration planning process will develop and analyze a range of alternatives to implement the following project goals:***

***-Restore and enhance a mix of wetland habitats to benefit endangered and threatened species as well as other migratory and resident species;  
-Provide for wildlife-oriented public access and recreation opportunities; and -  
Implement a technically feasible, cost effective, ecologically beneficial and sustainable restoration."*** (Emphasis added,)

And,



*"..restoration will be conducted within the landscape and watershed context, with attention paid to adjacent and ecologically related resources." Pg. 1*

According to CD documents, the Coastal Conservancy's Ballona project manager participated in USACE meetings in the 2004 timeframe citing inclusion of the areawide ecosystem eg. Ballona Lagoon, Del Rey Lagoon, the Sanctuary area, Marina del Rey and others that paralleled the activities of ecosystem review as described by the USACE ( Reconnaissance Study; Lower Ballona Creek Restoration Feasibility Study; 3/28/12 J.Davis submission to CC)

However, in contradiction to the 8/13/04 Memo cited above, the context of the larger historic boundaries of Ballona Wetlands were later arbitrarily dropped, without public notification or discussion. The CC Project Manager discusses no longer including the adjacent and ecologically related resources as part of the Joint EIR/EIS restoration evaluation performed with the USACE:

6/2/10 CC, SMBRC, USACE Ballona Coordination Meeting Minutes:

*"II. b. Mary Small: Have all the PMP sections looked at the same project area? Parts still refer to Ballona Lagoon, Grand Canal, Venice Canals and Oxford Basin, which are no longer in the study area. ( 3/28/12 CC hearing; J. Davis Attachment)*

**And, the Project Manager discusses instead a 'new' process for which there is no ostensible authority and to which the public has not been made aware:**

*"Mary Small: If the Corps falls too behind, we will work with Corps Regulatory for a permit for their activities (NEPA/CEQA, design, permitting, and Phase 1 construction)" and;*

*"Mary Small: It was always our understanding that the Corps would use our restoration alternatives. It makes us nervous that this was never in writing."(6/28/10 Ballona Ecosystem Restoration Planning Management Meeting)*

It was never the public's understanding that the Corps would be held to Coastal Conservancy and Foundation staff's restoration alternatives. Legal legitimacy for such behavior is also questionable. And,

*"Suggested response*

- 1) The EIS/EIR process begun in 2005 was for the Army Corps' Lower Ballona Ecosystem Restoration Feasibility Study, that project and the associated environmental review has not been completed and is not moving forward at this time. The EIR/S process for the proposed enhancement project will be separate." 2/7/12*

CC/Mary Small to Ca.Dept. Fish & Game- Rick Mayfield per response to Davis Ballona CEQA process query. (JDavis attachment 3/28/12 Request to CC Board)

Thus, the CC switch in process is 'suggested' to be disclosed to a member of the public after seeking and garnering approval for the 1/19/12 Staff Recommendation. ( 3/28/12 CC Hearing, Davis PRA attachment to Request)

This new and unauthorized process discussion continues in the same email, 2/7/12, from Shelley Luce to Mary Small and Rick Mayfield (CDFG):

...." ***The EIR/EIS that we want to start is for a separate project, i.e. the BWER restoration/ enhancement project.*** ". (emphasis added.)

The EIR/EIS that they want to start IS NOT on a separate project but instead on the same project but having eliminated the '94/ 2005 Joint EIR/EIS process; scope of review; environmental safeguards and full range of alternatives inherent in '94/ 2005 approved process.

In other words, the CC attempts to have the public and the USACE but out of their way so that the CC can control the project --using the public's dollar--alongside its political allies.

And, while Mary Small provides the appearance that the Request For Proposals is new online--" *the request for services ....went out today" ....*

2/8/12 CC email (JDavis PRA response attachment in 3/28/12 Request to CC Board)

The Coastal Conservancy, had already put out an online RFP in 2010 for the work requested for approval in the 1/19/12 Staff Recommendation. Thus, it appears that as of 2010, the outcome was already a done deal behind the public scene.

Changes, such as this were not communicated to the Public/ Working Group and the ongoing status of the relationship with the USACE as per the Joint EIR/EIS was not communicated either. In fact, the USACE- Sect. of the Army was not made aware of the attempt to extinguish the earlier, approved process. Any extinguishing of the approved EIR/EIS process (including House Document 389) would have to abide by the USACE process of removal. The process provides accountability for reasoning as to the ending of the project as well as detailed accounting for money spent and what had occurred throughout the process. This activity has not occurred and the USACE has provided a letter stipulating that the approved process is maintained and that investigation into the matter has started. ( USACE-J.Davis communication).

It is also unclear whether USACE/SPONSOR information was communicated to the Science Advisory Committee or other parties. Specific USACE work projects, including response to House Document 389 and work quality/certification needs are not communicated in any of the CD-SAC meeting notes which appears to show that the SAC team (contracted and paid for with public funds) were fulfilling ONLY the arbitrary GOALS as set forth by the CC Project Manager and SMBRC staff. Issues

such as the protection of groundwater (classified as potential drinking water), an issue of House Doc. 389 and current Los Angeles- Best Management Practices (BMPs) are absent in the meeting minutes.

Thus, the CC and SMBRC staff, provided for an atmosphere of further disconnect, lack of transparency and compartmentalization of information sharing.

And,

the public/Working Group was not made aware that the CC considered itself a part of the USACE/SPONSOR contract (which it is not) —so much a part, that Mary Small apparently believed that the CC would provide the alternative(s) for the USACE in the Joint EIR/EIS:

6/28/10 Ecosystem Restoration Planning Management Meeting:

II. C. 2." *Mary Small: It was always our understanding that the Corps would use our restoration alternatives. It makes us nervous that this was was never in writing. "*..

This type of very questionable influence was not conveyed publically. According to the USACE, Joint EIR/EIS language, the USACE study would provide for all reasonable alternatives and the process would embrace public disclosure and participation.

**The Coastal Conservancy and SMBRC staff have not been forthright with the public regarding status of the Joint EIR/EIS.**

#### I.

**B. 1- 3. The CD reveals SAC meetings, reports and concerns not shared with the public/the Working Group and other parties. Conversely, the public/ Working Group comments and concerns are not cross- shared.**

Contrary to the 1/19/12 Staff Recommendation, the public, Working Group and others have not been engaged by the Coastal Conservancy as promised and have not been provided with full information from the Science Advisory Committee (SAC) group in order to make informed decisions and provide input throughout the process to date.

Prop. 12 bond money was also provided from the Natural Resources Dept. to the Coastal Conservancy specifically to provide a GRANT to the Southern California Coastal Waters Research Project (SCCWRP)(#172) for creation of a SAC team. Thus, the SAC team was paid with public dollars to perform as an independent scientific advisory panel to provide input and advice regarding historical restoration options. Contrary to the GRANT purposes, the Coastal Conservancy's Ballona Project Manager and SMBRC staff instead told the SAC team what the intended outcome was and that all input was to secure that goal—namely full tidal estuarine and levee removal.

Thus, the Prop. 12 bond money was not utilized as intended.

The Coastal Conservancy and SMBRC staff kept the public and the Working Group out of the SAC loop of information and knowledge thereby thwarting and distancing

any meaningful interchanges and participation as falsely stated in the Staff Recommendation below.

**Staff Recommendation excerpt:**

*"Cooperation: The conceptual restoration plan was developed in a public process with input from a Science Advisory Committee, an Agency Advisor Committee, and the Ballona Working Group made up of representatives of local nonprofit organizations, agency staff and members of the public. Individual public members also participated in all facets of the development of the restoration alternatives."*

(p. 9 of 9 Staff Recommendation 1/19/12)

And, contrary to assurances that the public would be notified and included on all SAC meetings, the public was not notified or included.

*"MARY S. all SAC meeting are public, all interested parties will be notified and invited, meetings will be structured with SAC addressing issues first and public comment period at the end."* (CD- 7/20/05 LMU Ballona SAC MTG.)

A 2004 MEMO discusses –

"Ballona Restoration Planning Working Group: Stakeholder Committee and Public Involvement

*"A Ballona Restoration Planning Working Group (brpwg) made up of interested organizations, agencies, and individuals, will meet periodically to obtain project status updates, to provide input, and to support the restoration planning process. These meetings will be open to the public. Subcommittees may be established to address specific issues that may arise during planning."*pg.2

The language above provided for the public involvement at the start of the process that began with 'interim stewardship' meetings, (eg. trash cleanup and education tours) which did occur. As time passed, meetings stopped, informational sharing from agencies and the science team became nonexistent and; the public's comments were not included in the planning process that continued behind closed doors.

**-Website topic- SAC meeting minutes- was not accessible to the public.**

**Instead, when clicked – the website told the viewer entry was not allowed.**

**-SAC meetings, though described as open to the public, were not. The CD documents reveal that the SAC meetings were, in the main, telephonic and not inclusive of the public. Reports and Memos were not shared with the public but utilized internally.**

A continued failure to acknowledge the public and Working Group is also documented via the 2012 Science Advisory Meeting that was held days after the Staff Recommendation Approval. The SAC meeting was also a first in years for actually occurring and, that public notice was provided.

The Public/ the Working Group:



- provided strong objections to the proposed Plan, providing written testimony as well as oral testimony.
- listed issues that needed to be addressed properly; asked for responses that thus far have gone unanswered and,
- again requested the area be considered in its totality of ecosystem variety and benefits utilizing the historic system of Ballona.
- reminded the SAC that the area now has more saltwater --deep and mid habitat than historically existed at Ballona due to the Marina del Rey; Ballona Lagoon Marine Preserve; Del Rey Lagoon; Ballona Creek itself and; as well as freshwater due to the newly created catch-basin- aka, the freshwater marsh. (historically= the last couple hundred years)
- SAC numerical analysis of habitat types was in error. Ratios of entire Ballona Wetlands historic habitat applied to be fulfilled in Areas A, B, C alone is a faulty analysis. The SAC- ratio numbers that pertained to former water habitat and land elevations were either incorrect and/or not documented by SAC.
- cited and documented that SAC dredge spoils deposition locations and volumes were incorrect. (USGS Documents and maps provided by John Davis to the Coastal Conservancy)

The CC and SMBRC continue to fail to respond.

**Note: The CC continues to fail to respond to queries and comments provided by the public and its so-called "Working Group" members from 1/19/12 and 3/29/12.**

#### **FAILURE TO INCLUDE THE WORKING GROUP COMMENTS AND REQUESTS**

Despite providing comments, documentation and evidence regarding the topics listed above and others; there is no documentation provided from the Coastal Conservancy on the CD that any of the public/ Working Group communications were included for any meaningful response or use.

The CD documents reveal no inclusion of the public in any decision making for the alternatives.

Public comments provided to SMBRC and the Coastal Conservancy regarding Ballona specific studies such as the Phil Williams & Assoc. report, that did not address or incorrectly addressed issues, such as the migrating oilfield gas and reservoir gas leakage from SOCALGAS had no meaningful response. There is no showing that the CC or SMBRC staff ever shared these concerns with the SAC team, much less did any meaningful, good faith follow up with the public to understand how the gases may impact restoration. The same holds true for issues regarding protection and utilization of the Ballona aquifer groundwater hydrology. Repeated requests from stakeholders to be given ½ hour presentation time to provide information regarding hydrology and groundwater diversion issues, before the SMBRC have been met with silence ( The CC is part of the SMBRC) .

I.B.

**CONTROL OF MESSAGE AND OUTCOME**

**The CC and SMBRC Staff :**

**Allow For No Public/ Working Group Participation In The Planning Process;  
Fail to Disclose Science Advisory Committee (SAC) Conference Calls,  
Memorandums and Reports For Planning of Alternatives;  
Feasibility, Cost, Sustainability, Ecosystem Pros and Cons Are Not Disclosed;  
And**

**The CC & SMBRC Staff Arbitrarily Define Project Goal=Estaurine**

**Staff Recommendation excerpt:**

*"Cooperation: The conceptual restoration plan was developed in a public process with input from a Science Advisory Committee, an Agency Advisor Committee, and the Ballona Working Group made up of representatives of local nonprofit organizations, agency staff and members of the public. Individual public members also participated in all facets of the development of the restoration alternatives."*

(p. 9 of 9 Staff Recommendation 1/19/12)

**The 1/19/12 Staff Recommendation excerpt is false.** The public/ Working Group was neither privy to the SAC meetings and information created nor included in the planning process to participate in all facets of the development of the restoration alternatives.

The following excerpts from the CD document an internal discussion revealing the CC and SMBRC staff created and controlled the alternative selection:

*"Wayne (Wayne Ferren) suggested that biological sustainability be defined as no loss of habitat types & functions, major guilds, and sensitive species over the project site as a whole." July 7, 2008 SAC Conference Call.*

And;

*"Joy (Joy Zedler) asked how biodiversity is being defined? Sean indicated that **biodiversity = highest richness of estuarine dependent species.** If this is how we are defining biodiversity, it should be stated clearly in the document. (emphasis added; Sean Berquist was SMBRC staff and Foundation staff during this timeframe ) and,*

*"Wayne suggested that we clarify that biodiversity is the sustainable richness of representative interdependent native estuarine habitats along with their associated and expected species biodiversity." (CD-June 23, 2008 SAC Conference Call)*

The next paragraph, written by the note-taker- cited by CC as being CC or SMBRC staff- states the goal-

**"Estuarine biodiversity is the primary objective of the analysis."**

(CD- June 23, 2008 SAC Conference Call Memo)

This same Memo also sets forth a GOAL that was not shared with the public/Working Group.

*"The project goal is to create functional estuarine habitat...";*

***"1. Maximize area of estuarine habitat.";***

*Opportunities to create regionally significant habitat including vernal pools and...should be pursued but **not at the expense of restoration of estuarine habitat.**"*

The public/Working Group was not allowed to participate in the decision making and was not advised as to the differing opinions rendered by the SAC team.

Since this timeframe and without public notification or disclosure the Coastal Conservancy and staff of the Foundation have worked to eliminate the areawide review of ecosystem function and alternative habitat plans—including a public debate regarding the pros and cons of each system -- to instead focus upon a predetermined singular outcome of removal of Ballona Creek levees and dredging of Ballona to 'landscape' and convert the land from its historic natural function to an entirely new, artificial and unnatural function that precludes all habitat function that does not primarily promote the estuarine full tidal premise.

And though asked publically where this 'Plan- Alternative 5 " came from, no response has been forthcoming from either the CC or Foundation staff.

The CD docs however now shed light as to the creation of this "preferred plan". The overtones of financial leverage dominate the first half of the letter and serve to advance a predetermined outcome that is seen fulfilled in the Coastal Conservancy Staff Recommendation—the removal of levees to create the treatment wetlands.

July 10, 2007 SMBRC letter from Shelley Luce to Coastal Conservancy's Ballona Project Manager- Mary Small:

*"Dear Mary,*

*The Santa Monica Bay Restoration Commission, a National Estuary Program of the US EPA, has been pleased to participate in the acquisition and restoration of the Ballona wetlands at all levels over the last several years. We are proud partners in the restoration planning, and currently have one staff member dedicated full time to the planning effort, while I serve on the Ballona Wetlands Science Advisory Committee (SAC). The SMBRC is also an active local partner in the Army Corps of Engineers' Lower Ballona Ecosystem Restoration Feasibility Study and are participating in clean up and restoration plans for Ballona Lagoon, the Grand Canal, Marine del Rey and the Oxford Basin. We have also awarded several millions of dollars of bond monies under our purview to projects designed to improve water quality and habitat in the Ballona Creek watershed. Ballona wetlands restoration is clearly a very high priority of the SMBRC and the EPA. I have reviewed the restoration design alternatives that are being developed by the consulting team and I am disappointed that they do not fully consider important restoration options, thereby limiting potential habitat, biodiversity and water quality improvements in the wetlands complex. The Ballona SAC requested design alternatives that encompass the "extremes" of restoration planning, i.e. from minimal intervention to maximal structural changes, as well as alternatives in between. The current proposed*

alternatives do not provide this and need to be modified, or an additional (fourth) alternative is needed.

SMBRC feels that the restoration design for Ballona wetlands must represent a true restoration of maximum ecological functions and services for the area. Actual restoration work will not begin for months or years, and will be a long term and costly process. The best approach is to include design alternatives that are not limited by current infrastructure or fiscal concerns, since these factors will certainly change over the duration of the restoration process. Similarly, factors such as poor water quality in Ballona Creek will continue to change as Total Maximum Daily Loads and other regulatory measures are implemented. It does not serve us to design the restoration as though it would be undertaken and completed in the very near future, under existing physical or financial constraints.

I would like to request that the design team include at least one design alternative that proposes to

- remove all or part of the levees on one or both sides of Ballona Creek;
- daylight the channel connecting the freshwater marsh to the creek in Area B, and Stingray Creek to Marina del Rey in Area A;
- raise Culver Boulevard to increase flows between the north and south sections of Area B; and
- increase connectivity between Ballona Creek and Areas A and B."

Our staff Wetlands Restoration Manager Sean Bergquist is available to work closely with the consulting team to ensure the revised or new alternatives include features that stakeholders and the SAC members supported. The revised or new alternatives should be presented as one of the group of alternatives for consideration under CEQA and by stakeholders and the SAC.

Given our experience in and commitment to the Ballona wetlands and surrounding interconnected areas, the SMBRC staff, Governing Board and Watershed Council have a great deal to contribute to the restoration process. Please feel free to consult us further during development of the restoration design alternatives and we look forward to continuing our partnership to restore Ballona wetlands.

Sincerely,  
Shelley Luce, D.Env.  
Executive Director

An e-mail 7/17/07 from SMBRCCommission & Foundation executive officer Shelley Luce,

"RE: design alternative for Ballona wetland restoration" and Phil Williams & Associates' (PWA) Jeremy Lowe –

"We've sketched out Alternative 5 as described in Shelley's letter. Is this what you were envisaging?"

Luce: "Thank you for your response Jeremy. This is a good start for a 5<sup>th</sup> alternative. Sean and Jessica are adding/changing some details and will forward to you. "  
(presumably-Sean Berquist and Jessica Hall– both Foundation paid staff/ SMBRC staff)

The CD documents also reveal two sets of drawings and plans for the levy removal and levy replacement—by Jessica Hall, a Foundation paid staffer.

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Ms. Luce is the Executive Director of the Foundation; no contractual

agreements

have been produced by the SMBRCommission or the State Water Board that provide any authority for her to act in capacity of Executive Director of the State Agency-

Santa Monica Bay Restoration Commission which was created under SB 1381 Keuhl as a non regulatory state agency within the State Water Board. There have been no contractual agreements forthcoming by the State Water Board or federal authorities that provide for any SMBRC or federal EPA- National Estuary Program (NEP)- dedicated funding to be handed over to the SMBR Foundation. There is a treasury account that was formed under SB1381 in 2002.

The treasury account has never been used. The attendant oversight and accountability by the State Treasurer has likewise not been utilized.

Ms. Luce has been utilizing both the e-mail address and physical location of the LARWQCB as her work address. The utilization of the addresses has led to common belief that Ms. Luce is a Water Board employee. It is unknown but possible at this time to believe that the utilization of the addresses created a belief that Ms. Luce is LARWQCB personnel, which has in turn, provided Ms. Luce with access to controlling positions on various committees such as IRWMP (Integrated Resource Water Management Program). It would seem that by creating, via continued use of LARWQCB email address and business address, a very public belief that Ms. Luce is a Water Board employee may constitute impersonating a Water Board employee. The following is an e-mail exchange between Ms. Luce and a person with long associations with the Water Board and has acted as a contractor in Ballona restoration matters.

*'Travis Longcore [travislongcore@faadubon.org](mailto:travislongcore@faadubon.org) wrote:*

*Bounced from your waterboards address. Are you no longer a Water Board employee? –*

*Travis*

*On Sep 19, 2011, at 2:29 PM, Shelley Luce wrote:*

***No, not for many years. Most of our staff are with our SMBR Foundation. I will check my calendar and get back to you on this meeting, thank you for the invitation.***

*Shelley" (emphasis added)*

Ms. Luce does not appear to answer directly about herself with regard to the Foundation, or what she means by "our SMBR Foundation". She also does not explain her past personal use of the LARWQCB addresses while not employed and why she suddenly discontinued the practice.

Ms. Luce's resume cites her experience prior to SMBRCommission / Foundation as having been employed by Heal the Bay- the organization that has become institutionalized as part of the SMBRC. Our research indicates Ms. Luce was working in some capacity at LARWQCB during the years 1999-2001- prior to her finishing degrees from UCLA. It appears that her continued use of the Water Board e-mail address after no longer providing service to the California Water Resources Control Board has led/misled many people. ( A PRA to LARWQCB is pending for identification of duties.)

#### **Coastal Conservancy- PRA Response to J. Davis**

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**Rare ecosystems of the coastal marsh area are discussed internally by the SAC team with the CC project manager and staff of the Foundation; the information**



**is not broadcasted for public awareness, inclusion of discussion and decision making as promised.**

*"Rich noted that the discussion of grasslands should include mention of the historical native grassland prairie ecosystems that previously existed in the area. The rarity of native grasslands should be discussed,,," (CD- 6/28/08 SAC Conference Call)*

*"Rarity section...complex of prairie and vernal pool...  
Wet grasslands formed extensive areas were also palustrine wetlands above highest high tide.." (CD- SAC Call 6/23/08)*

*"...there is native biodiversity in the non-tidal saline soils. .... At Ballona, these wetlands at Area A, for example, are the only habitat where Alkali Barley (*Hordeum depressum*) is known to occur in the Ballona Ecosystem. This annual grass was probably the dominant native annual grass in naturally occurring non-tidal saline soils at Ballona." (CD- 11/23/08, Wayne Ferren communication to Mary Small...)*

And,

*"The region has a shortage of mudflat for shorebirds, high marsh for animals and salt marsh bird's beak, marsh-upland transition for rare shrubs (eg. , box thorn) that are used by animals,...*

*The region has a shortage of dune habitat and back – dune depressions that support clean-water brackish marsh for aquatic plants and animals.*

*One could also list maritime scrub, which remains in several places "...  
( CD- Joy Zedler (SAC) correspondence)*

Thus , without public /Working Group inclusion and input into the formation of the alternatives and later failure to include the public /Working Group comments and concerns regarding the PWA Alternatives that are presented at one public meeting--the CC and Foundation staff continue to work behind publically closed doors to focus upon the 'Preferred Alternative", now known as Alternative 5 presented in the 1/19/12, Staff Recommendation request for funding. Alternative 5 requires massive, non-historic, extraordinary, experimental and knowingly toxic changes to occur on the land masses of Area A and B so that **"biodiversity = highest richness of estuarine dependent species."**

**Contrary to the 8/13/04 CC Memo which promised transparency and public inclusion in the alternative planning process** which would "restore and enhance" a mix of wetland habitats....and that would implement a technically feasible, cost effective, ecologically beneficial and sustainable restoration.  
Instead, the public was shut out of the planning process; and SAC knowledge regarding the needs and dangers posed by Alternative 5 are not made public:

*"This alternative makes the greatest change to the site, would be the hardest to reverse and consequently has the most risk." (CD- 9/12/08 MEMO from SAC to PMT )*

*"...this alternative would **require reliance on upstream flood control and pollutant removal**, and could necessitate periodic removal of accumulated pollutants for some portions of the restored wetlands. Furthermore, it is unknown how the flow and sediment yield from the upper watershed would affect the sustainability of the marsh in terms of scour or sediment deposition." CD, P. 4 of 9, 10/15/08 SAC MEMO, emphasis added.*

There is no evidence of any such large scale BMP (Best Management Practice) planning or proposals for 'flood control and pollutant removal' occurring upstream on Ballona Creek.

And,

*"Eric suggested that there be a statement up front indicating that this site will not be self-sustainable, but will need to be actively managed in perpetuity." ( CD- 7/7/08 SAC Conference Call)*

Discussion and comments made from key federal agencies were withheld from the public, including but not limited to **NOAA communications regarding concern of toxicity of Ballona Creek upon the remaining wetlands should the levee removal and dredging take place.** (CD- National Oceanic Atmospheric Association email)

Studies that discuss the toxicity of the Ballona Creek waters and sediment to life in the waters and sediment were not released or shared with the public:

*"These sediments were toxic to aquatic organisms, potentially from organic compounds in these sediments. Ballona Creek has been identified as a potential source of tidal flows into Areas A, B, and C in each of the proposed restoration alternatives. Therefore, there is concern to tidal marsh areas, resulting in a negative impact to the habitats and biological resources." (CD- Weston -Technical Memorandum 11/26/07; Water Quality Data Gap Investigation Ballona Wetlands Restoration Project- Pohl , P.E., Ph.D.)*

And,

*" The July 2006 report by Weston also concludes that there are concerns related to water and sediment quality adjacent to the tidal channels. Consequently there is a need to develop a strategy to evaluation the potential ecological risk associated with influent water or sediment quality to the restored wetlands.*

*The scientific questions regarding sediment and water quality cannot be answered based on the information currently available, and will ultimately depend on the design of the project." (CD- Memorandum 3/8/08; Subject:*

APPROACH FOR ADDRESSING SEDIMENT AND WATER QUALITY ISSUES)

And;

*"Eric- Conc(ept) D—is it attempt to move water and sediment into system*

*Wayne- breaching levee bringing trash, water pollution and sediment into entire area is problematic.*

*John Dixon-important to describe these NOT as projects, but a directions.*

*Ambrose- maybe D is too extreme—this won't happen anyway.*

*Dixon- do feasible maximum tidal, not D—need to scale back*

*Jeremy- may need to do that, take out realignment Ballona—include realign on Hydrologic options"*

(CD-10/30/06 SAC Conference Call)

**Additional -SPECIFICS OF THE STAFF RECOMMENDATION 1/19/12**

The 1/19/12 Staff Recommendation misleads the public and the Governing Board as seen on pg. 3 of 9, paragraph 5-

*" In order to complete the environmental analysis required under the National Environmental Policy Act and the California Environmental Quality Act **and to apply for permits** to implement the project, **detailed technical work must be completed.**"*  
(Emphasis added.)

What is not disclosed to the reader, is an entire change of process from the Congressionally approved 2005 Joint EIR/EIS process requirements.

The Staff Recommendation sentence itself is also very misleading. The applications for permits to the USACE for implementation of the Coastal Conservancy "Plan", namely the destruction of the levees and the dredging of Ballona have been in process prior to this Staff Recommendation. The Plan-regarding garnering the USACE permits-including the 408- was already in process. (CD)

The Conservancy in its partnership with SMBRC fails to let the public know that they have been working to end the congressionally approved federal portion of the study which entails a full ecological review of the area between the Westchester Bluffs, the Santa Monica Bay, the Santa Monica mountains to a few miles inland – which would also provide for a full review of ALL REASONABLE ALTERNATIVES for enhancement of the ecosystem. ( See minutes of USACE/Sponsor meetings provided in the 3/28/12 Request to Rescind File No.04-088; EIS Lower Ballona Creek Restoration Feasibility Study 2005)



Undisclosed is the take-over of process for Ballona 'restoration' guided by the Coastal Conservancy that may disengage the USACE analysis provided for in the established 2005 Joint EIR/EIS.

Instead, it appears that the Coastal Conservancy along with SMBRC staff seek to simply garner permits from the USACE ostensibly for destruction of habitat on Ballona, in particular Area A and B of Ballona. Specifically, the CC and SMBRC staff seek permits (eg 408) for levee and land destruction and removal. It appears that the extensive dredging and massive bulldozing may provide the necessary fill for the LA Port. Questions from the public regarding the CC/SMBRC/ USACE status have gone unanswered. (CD docs and SMBRC April meeting -submission by GC )

**Contrary to discussion in the Staff Recommendation**—Area A is vegetated primarily by native plants and native wildlife and, is host to endangered species including but not limited to the Belding's Savannah Sparrow.

Not provided to the public are documents and communications which provide, in part, narrative of 'moving' Belding Savannah Sparrows to areas not planned for dredging. This information is vital for public discussion especially since, destruction of the Belding's habitat may wreak havoc upon the Belding population that utilizes Ballona year round. ( CD )

- Pg. 3 of 9 discusses hydrology/hydraulics studies that need to be done. What is not discussed with the reader are the multiple public requests for actual onsite hydrology studies that would include Ballona aquifer and groundwater studies that would provide the knowledge for alternatives inclusive of groundwater use onsite. Ballona has multiple aquifers underlying the site. The aquifers are classified as potential drinking water sources and are part of the West Basin aquifers which intermingle to the south and east. (Poland Report)
- None of the concerns raised in House Document 389 (part of the USACE review) regarding problems associated with further saltwater intrusion have been discussed. The elimination of the USACE EIS as part of the Joint EIR/EIS would hasten the Coastal Conservancy's and SMBRC staff GOALS = Estuarine which in turn would potentially threaten contamination of the underground aquifers as per House Document 389 literature. None of the above has been made a part of any review despite repeated requests from the public for such studies.
- The SOCALGAS operations and oilfield gas migration throughout the Ballona area have also not been discussed despite repeated requests from the public.
- Thus pg 9 of 9 is insufficient and incorrect in its comments regarding the Local Coastal Program and the Coastal Act, including but not limited to the

fact that there is no LCP language that states Ballona requires action as the Staff Recommendation implies as per 31252.

- Staff Recommendation- Pg. 8 of 9 Under "Sea level rise vulnerability"
- The Staff fail to alert the reader that the 'broad areas of mid marsh and high marsh' depicted--showing a meandering Ballona Creek mid-way between Area A and B-- will be inundated with yearly flood waters of the contaminated Ballona Creek --potentially killing nesting or burrowing life in the low, mid and high marsh areas. Concerns by the SAC team regarding scouring, trash and contamination were not disclosed in the Staff Report and have not been shared with the public.
- The Staff fail to inform the reader that the Preferred Plan creates a non historic cycling of yearly floods, debris and contamination as part of an end of pipe solution, a treatment wetland device .
- The Staff Recommendation does not disclose the SAC discussion of concerns regarding the creation of a treatment wetland.
- The Staff Recommendation does not alert the reader as to what is achieved with the use of the bond funds via "hydraulics" information. Will the hydraulics information be exclusive to new levy construction?
- The Staff Recommendation does not disclose to the reader, the need for upcreek flood control or contamination control as is discussed by SAC.

**31400- The Staff Recommendation cites enhancement of future NEW trails.**

The Coastal Conservancy has already awarded large grants specifically for the Ballona Bike Trail (File No. 07-058-01) which, currently exists and is heavily utilized by the public. Since, much public funding has already been utilized and will be utilized further for the pathway, why should that same importance of pathway be taken away at Ballona?

Removal of the levees would not only take away a heavily utilized public biking and hiking trail but would also take away the pathway's use as an observatory promenade for viewing the interior of Ballona. The levees provide an important opportunity for viewing without intruding.

The Coastal Conservancy and other agencies have failed to embrace and include the public on this issue as well. Using the public's hard earned money while keeping the public out of the planning process reveals the Coastal Conservancy has not acted in good faith.

**Grant Award of \$280,000 to Mountains Recreation and Conservation Authority (MRCA) File No. 04-088 from Staff Recommendation 7/21/10.**

1. The Mountains Recreation and Conservation Authority governing board refused to approve the use of bond money for the trailhead(s) and other enhancement s at Ballona. The Board agreed with members of the public. Namely, that due to the ongoing **Joint EIR/EIS** process' requirements being

more stringent than a singular EIR; those added requirements had to be fulfilled prior to any further decision making taking place.

Mr. Edmiston, at the meeting, asked did they want him to return the money?-

**Ostensibly the bond money had already been approved and given to MRCA. Where did the money go? And;**

2. The 1/19/12 Staff Recommendation cites NEW levy demolition and bike trails ,  
*"the proposed project could provide a new segment of the Coastal Trail. ....the project is located at the intersection of the California Coastal Trail and the Ballona Creek Trail, and may offer a significant opportunity for the development of improved connections between these trails."* P. 7 of 9 .
  - Since the Coastal Conservancy has been intent upon levee removal of Ballona Creek and dredging the land in the near future; why did the Conservancy give bond money to MRCA for trail head construction and enhancements for Area A (in particular)--apparently an area it intends to soon demolish and dredge? These inconsistencies appear to show misuse of public funds; paying for contractors and salaries for projects that lead nowhere.
  - Furthermore, it appears that when the CC Project Manager of Ballona desires to garner public bond money; the wetlands (or bike path) are discussed in a decidedly positive depiction as below:

*"Despite the degradation of site resources, significant wetland habitat remains within the Ballona Wetlands. Plant species within the project site include wetland indicators such as pickleweed, marsh heather, saltgrass, arrowgrass and glasswort, and a variety of upland and exotic species including brome, iceplant, oxalis, and ryegrass. Bird surveys indicate that the site is used seasonally by a variety of migratory shorebirds, as well as by typical shoreline residents (gulls, terns, and ducks) and typical upland birds including small raptors. Bird species of special interest observed in the project area include nesting pairs of Belding's Savannah sparrow and foraging use by California least terns. The proposed project will be implemented primarily on the portion of the BWER north of the Ballona Creek channel (Exhibit 2). This area of the reserve currently has very limited public access and suffers from illegal uses. The proposed project seeks to improve the resources on the site, increasing public use while discouraging illegal activities through improvements to fencing and signage." File No. 04-088*

This same project manager provides an entirely different depiction in the negative—when public bond money is requested for demolition purposes on the same piece of property. Note also the language of utilizing funds to safeguard the property directly contradicts the 1/19/12 Staff Recommendation of the 6 plus million wherein the Project Manager cites the need to demolish and dredge the same area as a means of eliminating public use by the homeless instead of—the aforementioned request for money to protect the same area. ( See also Ms. Small e-mails discussing need to show greater degradation in order to secure the desired outcome. (J. Davis 3/28/12 Request to CC ))  
It appears that the Ballona habitat is characterized dependent upon financial requests---not on reality or science based requests.

- Despite repeated requests for public follow up with regard to the bond money and that project, (including a request made for information at the recent Ballona Watershed Task Force Meeting) none has been forthcoming from MRCA staff or CC staff.

*"In 2008, the Conservancy authorized funds to the MRCA for planning, final design and implementation of specific public access improvements identified in the Ballona Wetlands Early BALLONA WETLANDS PUBLIC ACCESS IMPROVEMENTS*

*Action Plan. MRCA has completed much of that work and as a result of that planning effort, the project partners determined that some of the specific access improvements identified in that plan may need to be re-evaluated and others should be reviewed and permitted as part of the larger wetland restoration project. Rather than pursue the Early Action Plan improvements, the project partners decided that it is a higher priority to develop targeted educational and public access programs in the northern 300 acre portion of the site where there is currently almost no public access. The proposed project would also provide funding for MRCA to continue working on planning public access improvements for inclusion in the ultimate restoration project."*

### **This inconsistency for request/approval and follow-up on bond funds continues to remain unexplained.**

And, how does removal of the levees- the lower leg of the "Class 1 bike path" fit with the public's money expended below?:

*"In 2000, the Conservancy helped fund a regional plan for creation of a "Park to Playa" river parkway from the Baldwin Hills to Marina Del Rey. The plan envisioned creation of a parkway along Ballona Creek to link expanded parks at the Baldwin Hills to the beaches and the Coastal Trail. In 2001, the Conservancy helped fund the Ballona Creek and Trail Focused Special Study which identified potential improvements to the creek and trail. Consistent with that study, the Conservancy has also provided funding for the construction of a pedestrian bridge in Culver City which increased access to the Ballona Creek Trail. That project has been completed. This project will help to implement the vision of the "Park to Playa" and the Focused Study, developing a multi-benefit gateway park that will increase access to the trail and enhance the experience of trail users. File No. 07-058-01; Project Manager Mary Small*

*Conservancy funds for this project are expected to derive from the Conservancy's FY2002/03 appropriation from Proposition 40."*

3. Staff Recommendation pg. 9 of 9 re: Consistency With Local Coastal Policies fails to provide accurate Local Coastal Plan (LCP) background information.

The Coastal Commission certified the first LUP in 1984, the La Ballona MDR Land Use

Plan.

The Land Use Plan was then changed to reflect two distinctly different Land Use Plans, the La Ballona Plan and the new and different MDR LUP.

It is questionable as to if the California Coastal Commission certified another Land Use Plan for the Playa Vista Project.

Consistency with the California Coastal Act must be consistent with Chapter 3 of that Act.

The Project will not restore, but will instead convert the land from one historic natural function to an entirely new function that is unnatural.

Lack of saltwater connection is demonstrated in historic maps from the U.S. Geological Survey. ( A USGS map was submitted at the public hearing on Jan 19,2012. The CC remains nonresponsive)

Grassroots Coalition respectfully requests a written response to this Additional Complaint and maintains its request for response to the 3/29/12 REQUEST TO RESCIND APPLICATION FOR STAFF RECOMMENDATION APPROVAL ON 1/19/12, to award \$6,490,000 Ballona Wetlands Restoration Engineering and Technical Studies. (File 04-088)

The PRA response CD cited herein, is on file with the Coastal Conservancy. Copies of the CD are available upon request and/or are being forwarded.

GC also reserves its right to amend this Complaint and Request with additional information.

Attached is the 3/28/12 Request to Rescind from John Davis to Ca.Coastal Conservancy regarding File No. 04-088

Respectfully,  
Patricia McPherson, Grassroots Coalition-President



**Jones, Tanya**

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-----Original Message-----

From: maryknight [<mailto:kathy.knight@verizon.net>]

Sent: Tuesday, November 13, 2012 3:46 PM

To: David Lawhead; Swenson, Daniel P SPL

Subject: Ballona Community Meeting Thursday November 29, 2012

Dear Mr. Lawhead and Mr. Swenson:

I want to invite you both to our next Ballona Restoration Community Meeting. The Sierra Club Airport Marina Group is sponsoring these meetings so that the community has a chance to speak and listen to each other's concerns about restoration of the 600 acres that they fought so hard for many years to preserve.

We would very much like to have both of you attend, so that you can hear our concerns and we can ask you questions.

As I have mentioned to you, we wanted more than the open house held on Fiji way in Marina Del Rey. We requested that the Army Corps and Dept of Fish and Game hold a public hearing where the public can hear what other people have to say, but so far it hasn't happened. So we are trying to do it ourselves.

The next Ballona Community Meeting is scheduled for:

Thursday, November 29th

6-7:30 pm

Burton Chace Park Community Room

(at the far west end of Mindanao Way in Marina Del Rey)

Please let me know if you can make this meeting. We really hope you can!

Kathy Knight,

(310) 450-5961 cell (310) 613-1175

[kathy.knight@verizon.net](mailto:kathy.knight@verizon.net)

Mr. Swenson asked for a report on the last meeting, so I am providing it to you:

#### ISSUES RAISED AT BALLONA COMMUNITY MEETING ON OCT. 4th 2012:

This area is a Sacred Site of the Tongva Native Americans, who are the indigenous people of the Los Angeles area. They have been living here for 10,000 years. We need to start acknowledging and respecting their culture more.

This project seems more like a flood control project to protect Playa Vista, which was built in a flood plain, from damage from floods. It would make 20 ft. high levees that would block the view of the public of the wetlands when they drive on Lincoln Blvd. and Culver Blvd.

Playa Vista is dewatering their gas mitigation system and pumping the water to Hyperion. The aquifer under the wetlands is being depleted rather than replenished. This dewatering of the aquifer should be studied and documented. This water is needed for the wetlands to provide habitat for wildlife including migrating birds.

We need more community meetings with Fish and Game and the Army Corps attending so we can communicate and ask questions of them, prior to expenditure of any more public funds.

The animals and plants need to be studied carefully over a period of time. The government should reach out more to the local citizens who have studied this ecosystem for a long time (some of them for over 25 years) and can document a long term history of the area. They worked hard to save it, when other government agencies such as the Coastal Conservancy, had given up on saving it. These local citizens kept working to save it because of all the important wildlife and plants that they were documenting.

A small amount of salt/fresh water could be allowed into Ballona, but without any of the major bulldozing that the Coastal Conservancy wants to do.

Any restoration should follow the 7 Guiding Principles supported by community environmental groups (See handout from meeting).

Under Section 303(d) of the U.S. Clean Water Act, an impaired waterway cannot further pollute another waterway. Therefore Ballona Creek east and west of Lincoln Blvd. cannot be allowed to flow into the wetlands and pollute them. Other than naturally occurring hydration, no freshwater shall be allowed into the wetlands that has not been treated to tertiary levels.

All of the adjacent bodies of water need to be included into the Ballona Wetlands Study Area (BWSA) including, but not limited to, the Marina Del Rey Harbor, Oxford Lagoon, Del Rey Lagoon, Venice Canals, and Santa Monica Bay. There are still quite a bit of wildlife and sea creatures in the Marina area.

Classification: UNCLASSIFIED

Caveats: NONE

**Jones, Tanya**

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**From:** Cliff Moser [<mailto:cliff.moser@gmail.com>]

**Sent:** Saturday, November 17, 2012 7:01 PM

**To:** McCormick, Donna

**Subject:** Re: Ballona Wetlands comment

Hi Donna, I'd like to be involved with the planning on this as much as I can. I'm an architect living in Culver City and ride the Ballona Creek bike path daily.

I don't know what I can do to help, but I've sketched some ideas and attached them to this email.

On Tue, Oct 23, 2012 at 3:21 PM, Cliff Moser <[cliff.moser@gmail.com](mailto:cliff.moser@gmail.com)> wrote:

Hi, I'd like to comment on the wetlands scope.

I currently bike the creek bikepath and would like to see an extension and addition as part of the restoration.

Add a path that parallels the 91 freeway to the development that runs near culver blvd and then intersect with the existing path to venice beach.

also add a bridge at the old centinela creek railroad creek pylons to connect to the south side of the creek which would then create a circle around the entire wetland (fresh and salt).

a connection to the bluff paths below Loyola Marymount through playa vista, with connections down to playa del rey,

this would create a network of usable bike paths that would support rediscovery of the wetlands once recreated.

thanks

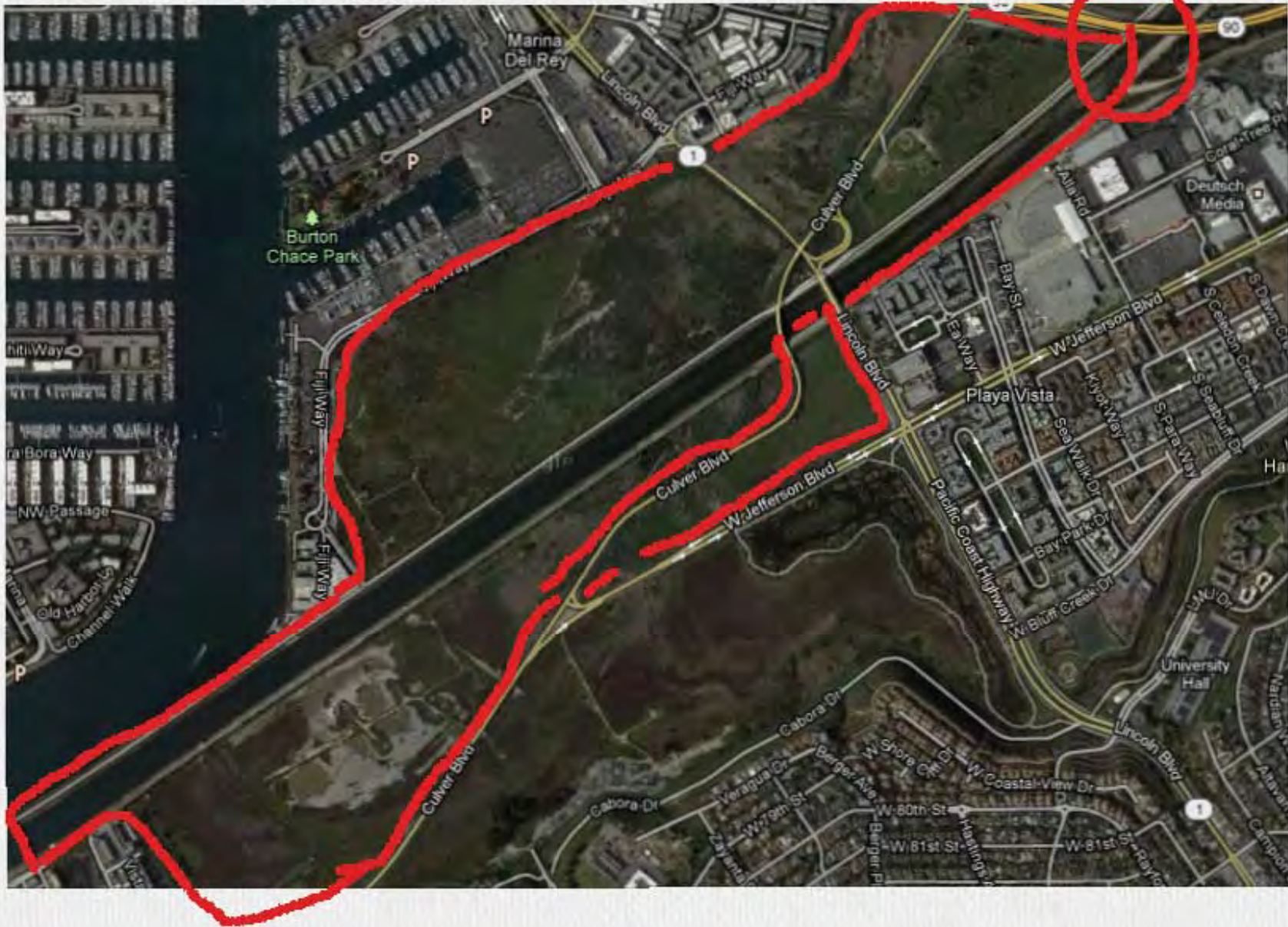
Cliff Moser

Culver City

[310.947.8509](tel:310.947.8509)



NEW  
BRIDGE











A-2252





A-2253





**Jones, Tanya**

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**From:** David Lawhead [<mailto:DLawhead@dfg.ca.gov>]  
**Sent:** Thursday, October 25, 2012 9:12 AM  
**To:** [ds\\_nahc@pacbell.net](mailto:ds_nahc@pacbell.net)  
**Cc:** McCormick, Donna; Diana Hurlbert  
**Subject:** NAHC Comment Letter on Ballona Wetlands NOP

Dave,

Donna McCormick from ICF forwarded me an October 23rd e-mail from you indicating concern that you had not reviewed and responded to the Ballona Wetlands Restoration Project NOP, since the comment period closed on Tuesday. I did receive a comment letter from you, dated August 2, 2012, which discussed your areas of issue and concern. I have attached the letter. If you have additional comments, please forward to me or Donna as soon as possible. Thanks for your input into the project.

Dave

David Lawhead  
Staff Environmental Scientist  
CA Dept. of Fish and game  
South Coast Region  
33883 Ruffin Road  
San Diego, CA 92123  
(858) 627-3997



**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
[ds\\_nahc@pacbell.net](mailto:ds_nahc@pacbell.net)



August 2, 2012

Mr. David Lawhead, Project Planner

**California Department of Fish & Game**

3883 Ruffin Road  
San Diego, CA 92123

Re: SCH#2012071090 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Ballona Wetlands Restoration Project; The Ballona Wetlands Ecological Reserve is located in the western portion of the City of Los Angeles (partially within unincorporated Los Angeles County), south of The City of Marina Del Rey and north of Playa Del Rey; approximately 1.5 miles west of Interstate 405 and approximately 0.25 miles east of Santa Monica Bay; Los Angeles County, California.

Dear Mr. Lawhead:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of *EPIC v. Johnson* (1985: 170 Cal App. 3<sup>rd</sup> 604).

This letter includes state and federal statutes relating to Native American historic properties or resources of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9. This project is also subject to California Government Code Section 65352.3 *et seq.*

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC did conduct a Sacred Lands File search of the project site, therefore 'area of potential effect' or APE, and Native American cultural resources were identified within the APE.

The NAHC 'Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in



the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties, including archaeological studies. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq.*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254( r) and may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built

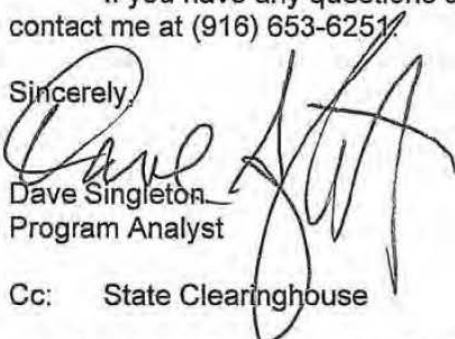


around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton  
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

## Native American Contact

Los Angeles County

August 2, 2012

LA City/County Native American Indian Comm  
Ron Andrade, Director

3175 West 6th St, Rm. 403  
Los Angeles, CA 90020  
randrade@css.lacounty.gov

(213) 351-5324  
(213) 386-3995 FAX

Ti'At Society/Inter-Tribal Council of Pimu  
Cindi M. Alvitre, Chairwoman-Manisar

3094 Mace Avenue, Apt. B Gabrielino  
Costa Mesa, CA 92626  
calvitre@yahoo.com

(714) 504-2468 Cell

Tongva Ancestral Territorial Tribal Nation  
John Tommy Rosas, Tribal Admin.

Private Address Gabrielino Tongva

**tattnlaw@gmail.com**

310-570-6567

Gabrielino/Tongva San Gabriel Band of Mission  
Anthony Morales, Chairperson

PO Box 693 Gabrielino Tongva  
San Gabriel, CA 91778  
GTTribalcouncil@aol.com

(626) 286-1632  
(626) 286-1758 - Home  
(626) 286-1262 -FAX

Gabrielino Tongva Nation  
Sam Dunlap, Chairperson  
P.O. Box 86908  
Los Angeles, CA 90086  
samdunlap@earthlink.net

Gabrielino Tongva

(909) 262-9351 - cell

Gabrielino Tongva Indians of California Tribal Council  
Robert F. Dorame, Tribal Chair/Cultural Resources

P.O. Box 490 Gabrielino Tongva  
Bellflower, CA 90707  
**gtongva@verizon.net**

562-761-6417 - voice

562-761-6417- fax

Gabrielino-Tongva Tribe  
Bernie Acuna

1875 Century Pk East #1500 Gabrielino  
Los Angeles, CA 90067

(619) 294-6660-work

(310) 428-5690 - cell

(310) 587-0170 - FAX

bacuna1@gabrieinotribe.org

Gabrielino-Tongva Tribe  
Linda Candelaria, Chairwoman

1875 Century Pk East #1500 Gabrielino  
Los Angeles, CA 90067

lcandelaria1@gabrielinoTribe.org

626-676-1184- cell

(310) 587-0170 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012071090; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Ballona Wetlands Restoration Project; located near the City of Marina Del Rey and Santa Monica Bay and part of the Ballona Creek watershed; Los Angeles County, California.

**Native American Contact**  
Los Angeles County  
August 2, 2012

Santa Ynez Tribal Elders Council  
Freddie Romero, Cultural Preservation ConsInt  
P.O. Box 365 Chumash  
Santa Ynez , CA 93460  
freddyromero1959@yahoo.  
805-688-7997, Ext 37

Gabrieleno Band of Mission Indians  
Andrew Salas, Chairperson  
P.O. Box 393 Gabrielino  
Covina , CA 91723  
(626) 926-4131  
gabrielenoindians@yahoo.  
com

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