State of California - The Resources Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
www.dfg.ca.gov

September 15, 2004

Mr. Dan Castleberry
Deputy Director
Ecosystem Restoration Program
California Bay-Delta Program
650 Capitol Mall, 5th Floor
Sacramento, California 95814

Dear Dan,

On behalf of the other Ecosystem Restoration Program (ERP) Implementing Agencies, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game, please accept our response to input received on the Milestones Assessment Package. Input was received during the 30-day period for stakeholders and interested parties to provide supplemental data to assist in assessing the progress toward achieving milestones and the efficacy of the EWA. The input was positive and provided points to consider for use during future assessments and during regional implementation planning.

Other informative input provided a more complete evaluation of 20 water quality milestones that elevated their status to "on schedule." Also included were important edits that were inadvertently omitted during preparation of the original assessment package which benefit the information content of the assessment. These edits and reassessment of water quality status should be considered during reinitiation of consultation to evaluate the efficacy of the Environmental Water Account and progress toward achieving the Milestones.

All input and response to input are available for viewing on the internet at: http://www.delta.dfg.ca.gov/envcomp/milestones.asp.

Sincerely,

DIANA F. JACOBS, Ph.D.
Deputy Director

cc: David Harlow, U.S. Fish and Wildlife Service
Michael E. Aceituno, National Marine Fisheries Service

RESPONSE TO INPUT

The CALFED Ecosystem Restoration Program (ERP) Implementing Agencies[1] solicited input on the comprehensive assessment package[2] to provide supplemental data to assist in assessing progress toward achieving milestones and the efficacy of the EWA. Input received from 9 individuals representing 4 non-government organizations and 4 government agencies supplements the information provided in the comprehensive assessment package for this reinitiation of consultation. Not all input provided supplemental data for the assessment package; however, all input was categorized and will be considered during subsequent evaluations.

To give context to the input, this document will reprint portions from the original assessment document. These reprinted paragraphs are followed by the input as it was received by the Implementing Agencies. A "Response to Input" text box provides the response offered by the preparers of the comprehensive assessment package.

Different types of input on the assessment package was received and was evaluated in the context of how the input added to this assessment effort, rather than on future assessment efforts or implementation of the program as a whole.

Some input discussed the merits of the milestones themselves or proposed changes to the milestones. These comments will be saved and employed during the development of regional implementation plans that will help guide regional implementation of the Multi-species Conservation Strategy over the life of the program. The scope of this assessment as stated in the Conservation Agreement Regarding Multi-Species Conservation Strategy "is *to evaluate the efficacy of the Environmental Water Account (EWA) and progress toward achieving the Milestones in conserving and promoting the recovery of Covered Species*." http://calwater.ca.gov/Archives/GeneralArchive/rod/5.pdf Those milestones, as written, are part of the regulatory package guiding and authorizing CALFED Program activities and are not currently subject to change.

The comments received on the milestones and the additional input on progress towards achieving those milestones provide suggestions that can be utilized during preparation of the regional implementation plans that will be prepared for the North San Francisco Bay and Suisun Marsh, the Delta and Eastside Tributaries, the Sacramento River, and San Joaquin River regions. These plans

[1] U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the California Department of Fish and Game

[2] Draft Reinitiation of Consultation: Milestones Assessment CALFED Bay-Delta Program, Appendix A: Multi-Species Conservation Strategy Milestone Progress Summaries and Project Linkages, Appendix B: Evaluated Project Descriptions and Multi-Species Conservation Strategy Milestone Linkages

will provide the context for implementing the ERP over the complete term of the project.

The input concludes with two important sections that include a clarification of water quality status made during the initial assessment. Lastly, there were edits to the assessment document that were inadvertently left out during its preparation. These edits are important contributions to the assessment and were fully intended for inclusion.

This effort is the joint work of the implementing agencies, the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the California Department of Fish and Game and the California Bay-Delta Authority. This effort is also the result of contributions from stakeholders and program persons dedicated to achievement of the Ecosystem Restoration Program and the success of the CALFED Bay-Delta Program.

Milestone 1. Develop a methodology for evaluating delta flow and hydrodynamic patterns and begin implementation of an ecologically-based plan to restore conditions in the rivers and sloughs of the Delta sufficient to support targets for the restoration of aquatic resources.

Status: Several ERP contracts addressed different aspects of this milestone, including contracts to develop methodologies for evaluating Delta flow and hydrodynamic patterns and planning related to specific contracts within the Delta Region. The contracts range from focused efforts on a relatively small scale within the watershed, such as developing a low flow model for the Yolo Bypass to improve or address flood capacity, to a valley wide approach by evaluating historic hydroclimatic conditions. A few contracts were focused efforts to develop a methodology for evaluating Delta flow and hydrodynamic patterns. In addition, contracts for hydrodynamic modeling projects funded by the ERP and Science Program for dissolved oxygen in the Stockton Deep Water Ship Channel will contribute to the development of methodologies for evaluating flow in the South Delta.

There are several current Delta one- and multi-dimensional hydrodynamic modeling efforts being conducted or contracted by Bay-Delta Program implementing agencies including the California Department of Water Resources (CDWR), the U.S. Bureau of Reclamation (Reclamation) and the U.S. Geological Survey (USGS). These models include CALSIM II, jointly developed by CDWR and Reclamation, which simulates much of the water resources infrastructure in the Central Valley of California and Delta Region and provides quantitative hydrologic-based information necessary to operate the State Water Project (SWP) and Federal Central Valley Project (CVP). CDWR also uses the DSM2 model for estuarine and riverine systems, including effects of land-based processes. CDWR currently is developing a new River, Estuary and Land Model (REALM) featuring map-based visualization. The model design encompasses high quality flow, transport and particle modeling in 1D -2D -3D mixed dimensions, including important Bay-Delta features such as wetting and drying, reactive constituents and stratification. CDWR has contracted with a consulting firm to perform detailed calibration of a two-dimensional numeric model (RMA Bay-Delta) for evaluating salinity responses from alternative configurations of Franks Tract and from potential consequences from levee failures.

Funds from an ERP contract contributed to the development of the DELTA-TRIM multi-dimensional hydrodynamic and transport numerical model by the USGS. DELTA-TRIM has been used to evaluate and compare one critical ecological function (phytoplankton biomass production and distribution) of two Delta shallow water areas, Franks Tract and Mildred Island. Other ERP-funded restoration contracts are utilizing HEC-RAS and Mike 11 models to guide restoration planning and design.

The ERP Science Board (ERPSB) is embarking on large-scale simulation modeling to examine the quantitative role of water in achieving ERP objectives

and restoration opportunities. This analysis will consider various water resource decisions, as well as longer term processes such as population growth and climate change that are likely to be important over the next 30 years. The modeling framework structure has not yet been designed, but may well involve a hierarchy of models at various spatial and temporal scales, focusing on indices of the quantity and quality of: (a) aquatic habitat; and (b) riparian and floodplain habitat in different parts of the CALFED region, for a representative and tractable set of species, including salmon.

Progress: On schedule

Next Steps: Next steps for meeting the milestone should include developing a synthesis of all existing information and compiling it into a comprehensive, ecologically-based plan designed to restore conditions in the rivers and sloughs of the Delta Region sufficient to support restoration of aquatic resources. The synthesis should include an analysis of gaps to guide future research and modeling efforts.

Comments on Milestone 1

Hydrodynamic studies of water movement from the Central Delta to the South Delta and export pumps have yet to completed. Movement of discrete blocks of water need to be studied under different outflow and export levels. How many days (or hours) does it take water in the lower San Joaquin River to get to the export pumps? Are reverse flows real? Does tidal mixing break down discrete blocks of water or are they relatively sustained? Do they move with net flows? Can we collect data to calibrate the models? Do blocks of water carry signatures (e.g., temp, salinity, turbidity, water chemistry, etc) whereby they can be tracked and monitored? ***Tom Cannon***

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

Milestone 12. Develop and implement a program to establish, restore, and maintain riparian habitat to improve floodplain habitat, salmonid shaded riverine aquatic habitat, and instream cover along at least one tributary within the Eastside Delta Tributary EMZ.

Status: ERP funds acquired lands along the Cosumnes River to maintain existing habitat and plan future restoration of riparian and floodplain habitats. Projects included development of an implementation plan for resource management actions for both the Cosumnes and Mokelumne River floodplains. This implementation plan will evaluate the feasibility of alternatives including setback levees, breaches and bypasses that will restore significant natural riparian and floodplain ecosystem function. ERP contracts addressed landscape level planning for potential floodplain restoration opportunities on the lower Cosumnes and Mokelumne rivers. A Watershed Program grant will support development of the Cosumnes River Preserve Management Plan, a comprehensive, integrated management plan for the entire Cosumnes River Preserve that consolidates plans

prepared for specific parcels by current Preserve partners. An ERP contract addresses this milestone for the Mokelumne River below Camanche Dam by protecting 2.3 acres of riparian habitat and providing streambank protection for improved fish habitats. An ERP contract furthers this milestone by continuing the watershed stewardship plan development for the lower Mokelumne River to guide willing and interested landowners to voluntarily implement floodplain agriculture, riparian habitat, and set back levees.

Progress: On schedule

Next Steps: Completion of the Cosumnes and Mokelumne River Floodplains Integrated Resource Management Plan and the Cosumnes River Preserve Management Plan will fulfill the milestone requirement for developing a program for the Cosumnes River and may meet the requirement for the Mokelumne River. Next steps should include further implementation of components of these plans related to riparian habitat and continued monitoring of riparian habitat resulting from breaches along the Cosumnes River.

Milestone 14. Restore a minimum of 300 acres of self-sustaining or managed diverse natural riparian habitat along the Mokelumne River, Cosumnes River, and Calaveras River and protect existing riparian habitat.

Status: Several ERP contracts that propose riparian restoration actions for both the Mokelumne and Cosumnes rivers are early in the planning stages. Other ERP contracts include preservation of approximately 45 acres on the Mokelumne River; addressing the Cosumnes River through acquiring property along the river to preserve existing habitat and to promote future restoration opportunities; and planning for future acquisition and restoration on the Cosumnes River.

Progress: On schedule

Next Steps: Next steps include continued restoration planning, implementation and monitoring of riparian habitat restoration projects. There is a need to increase the level of effort for the Calaveras River. Protected and restored habitat characteristics should be evaluated and quantified. Additional riparian habitat protection and restoration opportunities, including partnerships with other program elements, should be explored.

Comment on Milestones 12, 14

The riparian corridor of the lower Cosumnes River from tidewater to the upstream salmon spawning limit near Latrobe Road is severely degraded and no studies have been conducted or planned, nor are any restoration efforts contemplated. ***Tom Cannon***

Response to Input: Thank you. This information will be considered during

implementation planning and in subsequent milestones evaluations.

Milestone 17. Develop and implement a program to address inadequate instream flows for steelhead and Chinook salmon on streams within Eastside Delta tributaries. Where appropriate provide adequate flows for Sacramento splittail and green sturgeon.

Status: ERP contracts and funds from other sources contributed directly toward addressing inadequate stream flows. A contract completed design and construction modifications for both of the Granlees Diversion Dam fish ladders and the flow barrier wall on the Cosumnes River to improve low flow conditions for fish passage. Another ERP contract addresses this milestone for both the Cosumnes and Mokelumne rivers through research to develop a model to simulate the hydrological effects of historic and projected land use or land cover changes, and to identify surface and groundwater components of an integrated approach for restoration and flood control improvements. This modeling should be further assessed as a tool for evaluating feasibility for improved flows on the Cosumnes River. This research and modeling suggests that severe depletion of the ground water aquifers could have significant impacts to river flow early in the season which prevent fall or early winter flow and subsequent fish passage in the Cosumnes River (Mount, et al., 2001). Ongoing AFRP funded studies will provide estimates of minimum flow requirements for anadromous salmonids in the Cosumnes and Calaveras rivers. A Habitat Conservation Plan (HCP) being developed for the Calaveras River includes actions to resolve fish passage concerns.

An ERP-funded contract is investigating the life history and habitat needs of green sturgeon in the Bay-Delta system including determining their movements and distribution, habitats, especially spawning grounds, and tolerance to various stressors and habitats.

The EWA is a cooperative management program, the purpose of which is to provide protection to at-risk native fish species of the Bay-Delta estuary through environmentally beneficial changes in SWP and CVP operations at no uncompensated water cost to the projects' water users. Actions that protect fish species include reduction of pumping at the Delta SWP and CVP export pumping plants. The EWA assets can also provide other benefits such as augmenting instream flows and Delta outflows.

Other non-CALFED programs may be contributing toward attainment of this milestone. For example, there are ongoing negotiations between the fisheries agencies and utility districts for operational changes, such as those with EBMUD to improve operations of the Camanche and Woodbridge Dams on the Mokelumne River to meet fishery needs.

Status: Behind schedule

Next Steps: Continue research and modeling of instream flow needs, and support interactions between fisheries agencies and water management authorities on the Cosumnes, Mokelumne, and Calaveras rivers to promote improvement of their water release programs.

Milestone 18. Provide unimpeded upstream and downstream passage for salmon and steelhead on Eastside Delta tributaries.

Status: A contract completed design and construction modifications for both of the Granlees Diversion Dam fish ladders and the flow barrier wall on the Cosumnes River to improve low flow conditions for fish passage. An HCP being developed for the Calaveras River includes actions to resolve fish passage concerns. The ERP funded contracts for feasibility analysis, permitting and design for replacement of Woodbridge Dam and inclusion of new fish ladders to improve passage on the Mokelumne River. The new dam and fish ladders currently are under construction, funded by bonds financed by Woodbridge Irrigation District's sale of surplus water to the City of Lodi. There is an ERP contract that addresses the feasibility, planning, and design for improved fish passage at 29 unscreened diversions between Bellota Weir and New Hogan Dam on the Calaveras River. One landscape level ERP contract, which could also have implications for Eastside Delta tributaries, looks at identifying and addressing the potential for dam removal.

The Watershed Program funded removal of a dam on Murphy Creek, a tributary of the Mokelumne River, opening up 2 miles of stream habitat.

Progress: On schedule

Next Steps: Need to increase the efforts for the Calaveras River. Coordinate with projects addressing instream flows, screening, and temperature programs to work towards obtaining unimpeded fish passage. Continue research and support interactions between fisheries agencies and water management authorities on the Cosumnes, Mokelumne, and Calaveras rivers to promote improvement for unimpeded fish passage.

Milestone 21. Complete installation of fish passage facilities at Bellota Weir, Clements Dam, and Cherryland Dam on the Calaveras River and provide passage flows.

Status: An ERP contract addresses the feasibility, planning, and design for improved fish passage at 29 unscreened diversions between Bellota Weir and New Hogan Dam on the Calaveras River. An ERP implementation contract addressed improving fish passage at Bellota Weir through constructing a fish ladder.

Progress: Behind schedule

Next Steps: Continue research and support interactions between fisheries agencies and water management authorities on the Calaveras River to promote improvement of their fish passage programs. The fish passage issues at Clements Dam and Cherryland Dam on the Calaveras River need to be addressed, as does the issue of providing for fish passage flows at all locations. The need for adequate passage flows is central to any further successful restoration of anadromous salmonids in the Calaveras River.

Comment on Milestones 17, 18, 21

While there have been many opportunities to improve flows in the Cosumnes and Calaveras Rivers during the fall salmon spawning season, none were implemented despite available water. Much of the past several years of salmon production on each river have been sacrificed for lack of action. The amount of water needed is miniscule to what the Water Management Program has available. Despite a significant amount of the Cosumnes being diverted to the American River drainage, there is a reluctance on the part of the Department of Interior to return a small portion of this water to the Cosumnes via trades with El Dorado Irrigation District or Rancho Murietta, or to provide it directly via the Natomas South Canal (which flows directly over the middle Cosumnes with an existing value release). No change in this situation is expected in the near future. The CALFED funded study of the 29 diversions on the Calaveras River recommended that these facilities not be screened despite nearly 100 % of the releases of New Hogan Dam being diverted by these facilities and there being virtually no connections with tidewater to allow salmon and steelhead to ascend or descend the river. The HCP Section 10 process initiated by the local water agency is not sufficient action to meet these milestones for the Calaveras River. ***Tom Cannon***

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

Milestone 25. Upgrade screens at Southern Energy's Contra Costa power plants with screens acceptable to the Fish and Wildlife Agencies.

Status: Negotiations between Mirant (formally Southern Energy) recently broke down with the fisheries agencies. Mirant is in Chapter 11 and during recent negotiations with State and Federal fishery agencies, company representatives stated that they will not install and operate a positive fish barrier at their power generating facilities to lower their take of aquatic organisms. The current fish screening system is a traveling fish screen that exceeds delta smelt criteria 0.2 fps, and Mirant is proposing to utilize a Variable Speed Device (VSD) to reduce their take of aquatic organisms into their once-through cooling systems.

Progress: Behind schedule

Next Steps: It appears that it will be a minimum of four years before progress is made towards improving fish screening at the plant because of Mirant's current financial situation.

Comments on Milestone 25

How is it that Mirant can continue to operate and kill a significant portion of the delta smelt population in numbers potentially greater than by the previous owners PG&E. PG&E was able to sell these plants for hundreds of millions of dollars after negotiating the HCP for the plants' operation. Why have Mirant's operations not been curtailed to protect delta smelt? Mirant has also failed to comply with the habitat restoration portion of the HCP at PG&E's Collinsville site. PG&E continues to own much of the adjoining property, which they may sell at any time for tens of millions of dollars. All of this property should be transferred to the CBDA's program for habitat restoration. ***Tom Cannon***

Response to Input: Thank you. This input will be considered during future program evaluations.

Milestone 39. In the Suisun Marsh/North San Francisco Bay Ecological Management Zone (EMZ), restore a minimum of 7,000 acres of Saline Emergent Wetland by restoring tidal action in the Suisun Bay and Marsh EMU (including 200 acres of muted tidal marsh along the Contra Costa shoreline) and a cumulative total of 1,000 acres in the Napa River, Sonoma Creek, Petaluma River, and San Pablo Bay EMUs. Restore high marsh and high-marsh upland transition habitat in conjunction with restoration of saline emergent wetland. Develop cooperative programs to acquire, in fee-title or through a conservation easement, the land needed for tidal restoration, and complete the needed steps to restore the wetlands to tidal action. Begin aggressive program of control of non-native plant species that are threatening the known populations of Suisun thistle, Suisun Marsh aster, soft bird's beak, and Point Reyes bird's beak.

Status: See Milestone 40.

Progress: See Milestone 40.

Next Steps: See Milestone 40.

Milestone 40. Restore suitable, occupied slough edge habitat for delta mudwort and delta tule pea by at least 5 miles in the Suisun Bay and Marsh EMU and by at least 10 miles in the Napa River EMU. Bring at least 25 percent the currently existing but unprotected occurrences of delta mudwort and delta tule pea into protection through purchase or conservation agreement, and ensure appropriate management.

Status: In Suisun Marsh, the ERP is assisting the Suisun Marsh Charter Group in development of its *Habitat Management, Preservation, and Restoration Plan for Suisun Marsh.* The plan will outline actions needed in Suisun Marsh to preserve and restore managed seasonal wetlands, restore tidal marsh habitat, implement a

comprehensive levee protection/improvement program, and protect ecosystem and drinking water quality. Two hundred acres of tidal marsh have been restored along the Contra Costa shoreline the Suisun Bay and Marsh EMU, and plans for restoring 2,952 more acres are complete. In Suisun Marsh itself, 569 acres of are being acquired and planned for restoration to tidal wetlands, but the contracts are not yet implemented.

In north San Francisco Bay, the restoration target of 1,000 acres within the Napa River, Sonoma Creek, Petaluma River, and San Pablo Bay units will be exceeded. CALFED-funded cooperative projects affect 7,000 acres. To date 507 acres have been restored, a portion of 4,065 acres are being restored, and there is planning for an additional 2,385 acres. Most sites are planned to include high marsh and high-marsh upland transition, where site conditions allow, but the proportion of these habitats at these sites needs to be determined.

Actions to control non-native plant species threatening known populations of the above listed plants include two grants to support a program to control invasive *Spartina*, which threatens occurrences of all the targeted rare species except for Suisun thistle. The project's research and planning phases are largely complete, and control actions against *Spartina* are beginning. Another recent grant will support research about how control perennial pepperweed, another weed that threatens these species in tidal marshes,

A project currently in the planning phase will seek to identify opportunities to introduce or increase overall population of Suisun Marsh aster and Suisun thistle at three or more protected and managed sites. At least one new population of soft bird's beak, with high likelihood of success in restored habitat, was established in the Suisun Bay and Marsh EMU. However, no new populations were established in the Napa River EMU and the Petaluma EMU, and no new Pt. Reyes bird's beak was established.

Many tidal marsh restoration projects include slough edges along both exterior levees and within interior marshes. Within the Napa River unit, for example, 2.3 miles of slough edge habitat are being purchased and restored with CALFED grants. The extent of habitat suitable for the delta mudwort, delta tule pea, and Suisun Marsh aster within this area is unknown and should be inventoried. A pilot scale project to test restoration actions along 1,000 feet of slough edge in Suisun Marsh has been funded. More progress was made on Milestones 39 and 40 in North Bay and the Contra Costa shoreline than in the Suisun Bay and Marsh EMU.

Progress: On schedule

Next Steps: Others play the lead role in completing the North Bay tidal marsh restoration projects whose planning or site acquisition the ERP has previously supported. Supporting monitoring and adaptive management of these projects as

they are completed is also important. A more thorough assessment is needed of slough edges, high marsh, and high-marsh upland transitions in these sites. Research about delta mudwort, delta tule pea, and Suisun Marsh aster's ecology and distribution can provide a more adequate basis for assessing these species' recovery in the Napa River unit's restored marshes and, if necessary, for actions to rebuild their populations there. An inventory of habitat for these species is needed to determine where 25 percent of habitat and/or occurrences could best be protected, and a determination needs to be made of how many acres constitute 25 percent of habitat. Actions to control invasive *Spartina* should be completed and evaluated. New control actions for pepperweed are needed, beginning with pilot scale actions derived from the research now underway.

In Suisun Marsh, near term activity will emphasize completion of the Suisun Marsh Charter Group's *Habitat Management, Preservation, and Restoration Plan for Suisun Marsh*, ecosystem research, and completing the pilot scale restorations now being planed there. They can guide larger scale marsh restoration to carry out the Charter Group's plan in the future. Previously planned marsh restorations on the Contra Costa shoreline should be completed.

Milestone 42. Restore a minimum of 400 acres of tidal perennial aquatic habitat in the Suisun Marsh/North San Francisco Bay EMZ.

Status: Thirteen ERP contracts to restore tidal marsh contribute to this milestone, but the quantity of tidal perennial aquatic habitat within these restoration areas needs to be determined to assess whether it meets the 400 acre objective of this milestone.

Progress: On schedule

Next Steps: Monitor development of marsh, channel, and perennial aquatic habitat in tidal marsh restoration projects to verify target's accomplishment.

Comments on Milestones 39 and 42

Milestone 39 and 42 Status: I would encourage you to provide more detail for the status of these 2 millstones. Ponds 3, 4 and 5 in Napa Marsh total approximately 3,000 acres. In addition Cullinan Ranch is being planned (even though implementation has been delayed), and the Napa Crystallizer Ponds (1,400 acres) are being planned for restoration/enhancement (although not CALFED funded). Hamilton/Bel Marin Keys totals approximately 2,600 acres. I just think it would be good to mention a few of the large projects by name. You might also want to mention the restoration mapping project that Stuart Siegel did with CALFED funds and his acreage estimates. ***Amy Hutzel, California Coastal Conservancy***

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

Milestone 54. Construct a network of channels totaling 20 miles within the Sutter and Yolo Bypasses that effectively drains flooded lands after flood flows stop entering the bypasses. The channels should be designed to allow juvenile anadromous and resident fish to move from rearing and migratory areas. Develop and begin implementation of a program in the Yolo Basin to restore channel-floodplain connectivity and floodplain processes. Design natural stream channel configurations and expand floodplain overflow areas in the lower Cache and Putah Creek floodplains, as well as in channels and sloughs of the upper Yolo Bypass to provide connections with the Delta in a manner consistent with flood control requirements. Diversions (water source) into the Yolo Basin should not result in direct or indirect adverse impacts to salmonids. Project design features would include sloughs and creek channels, setback levees, and wetlands, where feasible and consistent with flood protection.

Status: ERP funded CDWR to perform the *Yolo Bypass Habitat Restoration Study* to develop recommendations for restoration actions that would improve bypass habitat for fish and aquatic organisms relative to the three hydrologic phases in the Yolo Bypass of inundation, drainage, and seasonal ponds. Results may bear on an effort to design and plan the network of channels to improve passage out of the Yolo bypass and to reduce stranding. No construction planning or construction has occurred in either the Yolo or Sutter Bypass. CDWR is also working with the Corps of Engineers to develop a two dimensional hydraulic model that will be used for determining flood conveyance impacts of ecosystem restoration projects in the Yolo Bypass. There are no specific contracts dealing with fish stranding in the Sutter Bypass, however, any projects done in the vicinity are implemented to provide a positive grade so there is drainage into the main channel (Ward, pers. comm.).

Another contract was granted to provide improved channel capacity, reduced sediment, increased habitat, lower slough and floodplain planning and restoration, and weed reduction in Union School Slough, tributary to Willow Slough, which is tributary to the Yolo Bypass. While not physically located within the bypass, efforts on this tributary may relate to water quality, temperature, sediment load and other factors germane to diversions into the Yolo Basin. Milestone 54 strives to restore Yolo Basin channel-floodplain connectivity and floodplain processes.

Progress: On schedule

Next Steps: This milestone is either behind or on schedule depending on the decisions made about whether it is needed and its relationship to other proposed work in the bypasses that create floodplain habitat and reduce fish stranding. It may be that the specified channels are not necessary in the Sutter Bypass and they remain a concept in the Yolo Bypass. A decision regarding the utility of the drain channels should be made if enough information exists. If additional studies are required, a carefully focused approach that will provide the foundation for that decision should be conducted. Recent insight into the great benefits of floodplain

habitats to target fish species should drive the need for this milestone's completion.

Milestone 70. Evaluate the feasibility of constructing fish passage facilities at the Grays Bend-Old River-Freemont weir complex at the upper end of the Yolo Bypass.

Status: No ERP, CVPIA, or AFRP contracts have been awarded to evaluate the feasibility of constructing fish passage facilities at the Grays Bend-Old River-Freemont weir complex. However, CDWR, private consultants, and CDFG staff have engaged in reconnaissance level assessments and evaluation of the feasibility of this concept. CDWR completed an analysis for developing a fish passage structure at the Grays Bend-Old River-Freemont weir complex and initial results indicate that construction of a structure is possible, but passage of fish species of concern remains an issue.

Progress: On schedule

Next Steps: Continued dialogue on the feasibility of this concept needs to occur so an informed decision to proceed can occur. There is a need to understand the dynamics and physical features of the bypass to make informed decisions.

Milestone 71. Develop a program to reduce or eliminate fish stranding in the Sacramento, Feather and Yuba rivers and the Colusa Basin drain and Sutter Bypass in the active stream channels, floodplains, shallow ponds and borrow areas. Develop protocols for ramping flow reductions. Conduct surveys of stranding under a range of flow conditions and recommend solutions.

Status: No contracts were issued to develop flow reduction ramping plans, conduct stranding surveys over a range of flow conditions, or make recommendations to reduce fish stranding on the Sacramento or Feather rivers or in the Sutter Bypass. The Colusa Basin Drain Watershed Program was funded to address riparian and floodplain restoration issues at selected sites and may reduce fish stranding, but is not a program to specifically target stranding or ramping of flows. Another watershed coordination program on the Yuba River might similarly address fish stranding issues, but the Narrows 2 project specifically addresses a fixed bypass flow that will maintain downstream flows at 3,000 cfs in the lower Yuba River and does reduce or eliminate fish stranding in the Yuba River by providing a stable flow below the power plant. It is not known if a flow reduction ramping plan was developed or if stranding surveys and recommendations were developed.

Actions via the SWRCB, Decision 1644, resulted in a Yuba River Stranding Study by consultants to evaluate benching, isolation, and stranding of salmonids that will be reviewed by the CDFG and finalized. Aerial photography and ground-truthing are included in the assessment. A joint effort by AFRP, Yuba County Water Agency and Western Aggregates (later replaced by Teichert Corporation) resulted in the Yuba County Return Channel Plug, preventing adults from being attracted into a dead end

flow area where waters receded. Another environmental review was conducted by CDWR to address fish passage issues related to the Daguerre Point Dam and is awaiting the Corps of Engineers to assume the Federal National Environmental Policy Act (NEPA) lead. Tracy Agreement funds also contributed to a sediment analysis and characterization of particle size, characteristics, and degree of mercury methylization.

The CDFG and CDWR are also addressing that portion of the Feather River that is available to salmon between the afterbay and dam.

Progress: On schedule

Next Steps: More work is needed to specify fish stranding problem areas and need to focus action in those areas.

Comments on Milestones 54, 70, and 71

The winter of 2004 was another example of considerable overflow into the bypasses, which resulted in upstream and downstream passage problems for salmon, steelhead, and sturgeon. The problems and solutions have been well known for decades. In July DFG noted eight adult sturgeon still stranded in a small pond in the upper Yolo Bypass (there are literally hundreds if not thousands of similar ponds in the bypasses and river floodplains). The extent of the problem and solutions have yet to be adequately evaluated, but are potentially considerable. Overflow from the Sacramento River occurred at all of the overflow weirs and near Chico into the upper Butte Basin. Overflow into the weirs and from the Colusa Basin Drain into the upper Yolo Bypass occur in all but the drier years – this is not just a wet year problem when fish lost are considered surplus. Flows of up to several thousand cfs from the Colusa Basin Drain enter the upper Yolo Bypass throughout the late fall, winter, and spring of most years, attracting untold numbers of adult salmon, steelhead, and sturgeon to the Colusa Basin from which they cannot escape. Limited observations in the Yolo and Sutter Bypasses, and borrow pits along the Feather, American, Yuba, and Sacramento River continue to indicate the potential loss of millions of salmon and steelhead smolts. Although these issues were evaluated by CALFED and were selected as being important enough for the Stage 1 program, virtually nothing has been done. The assessment package concludes that these milestones are on schedule, when in reality progress is nonexistent and proposed next steps will not get it done. This is a real serious problem that needs serious attention from the CBDA and CVPIA programs, as well as ESA enforcement programs. ***Tom Cannon***

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations. The ERP Implementing Agencies are actively addressing those milestones pertaining to these areas.

General Comments on the Document as a Whole

Comments on the Executive Summary

Page iv, comment: In certain instances it could be made clearer that achievement is in progress and that in some cases they are long-term projects with, for example, construction to come. ***Allan Oto, USBR***

Response to Input: Thank you. This suggestion will be considered during implementation planning and in subsequent milestones evaluations.

Page vii, 2nd para.: Suggest the following rewrite: "Although the EWA has not achieved the full funding level envisioned in the ROD, it has acquired sufficient water and other operational assets to implement fish actions during its first three years as needed to secure ESA regulatory commitments consistent with the ROD." ***Allan Oto, USBR***

Response to Input: Thank you. It is correct that the regulatory commitments were provided each year. However, because assets were limited (operational assets under-performed or could not be stored until needed) affirmation of the regulatory commitments was delayed until the spring when the need for EWA actions for the year was partly known and the adequacy of assets for remaining actions could be judged with reasonable confidence. This is not an acceptable situation in the long run.

General Comments on Section 3

Comments on Region Section 3 Progress. The report is a good-faith effort to assess progress in implementing CALFED Program milestones. Much more is known about aquatic and terrestrial habitats and natural processes in the Bay/Delta Estuary as a result of the CALFED Program and its science-based investigations. The milestone assessment, however, is necessarily somewhat general in that more time is needed to evaluate the success of a specific action. There are many agencies/organizations not directly involved with CALFED whose unknown efforts may affect the success of a particular milestone, and there are overlapping actions that affect milestones, making it difficult to clearly determine cause and effect. Certainly, the Bay Area community is interested in the effects on San Francisco Bay from actions carried out by CALFED programs in the North Bay, Delta and its watershed.

As noted in the summary, considerably more data are still needed to effectively assess milestone implementation. Much of the restoration work in the Suisun Marsh and North San Francisco Bay Region is being done by organizations/agencies other than CALFED agencies and CALFED-funded projects. It is not clear from the report exactly what work is being done by other organizations and how precisely the work implements CALFED milestones. Some compilation of these various programs is essential to accurately determine how well these efforts do or do not help meet CALFED milestones. If this assessment could been completed, it will be easier to determine whether additional specific targeted studies and actions should be undertaken by CALFED - for example,

those related to low dissolved oxygen conditions in Suisun Marsh or the reduction of fine sediments in Suisun-North Bay tributaries. Little funding was given directly to Bay Region projects and some Bay Region milestones have benefited indirectly as a result of Delta-funded projects. But, it is difficult to know exactly how and to what extent these upstream projects have improved Bay Region water quality or restoration efforts.

In addition to the commendable goals to protect, restore and enlarge areas of native habitat, it will be important to assess the quality of the habitat restored. Native species may or may not be attracted to newly restored habitat. There is much to be discovered about the impacts from restoration activities, for example, the impact of wetland restoration on mercury methylation and bioaccumulation. The complexity of food interrelationships makes it difficult to draw definite conclusions about the success of restoration. Marsh restoration includes microhabitats and each affects the food web differently. ***Marcia Brockbank, San Francisco Estuary Project (SFEP)***

Response to Input: Thank you. Your comment aptly describes the state of the milestones evaluation and the dilemma. We will continue to refine our assessment.

Comments on Water Quality Issues

More information is needed to evaluate the water quality milestones for the Bay Region. Many water quality milestones, as in all regions, are "under evaluation." While recognizing that it is difficult to compile information on a strictly regional basis, there needs to be a way to isolate specific information about known sources and impacts on Bay Region sites. The effectiveness of CALFED Program's commitment to eliminating Bay Region stressors by summarizing project efforts by other organizations/agencies, working to identify information gaps and "addressing high priority actions" should be evaluated specifically for the Bay Region. It would seem that most work is being done through upstream projects with the hope that they will indirectly benefit the Bay Region. Since water quality is a significant Bay Region issue, the CALFED Program needs to find a way to evaluate specific numerical water quality goals for this region. Some method needs to be devised to show how and to what extent upstream improvements are translating to Bay Region water quality improvements. Water quality goals could be met through the efforts of existing programs operated by non-CALFED agencies, but should be evaluated by the CALFED Program. For example, PCBs are a significant stressor and should be tracked numerically in the Bay Region and correlated to the effectiveness of various efforts both within and outside the region.

The introduction of non-native aquatic species, particularly via ballast water, is a major problem for the Bay Region. Non-native species especially have an impact on San Francisco Bay ecology, but can also significantly affect upstream regions. There should be a specific targeted milestone for this stressor for the Bay Region. ***Marcia Brockbank, San Francisco Estuary Project (SFEP)***

Response to Input: Thank you. This information will be considered during

implementation planning and in subsequent milestones evaluations. Please see additional water quality input below.

Suggestions for Obtaining Additional Information

SFEP would be happy to discuss further with you any of the following suggestions and we are happy to assist where possible in gathering the information.

1) There needs to be a systematic method for collecting information about the efforts of various agencies/organizations outside of the CALFED agencies and CALFED-funded programs that may contribute to CALFED goals and milestones. In addition to simply compiling a database with contact names, addresses and project descriptions, such an effort could be beneficial in helping to eliminate duplication and promoting cooperation and coordination among different groups. The San Francisco Estuary Project, through its biennial *Bay-Delta Environmental Report Card* has compiled a contact list of individuals and organizations/agencies, which might be used as an initial resource list. Communication with key individuals can help identify other involved individuals and organizations/agencies working in the field. At a minimum, it is important to establish a link with key individuals working in each of the various CALFED subject areas, both within and outside of CALFED agencies.

2) If there were a more organized way to communicate with interested/involved parties to determine who are working on various projects and which activities, it could assist the CALFED Program in meeting its goals. This could be in the form of periodic workshops for targeted groups to provide a forum for communication and cooperation. To obtain updated information for the *Report Card*, the San Francisco Estuary Project sends a copy of the past *Report Card* to various organizations/agencies with a request for an update on relevant activities they have undertaken or know about. A similar request could be sent to specific individuals or agencies based on the above-mentioned database requesting them to respond to a summary of CALFED milestones. This is a resource intensive effort and the Estuary Project limits its *Report Card* efforts to a biennial schedule and priority actions. (The Estuary Project asks respondents to add to or modify a brief description rather than to make an open-ended request for information. It also has been more effective to make a phone call to individuals, and then send a follow-up letter or Email request.)

3) In addition to the work of agencies, there are many non-profit groups and volunteers who are doing creek restoration, water quality monitoring and other environmental work. These hands-on workers often have very practical suggestions and are an underutilized resource. ***Marcia Brockbank, San Francisco Estuary Project (SFEP)***

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations. Representatives of the ERP Implementing Agencies will be contacting SFEP to assist in assessment and information gathering.

Regarding the Assessment Conclusions

1. Note that we have limited our detailed review and comments to those actions and milestones that the Nature Conservancy has been directly involved in. We do, however, have a broader concern that the regulatory conclusions are not clearly supported by the evaluation especially regarding the EWA. We strongly suggest that the arguments supporting your conclusions be restated, clarified, and strengthened. ***Jennifer Martin and Steve Johnson, The Nature Conservancy***

Response to Input: It is not clear what regulatory conclusions the comment is referring to. Regulatory commitments were related to having a functional EWA and appropriate ERP funding. EWA water purchases satisfied the requirements. Operational assets were obtained in variable amounts as expected. ERP funding was in accordance with expectations. Affirmation of regulatory commitments was in several instances delayed until the spring, after the need for EWA actions that year was partly known and the adequacy of available assets to meet the need for EWA actions during the remainder of the year could be determined with reasonable confidence.

2. Accomplishments cited not responsive to milestone: #15/p 15 – MSCS distinguishes between seasonal wetlands, which is this target, and seasonally-flooded ag land, which this writeup cites as contributing to milestone accomplishment; #17/p.16-7 – milestone is for east side trib instream flows, text cites EWA, which is fish protection in Delta; #24/p. 20 – milestone is Delta screens, but text cites Woodbridge and Bellota Weir, which are on east side tribs; #62/p. 50 – milestone is for Sac River black walnut stands, but stands cited are in Delta;

Response to Input:
#15 Agriculture enhancement projects do not meet the strict definition of this milestone addressing optimal seasonal wetland for sandhill crane habitat but do provide habitat used by cranes.
#17 This input will be considered for future revisions of the milestone.
#24 Both, Woodbridge and Bellota Weir are Eastside tributaries. This information will be used to support future revisions to this milestone.
#62 does address Black Walnut outside the Sacramento Region. Historically California Black Walnuts were not in the Sacramento Region, except for possibly the extreme southern portion of the Sacramento Region by Rio Vista. The locations where they were in the past or are presently located today are in the Delta and the Suisun Marsh/North San Francisco Bay EMZs. This information will be used to support revisions to this milestone.

Regarding the Bay Region introductory text:

[...]Habitat efforts include protecting, restoring, and enlarging remaining areas of native habitat, especially important tidally influenced aquatic and wetland habitats and adjacent uplands, and establishing connectivity among these areas. Key considerations in habitat restoration in the Bay Region include:

- large, connected patches of tidal marsh habitat centered on existing populations of species of concern (e.g., salt marsh harvest mouse, California clapper rail),
- placement of tidal marshes along the edge of the Bay and at the mouths of tributary streams to maximize benefits for aquatic organisms,
- incorporating natural features such as large tidal channels, marsh ponds, transitional pannes, and beaches to optimize habitats for many species of fishes, shorebirds, and waterfowl,
- utilize managed saline and seasonal ponds near mudflats to provide high-tide habitat for shorebirds,
- provide natural habitat transitions between bayland habitats and adjacent upland habitats to provide habitat required by many special status plant species,
- provide continuous corridors of riparian habitat along streams tributary to the Bay, and
- maintain upland buffers to protect all existing and restored wetland habitats from disturbance.

The vision also includes providing a more natural freshwater outflow pattern from the Delta in dry and normal rainfall years. Other focal points are reducing stressors, such as native marine invertebrates in ship ballast water, contaminants in municipal, industrial, and agricultural discharges into the Bay, and reducing losses of juvenile fish and their food organisms at unscreened diversions.

Habitat improvements will benefit the salt marsh harvest mouse, Suisun song sparrow, California clapper rail, and California black rail, as well as many native waterfowl and wildlife species living in and around the North Bay. Improving freshwater inflow and habitat will benefit delta smelt, splittail, Chinook salmon, longfin smelt, and other anadromous and resident marine and estuarine fishes and larger marine invertebrates (e.g., shrimp, crabs, and clams) of the Bay Region, as well as the estuarine foodweb (e.g., algae and planktonic and bottom-dwelling animals) on which the fish depend. [...]

Comment:

1. Is this list from the Goals Report? It looks familiar but is not cited.
2. Shouldn't non-native plants also be listed as a stressor, along with non-native invertebrates (by the way, the text says "native marine invertebrates")? Also, should methylmercury be listed as a stressor?
3. I would change "many native waterfowl" to: "migratory waterfowl and shorebirds." And should steelhead be listed as one of the fish that will benefit?

Amy Hutzel, California Coastal Conservancy

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

Regarding the Environmental Water Account (EWA):

The document should emphasize that, regardless of the funding and other concerns, EWA was able to function well enough to succeed in attaining the ESA regulatory commitments per the ROD in 2001-2004.

Response to input: It is correct that the regulatory commitments were provided each year. However, because assets were limited (operational assets under-performed or could not be stored until needed) affirmation of the regulatory commitments was delayed until the spring when the need for EWA actions for the year was partly known and the adequacy of assets for remaining actions could be judged with reasonable confidence. This is not an acceptable situation in the long run.

Page EWA-2, first para.: remove the "_'" between the words "regulatory commitment"

Response to Input: This would correct a typographical error. Thank you.

Page EWA-3 and subsequent pages: the formatting of the subheaders (bold vs. unbold, etc.) needs to be checked for consistency throughout the document.

Response to Input: Noted. Thank you.

Page EWA-5 and Table 1: A definition of a water year needs to be provided. For EWA, the water year is October 1 - September 30. Also, for WY 2002, the Federal Gov't spent $11.5 million for water purchases; not $12.5 million, which was the total Federal budget and included funds for labor, environmental compliance documentation, etc.

Response to Input: Thank you. Reclamation would be the authority on how much federal money was spent on the EWA.

Page EWA-7, para. 2: Revise the sentence beginning “Of the 58 TAF carried forward”, to read: “Of the 58 TAF carried forward from 2002, 16 TAF of water in San Luis was intentionally backed into Lake Oroville in the fall (by reducing Feather River flow by 20 TAF) because the risk of spill in Oroville was less than in San Luis. Later, in 2003 that water was lost to EWA because Oroville storage reached the flood control storage reservation.”

Response to Input: This revision more clearly describes the events in 2002. Thank you.

Page EWA-8, “Performance of Operational Tools and Other EWA Assets para.”

Suggest the following rewrite: "These are (1) one-half of the "state gain" from pumping the portion of CVPIA b(2) flows or EWP flows that would belong to the CVP under the COA, but exceeds Tracy pump capacity."

Response to Input: By definition "state gain" (i.e. "SWP gain") from b(2) releases occurs when the water cannot be pumped by the CVP in the Delta due to lack of pumping capacity, the SWP pumps it instead, and shares it equally with the EWA. Absent this agreement, it is not clear how the COA accounting would treat this water.

To date EWP acquisitions have resulted in a negligible amount of water in the Delta. It is not clear why water purchased by the EWP should become project water in the Delta. Any agreements to purchase water for the EWP will have to specify the place and purpose of use and the conditions under which the water may be diverted. This element of the EWA Operating Principles Agreement will likely be revisited in the future.

The text as written accurately describes how "state gain" was interpreted during the period covered by this document; the text should stand as-is.

Page EWA-10, top para., cont'd from previous page suggest the following rewrite: "This use of the pumping capacity has higher priority than EWA. SWP contractor's ability to use Article 21 water has been greater during the 2001-2003 period than was assumed when the EWA tools were determined. The combination of Delta hydrology, San Luis storage, and Article 21 demand has not resulted in any opportunities to utilize this EWA asset."

Response to Input: This text helps explain why excess Banks Pumping Plant capacity has not been available to the EWA in the first few years.

Page EWA-10, "E/I Standard Flexibility para.": Substitute the word "fraction" for "percent". Alternatively, use 35%, 65%, and 45% in place of 0.35, 0.65, and 0.45.

Response to Input: Agree that either proposed remedy will produce a correct statement.

Page EWA-12, 3rd para: last sentence: Suggest the following rewrite: "While three years is a relatively short time to assess the average performance of these tools, indications are that either adjustments to the tool mix or to the estimated utility of the operational tools may be necessary to ensure the continued functionality of the EWA."

Response to Input: Management of the EWA under a variety of operational conditions will provide increased insight into the value of each EWA tool. Adjustments to ensure the full functionality of the EWA may be proposed based on operational experience.

EWA-16, Suggest the following rewrite to the last paragraph: “The incidental take for delta smelt was established in the March 1995 FWS biological opinion for CVP-OCAP. The quantities of incidental take, which were established separately for above normal and below normal years, were based on historical salvage at the export facilities. The re-consultation level is a monthly quantity; the early warning level is a 14-day running average of daily salvage of 400/day. Incidental take for all listed species covered by the CVP-OCAP consultation will be revised when FWS and NOAA Fisheries issue biological opinions on the revised CVP-OCAP in 2004.”

Response to Input: The suggested text provides clarification.

I would strike the last sentence in the suggested revision; it is beyond the scope of this document.

EWA-17, 1st para. last sentence suggest the following rewrite: “EWA may also be used for fish actions at the CVP. Typically, this has occurred when no b(2) water was available,”

Response to Input: Agree. Thank you.

Pages EWA - 27, 28, 34, and maybe other pages: the pronoun "we" is used in several instances and it should not be. Please check for the use of this pronoun and replace with the appropriate wording. For example, in the second paragraph, second to last sentence, replace the phase "We assume...." with "It is assumed that...."

Response to Input: We have not purposefully ignored Reclamation guidance on the use of pronouns however, spending time to revise this document in that respect does not seem justified.

Page EWA-35, first para. Suggest the following rewrite to the last sentence: In as much as this was an important objective of the EWA, the EWA in its first three years (now four) may be judged a success for having achieved that objective.”

Response to Input: The intended meaning is the same.
I agree, the meaning is the same; no reason to revise.

Page EWA-37 Conclusions: Suggest rewrite to the first three sentences: “Although the EWA has not achieved the full funding level envisioned in the ROD, it has acquired sufficient water and other operational assets to implement fish actions during its first three years as needed to secure ESA regulatory commitments consistent with the ROD. EWA actions have taken place predominantly in the Delta. A shift in emphasis of EWA actions, if biologically justified, would enable EWA to implement more upstream actions. Alternatively, an increase in funding would enable more emphasis on upstream actions without de-emphasizing Delta actions, and could make some water available for experiments.”

Response to Input: Regulatory commitments were provided based on the availability of EWA assets relative to the fish actions taken annually and on ERP funding at the prescribed level. The revised text clarifies how a given level of EWA asset might be allocated.

There are now, potentially, two RODs to which this or other EWA-related documents may refer, the 2000 CALFED ROD and the 2004 EWA ROD; it is important for the text to retain the distinction.

The suggested revision fundamentally changes the authors' intent. While regulatory commitments are important, the revision discounts the point that EWA assets were insufficient to implement all the desired actions. That's okay; EWA was always meant to be on a budget, but the authors intended for the reader to be aware that, in some situations, more EWA assets might have been used than were available. I see no

Section 6-9, first paragraph under the header "Recommendations," first sentence: insert "assessment of the ERP" after the word "this" and delete "assessment" after the acronym "EWA." The beginning part of this sentence should then read: "During the completion of this assessment of the ERP Milestones and efficacy of the EWA, contributors noted....."

Response to Input: Thank you.

Comments about the Appendices

Two organizations, the Nature Conservancy and the Metropolitan Water District of Southern California (MWD) provided detailed comments about the information found in the appendices. All TNC comments are by ***Jennifer Martin and Steve Johnson, TNC***; all MWD comments are by ***Bridgit Adams, MWD***.

1. **McCormack-Williamson Tract.** The Nature Conservancy (TNC) writes that each of the three grants it received for McCormack-Williamson Tract (99-F03; 99-F04; 02-P25) ought to be listed as supporting the same set of milestones. The four milestones listed in TNC's comments are 9, 13, 14, and 16.

Response to Input: Thank you. The ERP Implementing Agencies concur. Future milestone progress tracking will reflect these changes.

2. **Cosumnes and Mokelumne Rivers Feasibility Study** (#99-CO1/CO2). The Appendices list this contract as addressing Milestones 8, 9, 12, 13, 14, 16, and 22. TNC believes this contract addresses Milestones 5, 17, and 18, but does not address Milestones 8, 9, 16, or 22.

Response to Input: Thank you. Milestones for this project should be 5, 12, 13, 14, 17, and 18. Future milestone progress tracking will reflect these changes.

3. **Cosumnes-Mokelumne Corridor** (#01-N10). This contract may not address Milestone 7, as listed in the appendices; also it is possible that Delta mudwort and Delta tule pea are on Staten Island, as shown in Natural Diversity Database records, however recent surveys have not found any.

Response to Input: Agree with removing milestone 7. Future milestone progress tracking will reflect this change. Thank you.

4. **Staten Island** (#01-N23). Include Milestone 15 as one addressed by this contract, and delete Milestone 13.

Response to Input: Agree with adding milestone 15 and removing milestone 13. Future milestone progress tracking will reflect this change. Thank you.

5. **Sacramento River Floodplain** (#97-N02). Add Milestones 58, 74, 76, 81, 113, and 115 to the list addressed by this contract.

Response to Input: Agree with adding milestones 58 and 74. Reject milestones 76, 81, 113 and 115 pending further clarification. Future milestone progress tracking will reflect this change. Thank you.

6. **Ecosystem & Natural Processes: Riparian Forest** (#97-N03a). Add Milestone 60, parts A and B, to the list addressed by this contract.

Response to Input: Agree with adding milestone 60A. Reject adding 60B since this project will not be establishing habitat preserves for bank swallows. Future milestone progress tracking will reflect this change. Thank you.

7. **Ecosystem & Natural Processes: Meander Belt** (#97-N04). Add Milestones 74, 76, and 81 to the list addressed by this contract.

Response to Input: Agree with adding milestones 74 and 76. Reject adding milestone 81 pending further clarification. Future milestone progress tracking will reflect these changes. Thank you.

8. **Lower Mill Creek** (#97-N08). Add Milestones 59, 62, 67, and 76 to the list addressed by this contract.

Response to Input: Agree with adding milestones 62, 67 and 76. Reject adding milestone 59 pending further clarification. Future milestone progress tracking will reflect these changes. Thank you.

9. **Floodplain Acquisition** (#98-F18). Add Milestone 81 to the list addressed by this contract.

Response to Input: Agree with adding this milestone. Future milestone progress tracking

will reflect these changes. Thank you.

10. **Deer and Mill Creeks** (#98-F20). Add Milestones 59, 67, and 76 to the list addressed by this contract.

Response to Input: Agree with adding milestones 59, 67 and 76. Future milestone progress tracking will reflect these changes. Thank you.

11. **Sacramento River Floodplain** (#00-F03). Add Milestones 58, 113, and 116 to the list addressed by this contract.

Response to Input: Agree with adding milestones 58 and 113. Reject milestone 116 pending further clarification. Future milestone progress tracking will reflect these changes. Thank you.

12. **Battle Creek** (#01-N24). Add Milestones 59, 64, 67, 69, 76 to the list addressed by this contract.

Response to Input: Agree with adding milestone 64. Reject milestones 59, 67, 69 and 76 pending further clarification. Future milestone progress tracking will reflect these changes. Thank you.

13. **Collaborative Approach Flow Regime** (#02D-P61). Add Milestones 62, 71, 113, and 115 to the list addressed by this contract.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations. Milestone 62G (rationale: This project will build integrated decision analysis model to evaluate flow scenarios against ecosystem components such as riparian vegetation response, and will also assess bank protection for habitat); Milestone 71 (rationale: This project will initiate field studies to quantify fluvial geomorphic processes that create and maintain off-channel habitats); Milestone 113A (rationale: This project will quantify the extent of cottonwood recruitment relevant to flow conditions); Milestone 115A (rationale: This project will develop and communicate multi-species conservation flow regime recommendations).

14. **Sacramento River, Big Chico and Mud creeks confluence** (#02-P16-D). Add Milestones 74, 76, and 81 to the list addressed by this contract.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

15. **Mill and Deer Creeks stewardship** (#02-P26). Add Milestones 59, 67, 76, and 112 to the list addressed by this contract.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations. Milestone 59

(rationale: Development of Stewardship Plans to protect and restore natural riparian, aquatic, and terrestrial habitats in order to maintain continuous habitat corridors on key tributaries and at their confluences with the upper Sacramento River); Milestone 67 (rationale: The purchase of conservation easements in the Mill Creek and Deer Creek watersheds which limit the amount of water diversions required for residential development and intensive agricultural will improve flow conditions for fish); Milestone 76 (rationale: The purchase of conservation easements in the Mill Creek and Deer Creek watersheds will reduce the threat of water quality degradation for salmon and Steelhead by limiting the negative impacts that are generated by residential development and intensive agricultural conversion.); Milestone 112 (rationale: Development and implementation of monitoring plans for compliance with stewardship plan)

16. **Battle Creek stewardship** (IMM-02-I01). Add Milestones 59, 76, and 112 to the list addressed by this contract.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

17. **Contract 98-B7**: amount should read $3,500,000.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations.

18. **Contract 98-F04:** incorrectly identified as a TNC grant; likely a Mill Creek Conservancy grant

Response to Input: Mill Creek Conservancy and TNC are co-applicants. TNC staff was consulted for the field review.

19. **Wildlife Friendly Agriculture:** Although not always identified as an explicitly goal in proposals, we are implementing wildlife-friendly agricultural practices (Milestone 61) on all properties acquired by TNC.

Response to Input: Thank you. This information will be considered during implementation planning and in subsequent milestones evaluations with TNC assistance in identifying all relevant projects.

The MWD table on the following pages is a comparison between the ERP project list in the appendices to an ERP project list "given to MWD from CALFED personnel." The list obtained by MWD from CALFED was associated with ERP budget forecast (excel-format) documentation. There are a number of ERP projects that are listed in one source but not in the other and vice versa.

Projects in MWD database that do not correspond to R. of C. contract database.

(MWD Database contains projects from ERP Budget Forecast v3.xls sent by CalFed and projects listed in KCWA ERP database.)

Region	Topic	Year	PSP #	CalfedID	Title	Award
Delta & East Side Tributaries	Riparian Habitat	1996		ERP-96-M09	Sherman Island - Levee Habitat Demonstration Project	$480,000
San Joaquin	Fish Screens and Passage	1996		ERP-96-M20	Fish Screen Project	$100,000
Sacramento	Fish Screens and Passage	1997		ERP-97-M01	Wilson Ranch Fish Screen Project	$200,000
Delta & East Side Tributaries	Fish Screens and Passage	1998		ERP-98-C16	Developing a Methodology to Accurately Simulate Entrainment of Fish (Pump Barge Study)	$200,000
Sacramento	Fish Screens and Passage	1998		ERP-98-N04		$100,000
Delta & East Side Tributaries	Flood Plains and Bypasses	1999		ERP-99-A01	Inundation of a Section of the Yolo Bypass to Restore Sacramento Splittail & Other Native Species.	$820,679
Delta & East Side Tributaries	Shallow Water Tidal and Marsh Habitat	1999		ERP-99-A02	Prospect Island Monitoring Project	$915,000
Bay	Nonnative Invasive Species	2000		ERP-00-F09	Treating Ballast Water Discharges at Existing Municipal Wastewater Treatment Plants	$122,014
Delta & East Side Tributaries	Shallow Water Tidal and Marsh Habitat	2001		ERP-01-N15	Fay Island Restoration Project, Phase I	$744,148
San Joaquin	Channel Dynamics and Sediment Transport	2001		ERP-01-N61	Tuolumne River Mining Reach Restoration No 3, Warner-Deardorff Segment	$910,486

Response to input: All of the above projects were not included in milestone review because they were cancelled.

Projects in MWD database that did not correspond to R. of C. contract database due to changed ID number. The MWD database in now updated to reflect new ID #.

Region	Topic	Year	PSP #	CalfedID	Title	Award	Changed ID #
Sacramento	Natural Flow Regimes	2001		ERP-01-N02	Real-Time Flow Monitoring	$418,700	ERP-01-C02
Bay	Nonnative Invasive Species	2001		ERP-01-N05	Invasive Spartina Project (ISP)	$1,793,661	ERP-01-C01
San Joaquin	Channel Dynamics and Sediment Transport	2001		ERP-01-N06	Revised Phase 2 - Merced River Salmon Habitat Enhancement: River Mile 42 to 44 (Robinson Ranch Site)	$1,699,101	ERP-01-C03
Delta & East Side Tributaries	Channel Dynamics and Sediment Transport	2001		ERP-01-N07	Sedimentation in the Delta and Suisun Bay	$1,367,684	ERP-01-C06
Bay	Shallow Water Tidal and Marsh Habitat	2001		ERP-01-N14	Hill Slough West Habitat Restoration Demonstration Project, Phase II	$87,000	ERP-01-C09
Bay	Shallow Water Tidal and Marsh Habitat	2001		ERP-01-N17	Suisun Marsh Property Acquisition & Habitat Restoration	$536,750	ERP-01-C04
Delta & East Side Tributaries	Shallow Water Tidal and Marsh Habitat	2001		ERP-01-N18	Feasibility Study of the Ecosystem & Water Quality Benefits Associated with Restoration of Franks Tract, Big Break, and Lower Sherman Lake	$1,218,105	ERP-01-C05
Delta & East Side Tributaries	Ecosystem Water & Sediment Quality	2001		ERP-01-N20	Transport, Transformation & Effects of Se and C in the Delta: Implications for ERP	$2,600,000	ERP-01-C07

Response to input: These are projects whose ERP ID number was changed. The new ID numbers are reflected in the current milestone progress tracking document. Thank you.

Projects in MWD database that were non-ERP projects as indicated by ID # listed in R. of. C. contract database.

Region	Topic	Year	PSP #	CalfedID	Title	Award
Sacramento	Fishery Assessment	2002	15	AFRP-2002-09	Lower Yuba River Juvenile Chinook Salmon Life History and Thermal Bioenergetics Evaluation	$733,115
Sacramento	Flood Plains and Bypasses	2002	24	AFRP-2002-04	Lower Butte Creek Project: Sutter Bypass - Willow Slough Weir Fish Passage Project	$155,000
San Joaquin	Channel Dynamics and Sediment Transport	2002	39	AFRP-2002-10	Continued Studies for the Knights Ferry gravel Replenishment Project, Phase II	$139,744
San Joaquin	Fishery Assessment	2002	98	AFRP-2003-03	A feasibility investigation of reintroduction of Anadromous Salmonids above Crocker-Huffman Dam on the Merced River	$160,758
San Joaquin	Fishery Assessment	2002	176	AFRP-2002-07	Test and Demonstrate a portable Alaskan Weir to Count and Characterize Runs of Anadromous Salmonids in the Stanislaus River	$659,590
Multiple	Channel Dynamics and Sediment Transport	2002	195	AFRP-2002-01	Demonstration Project to Test a New Interdisciplinary Approach to Rehabilitating Salmon Spawning Habitat in the Central Valley	$254,720
Multiple	Fishery Assessment	2002	210	AFRP-2002-08	Sex-reversal in Central Valley Chinook Salmon: occurrence and population genetic consequence	211936
Delta & East Side Tributaries	Ecosystem Water & Sediment Quality	2002	239	?	Investigating In-situ Low Intensity Chemical Dosing to Decrease Delta Waters DOC Concentrations & DBP Precursors while Accelerating Wetland Peat Accretion Rates & Reducing Flood Risks	$767,135
San Joaquin	Special Status Species	2002	245	AFRP-2002-06	Comprehensive Assessment of Genetic Population Structure & Diversity for Central Valley Chinook Salmon	$385,869

Sacramento	Fish Screens and Passage	2002	260	AFRP-2002-05	Yuba Goldfields Fish Barrier Replacement Project	$68,260
Entire Bay-Delta Watershed	Special Status Species	2003	13DA	AFRP-2003-05	Distribution and Relationship of Resident and Anadromous Central Valley Rainbow Trout	$158,756
Sacramento	Uplands and Wildlife Friendly Agriculture	2003	166DA	IMM-02-I01	Battle Creek Protection and Stewardship	$2,206,625
Sacramento	Natural Flow Regimes	2003	174DA	AFRP-2003-06	Lower American River Temperature Reduction Modeling Project (formerly the Lake Natoma Temperature Curtains Pilot Project)	$466,082
Sacramento	Fish Screens and Passage	2003	59DA	AFRP-2002-11	White Mallard Dam and Associated Diversions - Phase III Construction	$753,415

Response to input: Thank you. All of these projects are listed in Appendix A except AFRP-2002-11 and the project with the question mark. These two projects have ERP funding and thus are listed under ERP contracts.

CLARIFICATION OF WATER QUALITY STATUS ASSESSMENTS

During the milestones assessment a dilemma arose when it became clear that many of the water quality related milestones could not be classified under the categories used to define the status of the other milestones because of the multi jurisdictional nature of the water quality milestones. The issues addressed by the milestones are governed by Regional Water Quality Control Boards, U.S. Environmental Protection Agency, California Environmental Protection Agency, California Department of Health Services, Department of Pesticide Regulation, to name a few agencies and a milieu of county departments with regulatory and statutory responsibility over the water quality milestones. These combined efforts had resulted in substantial progress, but the measure of progress was difficult to articulate. While these milestone criteria were being refined, they were described as "under evaluation" to reflect the ongoing assessment of complicated and multifaceted issues and programs.

Since the milestones assessment was completed, staff refined the assessment of 20 water quality milestones that result in their status change from "under evaluation" to "on schedule." The discussion of these water quality milestones and supporting information is below.

Comments on water quality milestones related to agricultural activities – *CBDA*

The milestones assessment included approximately 20 water quality milestones that pertained to non-point sources, particularly agriculture. Approximately 16 of those 20 milestones were reported as "under evaluation" due to the need to evaluate activities in other programs that might support those milestones. Below is a brief summary of some of the programs and resources that are currently addressing nonpoint source pollution and water quality from agricultural land use. Based on the extensive programs in place and the amount of funding available from the State Board in the next few years (approximately $50 million), we feel that these milestones are being addressed adequately by other programs. The milestones related to agricultural water quality (27, 28, 29, 33, 35, 45, 46, 47, 49, 51, 73, 75, 76, 80, 81, 101, 104, 105, 107, 109)* should be reported that progress is "on schedule" instead of "under evaluation".

Programs established to control Non Point Source Pollution from agriculture in California include joint efforts by local, State, and federal agencies. The State Water Resources Control Board (SWRCB), the California Coastal Commission (CCC) oversees the statewide program, with assistance from the Department of Pesticide Regulation for pesticide pollution and the Department of Water Resources for irrigation water management. Local governments administer programs for general planning and local coastal plans. The California Natural Resource Conservation Service (NRCS) and the University of California Cooperative Extension Service provide technical and financial service for farmers. Resource Conservation Districts also provide guidance, training, and technical assistance.

The State Water Resources Control Board (SWRCB) has recently posted information about the Non-Point Source Program and the Agricultural Water Quality Grant Program. The "California NonPoint Source Encyclopedia" contains detailed information on programs on resources, programs and projects that are implementing management measures to control nonpoint source pollution. In 1998, SWRCB, the Regional Boards, and the Coastal Commission developed a 15-year strategy for the NonPoint Source Program (*Plan for California's Nonpoint Source Pollution Control Program*). The Strategy described the vision and goals of the NPS Program, including the basic NPS Program process elements of planning, coordination, implementation, monitoring and tracking, and assessment and reporting of NPS Program activities. The "NPS Program Five-Year Implementation Plan" lists nearly 200 pages of planned activities to reduce non-point source pollution in 2003-2008. The SWRCB has also posted a summary of activities to date of CALEPA to address nonpoint source pollution, including nutrients, animal operations, pesticides and sediment. The summary of activity for agriculture management actions (statewide) includes 168 projects completed, and 88 projects underway. The Central Valley Regional Water Quality Control Board has also recently adopted a Conditional Waiver of Waste Discharge Requirements for irrigated agriculture that requires dischargers, or coalition groups of dischargers, to perform monitoring and address water quality problems identified in the monitoring. For additional information on programs addressing agricultural water quality, please see attachment 1.

The table below is a list of funds available for grants to address nonpoint source pollution or watershed management, which will be administered by SWRCB.

Source of funds	Amount	Program	Description	Schedule
Prop 40	$11.4 million	Ag Water Quality	Surface Water Quality Monitoring	2004-2008
Prop 50	$29.5 million	Ag Water Quality	Implementation projects	2004-2008
USEPA	$5.5 million	Ag Water Quality -319-NonPoint Source	Implementation projects for TMDLs	2004
Prop 50	$5 million	Dairy Water Quality		2005-2006
Prop 40	$14.2 million	Urban Stormwater		2004-2008
Prop 40	$19 million	Non Point Source	NPS Pollution control projects	2004-2008
Prop 40	$47.5 million	Integrated Watershed Management		2004-2008
	$51.4 million	**Total Ag Water Quality funds**		
	$80.7 million	**Total NPS and Watershed funds**		

*The following list of 20 milestones is largely related to non-point sources, and in particular agricultural land use.

Milestone 27 (Delta), 45(SF Bay), 73(Sacramento), 101(San Joaquin). Develop, implement, and support measures to reduce pollutant (oxygen depleting substances, nutrients, and ammonia) discharges from concentrated animal feeding operations (from Phase II Report).
Change from "Under evaluation" to "On Schedule"

CBDA

Response to Input: A group of state agencies led by the SWRCB and coordinated with local and federal technical assistance programs developed and implement the Non Point Source Program that includes significant efforts to address nutrient management from agricultural operations. Future efforts will be accelerated by the Agricultural Water Quality Grant Program, which will provide over $50 million in funds for monitoring, planning and implementation projects to address water quality issues from agricultural land use. At least $5 million will specifically address water quality issues associated with dairies. Based on the activities of these programs, the "Progress" should be changed from "under evaluation" to "on schedule".

Milestone 28 (Delta), 46(SF Bay), 75(Sacramento), 104(San Joaquin. Encourage regulatory activity to reduce discharge of oxygen reducing substances and nutrients by unpermitted dischargers (from Phase II Report).
Change from "Under evaluation" to "On Schedule"

CBDA

Response to Input: The CVRWQCB has recently adopted a general permit that requires agricultural dischargers or coalition groups of dischargers, to perform monitoring and address water quality problems that are identified in the monitoring. In addition, a group of state agencies, led by the SWRCB and coordinated with local and federal technical assistance programs, developed and implemented the Non Point Source Program that includes significant efforts to address nutrient management from agricultural operations. Future efforts will be accelerated by the Agricultural Water Quality Grant Program, which will provide over $50 million in funds for monitoring, planning and implementation projects to address water quality issues from agricultural land use. Based on the activities of these programs, the "Progress" should be changed from "under evaluation" to "on schedule".

Milestone 33 (Delta), 49(Bay), 80(Sacramento), 107(San Joaquin). Conduct the following pesticide work (from Phase II Report):

- Develop diazinon and chlorpyrifos hazard assessment criteria with CDFG and the Department of Pesticide Regulations.
- Support development and implementation of a TMDL for diazinon.
- Develop BMPs for dormant spray and household uses.
- Determine the ecological significance of pesticide discharges.
- Support implementation of BMPs.
- Monitor to determine effectiveness of BMPs.

Progress continues to be "On schedule"

CBDA

Response to Input: The NRCS and other local programs have developed numerous resources to provide advice on BMPs for agriculture, as well as demonstration projects. In addition the SWRCB Non-Point Source Program includes considerable efforts to address pesticide impairment from both agricultural and urban sources. Future efforts will be accelerated with over $50 million in grants to address water quality from agriculture, and over $14 million to address urban storm water runoff, and an additional $55 million for other non point source and watershed management projects (statewide). These grants will be administered by SWRCB.

Milestone 35 (Delta), 51(Bay), 81(Sacramento), 109(San Joaquin). . Conduct the following actions in reduce organochlorine pesticide inputs to streams (from Phase II Report):

Participate in implementation of USDA sediment reduction program.

- Implement sediment reduction BMPs on agricultural lands and other specific sites.
- Implement BMPs for urban/industrial storm water runoff and discharges to reduce PCB and organochlorine pesticides.

Change from "Under evaluation" to "On Schedule"

CBDA

Response to Input: The NRCS and other local programs have developed numerous resources to provide advice on BMPs for agriculture, as well as demonstration projects. In addition, the SWRCB Non-Point Source Program and the Storm water programs at the Regional Boards include considerable efforts to address sediment control from both agricultural and urban sources. Efforts will be accelerated as SWRCB administers over $130 million in grants to address agricultural water quality, urban runoff and watershed management (statewide) over the next 4 years.

Milestone 29(Delta), 47(Bay), Sacramento (76), San Joaquin(105). Actions to reduce fine sediment loading to streams, especially Tuolumne, Merced, Stanislaus, Cosumnes, Napa, and Petaluma Rivers, and Sonoma Creek, due to human activities (from Phase II Report and Water Quality Program Plan):

- Participate in implementation of U.S. Department of Agriculture (USDA) sediment reduction program.
- Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.
- Implement stream restoration and revegetation work.
- Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.

Change from "Under evaluation" to "On Schedule"

CBDA

Response to Input: The NRCS and other local programs have developed numerous resources to provide advice on BMPs for agriculture, as well as demonstration projects. In addition, the SWRCB Non-Point Source Program and the Storm water programs at the Regional Boards include considerable efforts to address sediment control from both agricultural and urban sources. Efforts will be accelerated as SWRCB administers over $130 million in grants to address agricultural water quality, urban runoff and watershed management (statewide) over the next 4 years.

ERRATA – EDITORIAL COMMENT TO CLARIFY AND REMEDY OMISSIONS IN THE MILESTONES AND EWA ASSESSMENT

The following comments are comments provided during the preparation of the milestones assessment that were accepted and approved for inclusion in the assessment package posted on the website July 9, 2004 and sent to the U.S. Fish and Wildlife Service and National Marine Fisheries Service under the cover letter of the Bureau of Reclamation on July 16. These revisions were left out of the assessment but were intended to be part of the document.

Milestone 20. Develop and begin implementation of a program to reduce or eliminate the influx of non-native aquatic species in ship ballast water. I suggest revising Milestone 20 to say something like: "Support state and federal ballast water activities and programs to reduce or eliminate the influx of non-native aquatic species in ship ballast water." With the state ballast water program in place and federal rules/programs evolving, I think this alternative language could reflect a modified CBDA role rather than CBDA developing another program to address ballast water. There are numerous ballast water related projects that have been funded through CALFED and it's important to recognize that support and future support. But I think this modified language would allow that continued support, but not set up public expectations that CBDA will have its own ballast water program.

Status. Six ERP contracts were awarded to address this milestone. These contracts provide for public education and awareness efforts; data collection to reduce the nonnative invasive species (NIS) introduction from ballast water; forming and supporting the NIS Advisory Council to promote, prevent and guide eradication of NIS; preparing five reports that are both long-range strategies and short-term guides for local eradication; a West Coast Ballast Outreach effort, and a project to determine the biological, physical, and chemical characteristics of ballast water arriving in the San Francisco Bay-Delta Estuary. Continued support especially of operational components will be necessary, but strong progress has been made regarding this milestone.

Other non-CALFED programs are ~~may be~~ contributing towards attainment of this milestone. The State of California passed ballast water management legislation in

1999 (AB703) that created a ballast water program for California. On January 1, 2004, Assembly Bill 433 went into effect, which reauthorized and enhanced the previous legislation. Various state agencies implement components of the California legislation, including State Lands Commission and DFG (OSPR). Federal legislation that addresses ballast water management is also in place and is up for reauthorization. Coast Guard, FWS, State Lands Commission and DFG are working ~~For example, the FWS, DFG, and Food and Agriculture may be involved in ongoing negotiations~~ with ports and shipping companies to implement ~~for~~ operational changes, inspection programs, and regulations to improve control of NIS introduction from ballast water; these efforts have yet to be fully evaluated in this milestone assessment process.

Progress. On schedule

Next Steps. Although a program has not yet been implemented, there has been a lot of progress made regarding this milestone. Recommend continued support to existing and future ballast water efforts, both state and federally, and continued NIS Program coordination with ballast water programs and activities. Due to programs developed at the state level, a separate Ballast Water Program within CALFED is not recommended. ~~Continued coordination amongst the parties involved in ballast water efforts needs to continue.~~ Efforts should be made to coordinate with other groups that are coordinating ballast water ~~by the NIS Advisory Council to synthesize the~~ efforts in San Francisco Estuary and CALFED should work with these groups as they ~~to date to develop a strategy~~ develop strategies for filling data gaps and implementing plans ~~a plan~~ that focus on ~~better control measures for~~ ballast water management. ***FWS***

Milestone 22. Develop and begin implementation of a demonstration program to reduce invasive non-native plant abundance within at least one EMU in the Delta. Especially since this is the only other NIS milestone for CALFED, I suggest revising this milestone to say something like “Develop and begin implementation of a program to reduce invasive non-native species abundance in the CALFED area of concern.” Or since if this needs to be Delta specific "Develop .... within at least one EMU in the Delta."

Status. Some ERP contracts that deal with NIS in the San Francisco Bay also apply to the Delta, like the two contracts that initiated and provided continued support for the NIS Advisory Council. Other contracts support comprehensive efforts to map occurrences of, eradicate, or control a variety of NIS species in the Delta such as *Lepidium latifolium, Arundo*, purple loosestrife, and shallow water aquatic NIS ~~plants~~ species. Still other contracts provide for education and identification videos and guides to help educate the public regarding NIS species. One contract addresses eradication of NIS plants on 7 miles of levee on Georgiana Slough. Other contracts control or eradicate NIS plants as a subset of Delta habitat restoration.

Other non-CALFED programs are contributing to towards this milestone. For example, DFG and FWS conduct regular management practices to control and eradicate NIS on their properties. Additionally, County Agriculture Commissioners and Agriculture Extension Offices provide expertise and guidance for control of NIS.

Progress. On schedule

Next Steps. To date, there has been a lot of planning to map distribution of certain NIS species and some local eradication programs. Increased and continued support of the NIS Program ~~Advisory Council~~ and local programs is needed. Regional priorities should be established, if not already available, and coordinated both locally and at the landscape level in order to implement a program. Lessons learned from the existing efforts should be evaluated for effectiveness for both control and cost and made available. ***FWS***

From page 5-9: EWA Share of (b)(2)/ERP Water Pumped in the Delta. CVPIA (b)(2) water or ERP water released for upstream purposes may be pumped in the Delta by the SWP after the water has served its (b)(2) or ERP purpose. One half of (b)(2) and ERP upstream releases thus pumped by the SWP becomes an EWA asset. This tool was expected to produce 40 TAF on average each year. Instead the amount obtained was 46 TAF, 3 TAF and 19 TAF in 2001, 2002 and 2003, respectively; averaging less than 23 TAF per year. One reason for the lower than expected average amount of EWA water produced by this tool is the changes in (b)(2) accounting rules made in response to Federal Court decisions that have reduced the amount of (b)(2) water used for upstream releases, thus reducing the amount of (b)(2) water diverted from the Delta. ~~Another reason is that to date no water has been purchased by the ERP Environmental Water Program (EWP) so no water from this source has been available to be diverted in the Delta.~~ Another reason is that to date water purchased by the ERP Environmental Water Program (EWP) has not been of a quantity, or purchased in a manner, that could be made available to be diverted in the Delta. ***FWS***