LOWER SANTA ANA RIVER

Orange and Riverside Counties

GEOGRAPHIC RESPONSE PLAN
OIL SPILL RESPONSE

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

OFFICE OF SPILL PREVENTION AND RESPONSE

JUNE 2021

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Spill Response Contact Sheet

Immediate Emergency Notifications for Oil Spills Call Upon Discovery of Spill	
	*** Staffed 24-Hours/Day**
Local Emergency Response Agencies	**911***
State Notification - California Office of Emergency Services, State Warning Center (State Law requires that ANY discharge or threatened discharge of oil into STATE WATERS must be reported to Cal OES immediately) †See Footnote on spill thresholds for notification.	**(800) 852-7550***
Certified Unified Program Agency (CUPA) (CalOES Spill Report will be emailed to CUPA as part of their immediate notification)	
Orange County Environmental Health Division	**(714) 433-6406**
Anaheim City Fire Department	**(714) 765-4047** **(714) 765-4072**
Riverside County Department of Environmental Health	**(951) 358-5055** **(888) 722-4234** **(951) 782-2968***
Federal Notification - National Response Center: Any person in charge of a vessel or of an onshore or offshore facility is subject to the federal reporting requirements of the Discharge of Oil regulation if it discharges a harmful quantity of oil to U.S. navigable waters, adjoining shorelines, or the contiguous zone. ‡	**(800) 424-8802***
Infrastructure Emergency Notification: Promptly Notify	
Railroad, Pipeline, Fixed Facilities	
UPRR Railroad Emergency	**(888) 877-7267***
BNSF Railroad Emergency	**(800) 832-5452***
Kinder Morgan Pipeline Emergency	**(866) 762-8442***
Southern California Edison (SCE)	**(800) 611-1911***
Southern California Gas	**(800) 427-2200***
Highways, Utilities, Dams, Other Infrastructure	
California Highway Patrol (as appropriate) (The California Highway Patrol must be notified for spills occurring on highways in the State of California.)	**911/Local CHP Office***
California Department of Transportation (Caltrans)	
San Bernardino/Riverside, District 8	**(909) 383-4631**
Orange County, District 12	**(657) 328-6000**
Prado Dam, U.S. Army Corps of Engineers, Los Angeles District	**(213) 452-3440*** **(626) 372-0194***
Calif. Department of Water Resources, State Water Projects/Aqueducts	**(916) 574-2714***
Orange County Sanitation District	**(714) 593-7025*** **(714) 593-7625***
Oil Spill Response Agency Notifications: Promptly Notify	
CDFW Office of Spill Prevention and Response (OSPR)	
OSPR Dispatch - Report Oil Spills	**800-852-7550* or 800-OILS-911***

	* Staffed 24-Hours/Day
Oil Spill Response Agency Notifications: Promptly Notify (continued)	
Oiled Wildlife Care Network	
OWCN Activation/Oiled Wildlife Hotline	(877) 823-6926*
U.S. Environmental Protection Agency	
24-Hour Duty Officer	(800) 300-2193*
CALFIRE Office of the State Fire Marshal	
24-Hour Duty Chief	(916) 323-7390*
On-Call Pipeline Safety Engineer: Doug Allen	(916) 591-0699
On-Call Pipeline Safety Engineer: Alin Podoreanu	(916) 212-8891
Local Fire and Law Enforcement	
Cal Fire Southern Region – Chief	(559) 243-4100
Cal Fire Southern Region – Riverside Unit	(951) 940-6900
Orange County Fire Authority	(714) 573-6000
Anaheim City Fire Department, CUPA	(714) 765-4047
Costa Mesa Fire Department	(714) 754-5106
Fountain Valley Fire Department	(714) 593-4436
Huntington Beach Fire Department	(714) 536-5411
Newport Beach Fire Department	(949) 644-3104 (949) 644-3355
Orange City Fire Department	(714) 288-2500
Riverside County Fire Department	(951) 940-6900
City of Corona Fire Department	(951) 736-2220
Local Government (City and County)	
Riverside County Emergency Management Services Duty Officer	(951) 712-3342*
Orange County Emergency Management Division, Dispatch	(714) 288-6740* (714) 647-7000*, dial 19, 1
Affected or Adjacent Agencies to Notify Early-On as Appropriate; If In Doubt, Notify	
Water Districts, Water Intakes and County Water Agencies	
Municipal Water District of Orange County	(714) 963-3058
Orange County Water District	(714) 378-3200 (714) 378-3240*
San Bernardino Municipal Water Dept.	(909) 384-5095
Western Municipal Water District	(951) 789-5100 (951) 789-5109*

	*** Staffed 24-Hours/Day**
Affected or Adjacent Agencies to Notify Early-On as Appropriate; If In Doubt, Notify (contined)	
Public Works and Traffic Control	
Orange County Dept. of Public Works	**(714) 955-0200 (714) 719-1856***
Riverside County Public Works	
Flood Control and Water Conservation District	**(951) 955-1200 (951) 955-1230***
Transportation Department	**(951) 955-6880**
Statewide Traffic Safety & Signs, Santa Ana	**(714) 468-1919**
Additional Contact Information as Appropriate; If In Doubt, Notify	
Federal Agencies	
U.S. Department of the Interior, Regional Environmental Officer	**(415) 420-0524**
U.S.D.A. Forest Service: Forest Spill Coordinator, Belinda Walker, Asst. Regional Environmental Engineer	**(909) 229-5201**
U.S. Coast Guard, Sector LA/LB	**(310) 521-3801**
Bureau of Land Management (Palm Springs)	**(760) 833-7100**
U.S. Fish & Wildlife Service	
Carlsbad Office	**(760) 431-9440 (760) 607-9768***
Damien Higgins (Regional Spill Response Coordinator)	**(916) 943-8529**
NOAA Scientific Support Coordinator, Jordan Stout	**(206) 321-3320***
FEMA Region IX, 24-Hour Duty Officer	**(510) 627-7700* (800) 395-6042***
State Agencies	
Calif. Department of Fish and Wildlife	
Region 5, Regional Manager, Erinn Wilson-Olgin	**(562) 900-8138**
Region 6, Regional Manager, Heidi Calvert	**(760) 614-5098**
CalEPA Duty Officer Email: epadofficer@calepa.mail.onmicrosoft.com	
Jason Boetzer, REHS Assistant Secretary Local Program Coordination and Emergency Management	**o: (916) 327-9558 c: (916) 715-3005**
John Elkins Environmental Program Manager Emergency Response, Refinery Safety, CalARP, & HMBP	**c: (916) 804-8349**
Kristi Placencia Emergency Response Coordinator	**o: (916) 327-7780 c: (916) 601-7845**
CAL FIRE - Office of the State Fire Marshal, Pipeline Safety Division, Long Beach	**(562) 497-0350**
Calif. Regional Water Quality Control Board (Santa Ana)	**(951) 782-4130**
State Water Resources Control Board, Emergency Management Program	**Sarah Ries (916) 809-2558* Laura Fisher (916) 747-5501***

	*** Staffed 24-Hours/Day**
Additional Contact Information as Appropriate; If in Doubt, Notify (continued)	
State Water Resources Control Board, Division of Drinking Water, Southern California Field Operations Branch, Santa Ana Office	**OES Warning Center (800) 852-7550* or (714) 558-4410 Ask for SWRCB - Division of Drinking Water - Field Operations Branch**
Calif. Department of Water Resources	**(916) 574-2714**
Calif. Geologic Energy Management Division	**(916) 322-1110**
Calif. Department Toxic Substance Control	**(800) 260-3972**
Calif. Department of Public Health, Duty Officer	**(916) 328-3605***
Tribal and Historic Contacts (Individual Tribal contacts can be found on page 148)	
Native American Heritage Commission (NAHC)	**(916) 373-3710**
Andrew Green	**(916) 373-3710**
California Historic Resources Information System (CHRIS)	
South Central Coastal Information Center (Orange County)	**(657) 278-5395**
Eastern Information Center (Riverside County)	**(951) 827-5745**
Emergency Response Resources	
Orange Coast Memorial Hospital	**(877) 696-3622**
UCI Trauma Center	**(714) 456-7890**
Corona Regional Medical Center	**(951) 737-4343**
CHEMTREC 24-Hour Hotline	**(800) 424-9300***
CHEMTREC provides emergency information for chemical releases and fire control measures, assistance with chemical identification, and notification of manufacturer and/or shipper.	
Poison Control Centers 24-Hour Hotline	**(800) 222-1222***
Poison Control Centers provide poison/exposure information to emergency personnel and the public and has regional hospital capabilities for exposed victims. Calls are automatically forwarded to the nearest center: Sacramento, San Francisco, Fresno, and San Diego.	
Footnotes	
†California State Warning Center (Califonia Governor's Office of Emergency Services, Cal OES) State Law requires that ANY discharge or threatened discharge of oil into STATE WATERS must be reported to Cal OES [California Government Code (GC) §8670.25.5; California Water Code (WC) §13272, California State Oil Spill Contingency Plan]. If the release of oil is on land and is not discharged or threatening to discharge into State Waters; and (a) does not cause harm or threaten to cause harm to the public health and safety, the environment, or property; AND (b) is under 42 gallons, then no notification to the CSWC is required.	
‡National Response Center Any person in charge of a vessel or of an onshore or offshore facility is subject to the federal reporting requirements of the Discharge of Oil regulation if it discharges a harmful quantity of oil to U.S. navigable waters, adjoining shorelines, or the contiguous zone. A harmful quantity is any quantity of discharged oil that violates state water quality standards, causes a film or sheen on the water's surface, or leaves sludge or emulsion beneath the surface. A facility should report discharges to the National Response Center.	

The requirement for reporting oil spills stems from the Discharge of Oil Regulation, known as the "sheen rule." Under this regulation, oil spill reporting does not depend on the specific amount of oil spilled, but on the presence of a visible sheen created by the spilled oil. If a facility or vessel discharges oil to navigable waters or adjoining shorelines, waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or Deepwater Port Act of 1974, or which may affect natural resources under exclusive U.S. authority, the owner/operator is required to follow certain federal reporting requirements. These requirements are found in two EPA regulations – 40 CFR part 110, Discharge of Oil regulation, and 40 CFR part 112, Oil Pollution Prevention regulation. The Discharge of Oil regulation provides the framework for determining whether an oil discharge to inland and coastal waters or adjoining shorelines should be reported to the National Response Center. The Oil Pollution Prevention regulation, part of which is commonly referred to as the “SPCC rule,” identifies certain types of discharges from regulated facilities that also need to be reported to EPA. https://www.epa.gov/sites/production/files/2014-06/documents/spccfactsheetspillreportingdec06-1.pdf
Contingency Plan holders in the State of California must begin notification procedures within 30 minutes of learning of a spill and must complete notifications to CalOES, NRC, QI, OSRO, SMT, and if there is a threat to wildlife, OWCN, within 2 hours from the initiation of making notifications.

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Before you print this document:

This document is intended, and designed, to be printed out on 2-sided pages.

The following pages are provided in "landscape" orientation, 8.5 x 11:

- Chapter 1, Figure 1-2, pages 5-6
- Chapter 3, Figure 3-1, pages 21-22
- Chapter 3, Figure 3-2, pages 33-34
- Chapter 3, Figure 3-3, pages 43-44
- Chapter 3, Figure 3-4, pages 67-68
- Chapter 3, Figure 3-5, pages 89-90
- Chapter 4, Table 4-1 on pages 123 – 142

The following pages are provided in "landscape" orientation, paper size 11 x 17:

- Chapter 3, Table 3-1, pages 25-30

The following pages are provided in "portrait" orientation, 8.5 x 14:

- Appendix F, Table F-2, pages 175-176

All other chapters and appendices are oriented in "portrait," 8.5 x 11.

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Lower Santa Ana River
Geographic Response Plan

Purpose and Use of this Plan

This Geographic Response Plan (GRP) has been developed for inland waters of California by the California Department of Fish and Wildlife (CDFW), Office of Spill Prevention and Response (OSPR). This GRP includes response strategies, response methods, and shoreline countermeasures to be used by spill response personnel to rapidly and efficiently address actual or threatened oil spill releases to the Lower Santa Ana River. This GRP was developed to facilitate oil spill response preparedness and to expedite spill response activities in the GRP coverage area and is meant to aid the response community during the initial phase of an oil spill. The GRP provides tactical response strategies and identifies available access to the shoreline. By using this document, it is hoped that immediate and proper action can be taken to reduce potential impacts that oil may have on the environment as well as any sensitive resources in the area.

The strategies shown in this GRP were developed using the best information available at the time of preparation. However, no one strategy can effectively address all environmental conditions considering seasonal, annual, and localized site-specific conditions. An on-site evaluation of actual conditions is often needed to determine whether a response strategy is safe to deploy and whether it will be effective under existing environmental conditions or effective for the particular type of oil involved. Responders must use on-scene judgment based on real-time observations to ensure a safe and effective response. The strategies discussed in this GRP have been designed for use with persistent oils that float on water and may or may not be suitable for other oil products or hazardous substances.

After a spill occurs, efforts to control and contain the spill at or near the source should be a top priority. Beyond those efforts, the appropriate booming, damming and notification strategies provided in Chapter 3 of this GRP should be implemented as soon as possible, unless overflight information, spill trajectory models, or circumstances unique to a particular spill situation dictate otherwise.

From an operational perspective, this GRP offers guidance to responders during the initial phases of an oil spill by:

- Providing tactical response strategies to be implemented during the early hours of an oil spill.
- Providing detailed information for booming and damming strategies that could be utilized to minimize impacts on predetermined sensitive resources.
- Providing sufficient information for responders to prepare initial ICS 201, 208, and 232 documents and the initial Incident Action Plan (IAP).

OSPR is responsible for long-term maintenance of this GRP; it will be updated and maintained periodically to ensure the information contained within remains current and relevant. The first maintenance cycle will be at Year 3 after its original release, and thereafter, every 5 years. Contact information will be updated on an annual basis and provided as an addendum.

Purpose

1. This GRP establishes spill response guidance for oil spill incidents occurring within the Lower Santa Ana River area. The GRP boundary begins at the base of Prado Dam near the City of Corona and continues to the Pacific Ocean in Newport Beach. The GRP area is within Riverside and Orange Counties and Local Emergency Planning Committee (LEPC) Regions I and VI.

2. This GRP is the principal guide for response personnel, response organizations and agencies within the GRP boundary area, its incorporated cities, and other local government entities responding to and minimizing the impacts of oil spill incidents. This GRP is intended to facilitate multi-agency and multi-jurisdictional coordination, pursuant to the Incident Command System (ICS) among local, state, and federal agencies, as well as the responsible party (RP), in oil spill incidents.

3. This GRP is an operational plan as well as a reference document. It may be used for pre-spill planning and actual spill response. Agencies with jurisdictional roles and responsibilities for oil spills are encouraged to develop standard operating procedures (SOPs) and spill response checklists based on the provisions of this GRP.

Response Strategy Selection

The bulk of this GRP is contained in Chapter 3. It provides information on response strategies including detail sheets with specific information on each identified response site and access/observation site. The response strategies have been identified by available access points and the amount of oil spill response resources that can be deployed from those locations. Operational division and segment maps as well as information on staging areas are also provided in the chapter. When a spill occurs, the response strategies provided in Chapter 3 should be implemented as soon as possible. Unless circumstances unique to a particular spill situation dictate otherwise, the matrix in Section 3.4 of the chapter should be used to determine strategy deployment locations. The movement of oil on water and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting strategy implementation priorities.

Once the Unified Command (UC) is formed, additional operational strategies and tactics should be relayed to response personnel in the field in the form of the ICS 204 assignment list. Because GRPs are one of the primary strategy tools used during an initial phase of the response and are fairly broad in their scope, they are not intended to minimize impacts on all possible sensitive areas that could be affected by an oil spill. Likewise, this GRP is not intended to be an exhaustive list for all of the tactical strategies that could, or should, be implemented during a spill.

Guiding Principles for GRPs

1. The safety and health of responders always takes precedence over the protection of sensitive environmental or economic resources.

2. Source control and containment are always a higher priority over GRP strategy deployments but should occur concurrently if resources are available.

3. Environmental conditions (velocity/flow, water levels, gradient, and tides), together with the physical limitations of existing spill response technology, may preclude the effective protection of some areas.

4. Once a coordinated response has been established during an oil spill incident, booming strategy selection and prioritization are refined and supplemented based on real-time assessments. The UC has the authority to supersede the strategies proposed in this GRP.

5. Response personnel may find it necessary to deviate from the exact details provided for deploying a particular response strategy; response personnel should use their best judgment to modify existing strategies based on real-time conditions and notify UC accordingly. Response personnel should notify the Planning and/or Operations Section staff regarding any opportunities for deploying additional strategies that might be used to take advantage of incident-specific conditions.

Control and Containment of an Oil Spill at the Source is a Higher Priority than the Implementation of GRP Response Strategies

In the responder's best judgment, if control and initial containment of an oil spill at the source is not feasible or the source is controlled but oil has spread beyond initial containment, then the response strategies laid out in Chapter 3 of this GRP take precedence until a UC is formed. Spill response priorities beyond those described in this GRP should be based upon observations and spill trajectory information. During a spill, modifications to the strategies provided in Chapter 3 of this GRP may be made if approved by the Incident Commander (IC) or UC.

Resources-At-Risk

Chapter 4 of this GRP outlines information on the environmental, economic, tribal, and cultural and historic resources-at-risk in the area that could be injured or damaged if impacted by oil or cleanup operations, and key contacts for notification. Chapter 4 also provides information on oiled wildlife, wildlife avoidance measures, and the Wildlife Response Plan developed by OSPR in coordination with the Oiled Wildlife Care Network (OWCN) and other trustee agencies.

Appendices

The appendices section provides information on site description, local and regional assets for oil spill response equipment, and other relevant emergency response documents for the area.

Companion Manual

The GRP Companion Manual (GRP CM) contains information common to all GRPs. The GRP CM Sections include response methods, shoreline cleanup, applied response technologies, waste management, mutual aid, volunteers, non-floating oils, and procedures for the discovery of human remains and cultural and historic resources.

Standardized Response Language

In order to avoid confusion, this GRP uses standard National Incident Management System, Incident Command System (NIMS ICS) terminology.

Drills and Exercises

If an equipment deployment exercises program [similar to the Sensitive Site Strategy Evaluation Program (SSSEP) for Area Contingency Plans (ACPs)] is developed for inland GRPs, a corresponding section will be added to this GRP. As appropriate, this GRP can be exercised during tabletop drills with contingency plan holders to test the efficiency and user-friendly aspects of the document and make suggestions for updates as necessary.

Lower Santa Ana River
Geographic Response Plan

TABLE OF CONTENTS

Lower Santa Ana River
Geographic Response Plan

Chapter 1 – Introduction

Introduction

OSPR is developing GRPs for inland waters of California. These plans are being prepared for the State of California and will be the responsibility of OSPR. GRPs are being developed through committees, workshops, and meetings with federal, state, and local oil spill emergency response experts, tribal representatives, industry, local governments, first responders, and environmental organizations. Please see Appendix A for the list of contributors who helped to develop the structure and content of this GRP.

This GRP serves as guidance for federal and state on-scene coordinators and first responders during the initial phase of an oil spill response. This plan has been developed for the Lower Santa Ana River within Riverside and Orange Counties (Figure 1-1). The upstream boundary begins at the base of Prado Dam near the City of Corona and continues to where the Santa Ana River empties into the Pacific Ocean between Huntington Beach and Newport Beach (Figure 1-2). The defined boundary encompasses approximately 31.38 river miles.

An area site description and information on physical features, hydrology, winds, climate, and risk are included in Appendix B of this document.

Changes and updates to this document are expected as response strategies are optimized through drills, site visits, and use in actual spill situations. OSPR values stakeholder input and welcomes suggestions about how the plan might be improved. Please submit comments by mail using the form and information provided in Appendix C of this document or through the email address provided for the GRP contact on the OSPR Website at http://www.wildlife.ca.gov/OSPR/Contingency. A Record of Changes, Appendix D, will be kept as updates are made.

Other Relevant Emergency Response Plans can be found in Appendix E; for the Lower Santa Ana River GRP, this includes emergency plans for Riverside and Orange Counties, as well as LEPC Emergency Response Plans for Regions I and VI.

Authority

State Government

The Administrator of OSPR has the primary authority to serve as the state incident commander, State On-Scene Coordinator (SOSC), and direct the removal, abatement, response, containment, and cleanup efforts, including decisions regarding the utilization of in-situ burning, dispersants, and cleanup agents, with regard to all aspects of any oil spill into marine and inland surface waters of the state, but not ground waters. This authority may be delegated. [FGC §5655(d), §5655(e)(2); GC §8670.62, §8670.7].

Federal Government

The U.S. Environmental Protection Agency (USEPA) shall provide a Federal On-Scene Coordinator (FOSC) for discharges or releases into or threatening the inland zone. The term inland zone, defined as the environment inland of the coastal zone, delineates an area of federal responsibility for response action. The U.S. Coast Guard (USCG) shall provide an FOSC for oil discharges within or threatening the coastal zone. Precise boundaries are determined by USEPA/USCG agreements and identified in federal regional contingency plans. The boundary in California typically follows Highway 1 and includes the San Francisco Bay and Sacramento-San Joaquin Delta as part of the coastal zone. The basic framework for the response management structure is a system (e.g., a unified command system), that brings together the functions of the federal government, the state government, and the responsible party to achieve an effective and efficient response, where the OSC maintains authority. National Contingency Plan (NCP) – 40 CFR §300.105 and 40 CFR §300.120

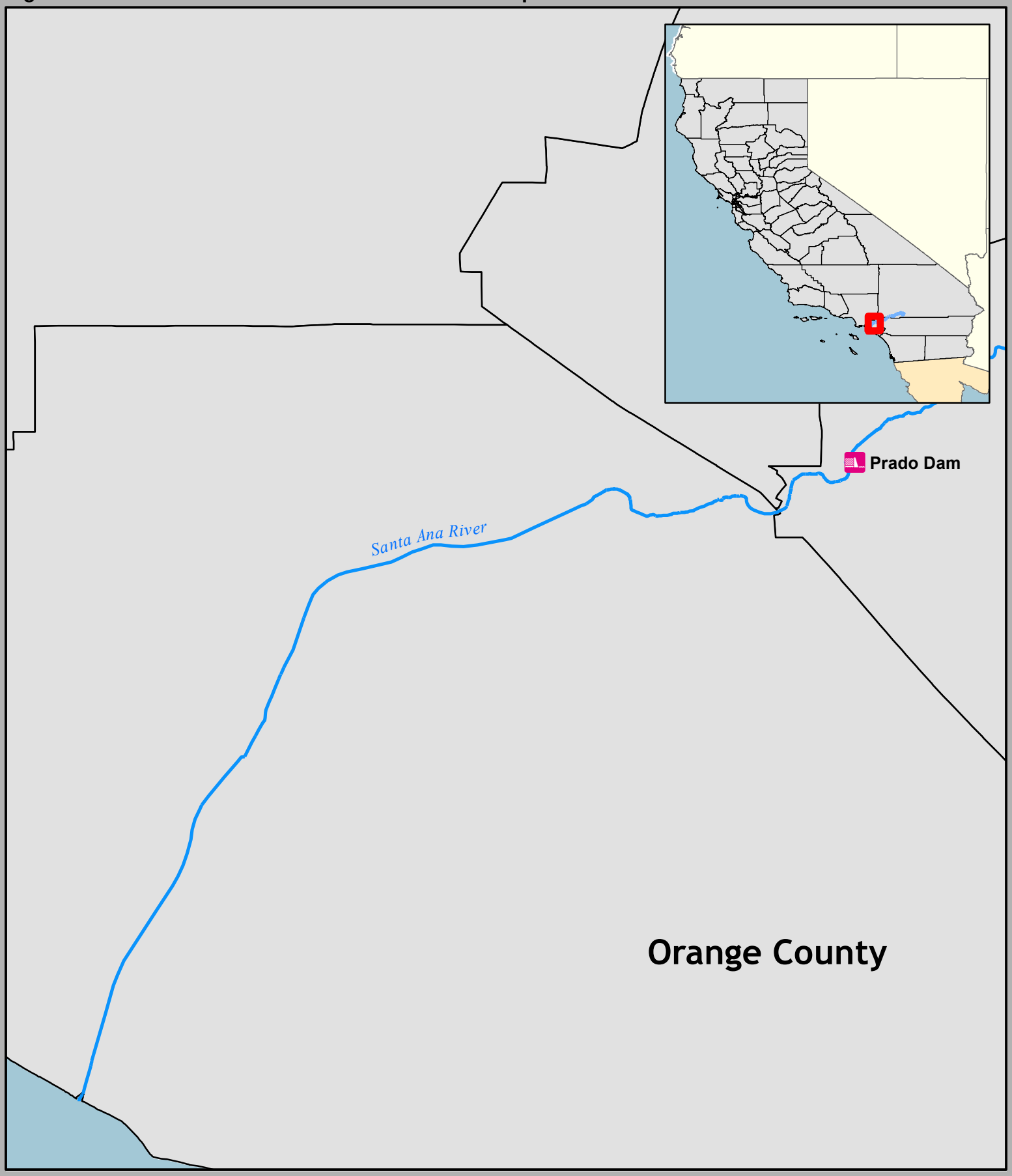
Responsible Party

The Responsible Party (RP) has the primary responsibility to conduct spill cleanup following the procedures listed in their facility (i.e., fixed facility, pipeline, railroad) response plan, or if no plan exists, in coordination with the Unified Command. The basic framework for the response management structure is a system (e.g., NIMS Incident Command System) that brings together the functions of the federal government, the state government, and the responsible party to achieve an effective and efficient response, where the FOSC maintains authority. The RP will participate in the UC alongside the FOSC and SOSC [and Local Government On-Scene Coordinator (LGOSC) if requested]. National Contingency Plan - 40 CFR §300.105(d), (e)(1) Figure 1a, and §300.135(d).

Local Government

When an oil spill occurs, the UC (OSC’s and RP) will evaluate the nature and severity of the spill, jurisdictions that may be affected, potential for public involvement, and need for local agency support. The UC may exercise the option to appoint an LGOSC as a participant within the UC. National Contingency Plan, §300.135(d).

Figure 1-1: Lower Santa Ana River GRP Location Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: CDFW-OSPR, NHD (USGS)
Requestor: OSPR
Author: S. Paine
Date Created: 05/21/2019

Lower Santa Ana River Geographic Response Plan Location

0 3 6 Miles
0 4.5 9 Kilometers

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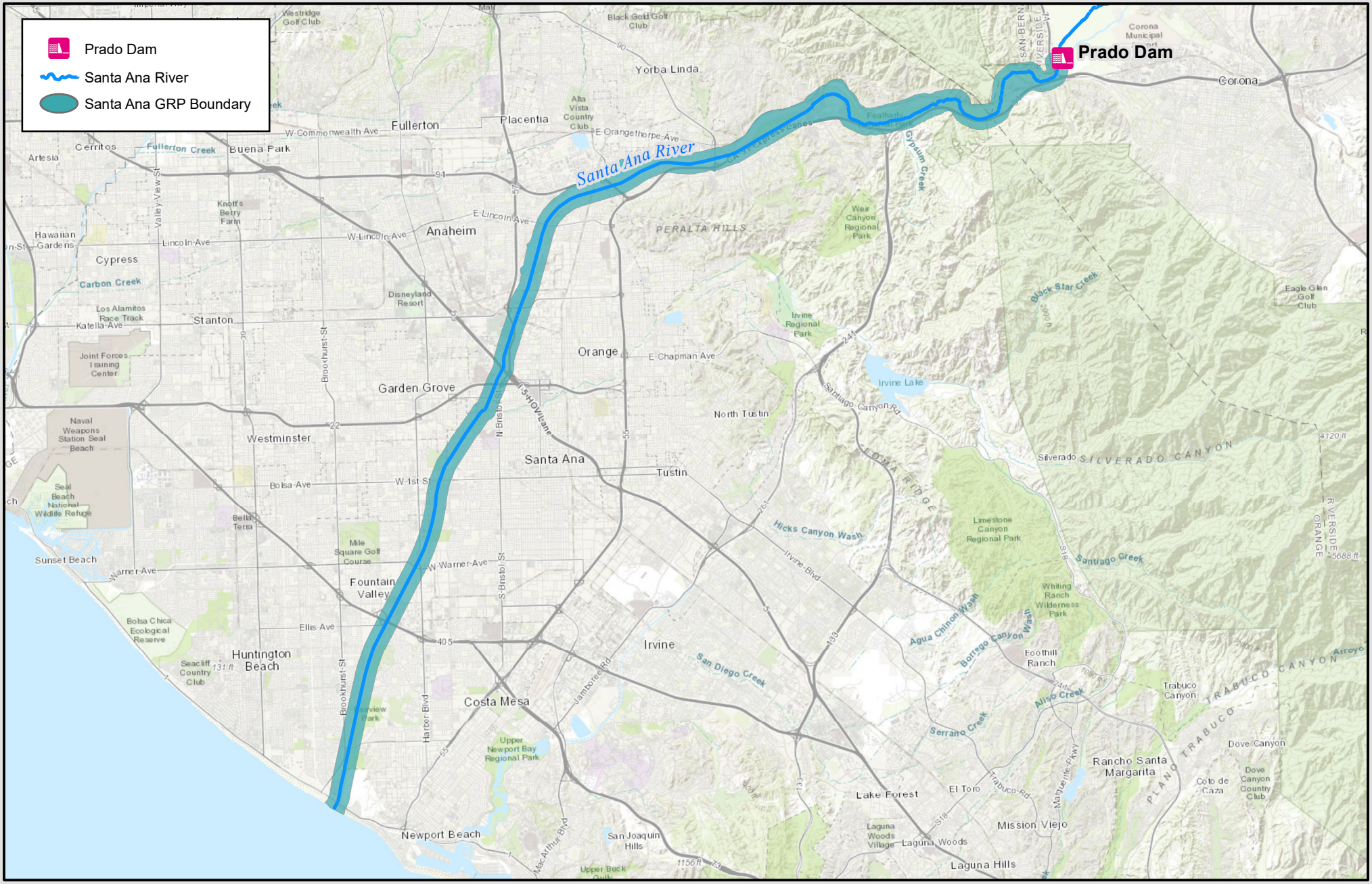
Figure 1-2: Lower Santa Ana River GRP Boundary Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: CDFW-OSPR
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 1/13/2020

Lower Santa Ana River Geographic Response Plan Boundary

0 4 8 Miles
0 5 10 Kilometers

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Lower Santa Ana River
Geographic Response Plan

Chapter 2 - Emergency Management, Incident Objectives, And Response Considerations

2.0 Chapter Overview

This chapter discusses the emergency management aspect of an oil spill as it applies to first responders and the public. This chapter includes information on site safety, site assessment, responder and public safety, and area and traffic control. Public Health, including information on Certified Unified Program Agencies (CUPAs) and fisheries closures, are discussed below along with response equipment availability and on-site considerations.

California's emergency assistance is based on a statewide mutual aid system designed to ensure additional resources are provided to the state's political subdivisions whenever their own resources are overwhelmed or inadequate. Mutual Aid is discussed below in Section 2.12 as well as in the GRP CM.

The first emergency responder to arrive at the incident site will assume the role of IC. The primary responsibility of this first responder is to protect the health and safety of the public (including potential responders) at the scene. As additional IC's from local, state, and federal agencies, or the RP, arrive on-scene, they will be incorporated into a UC, as appropriate.

Upon arrival, the IC will establish an Incident Command Post (ICP) a safe distance from the incident until hazards are removed, controlled, or neutralized. The location of the ICP should be far enough away from the incident to avoid contamination or other dangers, and close enough to the incident to maintain reasonable contact with operational personnel.

The IC will be responsible for coordinating multi-agency operations (e.g., fire, sheriff, highway patrol, etc.). All emergency responders shall report to the ICP or the staging area as designated by the IC immediately upon arrival to the scene. All emergency response operations (spill identification, containment, etc.) shall be coordinated through the IC or a duly appointed Operations Section Chief.

Incident Objectives

In order for spill response personnel to evaluate the oil product and take appropriate emergency actions to save lives, reduce injuries, and prevent or minimize damage to the environment and property, the following actions should be taken:

1. Provide for the safety and security of responders and maximize the protection of public health and welfare.

2. Conduct an operational risk assessment, secure the source and affected area, isolate the hazard, and deny the entry of unauthorized persons into the area.

3. Identify and report the oil spill to appropriate agencies.

4. Provide rapid and effective warning, information, and instructions to threatened populations.

5. Implement response strategies, deploy spill response equipment, commence shoreline countermeasures, and return to normal conditions as quickly as possible.

2.1 Safety

The primary responsibility of the first emergency responder to arrive at the incident site is to protect the health and safety of the public and responders on scene. This protection will be accomplished by restricting access to the scene, initiating containment if it can be done safely, and isolating contaminated persons and materials until arrival of the supporting agencies.

Rendering emergency care and initiating decontamination of affected persons is always a high priority but only if it is within the first responder's level of training and only if it can be done safely.

Site perimeter security and traffic control are the responsibility of the law enforcement agency with traffic investigation authority and should be initiated as soon as possible to minimize contamination of citizens and to allow first responder crews to perform their tasks without interference. The following guidance, considerations, and actions are to provide for the safety of responders and the public during an oil spill incident:

Responder Safety

- Resist Rushing In! Respond safely, slowly, and methodically.
- Approach cautiously from uphill, upwind, or upstream.
- Stay clear of vapor, fumes, smoke, and spills.
- Don't assume that gases or vapors are harmless because of lack of a smell – odorless gases or vapors may be harmful.
- Vapors may cause dizziness or asphyxiation without warning.
- Fire may produce irritating, corrosive and/or toxic gases.
- Many gases/vapors are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks) – control ignition sources.
- Keep out of low areas.
- Enter only when wearing appropriate protective gear and in accordance with your training, resources and capabilities.
- Establish an ICP and lines of communication.
- Continually reassess the situation and modify the response accordingly.
- Consider your own safety first, then the safety of people in the immediate area. Rescue attempts and protecting the environment or property must be weighed against you becoming part of the problem.

Area Assessment

- Is there a fire, spill, or leak?
- What are the weather conditions?
- What is the terrain like?
- Who/what is at risk – people, the environment, or property?

- What actions should be taken – evacuation or shelter-in-place?
- What resources are required (human and equipment)?
- What can be done immediately?

Site Safety

- Secure the scene:
    - Isolate the area and protect yourself and others.
- Use the Department of Transportation (DOT) Emergency Response Guidebook (ERG), ERG App or the Wireless Information System for Emergency Responders (WISER) App recommendations for establishing safe distances and safety information. See the GRP CM, Section 5, for Web Links to Information Resources.
- Fire? – Consider a blast radius of 0.6 miles (1 km).
- Gather intelligence from a safe distance before conducting an on-site assessment – understand the problem:
    - Train consist/waybill.
    - Observe placards and types of containers/railcars.
    - Use the appropriate monitoring devices to detect hazardous materials.
    - One product or multiple commodities**.** If multiple materials are involved, what is the potential outcome of their commingling, will there be reactivity?
- CHEMTREC – Chemical Transportation Emergency Center provides two types of assistance during a hazardous material incident:
    - Relays information in regard to the specific chemical, and
    - Will contact the chemical manufacturer or other expert for additional information or on-site assistance.
    - **24-Hour Hotline: (800) 424-9300.**
    - If the substance cannot be identified, monitoring and sampling may be needed to determine the substances' physical and chemical properties, concentrations, and its degree of hazard.
    - To minimize danger to personnel, this function should be performed by persons who are properly trained and are using the appropriate personal protective equipment (PPE) such as a trained hazardous materials response team following established protocols.
- Position vehicle away from the incident and use binoculars.
- Establish a dedicated Safety Officer.
- Develop an initial Site Safety Plan.
- Verify all information/intelligence.
- Consider all modes of operation:
    - Offensive
    - Defensive
    - Non-Intervention
- Eliminate any ignition sources.
- Consider current and expected weather.
- Consider worst-case scenario.
- Prepare for first responder rescue.
- Establish an accountability system for incident personnel.

Public Safety

- Identify threats to health and safety.

- Keep unauthorized persons away – initiate site access control.
- As an immediate precautionary measure, isolate spill or leak in all directions as recommended by the DOT ERG.
- Establish a Public Information Officer/Joint Information Center.
- Establish a Law Enforcement Branch:
    - Evacuation
        - Establish evacuation groups/divisions as needed.
        - Identify residents, businesses, public buildings and other areas from which occupants and property may need to be evacuated.
        - Locate and identify special needs individuals that require extraordinary care.
        - Provide security for evacuated areas.
    - Shelter-In-Place
        - Create a temporary safe refuge area by using the residence or business place.
        - Ensure, through community outreach, that the public understands what shelter in place means.
        - Limit travel in the affected area, when the process of evacuation puts the public in harm's way.
        - Provide clear information and instruction on the shelter in place process.
- Resource Notifications:
    - Identify resources to assist with shelter in place operations:
        - Local Office of Emergency Services
        - Public health services/offices
        - Local hospitals and disaster control facilities
        - Public Information Officer
        - Utilize mass notification systems:
            - Reverse 911
            - Television, radio
            - Websites, social media
            - Local sirens
- Poison Control Centers:
    - Provide poison/exposure information to emergency personnel and the public. For exposed victims, can provide regional hospital capabilities. Calls are automatically forwarded to the nearest center: Sacramento, San Francisco, Fresno, and San Diego. **24-Hour Hotline: (800) 222-1222.**

Isolation, Deny Entry, Traffic and Access

- Control all access/entry points to the incident.
- Control perimeter between all entry points.
    - Determine perimeter size using the ERG, ERG App, or WISER App.
- Control access inside perimeter, including responders.
- Establish zones:
    - Exclusion/Hot Zone
    - Contamination Reduction/Warm Zone
    - Support/Cold Zone
- Establish traffic pattern.

Communication Frequencies

- The local, responding fire department will establish the communication frequency for the incident, followed by law enforcement and the UC establishing a formal Communications Plan, ICS Form 205.

2.2 Source Control

After a spill occurs, efforts to control and contain the spill at or near the source should be a top priority. An on-site evaluation of actual conditions is needed to determine whether a response strategy, including source control, is safe to deploy, effective under existing environmental conditions, and effective for the particular type of oil involved. If, in the responder's best judgment, control and initial containment of an oil spill at the source is not feasible, or the source is controlled but oil has spread beyond initial containment, then the response strategies laid out in Chapter 3 of this GRP take precedence until a UC is formed. If, in the responder's judgement, it is determined to be safe to implement source control actions, the following methods may be applicable.

Offensive source control strategies (stop, control, or stabilize the release) typically include the following:

- Plug and patch
- Absorb/adsorb
- Transfer (e.g., sting tanks)
- Containerize
- Stop (shut off valve)

Defensive containment strategies (restrict, slow, or redirect the spread of oil) typically include the following:

- Containment boom
- Berm or dam:
    - Simple berm or dam constructed of dirt, sandbags, hay bales, fire hose, or lumber.
    - Underflow dam for product that floats on top of water.
    - Overflow dams for product that sinks in water.

Once a UC has formed, with input from the Environmental Unit, and under the direction of the Recovery and Protection Branch Director, the Salvage/Source Control Group Supervisor coordinates and directs all salvage/source control activities related to the incident.

2.3 River Streamflow Ranges

Current river stage data are available for the Lower Santa Ana River through the NOAA National Weather Service website below and should be used to calculate travel distances for the first 6, 12, and 24 hours at the time of the release. The maximum velocity for the Lower Santa Ana River, below Prado Dam, based on average velocity from the U.S. Geological Survey (USGS) National Hydrology Dataset is 2.807 feet per second (1.663 knots).

Current river stage for the Santa Ana River is available online from NOAA National Weather Service, Advanced Hydrologic Prediction Service.

Additional flow data resources can be found in Section 5 of the GRP CM, Web Links to Information Resources.

2.4 Regional Response Trailer Locations

Table 2-1 below provides information on the nearest response equipment trailers to the GRP boundary.

Table 2-1: Regional Response Trailer Locations

Contact Name	Equipment Location	Boom	Phone Number Email
City of Newport Beach	1600 W. Balboa Blvd. Newport Beach, Ca 92663	1000-feet, 6” x 12”	Kurt Borsting, (949) 270-8158 office, (562) 241-0098 cell kborsting@newportbeachca.gov rreyes@newportbeachca.gov
Orange County Sheriff’s Department Harbor Patrol	1901 Bayside Drive Corona Del Mar, Ca 92625	1000-feet, 6” x 12”	Nancy Nguyen, (714) 935-6869 nmnguyen@ocsd.org (949) 723-1002
County of Los Angeles Beaches & Harbors	Marina Del Rey	1000-feet, 6” x 12”	(310) 305-9522

2.5 Local/Regional Asset Resources

Appendix F contains information on Local/Regional Asset Resources including the location and contact information for the following:

- Water supplies and foaming operations for firefighting
- Air monitoring equipment
- Communication equipment
- Certified HazMat Teams
- Swift Water Rescue Teams

In addition to the local/regional assets and response trailer locations, Oil Spill Response Organizations (OSROs) are kept on contract by the RP and retain an extensive inventory of response equipment that can be called upon to deploy in an expedited time frame.

2.6 Unoccupied Aircraft System

CDFW has an Unoccupied Aircraft System (UAS) Program that manages the use of UAS within the Department. OSPR is currently working to adapt this technology to assist with oil spill response. Opportunities exist to utilize UAS with situation data collection and SCAT whereas constraints for UAS may include restricted airspace near major airports and potential disturbance to biological resources. Additionally, many industry partners and their contractors and/or consultants are testing and utilizing UAS capabilities for spill response.

2.7 Incident Command Post Locations

During initial response, the ICP will likely be near the incident, possibly working from a first responder vehicle. As the incident progresses and responding staff continue to be deployed, the need for an off-site ICP providing space, electricity, and additional amenities and resources becomes apparent. Table 2-2 provides a list of locations near the Lower Santa Ana River GRP boundary that can serve as an ICP for spill response activities. Appendix F includes an ICP Facility Assessment Check Sheet to evaluate potential ICP locations including proximity to services, cell phone coverage, location physical characteristics/size, parking, and site security.

Table 2-2: Incident Command Post Locations

Location	Address	Phone Number
Huntington State Beach	21601 Pacific Coast Highway, Huntington Beach, CA 92646	(714) 536-1454
Angel Stadium of Anaheim	2000 E Gene Autry Way, Anaheim, CA 92806	(714) 940-2000
Yorba Regional Park	7600 W La Palma Ave, Anaheim, CA 92807	(714) 973-6615

2.8 Public Works

Local street and road departments are responsible for maintaining roadways in their jurisdiction and may assist with road closures, cleanup, or decontamination. Local water supply agencies (which may be a public works) are responsible for maintenance of community water systems. They may provide remedial actions in coordination with the Regional Water Quality Control Board (RWQCB) and the Department of Water Resources (DWR) when an oil spill incident may affect water sources such as treatment plants and pumping stations. Public works departments are also critical for spills involving storm drains as they have access to storm sewer system diagrams showing input and outfall points, which may be essential for response. See section 2.9, Public Health, for small public water systems.

Water Intakes

Water intakes and outflows include the Orange County Water Agency and the Orange County Sanitation District. The Orange County Water Agency takes water from the Santa Ana River for groundwater replenishment and has two diversion dams to divert water to Santa Ana River Lakes. The Orange County Sanitation District manages a wastewater treatment plant with dry weather urban runoff diversion (water intake) from the Santa Ana River as well as an emergency outflow at the wastewater treatment plant in Huntington Beach adjacent to the river. After-hours contact for both agencies can be found in the Contact Sheet and List of Economic Resources Susceptible to Oiling in Chapter 4.

Tidal Gates

There are two tidal gates near the mouth of the Santa Ana River; both connect to Newport Slough on the southeast side of the river and includes a waterfront residential area. The Newport Slough tidal gates are operated manually by the Orange County Department of Public Works. Table 2-3 lists the contact information for the Newport Slough tidal gates.

Table 2-3: Lower Santa Ana River Tidal Gates

Gate	Contact Name	Phone Number
Newport Slough Tidal Gates	Orange County Department of Public Works	(714) 955-0200 After Hours (714) 719-1856

2.9 Public Health

Local health agencies are responsible for protecting public health and often coordinate emergency medical services. County and city health officers have authority within their jurisdictions to take any preventive measures which may be necessary to protect and preserve public health. Public Health and Environmental Health Officers can provide assistance with health impacts associated with the release, key public health messages, community air monitoring and evacuations/shelter-in-place orders. The Public Health Officer has broad authority to take actions necessary to protect the public's health and may be a key partner in decisions around evacuation and restrictions against public access. Click here for additional information on Public Health Officer authorities.

Small public water systems, 200 connections or less, and small state systems, less than 15 services, may be overseen by local public health. The environmental health agency may be a great resource for identifying rural water source/systems at risk from a particular release.

During an oil spill the local Air Pollution Control District can provide valuable support to the UC and be actively involved in situations where public and environmental health are threatened by an oil spill, particularly with respect to public air monitoring. For a directory of local air pollution control districts, please see the California Air Resources Board website.

CUPA

All counties and a number of cities within California have been designated to implement the state and federal hazardous materials emergency planning and community right-to-know programs; these program functions are performed by CUPAs. A list of CUPAs has been developed and is maintained by the California Environmental Protection Agency (CalEPA), Unified Program Section. Table 2-4 below lists the CUPAs for Riverside and Orange Counties (current as of 01/2020). CUPAs are typically fire departments or environmental health departments that may provide resources and liaison functions during oil spills. Some CUPAs have emergency response capabilities with Health Officer authority.

CUPAs are responsible for the following local "unified programs," which may include addressing chemical components released by an oil spill:

- Hazardous Materials Area Plans.
- Hazardous Materials Business Plan Program.
- Underground Storage Tank (UST) Program.
- Inspection of Aboveground Storage Tanks (AST) storing petroleum products to ensure that Spill Prevention, Control and Countermeasure (SPCC) plans are in place, where necessary.
- Hazardous Waste Generator Program, including most of the state's "tiered permit" requirements.
- California Accidental Release Prevention Program (CalARP).

Table 2-4: Riverside and Orange County CUPAs

Agency Name	Address	Phone Number
Anaheim City Fire Department	201 South Anaheim Blvd., Suite 300 Anaheim, CA	(714) 765-4047
Orange County Environmental Health	1241 East Dyer Rd. Santa Ana, CA	(714) 433-6406
Riverside County Department of Environmental Health	4065 County Circle, Room 104 Riverside, Ca 92503	(951) 358-5055

Fisheries Closures

Fish and Game Code 5654 requires the Director of CDFW to close affected waters to the commercial, recreational, subsistence, and aquaculture take or harvest of all fish and shellfish within 24 hours of notification of a spill or discharge. As soon as practicable during an incident response with potentially impacted fisheries, the responding OSPR Environmental Scientist will notify the OSPR Fisheries Closure Coordinator and provide the following information (as available):

- Location
- Product
- Volume
- Weather
- Known fisheries
- Known media interest
- Spill trajectory

The OSPR Fisheries Closure Coordinator will work with the Office of Environmental Health Hazard Assessment (OEHHA), under CalEPA, to determine whether a closure is warranted, and if so, the geographical boundaries of the closure [FGC §5654, 7715]. Per the Code, closure is not required if OEHHA finds, within 24 hours of the spill notification, that a public health threat does not or is not likely to exist. Once in place, closures may be reopened within 48 hours if OEHHA determines there is no longer a health threat. Closures lasting more than 48 hours require the Director of CDFW to order expedited sampling. OSPR and OEHHA, working together, will develop and execute a sampling and analysis plan. Once safety thresholds are met, CDFW will reopen closed fisheries.

2.10 On-Site Considerations

Before Deploying a GRP Strategy (Questions to Ask)

- Are conditions safe? Response managers and responders must first determine if efforts to implement a response strategy would pose an undue risk to worker safety or the public, based on conditions present during the time of the emergency. No strategy should be implemented if doing so would threaten public safety or present an unreasonable risk to the safety of responders.

- Has initial control and containment been sufficiently achieved? Source control and containment of the spill at or near the source of a spill are always higher priorities than the deployment of GRP response strategies, especially when concurrent response activities are not possible.

- How far downstream or out into the river environment is the spilled oil likely to travel before response personnel will be ready and able to deploy GRP response strategies?

- Will equipment or vehicles need to be staged on or near a roadway? If so, traffic control may be required. See Contact Sheet for Caltrans and Statewide Traffic Safety & Signs contact information.

During Strategy Implementation (Things to Remember)

- On-scene conditions (weather, river stage and flow, waves, and debris) may require that strategies be modified in order to be effective. There is a significant chance that weather and conditions experienced at a particular strategy location during an actual spill event will be different from that when data were gathered during field visits. Response managers and responders must remain flexible and modify the strategies provided in this chapter as needed to meet the challenges experienced during an actual response.

- Certain strategies may call for access points or staging areas that are not easily reached at all times of the year or in all conditions.

- Oil containment boom must be free of twists, gaps, and debris in order to remain effective. The deployment of oil containment boom or underflow dams is anticipated to be a component of response operations at all locations.

After Strategy Implementation (Things to Understand)

- Oil containment boom and underflow dams should be maintained and periodically monitored to ensure their effectiveness. Changes in river stage and flow will likely require modifications to boom deflection angles (see Section 1 of the GRP CM). Depending on conditions, some booming strategies or underflow dams may require around-the-clock tending.

- Although designed for implementation during the initial phase of an oil spill, GRP strategies may continue to be deployed and implemented throughout the entire lifespan of a response, as determined appropriate and necessary by the IC or UC.

2.11 Transitioning from Initial Response to a Unified Command

Incidents usually occur without warning. The period of Initial Response and Assessment occurs in all incidents. Short-term responses, which are small in scope and/or duration (e.g., a few resources working during one operational period), can often be coordinated using only an Incident Briefing Form (ICS 201).

During the transfer-of-command process from the initial IC to the next IC, or a more formal UC, an Incident Brief utilizing the ICS 201 provides an incoming IC/UC with basic information regarding the current incident situation and resources allotted to the response. Most importantly, the ICS 201 functions as the Incident Action Plan (IAP) for the initial response, remains in force, and continues to be updated until the response ends or the Planning Section generates the incident's first comprehensive IAP. It is also suitable for briefing individuals newly assigned to the Command and General Staff, incoming tactical resources, as well as needed assessment briefings for the Incident Management Team (IMT). Per OPA 90, the UC consists of an FOSC, SOSC, and the RP.

2.12 Mutual Aid

California's emergency assistance is based on a statewide mutual aid system designed to ensure additional resources are provided to the state's political subdivisions whenever their own resources are overwhelmed or inadequate. The basis for this system is the *California Disaster and Civil Defense Master Mutual Aid Agreement* (MMAA), which is entered into, by and among, the State of California, its various departments and agencies, and the various political subdivisions, municipal corporations, and public agencies to assist each other by providing resources during an emergency.

For mutual aid coordination purposes, California has been divided into six mutual aid regions. The purpose of a mutual aid region is to provide for the most effective application and coordination of mutual aid and other emergency related activities. Figure 6-1, Mutual Aid Regions, in Section 6 of the GRP CM illustrates the six mutual aid regions, which have the same boundaries as the LEPCs.

Formal mutual aid requests follow specified procedures and are processed through pre-identified mutual aid coordinators. Mutual aid requests follow discipline-specific chains (i.e. fire, law enforcement, emergency manager) from one level of government to the next. The mutual aid coordinator receives the mutual aid request and coordinates the provision of resources from within the coordinator's geographic area of responsibility. In the event resources are unavailable at one level of government, the request is forwarded to the next higher level of government to be filled.

Details on Mutual Aid as outlined in the State of California State Emergency Plan, 2017, can be found in Section 6 of the GRP CM.

2.13 Volunteers

In general, volunteers do not participate in the majority of oil spill responses. In cases when there has been no volunteer interest expressed, the ICS structure may not contain any positions specifically dedicated to volunteer management. Volunteers are only used if there is a role for them to fill. As the IC or UC becomes aware of individuals or organizations interested in providing volunteer services and/or the need for volunteers arises, the IC/UC should address the volunteer issue and may make assignments for volunteer management

within the ICS. Only volunteers approved by the IC/UC are allowed to participate at a spill response. For additional information on volunteers, see Section 7 of the GRP CM.

2.14 Natural Resource Damage Assessment

The overall goals of the natural resource damage assessment (NRDA) process are to restore the injured natural resources to pre-spill conditions and to obtain compensation for all documented losses. NRDA is conducted by State and federal trustees, often in cooperation with the responsible party, and is a separate process from the response. Assessment of injuries and damages resulting from spilled oil needs to begin as soon as possible following the initial release of the pollutant. This necessitates that NRDA activities be conducted simultaneously with response efforts and coordinated through the UC. Portions of the NRDA process should be integrated into the ICS to improve communication, expedite both response and NRDA activities, and make efficient use of personnel and equipment. To avoid potential conflicts in duties, it is recommended that members of the NRDA Team not have responsibilities for the spill cleanup or general response activities. For additional information on the NRDA Process, see GRP CM Section 8.

Lower Santa Ana River
Geographic Response Plan

Chapter 3 – Response Site Strategies

3.0 Chapter Overview

This section provides information on GRP response strategies. First responders should prioritize the order in which they should be implemented based primarily on the release origin point and the nearest appropriate access point for response operations, given the time required to mobilize and deploy response assets. These strategies are intended to be implemented immediately during the initial phase of incident response and may continue to be utilized as long as necessary at the discretion of the IC or UC. Unless circumstances unique to a particular spill situation dictate otherwise, the response strategy summary matrix in Section 3.4 should be used to decide the order in which GRP strategies are deployed. The downstream movement of oil and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting implementation priorities. Area maps, operational division maps, and information on staging areas and boat launch locations are also provided in this chapter. Information on resources-at-risk and oiled wildlife can be found in Chapter 4 of this plan. And information on response methods and shoreline countermeasures can be found in Sections 1 and 2 of the GRP CM.

3.1 Response Strategy Map Index

The following map (Figure 3-1) provides an index of the response strategy locations for the Lower Santa Ana River GRP. Each block represents the map area for the corresponding response strategy detail sheet. Detailed information for each strategy location can be found in the response strategy summary matrix in Section 3.4 and the response strategy detail sheets in Section 3.5. Operational division maps can also be found in Section 3.5 before each grouping of response strategy and access/observation detail sheets.

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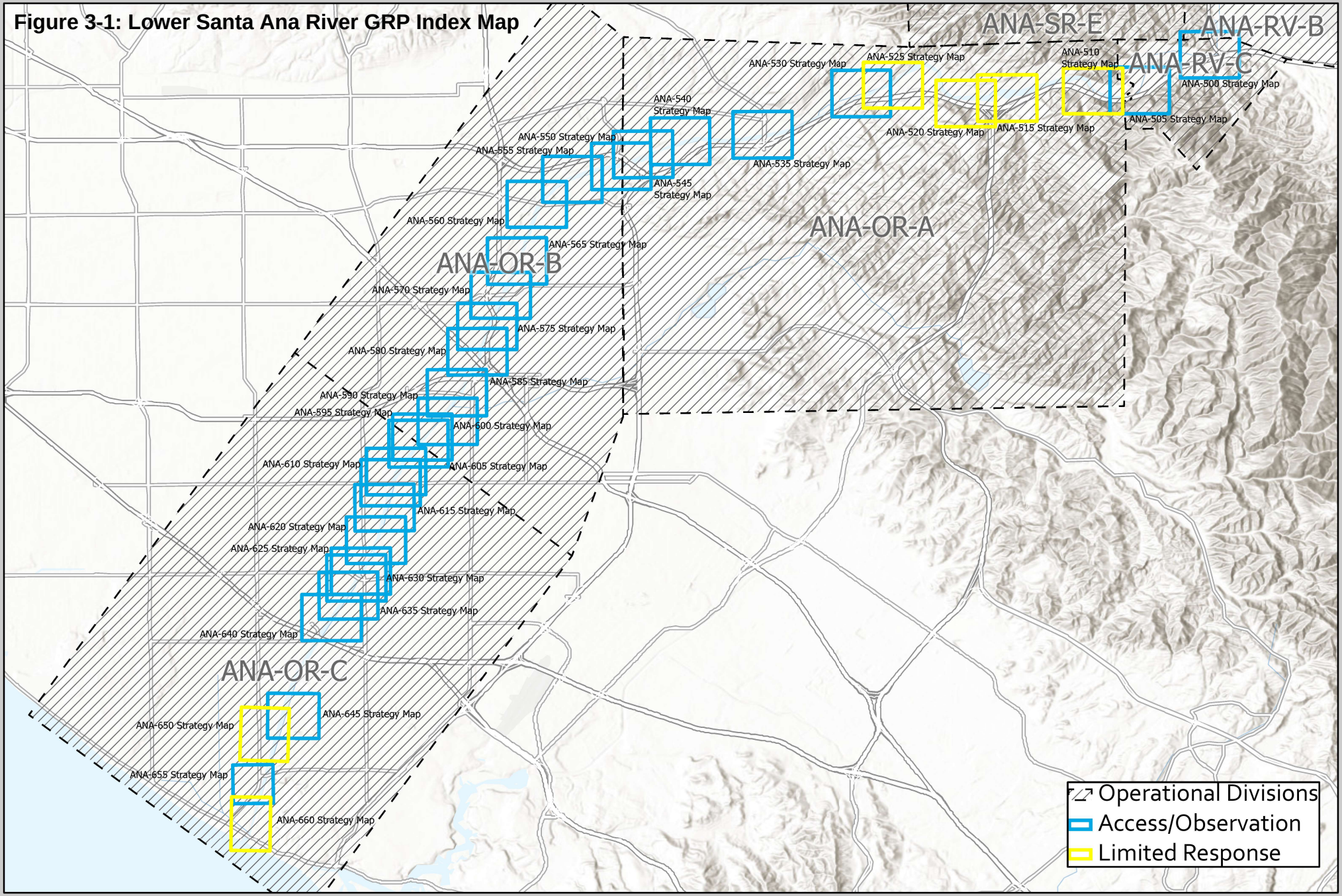
Figure 3-1: Lower Santa Ana River GRP Index Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: OSPR GIS
Requestor: S. Torres
Author: L. Gustafson
Date Created: 3/23/2020

NAD_1983_California_Teale_Albers

Lower Santa Ana Geographic Response Plan Index Map

0 75 150 300 Miles

0 100 200 400 Kilometers

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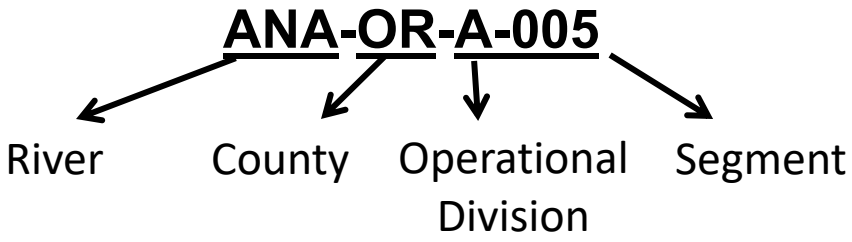
3.2 Naming Conventions – Operational Division and Segments and Site Strategies

Operational divisions and segments are presented in this GRP as front-loaded information to assist in rapid response planning by dividing the area of concern into smaller zones to provide for quicker operational planning, implementation, and monitoring for each area (operational division and/or segment). Operational divisions are subdivided into smaller segments that can be used for response work assignments including SCAT and shoreline cleanup.

Each segment listed in this document has been given a unique identifier that includes three letters denoting the associated waterbody or area/GRP name (e.g. Cajon Pass = CAJ) and two letters denoting the county. The operational division consists of a single letter and the segment is a three-digit number starting with 005 and increasing in number by increments of 5. For rivers that border two counties, the county on the north or west side of the river, respectively, will be the denoted county. Operational divisions (and therefore segments) do not cross county lines.



ANA = Santa Ana River

OR = Orange County

RV = Riverside County

Operational Division = A, B, C, D, etc.

Segment = 005, 010, 015, etc.

During the course of conducting SCAT, an existing segment may need modification, or a new segment may need to be added; please consult with the SCAT Coordinator or EUL who will determine the proper naming convention for new or modified segments.

Each Access/Observation or Response Site Strategy is uniquely identified by the waterbody three-letter code, followed by a three-digit number starting with 005 (e.g. ANA-005) and increasing in number by increments of 5 (e.g. 005, 010, 015, etc.). The unique identifier for each Access/Observation or Response Site Strategy is found in the top header of each strategy sheet and corresponds to the locations on the Index Map, Division Maps, and Response Strategy Summary Matrix.

The site strategy numbering is independent of the segment numbering.

3.3 General Response Priorities

The following list provides the priority or order in which GRP strategies should be implemented after an oil spill into the Lower Santa Ana River:

- Safety is always the number one priority. Do not implement GRP strategies or take actions that will unduly jeopardize public, worker, or personal safety.
- Make appropriate notifications.
- Control and contain the source of the spill; mobilize resources to the spill location. Source control and containment are always a higher priority than the implementation of GRP strategies.
- Determine the order in which GRP strategies should be implemented based on the location of the spill or affected area and the downstream trajectory of the oil based on surface water velocity.
- Generally, GRP strategies should be simultaneously deployed closer to the spill and downstream, well beyond the furthest extent of the spill, and then continued upstream towards the spill source.
- As response resources become increasingly available, implement the GRP strategies more broadly. As the response proceeds under an organized command structure, GRP strategies and priorities may be modified based on incident-specific conditions.

3.4 Response Strategy Summary Matrix

Table 3-1 lists the response strategy and access/observation sites for the Lower Santa River GRP from upstream to downstream. Each site is color coded to represent response sites with full response capability, limited response capability, and manual response capability. Access/observation sites are color coded in blue and staging areas are denoted with a purple triangle. Each response strategy and access/observation site has a unique identifier as detailed in Section 3.2 above.

Table 3-1: Response Strategy Summary Matrix

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	Site Strategy Type	Minimum Boom Requirement (Feet)	Boat/Kayak/ Inflatable Raft Required To Access One or Both Shorelines?	Site Strategy Notes	Staging Area Notes	Site Hazards and Restrictions	Nearest Rail Milepost or Highway Postmile	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
ANA-000 (Example Strategy)	**Sandbag Dam Strategy** From W 17th St at Santa Ana River City of Santa Ana downstream to South of 405 Fwy at Santa Ana River. City of Fountain Valley	33.759956 -117.900335 downstream to 33.678681 -117.943548	Sandbag dam	N/A	N/A	A sandbag dam with underflow pipes can be used almost anywhere in this section during low flows.	Staging areas will vary. See other sites in GRP.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	N/A	35
ANA-500	71 Freeway near Prado Flood Control Basin at Santa Ana River	33.88365733 -117.6463435	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	33	39
ANA-505	Green River Golf Club Bridge and Santa Ana River	33.87215274 -117.66888889	Access/ Observation	N/A	NA	N/A	N/A	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	33	41
(S) **ANA-510**	Green River Rd. South and Santa Ana River	33.871868 -117.684110	Deflection boom and collection.	200	NA	N/A	N/A	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	43	45
(S) **ANA-515**	Featherly Regional Park and Santa Ana River	33.86968109 -117.7118044	Deflection boom and collection.	200	N/A	N/A	Large staging areas within RV park.	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	43	49
(S) **ANA-520**	Featherly Regional Park Habitat Management Area and Santa Ana River	33.86794901 -117.7251812	Access/ Observation	N/A	N/A	N/A	Large staging areas within RV park.	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	43	53
(S) **ANA-525**	Yorba Linda Blvd. and Santa Ana River	33.8730191 -117.7533217	Deflection boom and collection.	300	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and removable bike path bollards.	N/A	43	55
(S) **ANA-530**	Yorba Regional Park and Santa Ana River	33.8711592 -117.7590589	Access/ Observation	N/A	N/A	N/A	Large staging areas within Yorba Regional Park.	Dangerous swiftwater after rainfall. Steep manmade banks.	N/A	43	59

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	Site Strategy Type	Minimum Boom Requirement (Feet)	Boat/Kayak/ Inflatable Raft Required To Access One or Both Shorelines?	Site Strategy Notes	Staging Area Notes	Site Hazards and Restrictions	Nearest Rail Milepost or Highway Postmile	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
ANA-535	South Imperial Highway Bridge and Santa Ana River	33.85782816 -117.7910123	Access/ Observation	N/A	NA	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	43	61
ANA-540	Lakeview Ave. Bridge and Santa Ana River	33.85574408 -117.8176624	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	43	63
ANA-545	OC Water District Parking Lot	33.8514754 -117.8296605	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Steep manmade banks and locked gates.	N/A	43	65
ANA-550	Tustin Ave. and Santa Ana River	33.84764415 -117.8366941	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	69
ANA-555	Glasell St. and Santa Ana River	33.84339096 -117.8524966	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	71
ANA-560	Lincoln Ave. and Santa Ana River	33.835331 -117.864033	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	73
ANA-565	Taft Ave. and Santa Ana River	33.816984 -117.870368	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	75
S ANA-570	Katella Ave. and Santa Ana River	33.805885 -117.875648	Access/ Observation	N/A	N/A	N/A	This site is adjacent to the Honda Center.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	77

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	Site Strategy Type	Minimum Boom Requirement (Feet)	Boat/Kayak/ Inflatable Raft Required To Access One or Both Shorelines?	Site Strategy Notes	Staging Area Notes	Site Hazards and Restrictions	Nearest Rail Milepost or Highway Postmile	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
S ANA-575	Orangewood Ave. and Santa Ana River	33.795893 -117.880019	Access/ Observation	N/A	N/A	N/A	This site is adjacent to Angel Stadium of Anaheim.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	79
ANA-580	Chapman Ave at Santa Ana River	33.787735 -117.883211	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	81
S ANA-585	Garden Grove Blvd./Memory Lane and Santa Ana River	33.774381 -117.88979	Access/ Observation	N/A	N/A	N/A	Nearby parking lots may be used for staging.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	83
S ANA-590	River View Golf Course and Santa Ana River	33.7651756 -117.8927868	Access/ Observation	N/A	N/A	N/A	Nearby parking lots may be used for staging.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	85
S ANA-595	17th St. and Santa Ana River	33.760075 -117.900993	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	67	87
S ANA-600	N Fairview St. and Santa Ana River	33.75800293 -117.9022322	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	91
S ANA-605	5th St. and Santa Ana River	33.749032 -117.909491	Access/ Observation	N/A	N/A	N/A	Nearby parking lots may be used for staging.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	93

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	Site Strategy Type	Minimum Boom Requirement (Feet)	Boat/Kayak/ Inflatable Raft Required To Access One or Both Shorelines?	Site Strategy Notes	Staging Area Notes	Site Hazards and Restrictions	Nearest Rail Milepost or Highway Postmile	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
(S) ANA-610	1st St. and Santa Ana River	33.745368 -117.911256	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	95
ANA-615	McFadden Ave. and Santa Ana River	33.73733 -117.913215	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	97
ANA-620	Edinger Ave. and Santa Ana River	33.72682758 -117.9159546	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	99
ANA-625	Harbor Blvd at Santa Ana River	33.71676785 -117.920878	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	101
ANA-630	Warner Ave. and Santa Ana River	33.71455327 -117.9223166	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	103
ANA-635	Slater and Segerstrom at Santa Ana River	33.708925 -117.924833	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	105
ANA-640	Talbert/McArthur Blvd. and Santa Ana River	33.70176704 -117.9303218	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	107

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	Site Strategy Type	Minimum Boom Requirement (Feet)	Boat/Kayak/ Inflatable Raft Required To Access One or Both Shorelines?	Site Strategy Notes	Staging Area Notes	Site Hazards and Restrictions	Nearest Rail Milepost or Highway Postmile	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
ANA-645	Adams Ave. and Santa Ana River	33.672304 -117.946166	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	109
(S) ANA-650	Le Bard Park and Santa Ana River	33.66387431 -117.9483606	Deflection boom and collection.	500	N/A	N/A	Limited staging on So Cal Edison right of way under power lines.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	111
ANA-655	Hamilton Ave. and Santa Ana River	33.650453 -117.952367	Access/ Observation	N/A	N/A	N/A	N/A	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	115
(S) ANA-660	Pacific Coast Highway and Santa Ana River	33.634074 -117.956436	Deflection boom and collection.	1000	N/A	N/A	Nearby parking lots may be used for staging.	Dangerous swiftwater after rainfall. Homeless encampments. Steep manmade banks and locked gates.	N/A	89	117

Table Legend		
YELLOW	**Limited Response**	Access to site may be limited; have to cross railroad tracks, etc., may not get large equipment to site.
BLUE	**Access/ Observation**	Site provides access to the shoreline or edge of waterbody and/or provides an observation site. Observation site may not be at the waters edge. Both may provide locations for SCAT teams or NRDA to deploy/survey for oil.
GRAY	**Unique Occurrence, Special Circumstance, or Stand-Alone Occurrence**	ANA-000 identifies 10 sites along the Lower Santa Ana River with the same response strategy type - deployment of a sandbag underflow dam. All 10 sites are on a single map with site strategy information listed on a single detail sheet.
Ⓢ	**Staging Areas**	Response Strategy and Access/Observation Sites with a potential staging area are denoted with the letter S inside a circle.

3.5 Response Strategy Detail Sheets

Section 3.5 contains the color-coded full response strategy (red), limited response strategy (yellow), manual response strategy (green) and access/observation site (blue) detail sheets with corresponding unique identifier and site name listed in the header. Before each grouping of detail sheets, the operational division map will show the location of each site and any staging areas.

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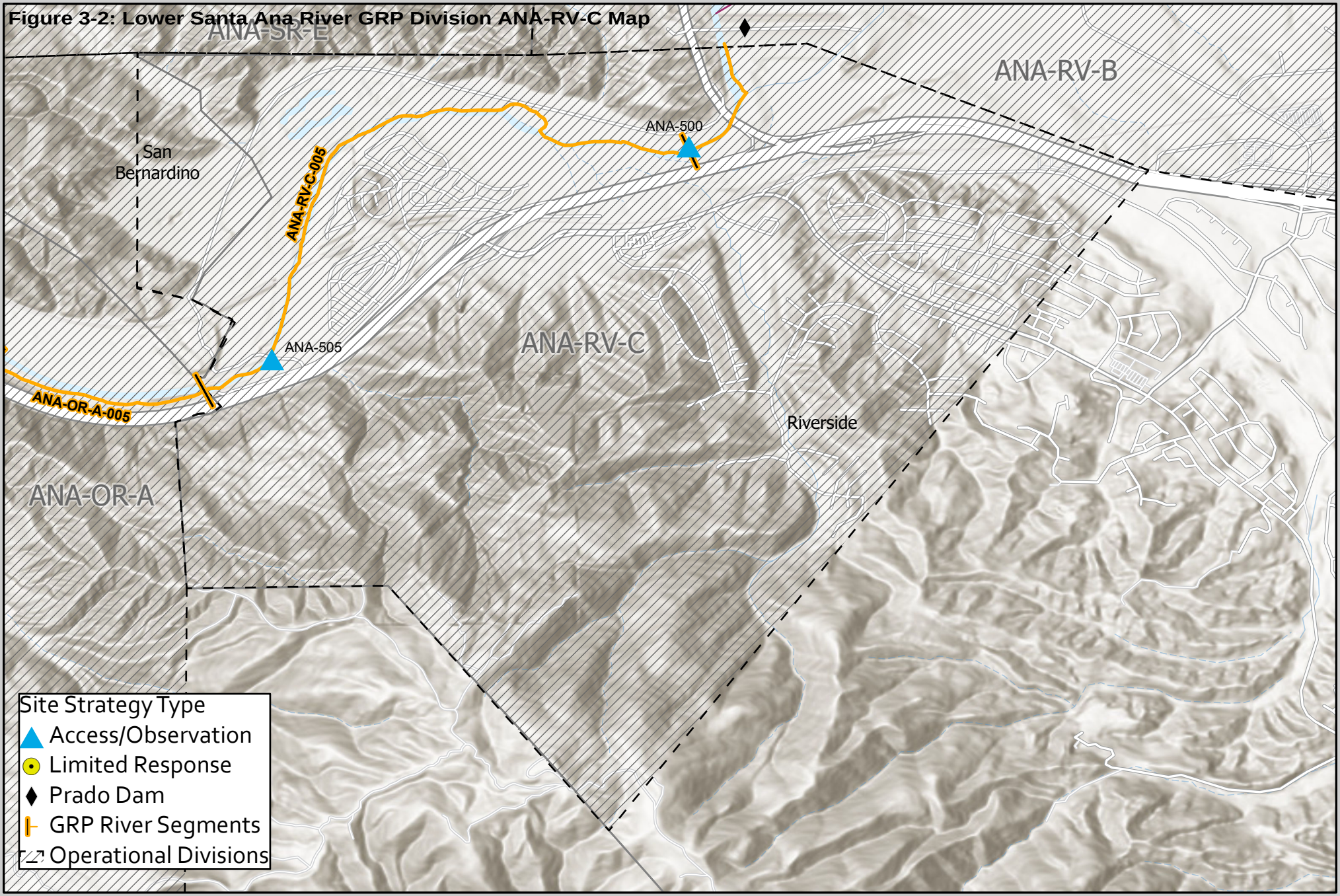
Figure 3-2: Lower Santa Ana River GRP Division ANA-RV-C Map



Data Source: OSPR GIS
Requestor: S. Torres
Author: L. Gustafson
Date Created: 3/18/2020

NAD_1983_California_Teale_Albers

0 25 50 100 Miles

0 35 70 140 Kilometers

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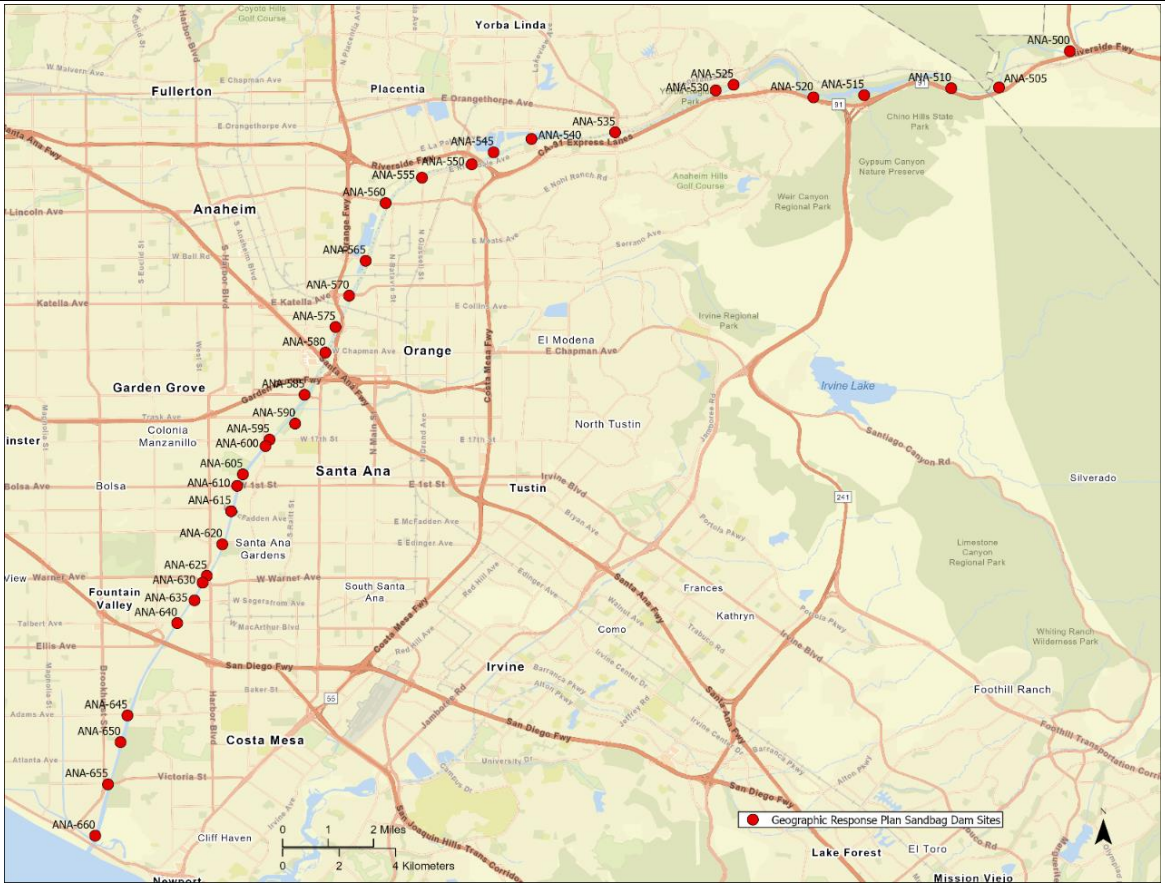
Response Strategy Site: Sandbag Dam Strategy (ANA-000)			**Page 1 of 3**
Driving Directions:	Area can be accessed via I-405 from the north or south. Or, from SR-22 from the east or west using several exits. Several street crossings have access. See Access/Observation sites ANA-595 through ANA-640.		
Latitude/Longitude 33.759956, -117.900335 downstream to 33.678681, -117.943548	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address and Thomas Guide #: N/A			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Dangerous swift water after rainfall
- Unhoused encampments
- Steep manmade banks
- Vehicle/Bicycle/Pedestrian traffic
- Locked Gates

Resources-At-Risk

Ecological: steelhead - southern California DPS

Economic: Santa Ana River Trail, Orange County Parks (717) 973-6680

Tribal: Contact the Native American Heritage Commission at (916)-373-3710.
Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Site Description and Field Notes

Site Location/Segment: ANA-595 thru ANA-640	**Site Description and Field Notes:** Concrete lined storm channel with vertical walls from 17th St. south to Adams Ave. Access to the channel bottom will be easier and safer from the vehicle ramps located at the access points. Sandbag dams are an ideal strategy for this portion of the river.			
Gradient: Medium	**River Width:** Varies	**Vehicular Access:** Passenger vehicle-portions of the Santa Ana River Trail may be narrow and difficult to turn a vehicle around.	**Recreational Use:** N/A	**Boat Launches:** N/A
Site Contact/s:	Orange County Public Works: (714) 955-0200, After Hours: (714) 719-1856			
ESI Shoreline Type:	1B Exposed, solid man-made structures			

Site Images

Sandbag Underflow Dam Strategies

Response Strategy Site: Sandbag Dam Strategy (ANA-000) **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Construct sandbag underflow dam with a minimum of 3 feet high.

Staging Area Location and Capabilities/Amenities/Waste Management: Various staging possibilities near Santa Ana River Trail, side roads, and nearby parking lots.

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Sandbags					Sandbag dam minimum of 3 feet high
Piping					For sandbag dam underflow

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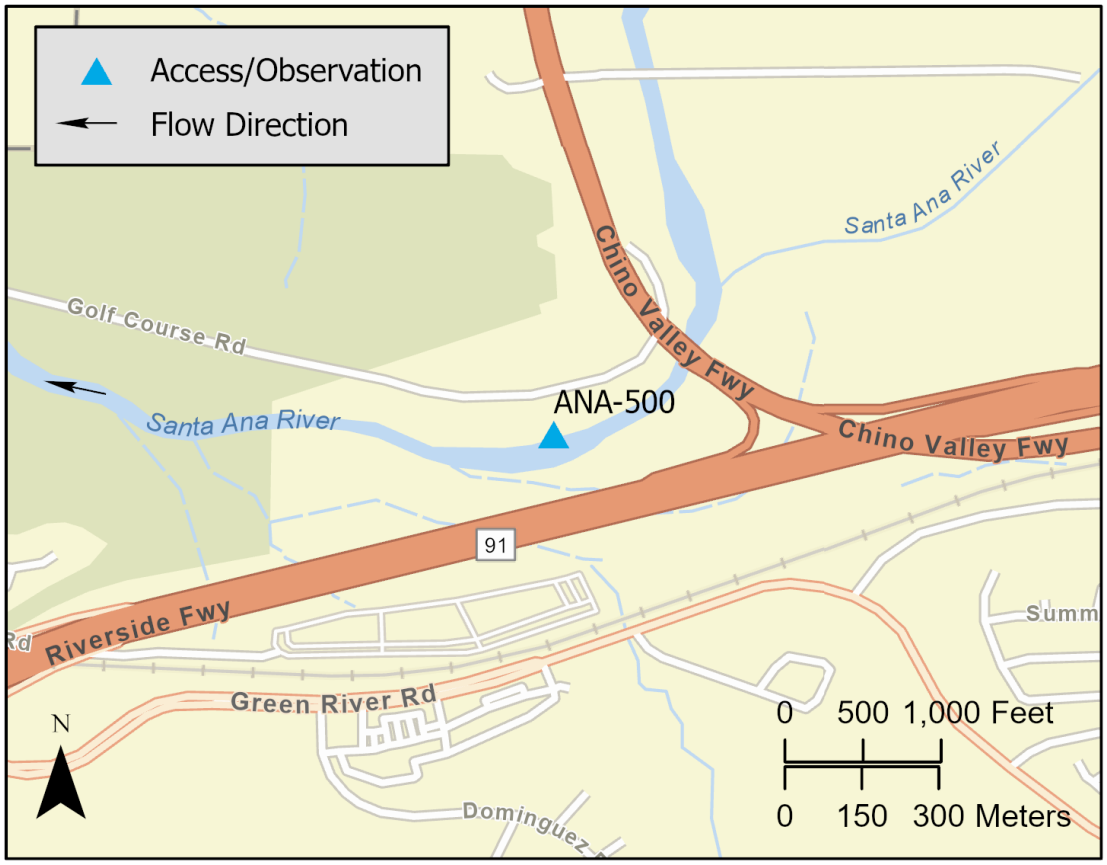
Access/Observation Site: 71 Freeway (ANA-500)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 45 for northbound SR-71. Take right side turnout almost immediately after crossing over the Santa Ana River. Take Santa Ana River Trail down to the river.		
Latitude: 33.88365733 **Longitude:** -117.6463435	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** RIV 742 C-5			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Densely vegetated banks
- Steep manmade slopes
- Locked gate

Access/Observation Site: 71 Freeway (ANA-500)			Page 2 of 2
Site Description and Field Notes			
Site Location/ Segment: ANA-RV-C-005	**Site Description and Field Notes:** Shoreline is concrete lined in the Prado Dam area and drops into a heavily vegetated shoreline. Width is 60 meters (200 feet).		
Site Contact/s:	US Army Corps of Engineers – 24 hr (213) 452-3623	Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200

Site Images

Upstream

Downstream

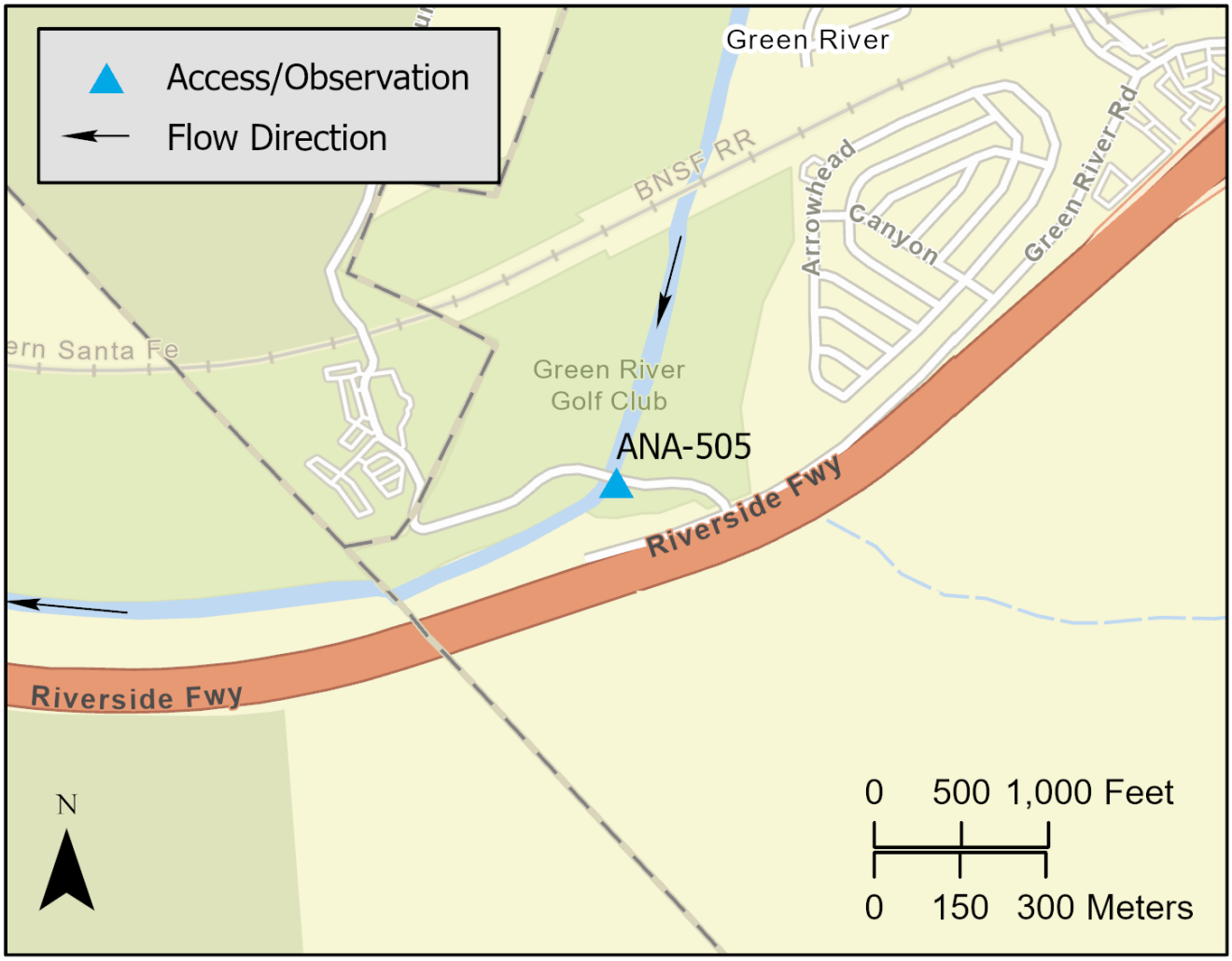
Entrance

RR = River Right **RL = River Left**

Photo Date: 5/21/2019

Access/Observation Site: Green River Golf Club Bridge (ANA-505)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 44 for Green River Rd. Stay on Green River Rd. to Green River Golf Club entrance. Turn right at the entrance to the bridge.		
Latitude: 33.87215274 **Longitude:** -117.66888889	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 5215 Green River Rd., Corona CA 92880 **Thomas Guide #:** ORG 742 A-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Densely vegetated banks
- Vehicle traffic
- Golf course

Access/Observation Site: Green River Golf Club Bridge (ANA-505)			Page 2 of 2
Site Description and Field Notes			
Site Location/ Segment: ANA-RV-C-005	**Site Description and Field Notes:** Shoreline is densely vegetated. River width is 18 meters (59 feet).		
Site Contact/s:	Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	Green River Golf Club (714) 970-8411

Site Images

Upstream

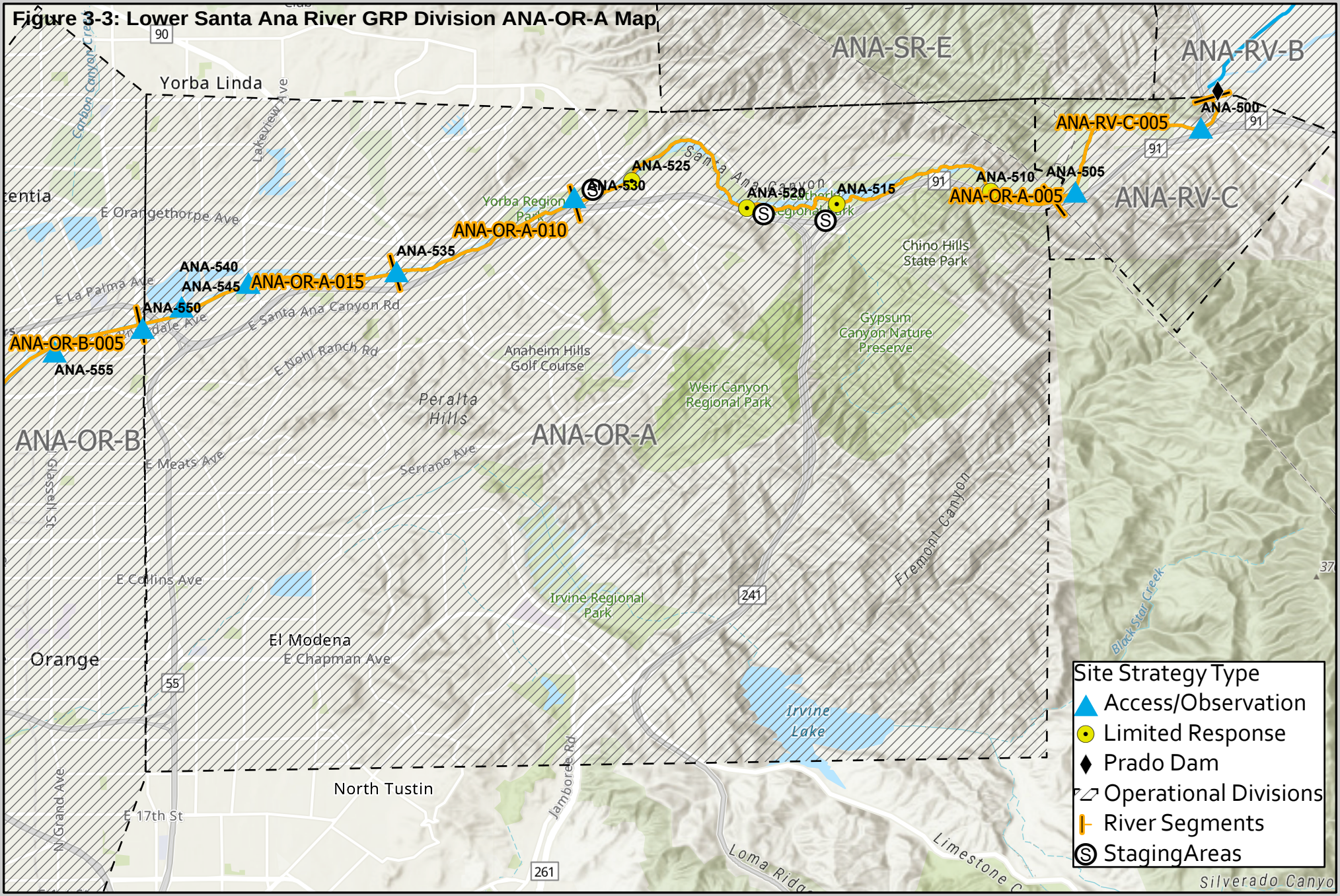
Downstream

Entrance

RR = River Right RL = River Left

Photo Date: 5/21/2019

Figure 3-3: Lower Santa Ana River GRP Division ANA-OR-A Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: OSPR GIS
Requestor: S. Torres
Author: L. Gustafson
Date Created: 8/19/2020

NAD_1983_California_Teale_Albers

Lower Santa Ana Geographic Response Plan ANA-OR-A

0 5 10 20 Miles

0 5 10 20 Kilometers

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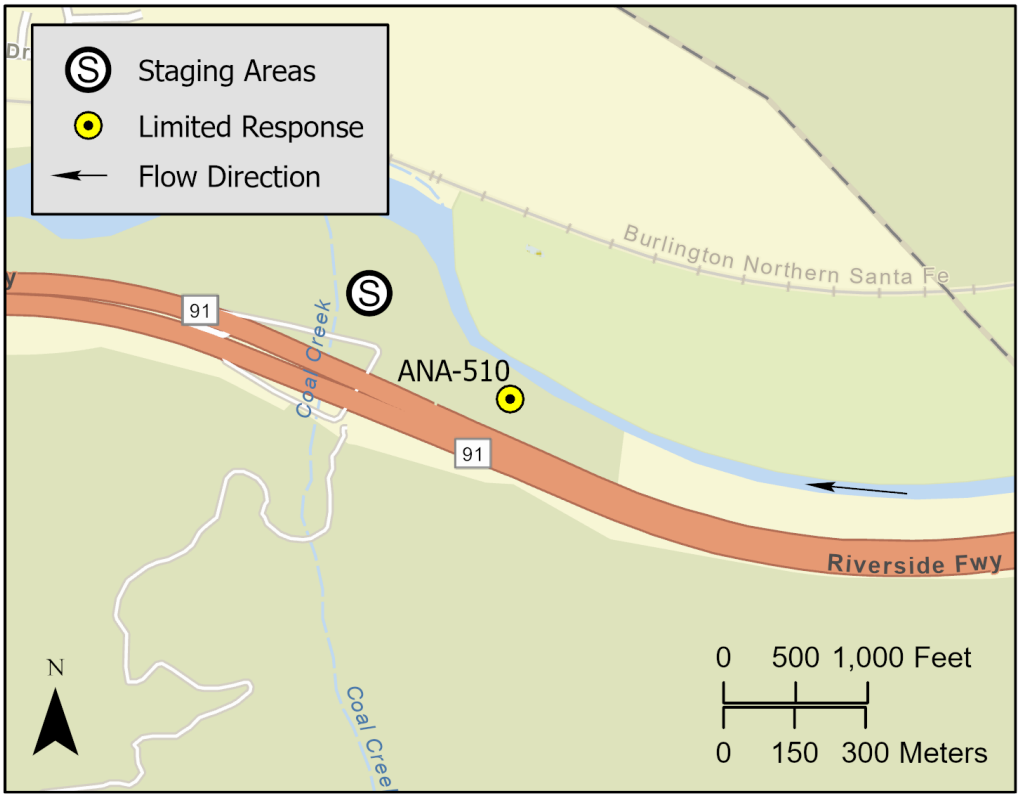
Response Strategy Site: Green River Rd South (ANA-510) Ⓢ			**Page 1 of 3**
Driving Directions:	From eastbound CA-91, take exit 44 for Green River Rd. Stay on Green River Rd. and continue to end of cul-de-sac. Enter bike path from gated entrance and head west (down river) to observation/deployment site.		
Latitude: 33.871868 **Longitude:** -117.684110	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 5215 Green River Rd. Corona, CA 92880 **Thomas Guide #:** ORG 741 H-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Swift moving water, medium grade manmade slopes and wintertime wild hogs. Downstream of this location, the river widens considerably and is densely vegetated.

Resources-At-Risk

Ecological: Coastal Cactus Wren, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Yellow-breasted Chat, western mastiff bat, Santa Ana sucker, steelhead - southern California DPS, Arroyo Toad, Western Spadefoot, Coast Horned Lizard, Southern California Legless Lizard, Western Pond Turtle, Quino checkerspot butterfly, San Diego fairy shrimp, Braunton's milk-vetch, chaparral nolina, chaparral sand-verbena, intermediate mariposa lily, long-spined spineflower, Santa Ana River woollystar

Economic: Chino Hills State Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Response Strategy Site: Green River Rd South (ANA-510)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: **ANA-OR-A-005**	**Site Description and Field Notes:** Very limited staging, additional area located down the bike path. Collection may occur along concrete edge of river.			
Gradient: Medium	**River Width:** 30 meters (100 feet)	**Vehicular Access?** Passenger vehicles, small trucks, and small trailers.	**Recreational Use?** Bike path	**Boat Launches:** N/A
Site Contact/s:	Orange County Public Works (714) 955-0200		Orange County Water District (714) 378-3200	
ESI Shoreline Type:	1B Exposed, solid man-made structures; 9B Vegetated low banks			

Site Images

Upstream

Downstream

Entrance

RR = River Right **RL = River Left**

Photo Date: 5/21/2019

Response Strategy Site: Green River Rd South (ANA-510) Ⓢ **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Deploy containment boom across river with appropriate angle. Use existing trees as anchor points or Danforth anchors.

Staging Area Location and Capabilities/Amenities/Waste Management: Limited staging on bike path pull out. Boom trucks, trailers, vacuum trucks and temporary storage tanks could use the space, but it is limited and narrow. Additional staging is available just down the bike path.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Swiftwater, Swamp, or Harbor	8, 12, or 18	Inch	200 ft.	
Staff	Staff to Deploy			5	
Boat	Punt			1	
Anchors	Danforth	20	lb	2	

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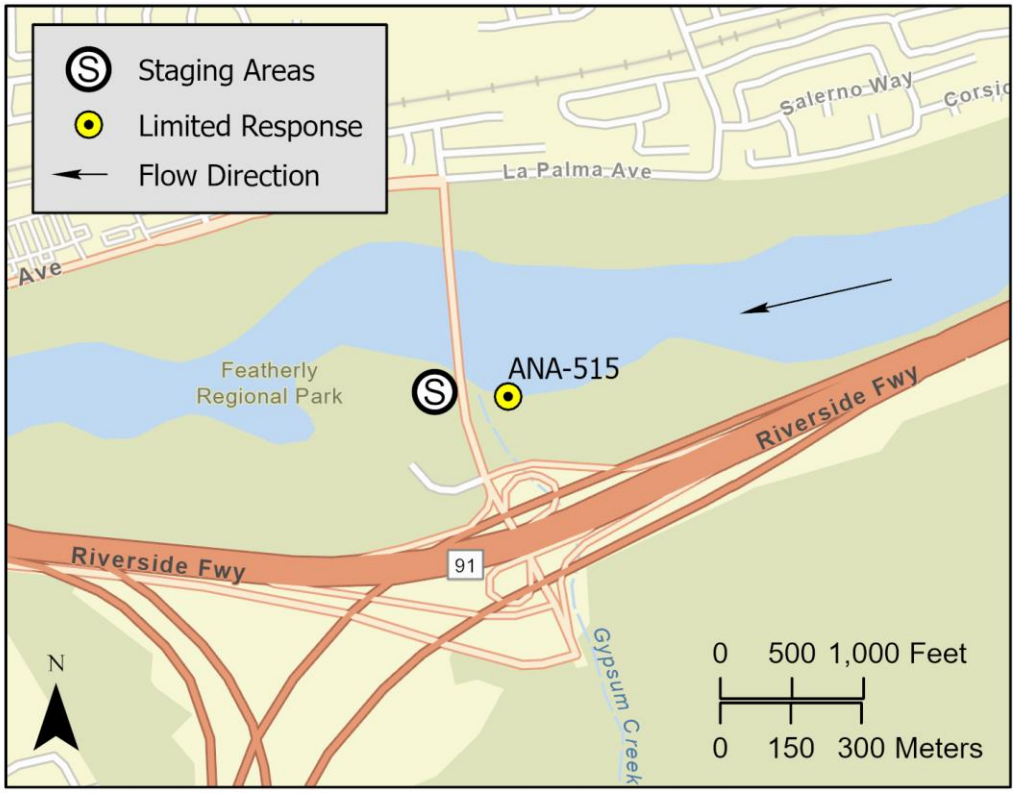
Response Strategy Site: Featherly Regional Park (ANA-515) Ⓢ			**Page 1 of 3**
Driving Directions:	From eastbound CA-91, take exit 41 for Gypsum Canyon Rd., head north on Gypsum Canyon Rd. and turn left onto Featherly Park. Enter Canyon RV Park and head east to the parking area.		
Latitude: 33.86968109 **Longitude:** -117.7118044	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 24001 E Santa Ana Canyon Rd., Anaheim, CA 92808 **Thomas Guide #:** ORG 741 E-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Swift moving water, densely vegetated banks. Access is through Canyon RV Park. The river runs along the RV park.

Resources-At-Risk

Ecological: Coastal Cactus Wren, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Yellow-breasted Chat, western mastiff bat, Santa Ana sucker, steelhead - southern California DPS, Arroyo Toad, Western Spadefoot, Coast Horned Lizard, Southern California Legless Lizard, Western Pond Turtle, Quino checkerspot butterfly, San Diego fairy shrimp, Braunton's milk-vetch, chaparral nolina, chaparral sand-verbena, intermediate mariposa lily, long-spined spineflower, Santa Ana River woollystar.

Economic: Canyon RV Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Response Strategy Site: Featherly Regional Park (ANA-515) (S)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: **ANA-OR-A-005**	**Site Description and Field Notes:** Large staging area available.			
Gradient: Medium	**River Width:** 60 meters (200 feet)	**Vehicular Access?** Passenger vehicles, small trucks, and small trailers.	**Recreational Use?** RV camping, hiking, and bike path.	**Boat Launches:** N/A
Site Contact/s: Canyon RV Park 24001 E Santa Ana Canyon Rd, Anaheim, CA	Orange County Public Works (714) 955-0200		Orange County Water District (714) 378-3200	
ESI Shoreline Type:	9B Vegetated low banks			

Site Images

Upstream

Downstream

Straight Across

Entrance

RR = River Right **RL = River Left**

Photo Date: 5/21/2019

Response Strategy Site: Featherly Regional Park (ANA-515) Ⓢ **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Deploy containment boom across river with appropriate angle. Use existing trees as anchor points or Danforth anchors.

Staging Area Location and Capabilities/Amenities/Waste Management: Boom trucks, trailers, vacuum trucks and temporary storage tanks could use the parking areas.

Response Strategy Map (overview)

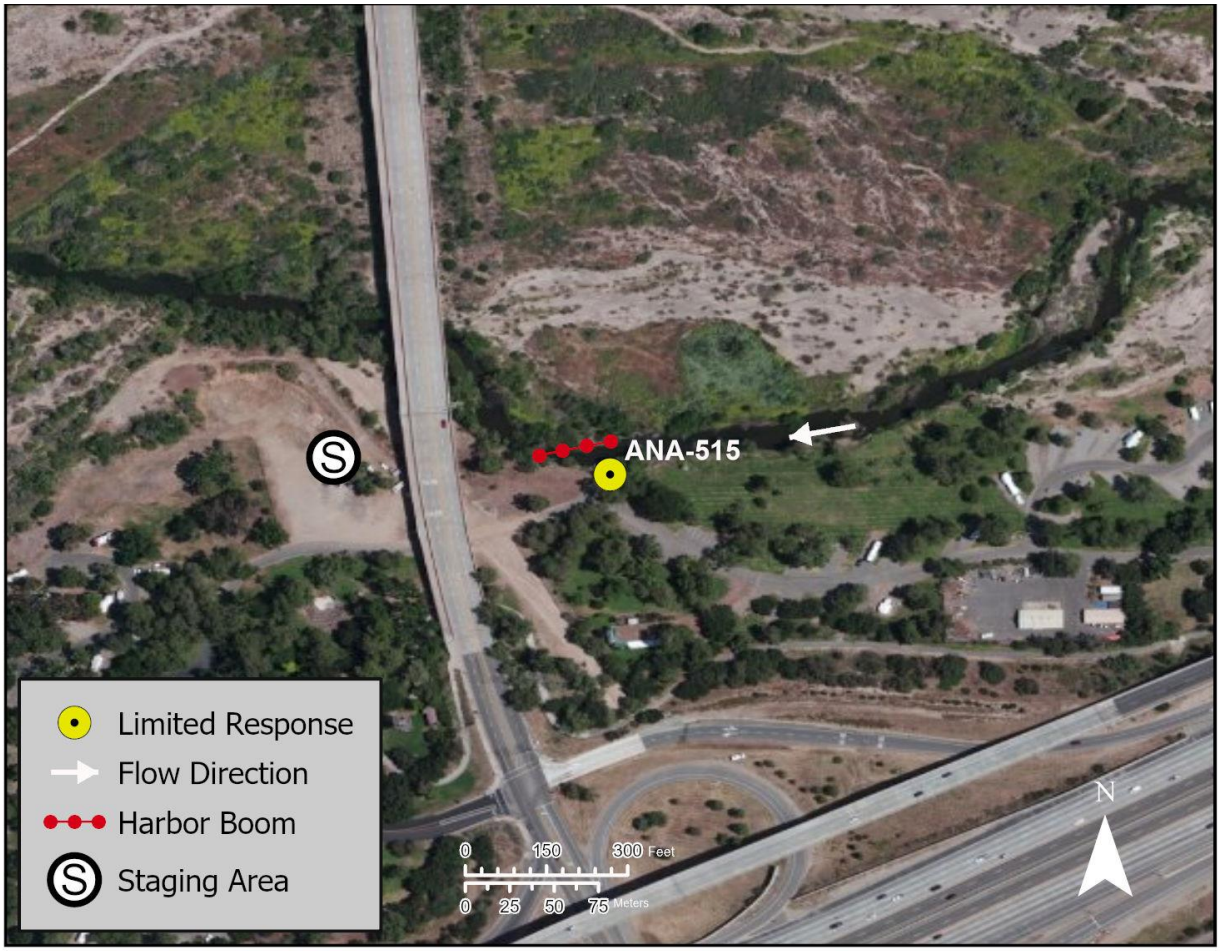


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Swiftwater, Swamp, or Harbor	8, 12, or 18	Inch	200 ft.	
Staff	Staff to Deploy			5	
Boat	Punt			1	
Anchors	Danforth	20	lb	2	

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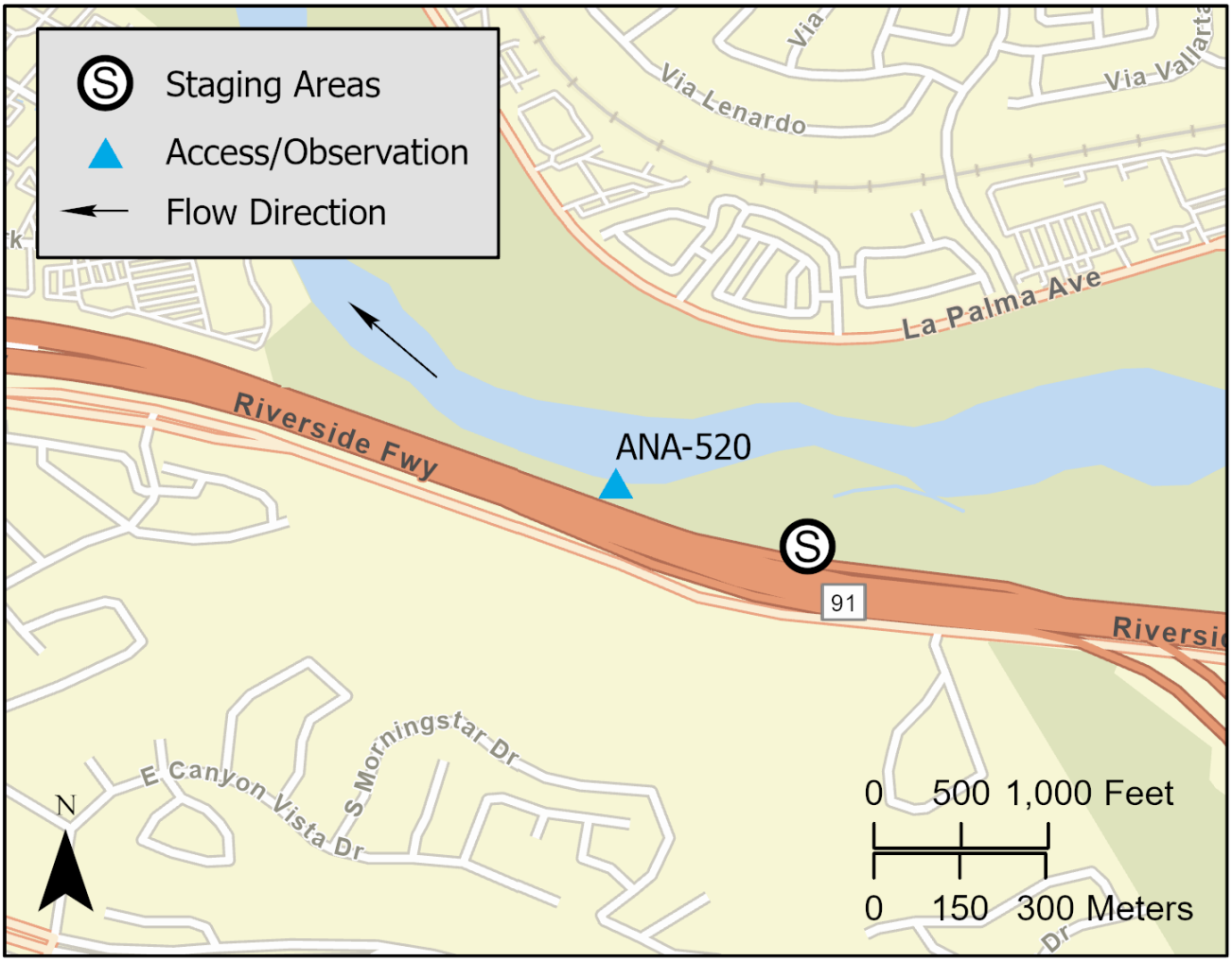
Access/Observation Site: Featherly Regional Park Habitat Management Area (ANA-520) Page 1 of 2 (S)			
Driving Directions:	From eastbound CA-91 take exit 41 for Gypsum Canyon Rd. Continue onto Gypsum Canyon Rd. and turn left onto Featherly Park. Enter Canyon RV Park and head west to the gated service entrance area.		
Latitude: 33.86794901 **Longitude:** -117.7251812	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 24001 E Santa Ana Canyon Rd., Anaheim, CA 92808 **Thomas Guide #:** ORG 741 D-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Densely vegetated banks
- Steep manmade slopes

Access/Observation Site: Featherly Regional Park Habitat Management Area (ANA-520) Page 1 of 2 (S)		
Site Description and Field Notes		
Site Location/Segment: ANA-OR-A-005	**Site Description and Field Notes:** Access is through Canyon RV Park. The river runs along the RV park. Width is 60 meters (200 feet).	
Site Contact/s: Canyon RV Park (714) 637-0210	Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200

Site Images

Upstream

Downstream

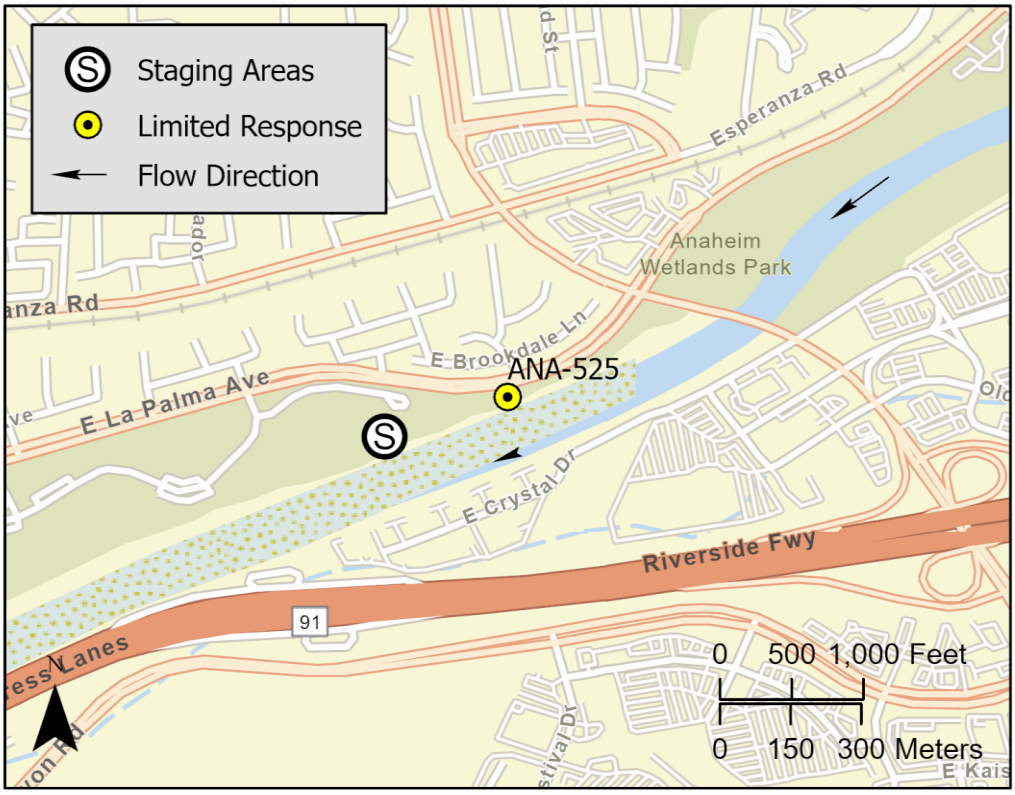
Entrance

RR = River Right **RL = River Left**

Photo Date: 1/31/2020

Response Strategy Site: Yorba Linda Blvd. (ANA-525) Ⓢ			**Page 1 of 3**
Driving Directions:	From eastbound CA-91, take exit 36 for Imperial Hwy/CA-90. Head north on CA-90, turn right onto La Palma Ave, continue to Yorba Regional Park. Enter the bike path from the service road after passing Yorba Regional Park. Follow the bike path upstream to the deployment location; approximately 0.3 miles.		
Latitude: 33.8730191 **Longitude:** -117.7533217	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 7600 E La Palma, Anaheim, CA 92807 **Thomas Guide #:** ORG 740 J-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Swift moving water, densely vegetated banks, steep manmade slopes and removable bike path bollards.

Resources-At-Risk

Ecological: Coastal Cactus Wren, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Yellow-breasted Chat, western mastiff bat, Santa Ana sucker, steelhead - southern California DPS, Arroyo Toad, Western Spadefoot, Coast Horned Lizard, Southern California Legless Lizard, Western Pond Turtle, Quino checkerspot butterfly, San Diego fairy shrimp, Braunton's milk-vetch, chaparral nolina, chaparral sand-verbena, intermediate mariposa lily, long-spined spineflower, Santa Ana River woollystar.

Economic: Yorba Regional Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Site Description and Field Notes

Site Location/Segment: **ANA-OR-A-005**	**Site Description and Field Notes:** Limited staging. Collection may occur along river right.			
Gradient: Medium	**River Width:** 30 meters (100 feet)	**Vehicular Access?** Passenger vehicles, small trucks, and small trailers.	**Recreational Use?** Bike path	**Boat Launches:** N/A
Site Contact/s:	Orange County Public Works (714) 955-0200		Orange County Water District (714) 378-3200	
ESI Shoreline Type:	1B Exposed, solid man-made structures; 9B Vegetated low banks			

Site Images

Upstream

Downstream

Entrance

RR = River Right **RL = River Left**

Photo Date: 10/9/2020

Response Strategy Site: Yorba Linda Blvd. (ANA-525) Ⓢ **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Deploy containment boom across river with appropriate angle. Use Danforth anchors to secure.

Staging Area Location and Capabilities/Amenities/Waste Management: Limited. Boom trucks, trailers, vacuum trucks and temporary storage tanks could use the space but it is limited and narrow.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Swiftwater, Swamp, or Harbor	8, 12, or 18	Inch	300 ft.	
Staff	Staff to Deploy			5	
Boat	Punt			1	
Anchors	Danforth	20	lb	2	

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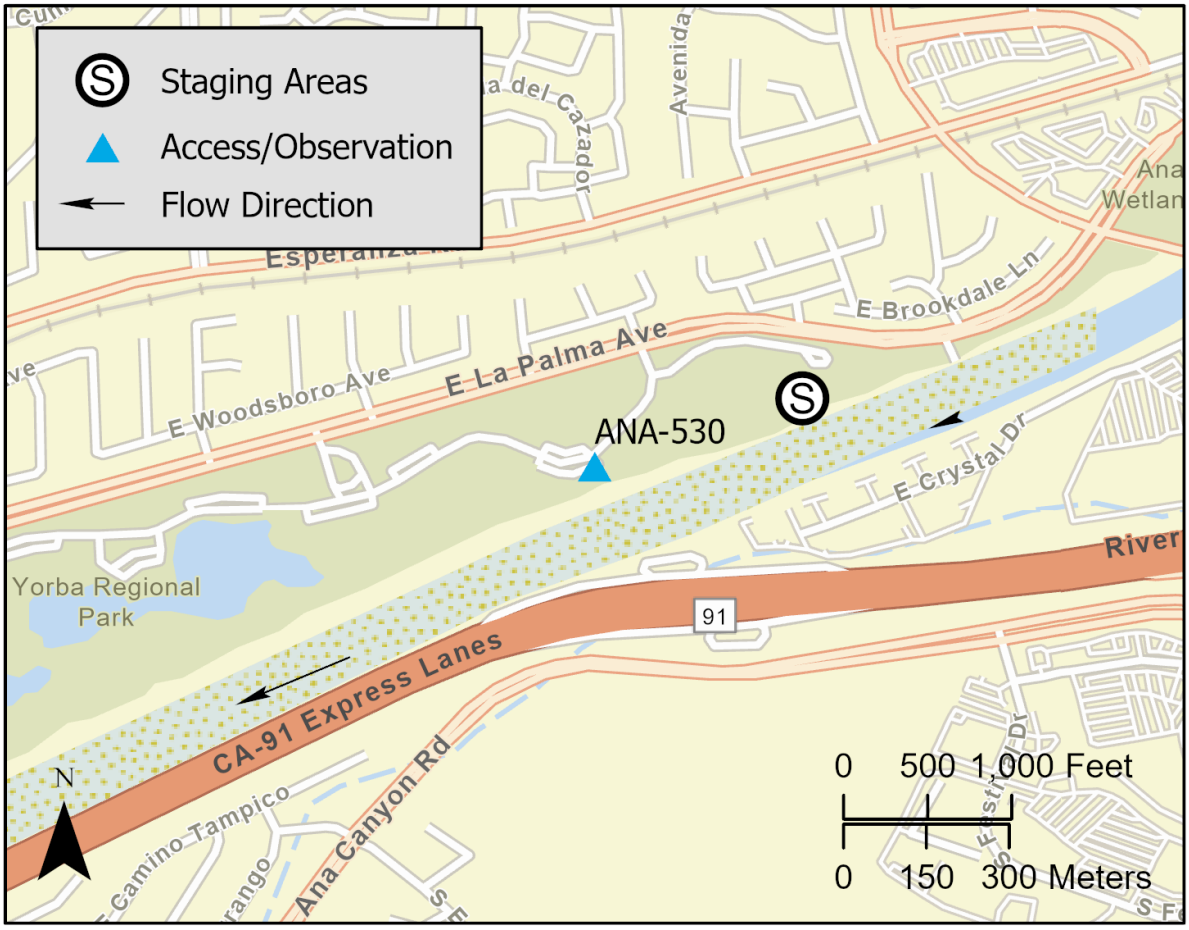
Access/Observation Site: Yorba Regional Park (ANA-530) Ⓢ			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 36 for Imperial Hwy/CA-90. Head north on CA-90, turn right onto La Palma Ave. and continue to Yorba Regional Park.		
Latitude: 33.8711592 **Longitude:** -117.7590589	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 7600 E. La Palma, Anaheim, CA 92807 **Thomas Guide #:** ORG 740 J-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Vegetated banks
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic

Site Description and Field Notes

Site Location/Segment: **ANA-OR-A-005**	**Site Description and Field Notes:** Parking lots A and J offer the shortest walk to view the river. Additional access and observations can be made along the bike path. The river runs along the north bank at the western end of the park and runs along the south bank at the eastern end. This may change depending on the flow of the river. Large staging areas within parking lot.	
Site Contact/s: Yorba Regional Park 7600 E. La Palma Anaheim, CA 92807 (714) 973-6615 or (714) 973-6838	Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200

Site Images

Upstream

Downstream

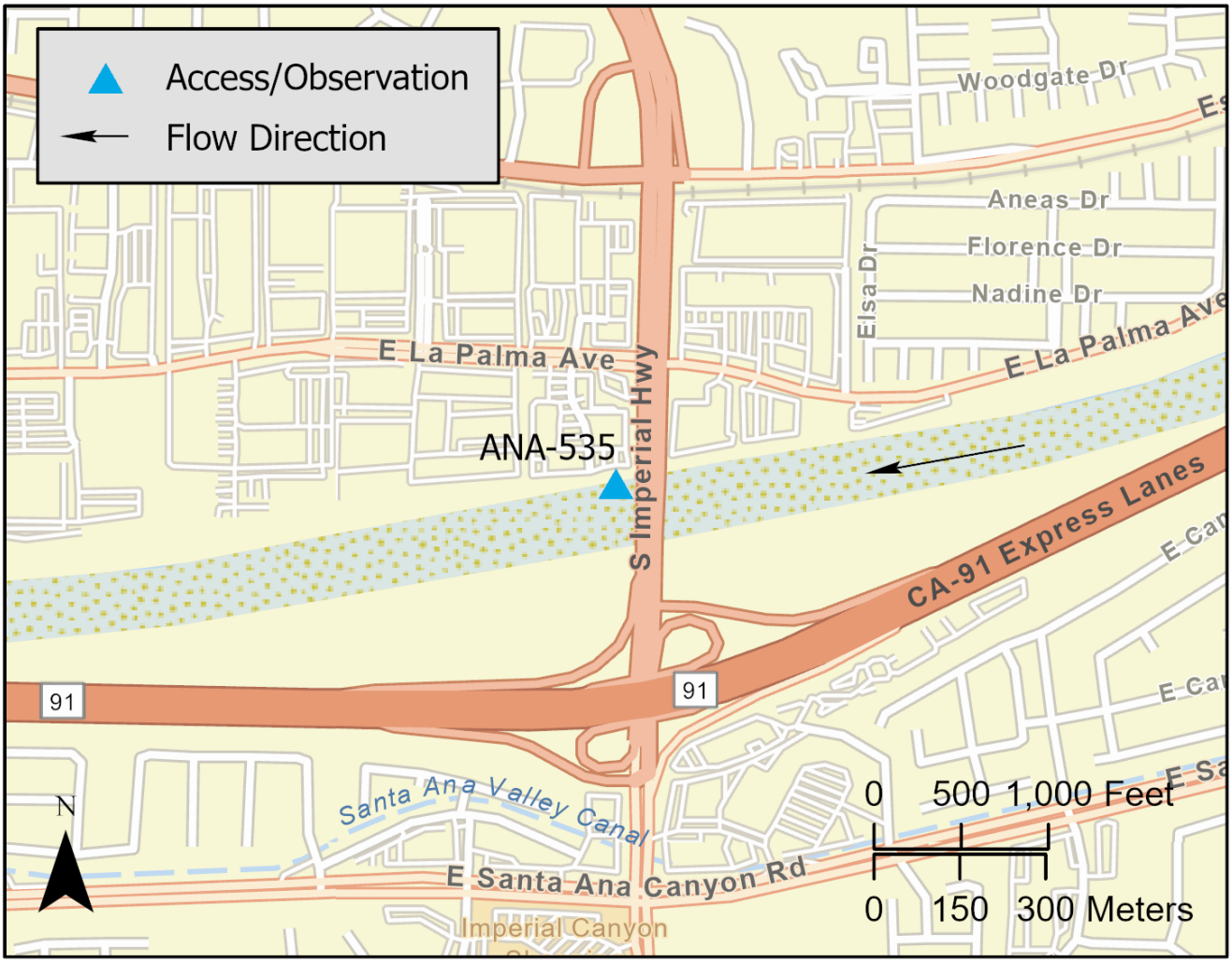
Entrance
Photo from Google Maps

RR = River Right **RL = River Left**

Photo Date: 8/20/2018

Access/Observation Site: South Imperial Highway Bridge (ANA-535)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 36 for Imperial Hwy/CA-90. Head north on CA-90, turn left onto La Palma Ave. and turn right into the parking lot for Anaheim Hills Village Center. Park in the corner near the river and Hwy/CA-90.		
Latitude: 33.85782816 **Longitude:** -117.7910123	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 5624 E La Palma Ave., Anaheim, CA 92807 **Thomas Guide #:** ORG 770 E-1			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Vegetated banks
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Locked gates

Access/Observation Site: South Imperial Highway Bridge (ANA-535)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-A-010**	**Site Description and Field Notes:** Enter northwest gates to riverbed. Width is 15 meters (49 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream

Downstream

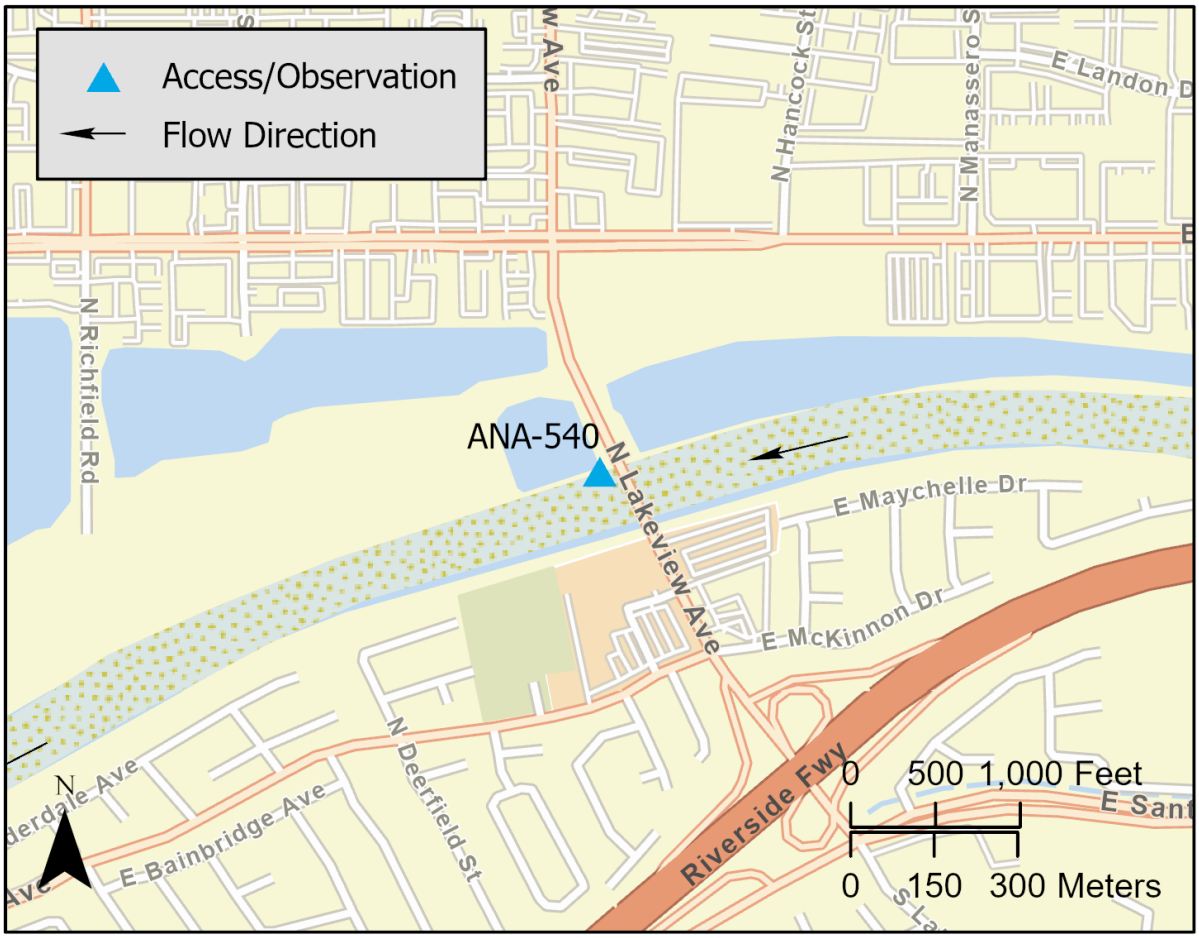
Entrance
Photo from Google Maps

RR = River Right **RL = River Left**

Photo Date: 1/31/2020

Access/Observation Site: Lakeview Ave. Bridge (ANA-540)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 35 toward Lakeview Ave. Turn left onto E Santa Ana Canyon Rd. and then turn left onto S Lakeview Ave. The large parking lot located just before the river allows for safe walking access to the river.		
Latitude: 33.85574408 **Longitude:** -117.8176624	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 400 N Lakeview Ave., Anaheim, CA 92807 **Thomas Guide #:** ORG 770 B-2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Vegetated banks
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Locked gates

Access/Observation Site: Lakeview Ave. Bridge (ANA-540)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-A-015**	**Site Description and Field Notes:** A large parking lot located on the south side of the river allows for safe walking access to the river. Parking lot can also be used as a staging area. Width is 100 meters (328 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream

Downstream

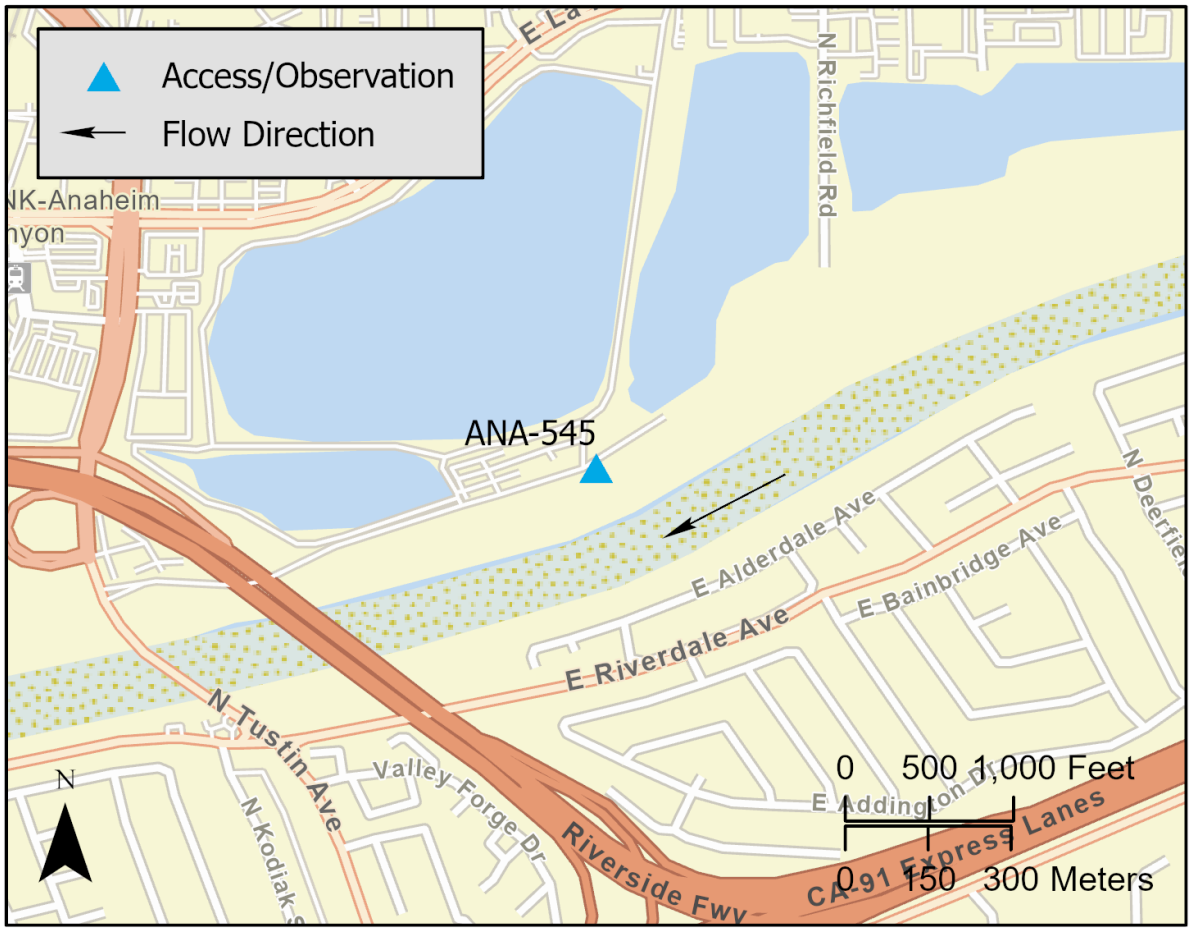
Entrance
Photo from Google Maps

RR = River Right **RL = River Left**

Photo Date: Unknown

Access/Observation Site: OC Water District Parking Lot (ANA-545)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 33 for Tustin Ave., continue north on Tustin Ave. Turn right onto E La Palma Ave. Enter through Santa Ana River Lakes entrance.		
Latitude: 33.85147547 **Longitude:** -117.8296605	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 4060 E La Palma Ave., Anaheim, CA 92807 **Thomas Guide #:** ORG 770 A-2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Entry is through Santa Ana River Lakes entrance
- Swift moving water
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Locked gates

Access/Observation Site: OC Water District Parking Lot (ANA-545)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-A-015**	**Site Description and Field Notes:** Width is 120 meters (394 feet)	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream

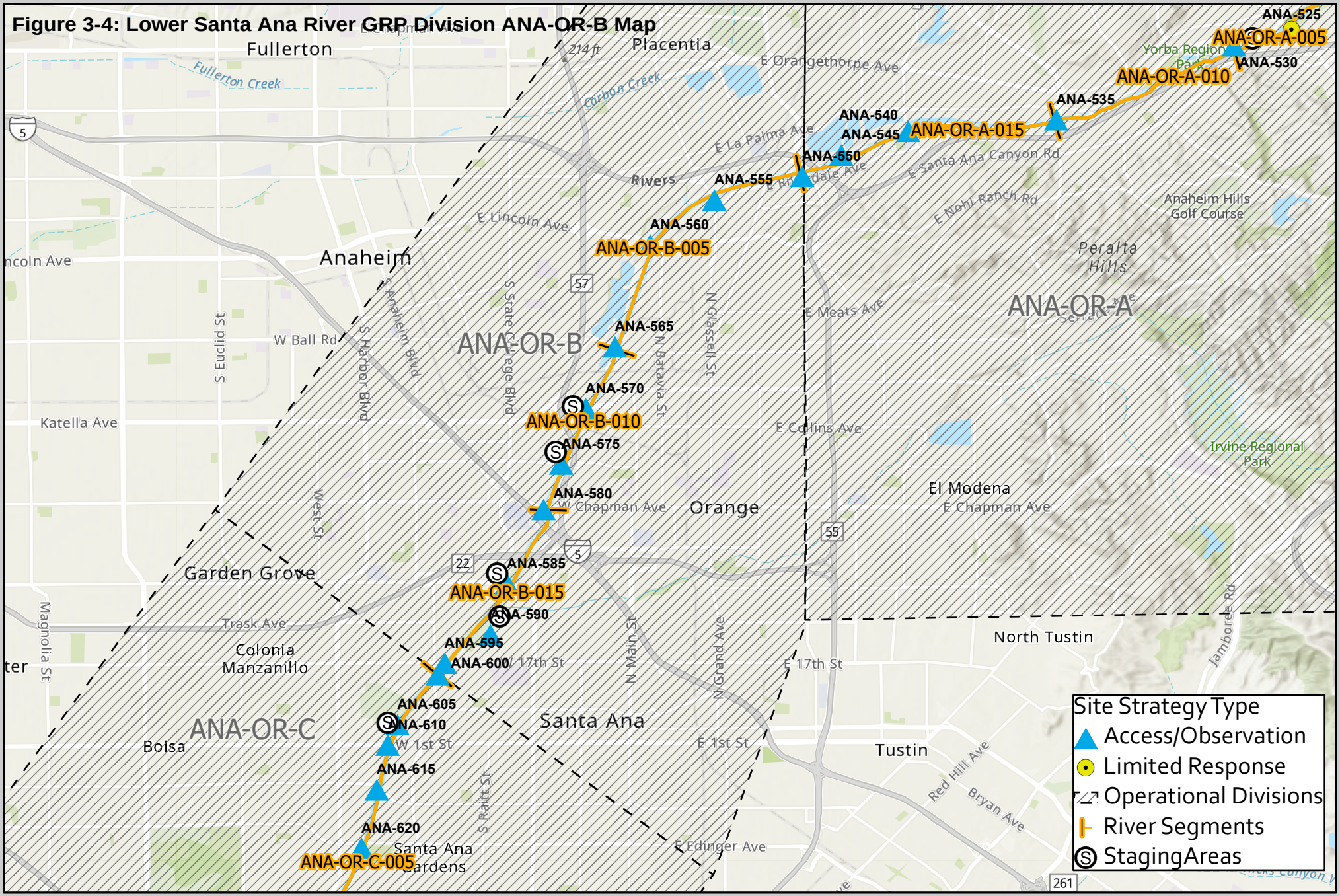
Downstream

Entrance
Photo from Google Maps

RR = River Right **RL = River Left**

Photo Date: 2/7/2020

Figure 3-4: Lower Santa Ana River GRP Division ANA-OR-B Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: OSPR GIS
Requestor: S. Torres
Author: L. Gustafson
Date Created: 8/19/2020

NAD_1983_California_Teale_Albers

Lower Santa Ana Geographic Response Plan ANA-OR-B

0 5 10 20 Miles

0 5 10 20 Kilometers

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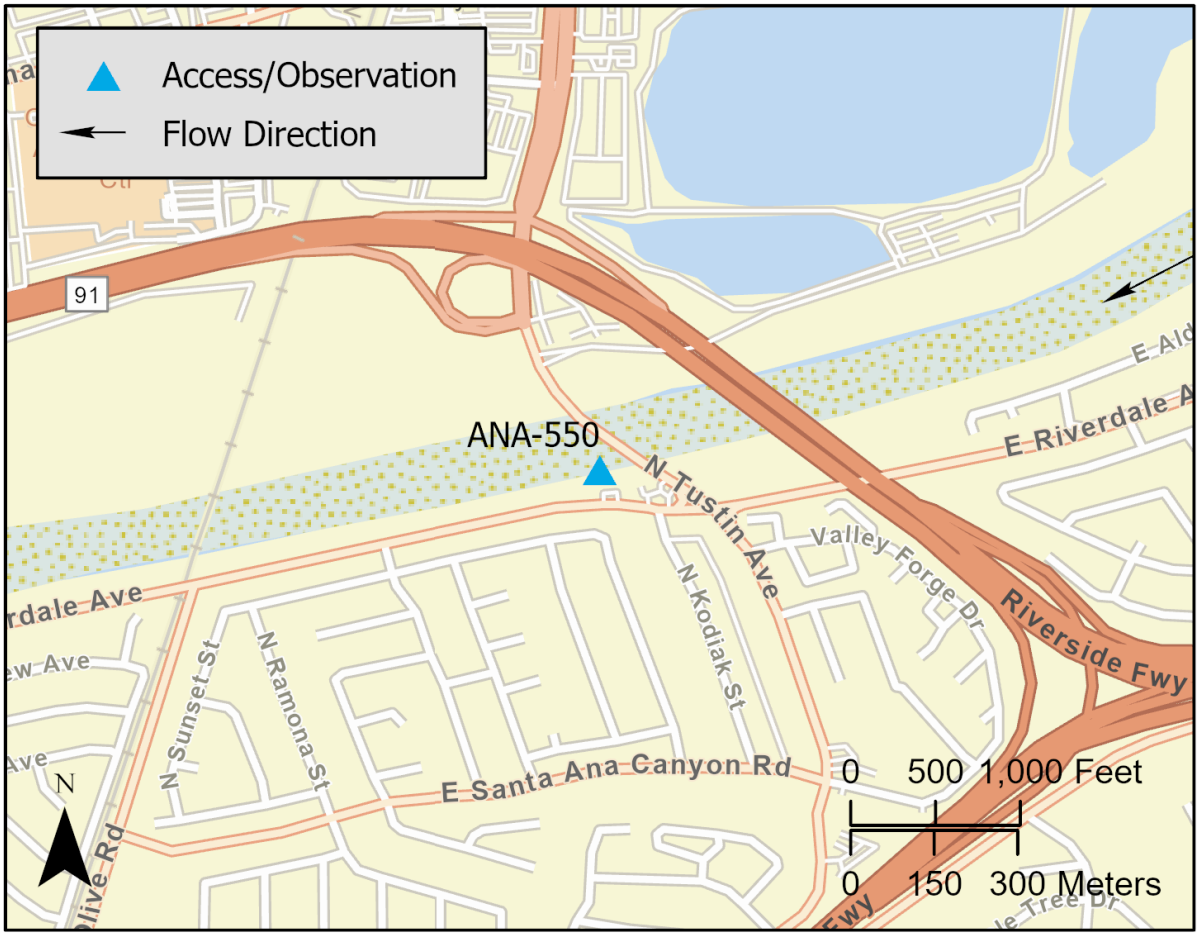
Access/Observation Site: Tustin Ave (ANA-550)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 33 for Tustin Ave. Head south on Tustin Ave. and turn right onto East Riverdale Ave. Address is on the right. Access can be made via the Santa Ana River Trail turnout or the Circle K parking lot.		
Latitude: 33.84764415 **Longitude:** -117.8366941	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 3899 East Riverdale Ave., Anaheim, CA 92807 **Thomas Guide #:** ORG 769 J-3			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Sparsely vegetated
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic

Access/Observation Site: Tustin Ave (ANA-550)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-A-015**	**Site Description and Field Notes:** • Amtrak line approximately 1/4 mile downstream. • Enter through southeast gates onto bike trail - no vehicle access to riverbed only foot access due to rip rap. Width is 150 meters (492 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream
Photo Date: 2/13/2020

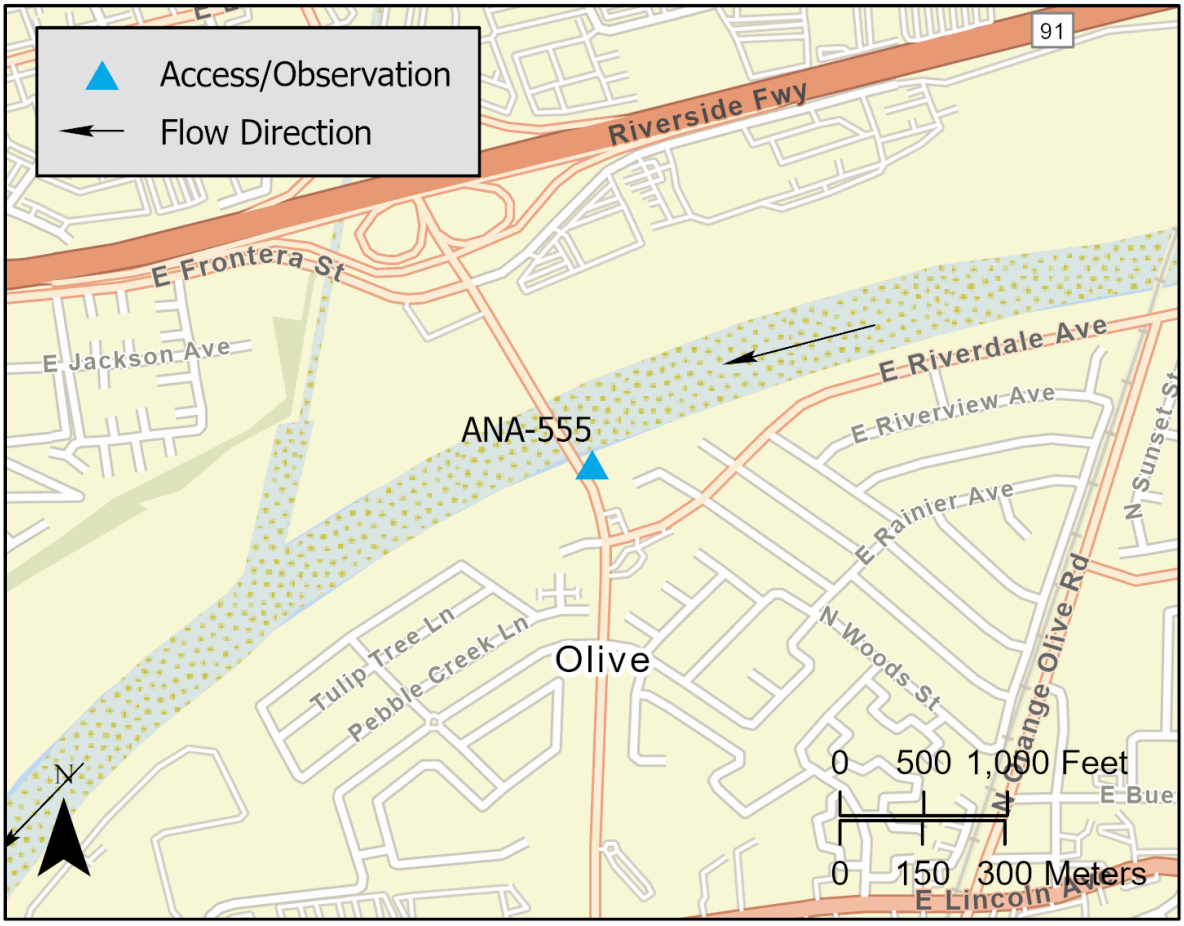
Downstream
Photo Date: 8/23/2017

Entrance
Photo Date: 2/13/2020

RR = River Right RL = River Left

Access/Observation Site: Glasell St (ANA-555)			Page 1 of 2
Driving Directions:	From eastbound CA-91, take exit 31 for Glassell St. Head south on Glassell St. to the Santa Ana River.		
Latitude: 33.84339096 **Longitude:** -117.8524966	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 769 G-3			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Locked gates

Access/Observation Site: Glasell St (ANA-555)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-005**	**Site Description and Field Notes:** • Amtrak line located upstream approximately 1/2 mile. • Enter northeast gates and use utility road to access riverbed. Width is 300 meters (984 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream
Photo Date: 2/13/2020

Downstream

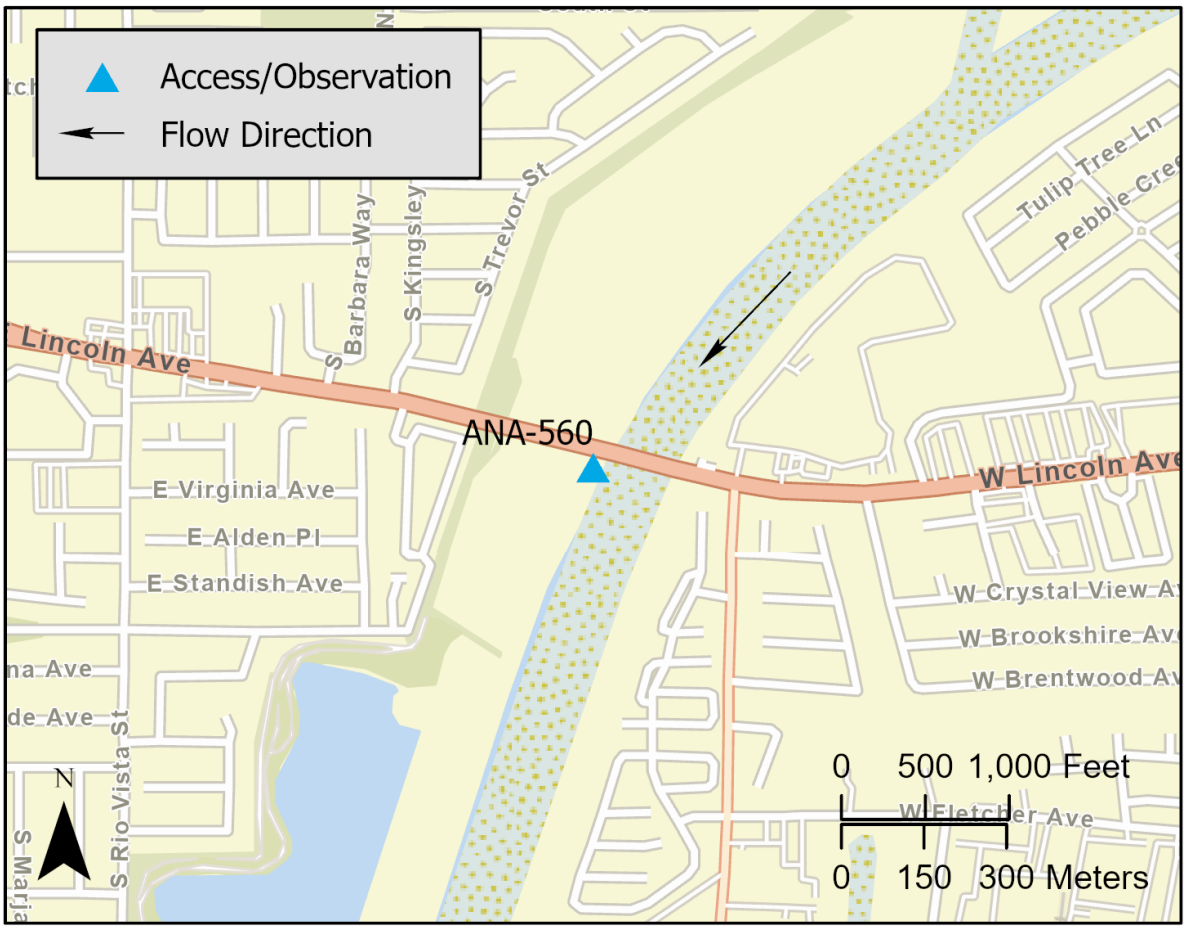
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Lincoln Ave (ANA-560)			Page 1 of 2
Driving Directions:	From northbound CA-57, take exit 4 for Lincoln Ave. and head east to the Santa Ana River.		
Latitude: 33.835331 **Longitude:** -117.864033	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 15505 E Lincoln Ave., Orange, CA 92865 **Thomas Guide #:** ORG 769 F-5			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Locked gates

Access/Observation Site: Lincoln Ave (ANA-560)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-005**	**Site Description and Field Notes:** Enter through southwest gates and use utility road for access. Vehicle access located at ramp approximately 1/2 mile north of Lincoln Blvd. Width is 300 meters (984 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream
Photo Date: 2/13/2020

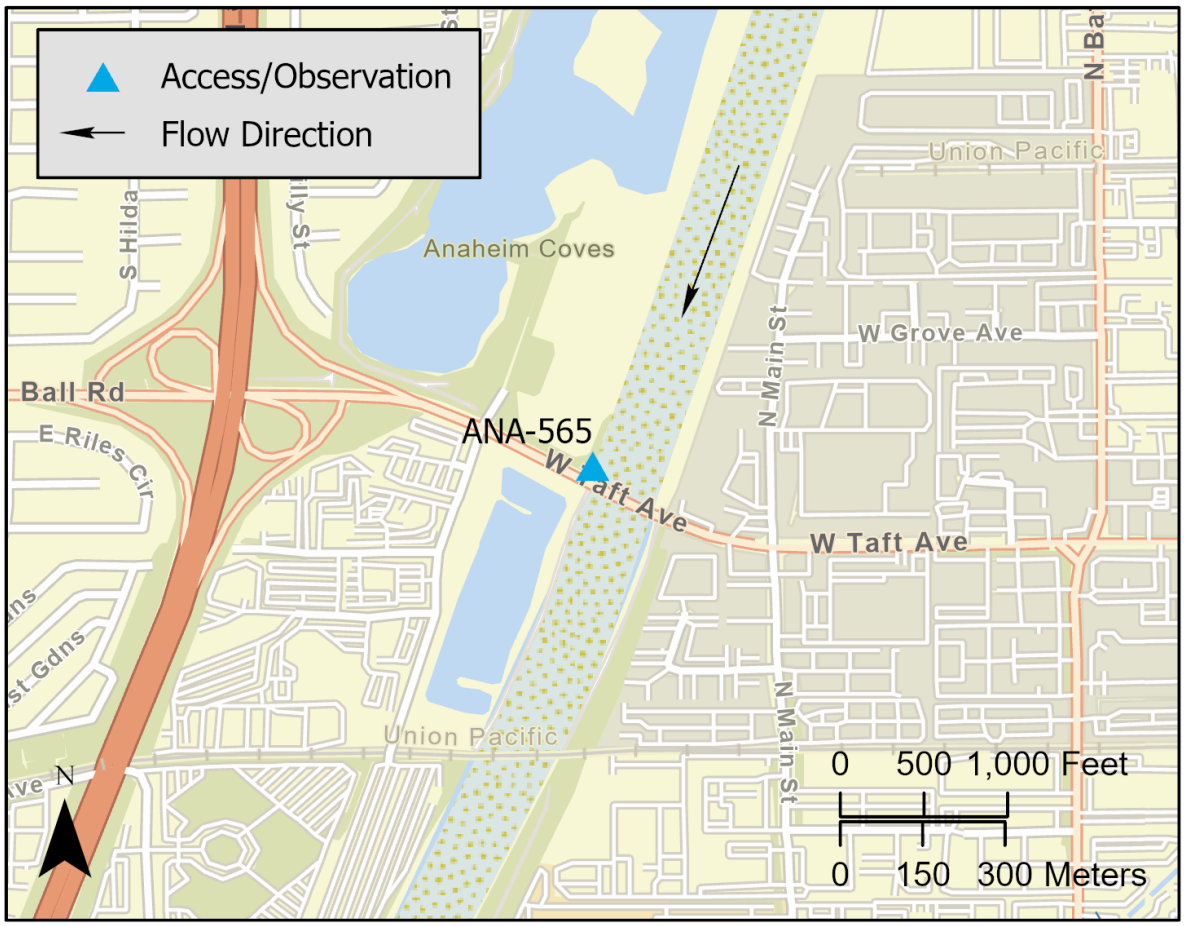
Downstream
Photo Date: 8/23/2017

Entrance
Photo from Google Maps

RR = River Right RL = River Left

Access/Observation Site: Taft Ave (ANA-565)			Page 1 of 2
Driving Directions:	From northbound CA-57, take exit 3 for Ball Rd. Head east on Ball Rd. which becomes Taft Ave. and crosses over the Santa Ana River.		
Latitude: 33.816984 **Longitude:** -117.870368	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 1700 N Main St., Orange, CA 92865 **Thomas Guide #:** ORG 769 E-7			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Equestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Taft Ave (ANA-565)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-005**	**Site Description and Field Notes:** Enter northwest gates to riverbed. Width is 250 meters (820 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200	Orange County Water District (714) 378-3200	

Site Images

Upstream
Photo Date: 8/23/2017

Downstream

Entrance

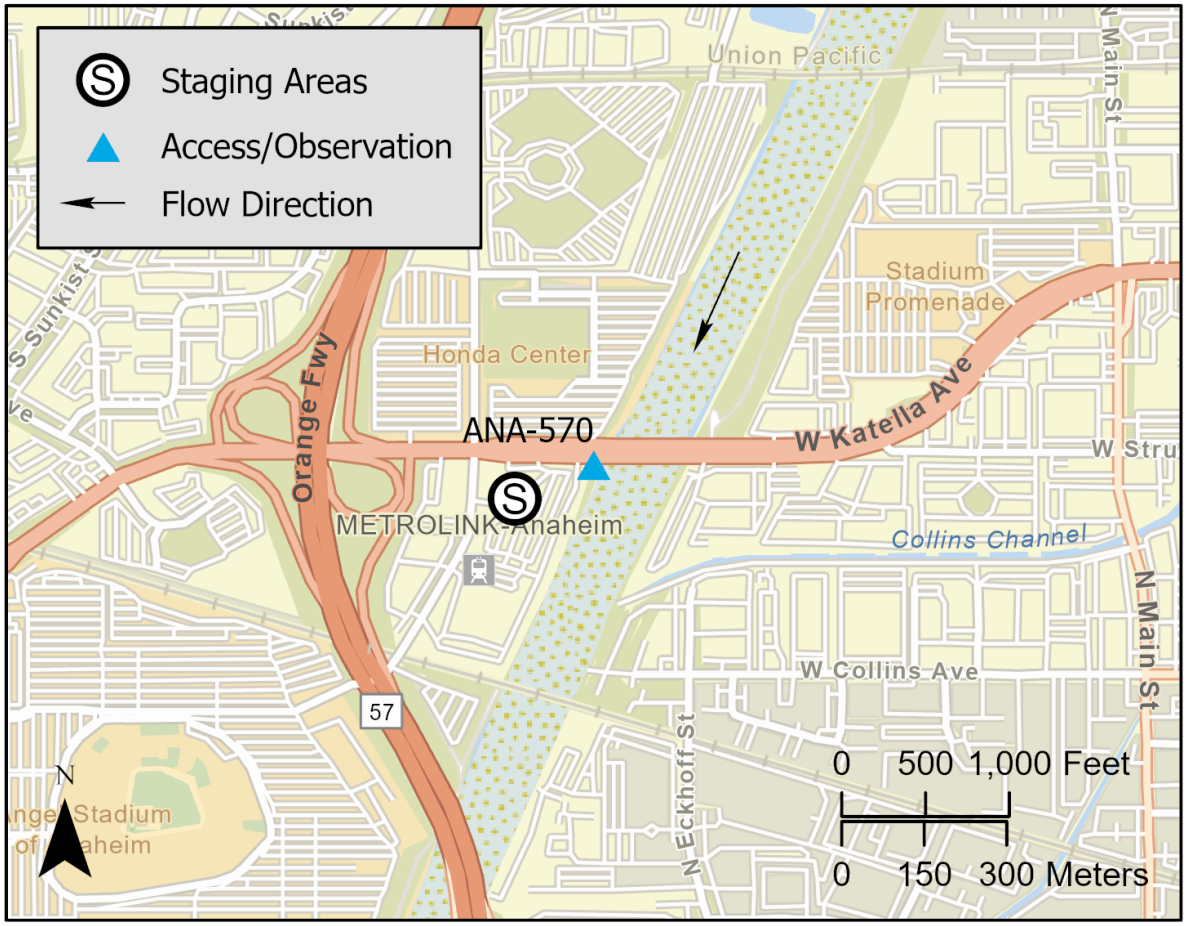
RR = River Right **RL = River Left**

Photo Date: 2/13/2020

Access/Observation Site: Katella Ave (ANA-570)			Page 1 of 2
Driving Directions:	From northbound CA-57, take exit 2 for Katella Ave. Head east on Katella Ave. to the Santa Ana River.		
Latitude: 33.805885 **Longitude:** -117.875648	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 2695 E Katella Ave., Anaheim, CA 92806
Thomas Guide #: ORG 799 E-2

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Katella Ave (ANA-570)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-010**	**Site Description and Field Notes:** Enter through southwest access gates and use utility road to access riverbed. Width is 100 meters (328 feet). This site is adjacent to the Honda Center which may be used as a staging area.	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream
Photo Date: 2/13/2020

Downstream

Entrance

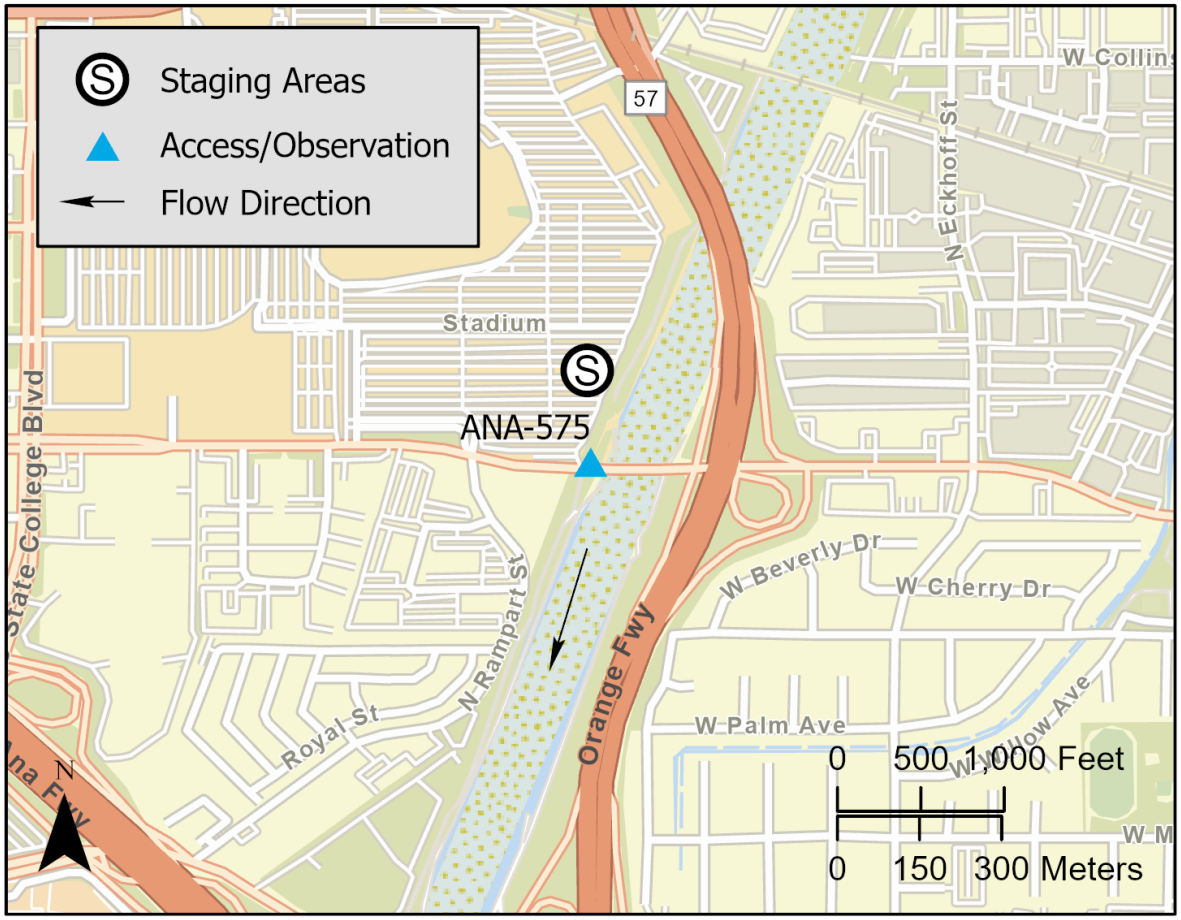
RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Orangewood Ave (ANA-575)			Page 1 of 2
Driving Directions:	From northbound CA-57, take exit 1B for Orangewood Ave. Head west on Orangewood Ave. to the Santa Ana River.		
Latitude: 33.795893 **Longitude:** -117.880019	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 2000 E Gene Autry Way, Anaheim, CA 92806
Thomas Guide #: ORG 799 D-3

Overview Street Map



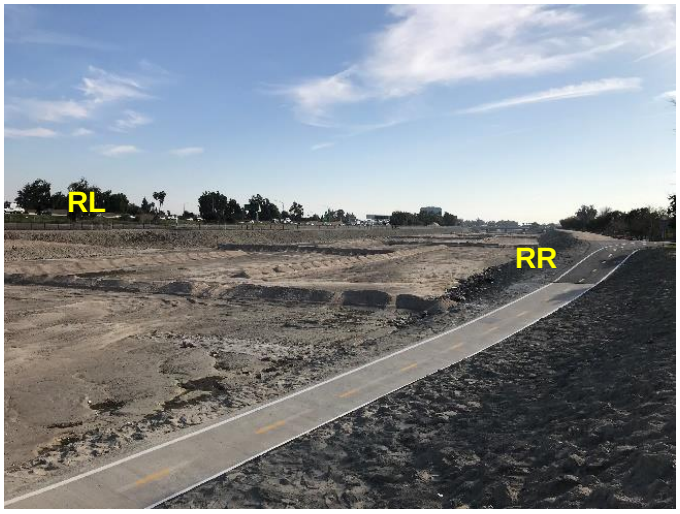
Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Orangewood Ave (ANA-575)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-010**	**Site Description and Field Notes:** Go through gates on northwest side of Orangewood Ave. and use utility road to access riverbed. Width is 100 meters (328 feet). This site is adjacent to Angel Stadium of Anaheim which may be used as a staging area.	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream



Downstream
Photo Date: 2/13/2020

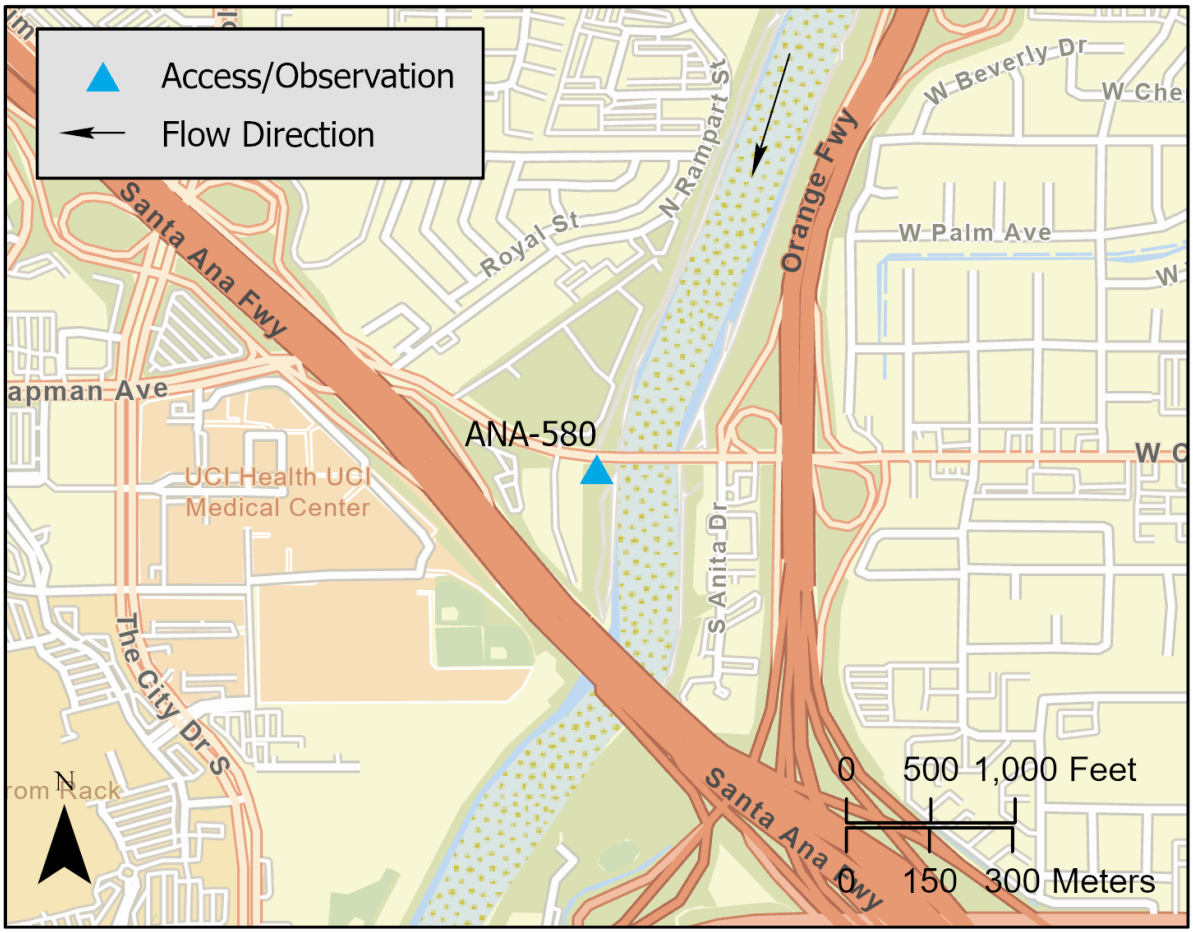
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Chapman Ave (ANA-580)			Page 1 of 2
Driving Directions:	From northbound I-5, take exit 107B for Chapman Ave. Head east on Chapman Ave. to the Santa Ana River.		
Latitude: 33.787735 **Longitude:** -117.883211	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 3063 W Chapman Ave., Orange, CA 92868 **Thomas Guide #:** ORG 799 D-4			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Chapman Ave (ANA-580)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-010**	**Site Description and Field Notes:** Go through southwest gates and use utility road to stage response equipment. No vehicle access to riverbed foot crew only at this location. Width is 100 meters (328 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream
Photo Date: 8/23/2017

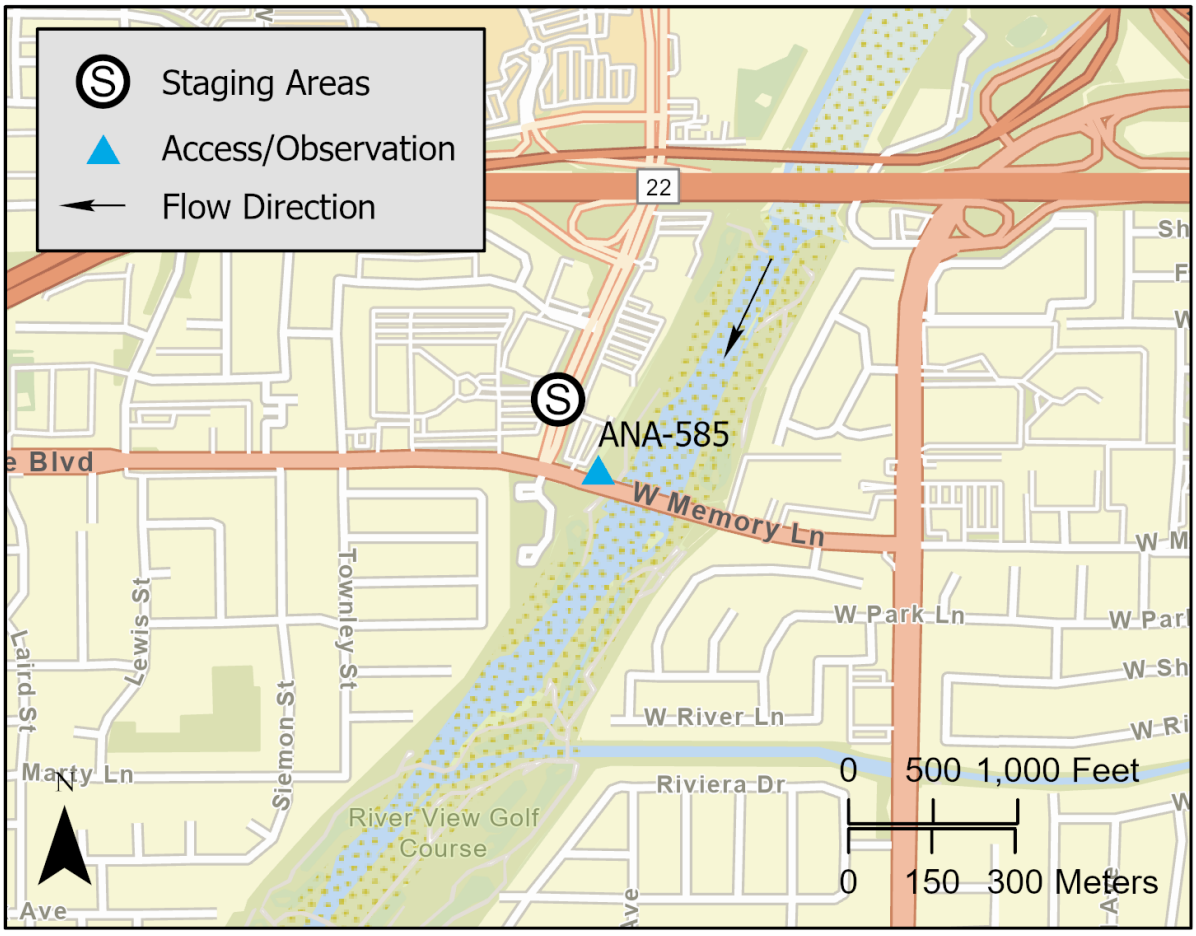
Entrance

RR = River Right **RL = River Left**

Photo Date: 2/13/2020

Access/Observation Site: Garden Grove Blvd/Memory Lane (ANA-585)			Page 1 of 2
Driving Directions:	From eastbound CA-22, take the I-5 exit toward CA-57. Keep right to continue onto Exit 14A, follow signs for The City Drive. Head south on The City Dr. S and turn left onto W Memory Ln. to the Santa Ana River.		
Latitude: 33.774381 **Longitude:** -117.88979	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 799 C-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Riverview Golf Course
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Garden Grove Blvd/Memory Lane (ANA-585)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-015**	**Site Description and Field Notes:** Go through northwest gates and use utility road to access riverbank. Width is 200 meters (656 feet). Nearby parking lots can be used for staging areas.	
Site Contact/s: River View Golf Course (714) 563-8435	Orange County Public Works (714) 955-0200	

Site Images

Upstream
Photo Date: 8/23/2017

Downstream

Entrance

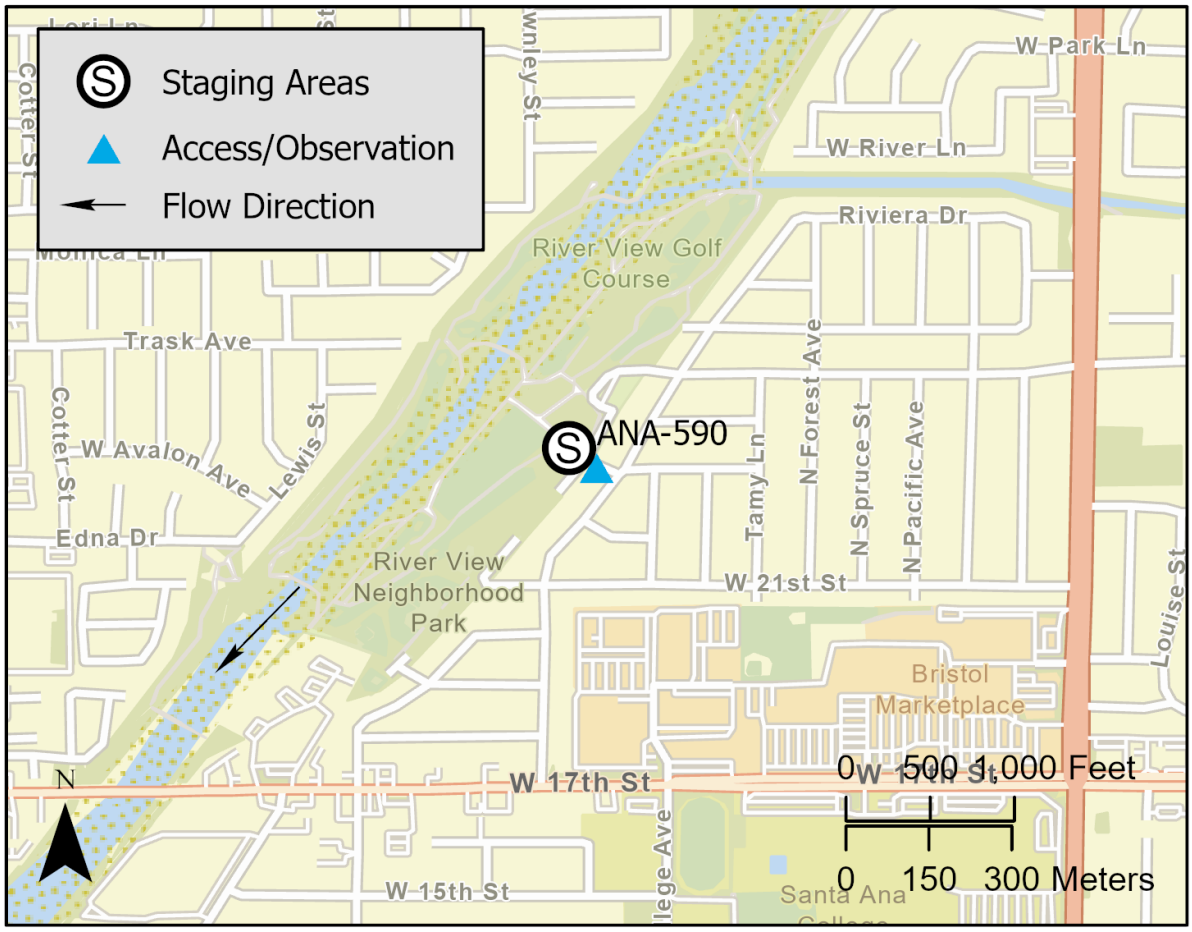
RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Access/Observation Site: River View Golf Course (ANA-590)			Page 1 of 2
Driving Directions:	From eastbound CA-22, take exit 13 for Fairview St. and turn left onto Fairview St. then turn right onto Garden Grove Blvd. Continue onto W Memory Ln. and turn right onto N Bristol St. Turn right onto W Santa Clara Ave. to River View Golf Course clubhouse.		
Latitude: 33.7651756 **Longitude:** -117.8927868	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 1800 West Santa Clara Ave., Santa Ana, CA 92706
Thomas Guide #: ORG 799 C-7

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Vehicle/Bicycle/Pedestrian traffic
- River View Golf Course

Access/Observation Site: River View Golf Course (ANA-590)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-015**	**Site Description and Field Notes:** River runs through the River View Golf Course. Width is 250 meters (820 feet).	
Site Contact/s: River View Golf Course (714) 563-8435	Orange County Public Works (714) 955-0200	

Site Images

Upstream

Downstream

Entrance
Photo Date: 8/23/2019

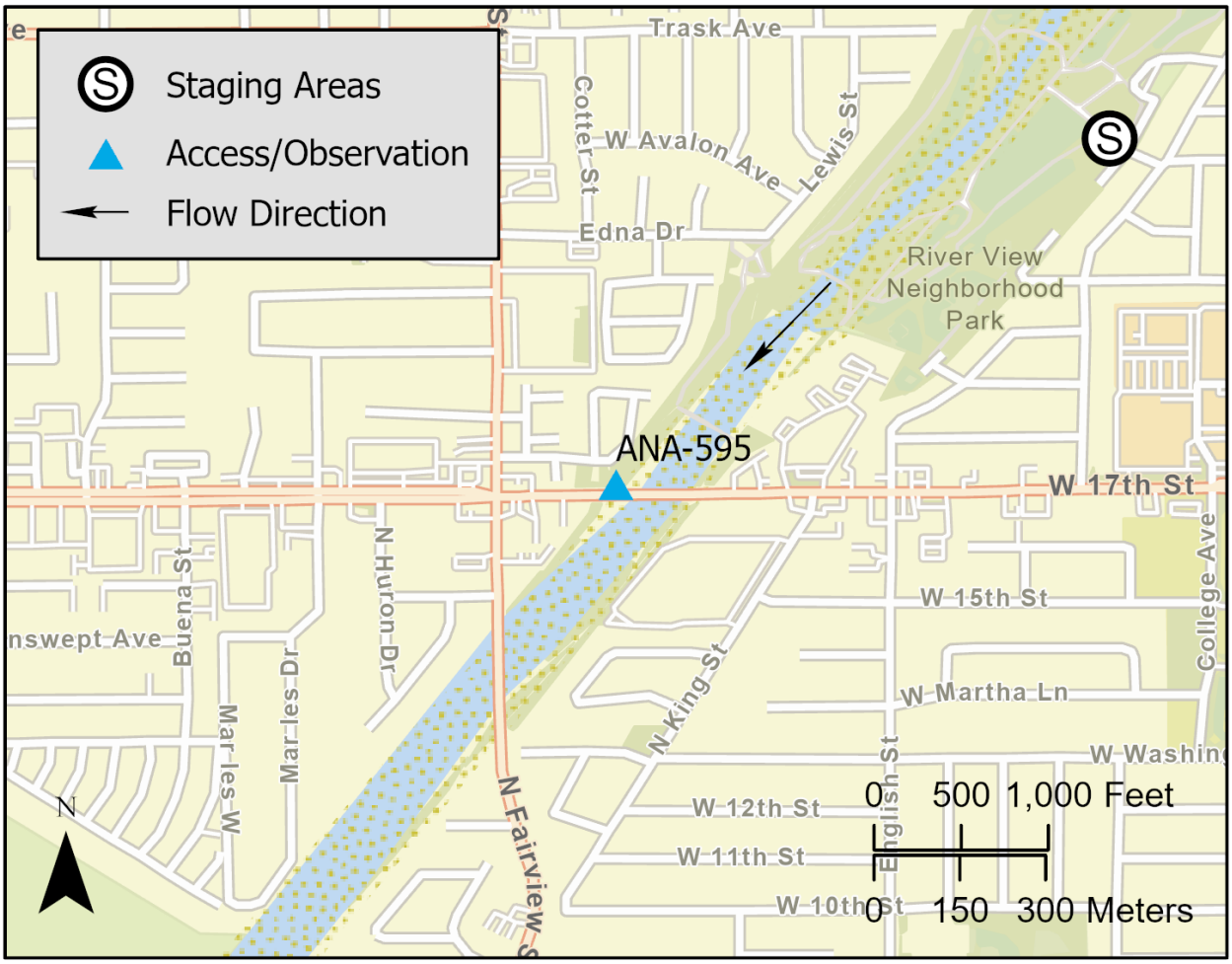
RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: 17th St (ANA-595)			Page 1 of 2
Driving Directions:	From eastbound CA-22, take exit 13 for Fairview St. and head south to 17th St. Head east on Fairview St. to the Santa Ana River.		
Latitude: 33.760075 **Longitude:** -117.900993	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: N/A
Thomas Guide #: ORG 829 B-1

Overview Street Map



Hazards, Restrictions and Advice for Responders

- High pressure gas line running east west across Santa Ana River
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampment
- Locked gates

Access/Observation Site: 17th St (ANA-595)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-B-015**	**Site Description and Field Notes:** Go through northwest gates and use utility road to access riverbank. Width is 75 meters (246 feet). This location also provides access to the lower portion of the River View Golf Course.	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

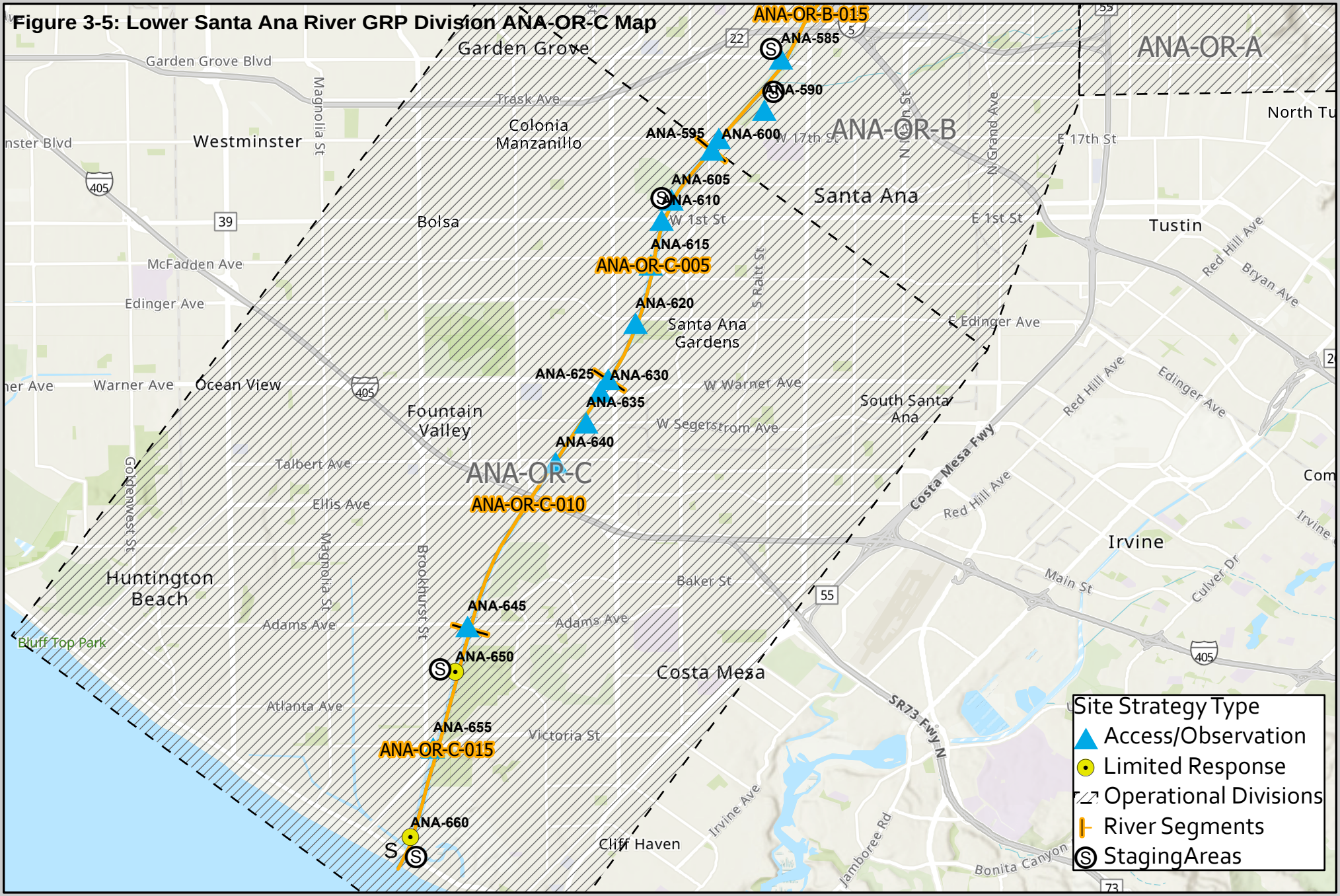
Downstream
Photo Date: 8/23/2019

Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Figure 3-5: Lower Santa Ana River GRP Division ANA-OR-C Map



Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response

Data Source: OSPR GIS
Requestor: S. Torres
Author: L. Gustafson
Date Created: 8/19/2020

NAD_1983_California_Teale_Albers

Lower Santa Ana Geographic Response Plan ANA-OR-C

0 5 10 20 Miles

0 5 10 20 Kilometers

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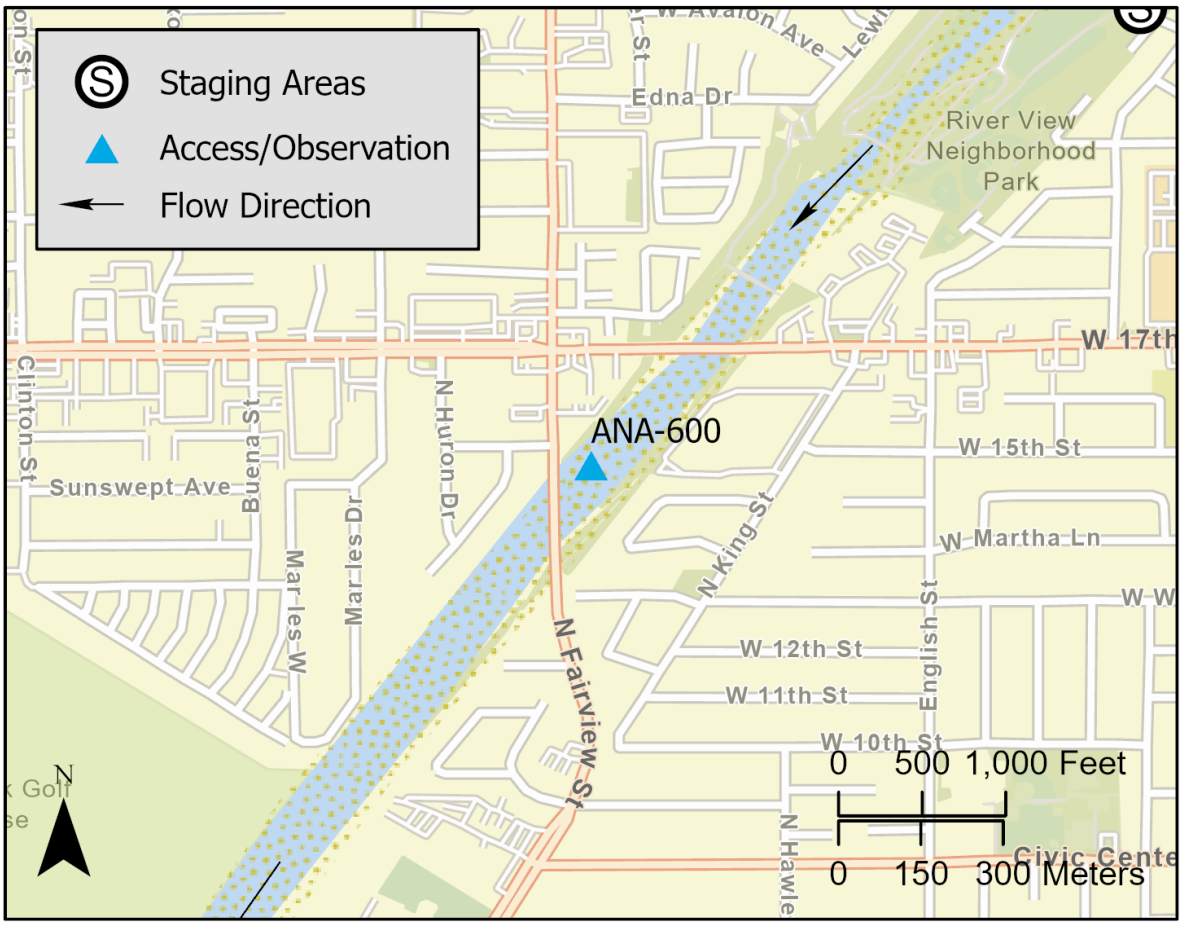
Access/Observation Site: N Fairview St (ANA-600)			Page 1 of 2
Driving Directions:	From eastbound CA-22, take exit 13 for Fairview St. Head south on Fairview St. to the Santa Ana River.		
Latitude: 33.75800293 **Longitude:** -117.9022322	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: N/A
Thomas Guide #: ORG 829 B-1

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: N Fairview St (ANA-600)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** Go through northwest gates and use utility road to access riverbank. Water flow is primarily nuisance water. Width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream
Photo Date: 8/23/2019

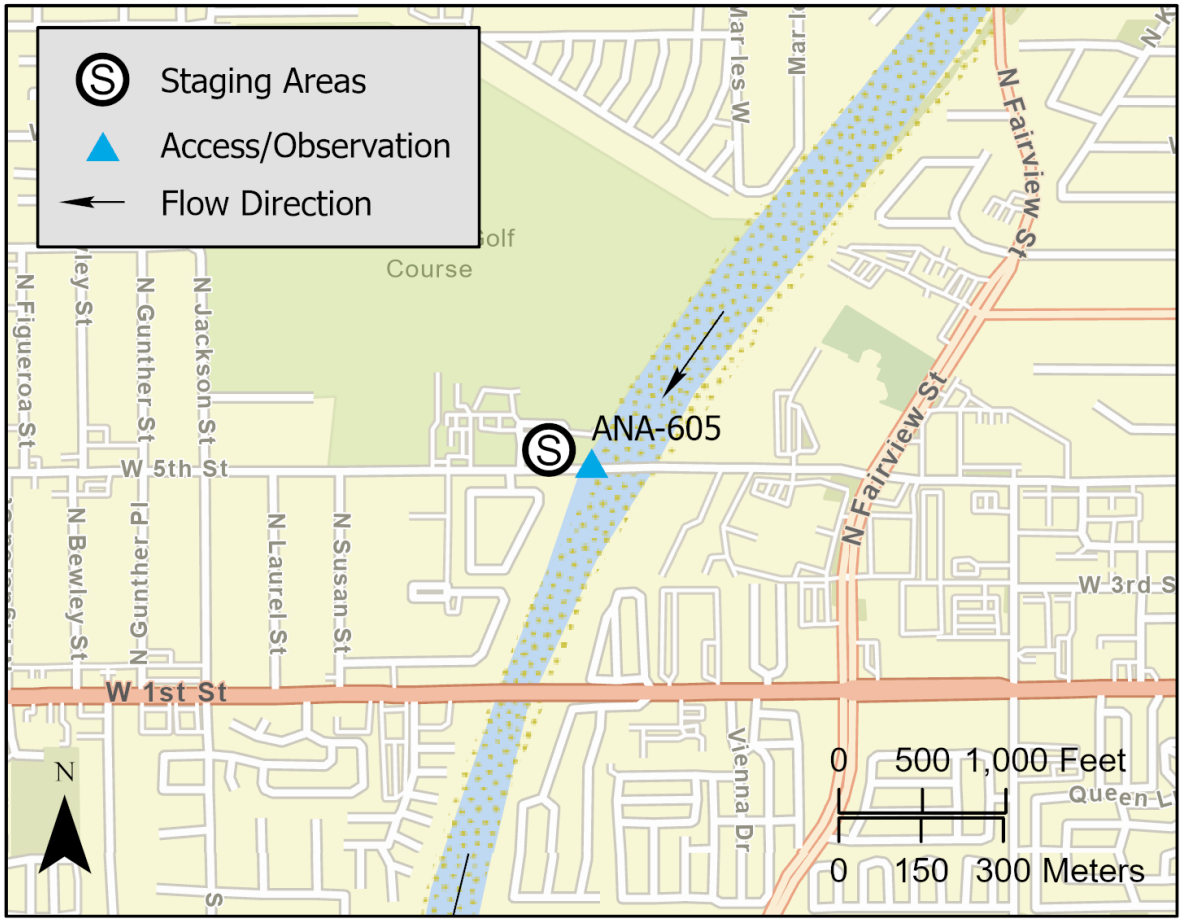
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: 5th St (ANA-605)			**Page 1 of 2**
Driving Directions:	From eastbound CA-22, take exit 12A for Harbor Blvd. S and head south to 5th St. Head east on 5th St. to the Santa Ana River. From southbound I-405, take exit 11A for Fairview Rd. and head north to 5th St. Head west on 5th St. to the Santa Ana River.		
Latitude: 33.749032 **Longitude:** -117.909491	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 3017 W 5th St., Santa Ana, CA 92703 **Thomas Guide #:** ORG 829 A-3			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: 5th St (ANA-605)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** Enter through southwest gates off 5th Street and use utility road to access riverbank. Water flow is primarily nuisance water. Width is 75 meters (246 feet). There are parking lots at Willowick Golf Course and Romero-Cruz Academy that may be used for staging.	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

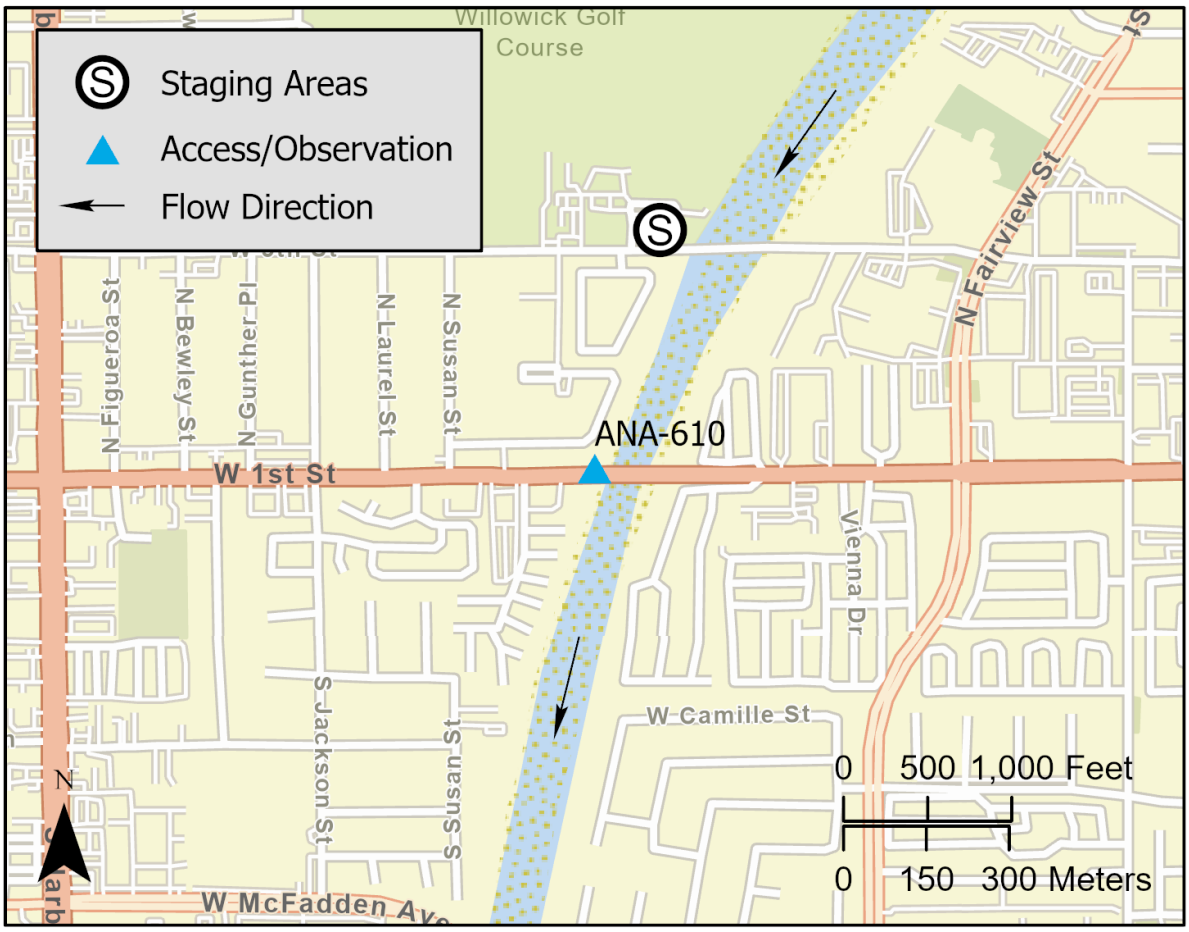
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Access/Observation Site: 1st St (ANA-610)			Ⓢ **Page 1 of 2**
Driving Directions:	From eastbound CA-22, take exit 12A for Harbor Blvd. and head south to 1st St. Head east on 1st St. to the Santa Ana River. From southbound I-405, take exit 11A for Fairview Rd. and head north to 1st St. Head west on 1st St. to the Santa Ana River.		
Latitude: 33.745368 **Longitude:** -117.911256	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 2934 W 1st St., Santa Ana, CA 92703 **Thomas Guide #:** ORG 829 A-3			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: 1st St (ANA-610)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** Go through gates on northwest side of 1st St. and use utility road to access riverbed. Water flow is primarily nuisance water. Width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

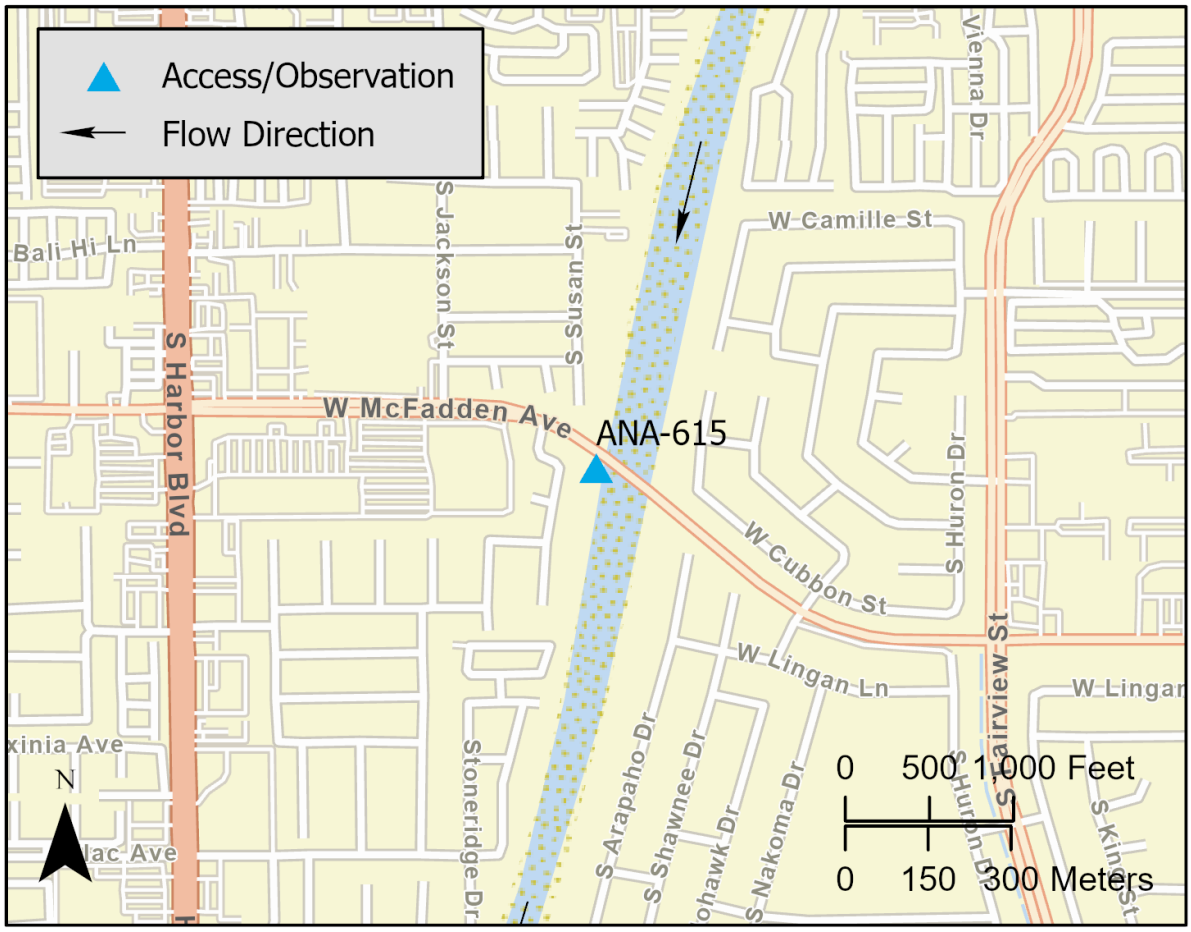
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Access/Observation Site: McFadden Ave (ANA-615)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 11A for Fairview Rd. and head north to McFadden Ave. Head west on McFadden Ave. to the Santa Ana River.		
Latitude: 33.73733 **Longitude:** -117.913215	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 828 J-4			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: McFadden Ave (ANA-615)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** Enter through gates and take utility road down to riverbank. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

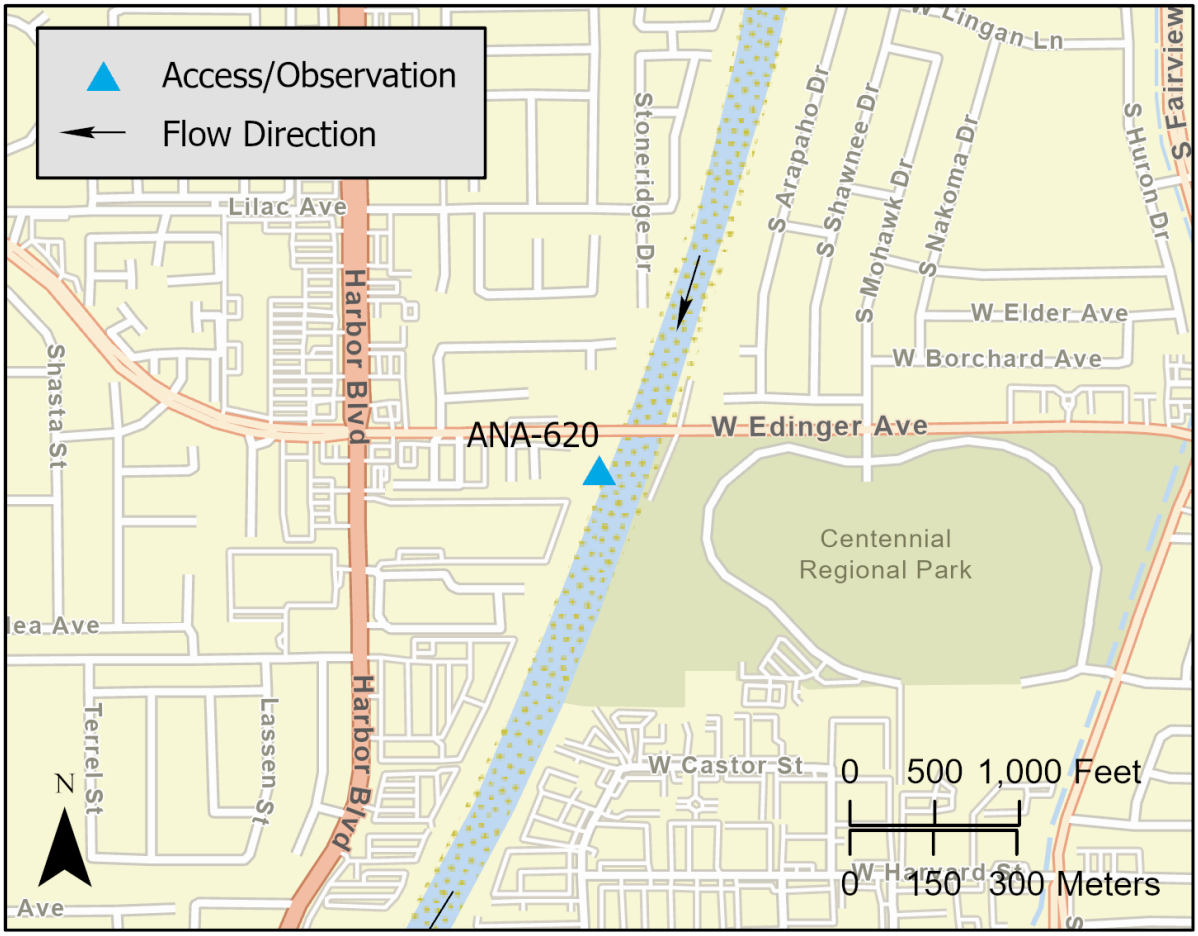
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Access/Observation Site: Edinger Ave (ANA-620)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 11B for Harbor Blvd. and head north to Edinger Ave. Head east on Edinger Ave. to the Santa Ana River.		
Latitude: 33.72682758 **Longitude:** -117.9159546	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 828 J-6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Edinger Ave (ANA-620)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** Go through southwest gates and use utility road to access riverbed. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream
Photo Date: 8/23/2019

Downstream

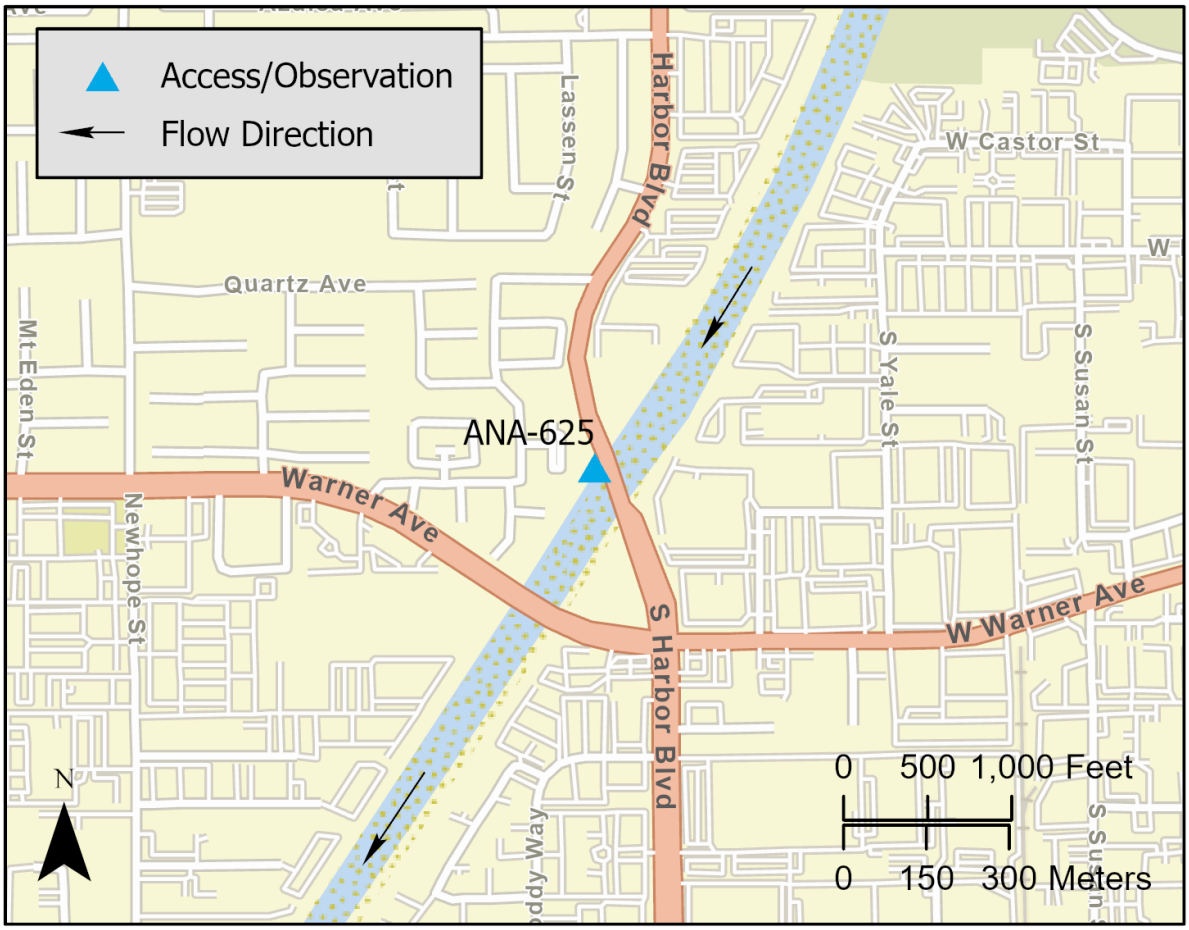
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Harbor Blvd (ANA-625)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 11B for Harbor Blvd. Head north on Harbor Blvd. to the Santa Ana River.		
Latitude: 33.71676785 **Longitude:** -117.920878	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 828 J-7			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Harbor Blvd (ANA-625)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-005**	**Site Description and Field Notes:** From Harbor Blvd. enter southwest gates and use utility road to access riverbed. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream
Photo Date: 8/23/2019

Downstream

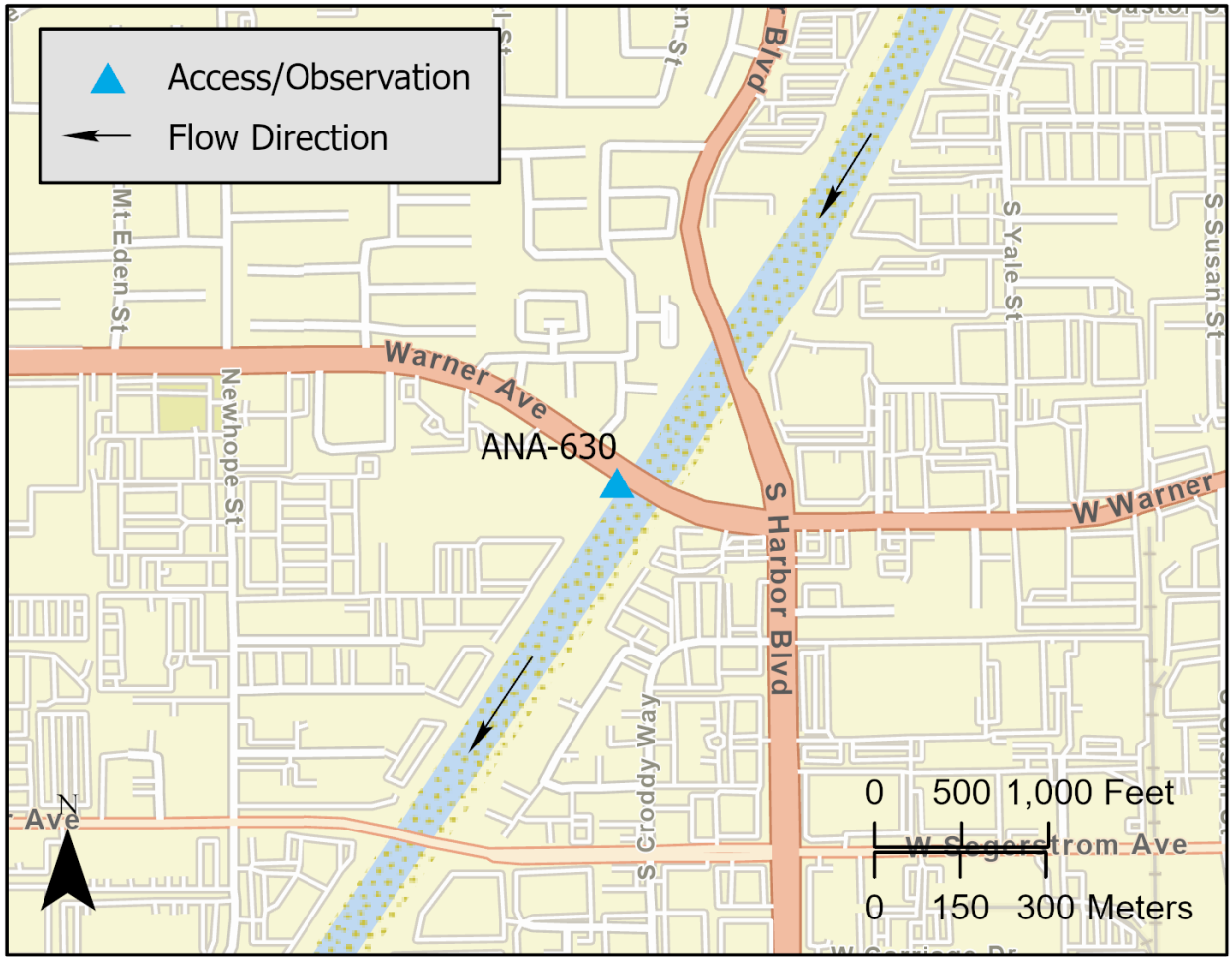
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Warner Ave (ANA-630)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 15A for Warner Ave. Head east on Warner Ave. to the Santa Ana River.		
Latitude: 33.71455327 **Longitude:** -117.9223166	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 828 J-7			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Warner Ave (ANA-630)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-010**	**Site Description and Field Notes:** From Warner Ave. enter southwest gates and use utility road to access riverbank. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream
Photo Date: 8/23/2019

Downstream

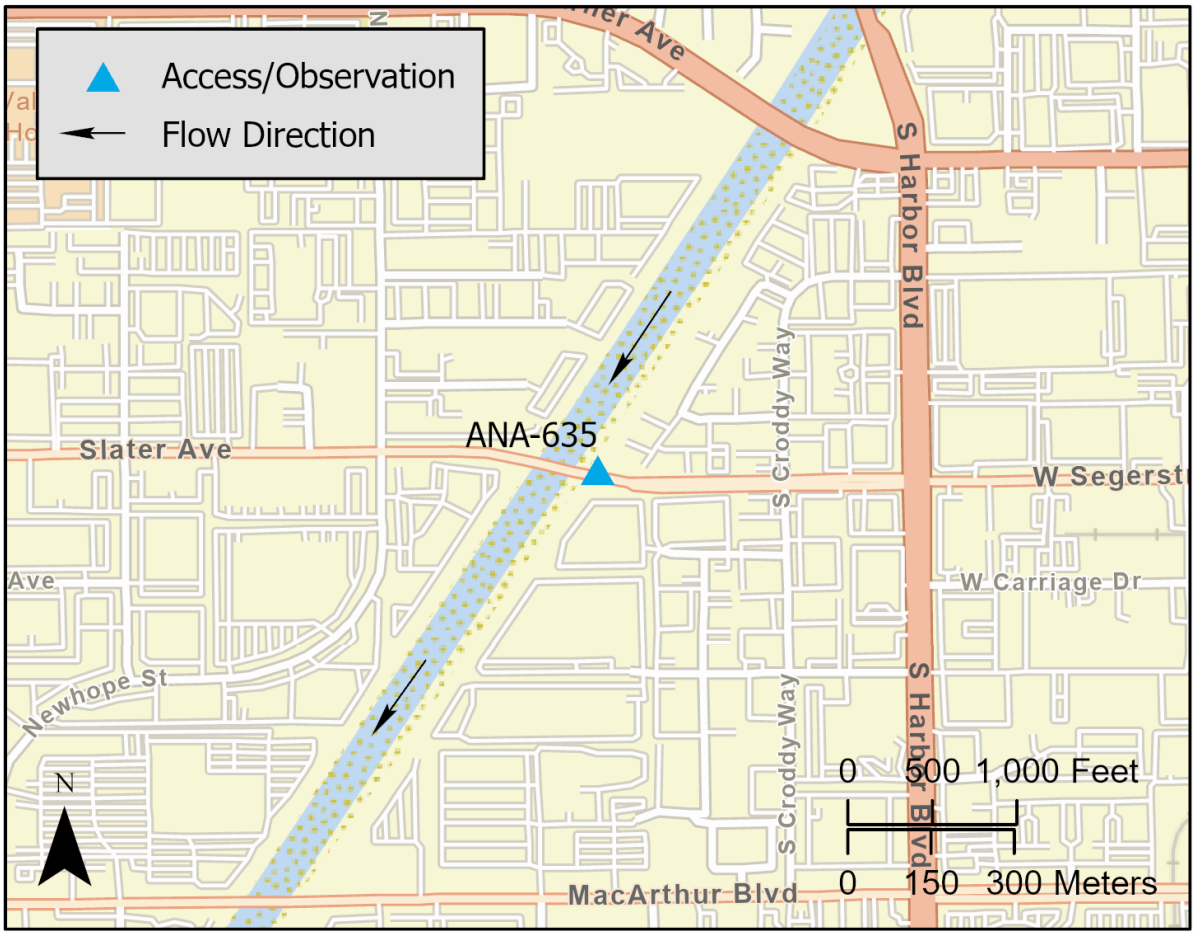
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Slater/Segerstrom (ANA-635)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 11B for Harbor Blvd. Head north on Harbor Blvd. and left onto Segerstrom Ave. to the Santa Ana River. Use southwest entrance to access river.		
Latitude: 33.708925 **Longitude:** -117.924833	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: N/A **Thomas Guide #:** ORG 858 H-1			

Overview Street Map



Hazards, Restrictions and Advice for Responders

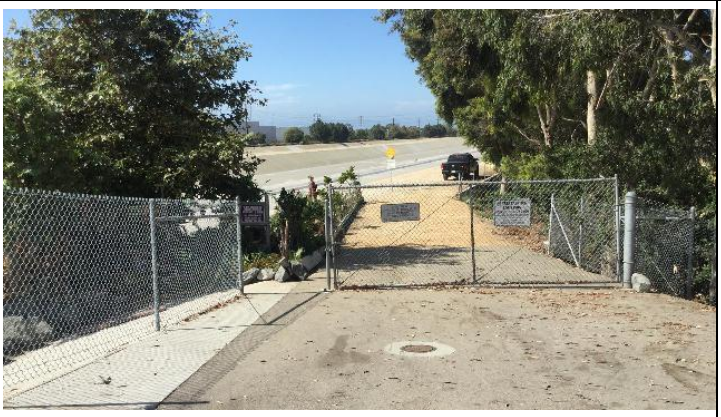
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Slater/Segerstrom (ANA-635)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-010**	**Site Description and Field Notes:** Access through southwest gates and use utility road to access riverbed. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream
Photo Date: 8/23/2019

Downstream



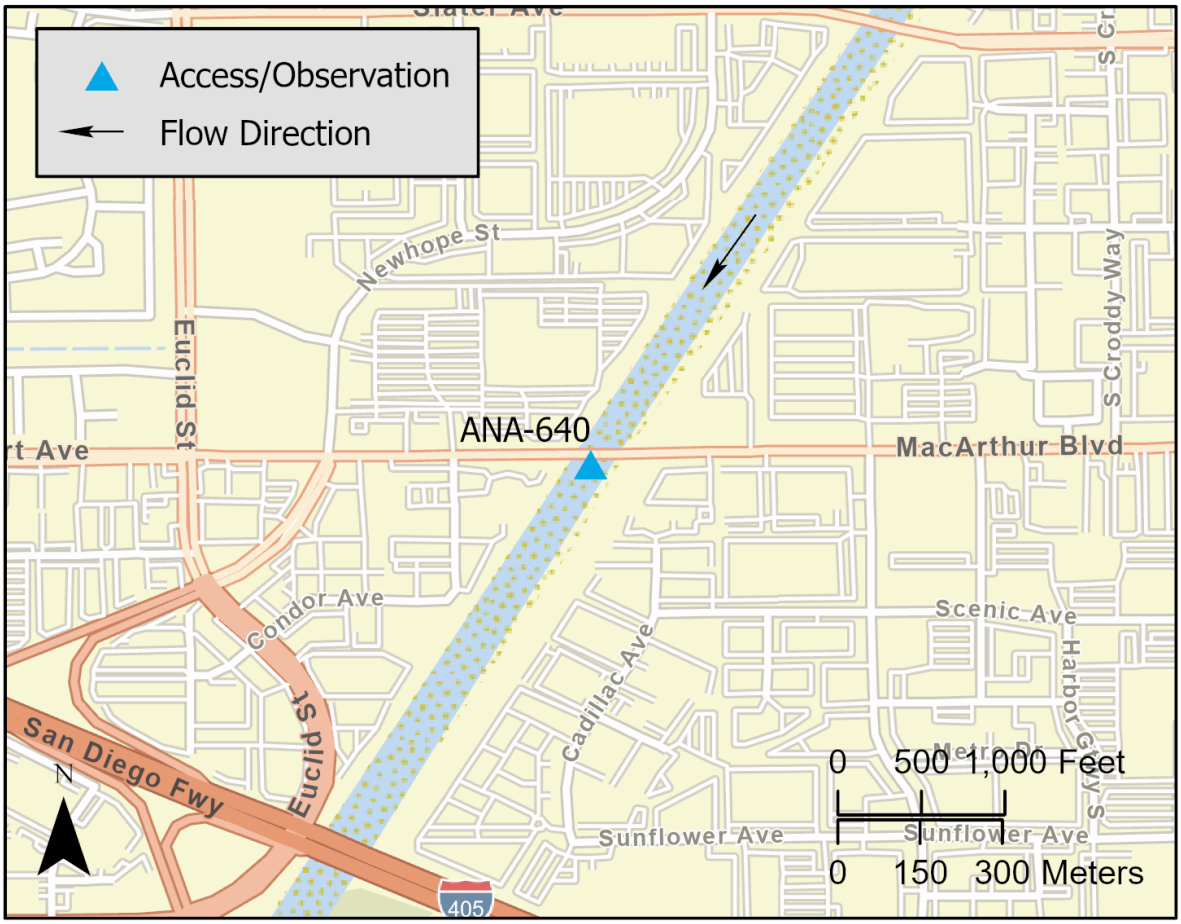
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2017

Access/Observation Site: Talbert/McArthur Blvd (ANA-640)			Page 1 of 2
Driving Directions:	From southbound I-405, exit 12 for Euclid St. Head north to Talbert Ave. Head east on Talbert Ave. to the Santa Ana River.		
Latitude: 33.70176704 **Longitude:** -117.9303218	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 18030 Mt. Washington St., Fountain Valley, CA 92708 **Thomas Guide #:** ORG 858H-2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampment
- Locked gates

Access/Observation Site: Talbert/McArthur Blvd (ANA-640)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-010**	**Site Description and Field Notes:** Access location from southwest gates. Response equipment can use utility road to access riverbed. Water flow is primarily nuisance water. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

Entrance

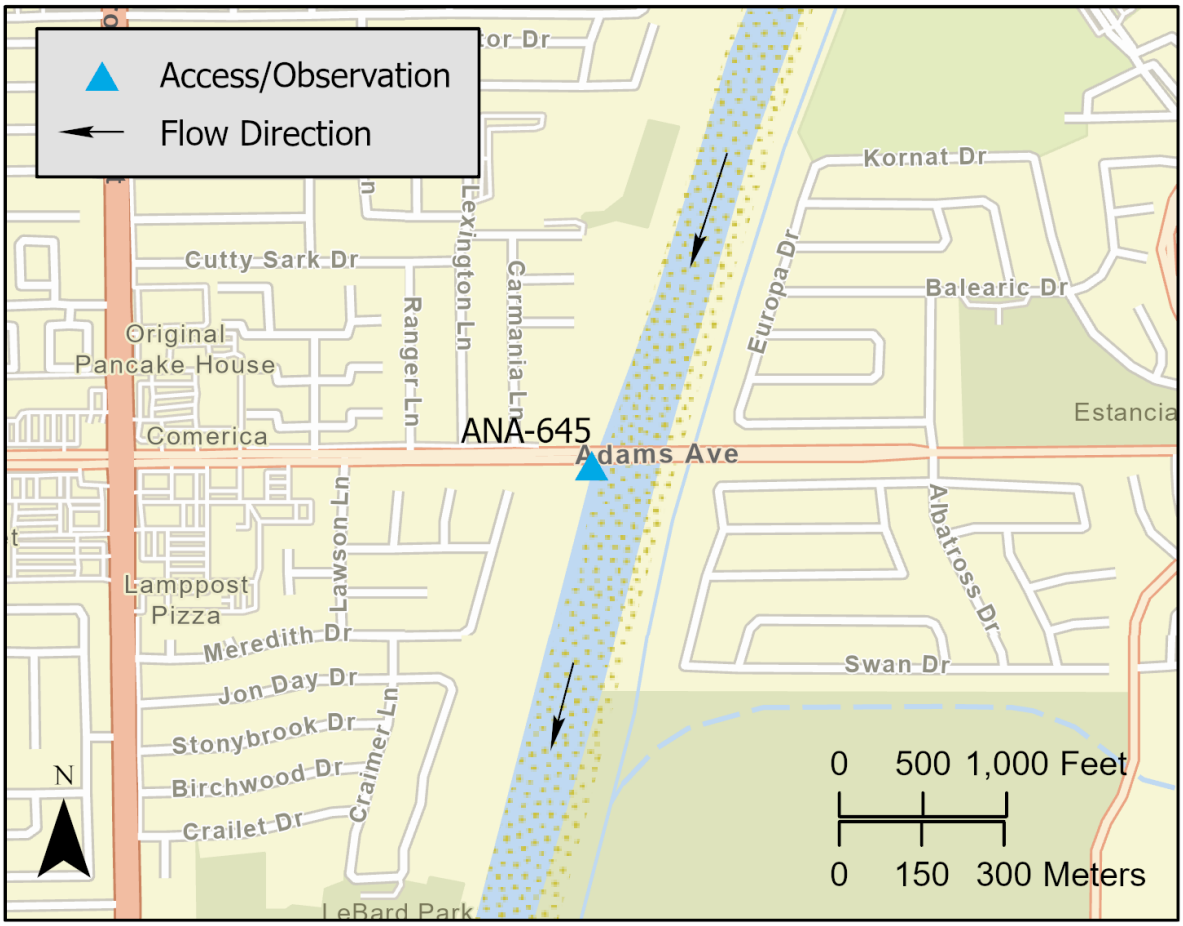
RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Access/Observation Site: Adams Ave (ANA-645)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 14 for Brookhurst St. and head south to Adams Ave. Head east on Adams Ave. to the Santa Ana River.		
Latitude: 33.672304 **Longitude:** -117.946166	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 10449 Adams Ave., Huntington Beach, CA 92646
Thomas Guide #: ORG 858F-6

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Vertical walls in channel
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampment
- Locked gates

Access/Observation Site: Adams Ave (ANA-645)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-015**	**Site Description and Field Notes:** Access location from southwest gates. There are vertical walls along this part of the river. River width is 61 meters (200 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

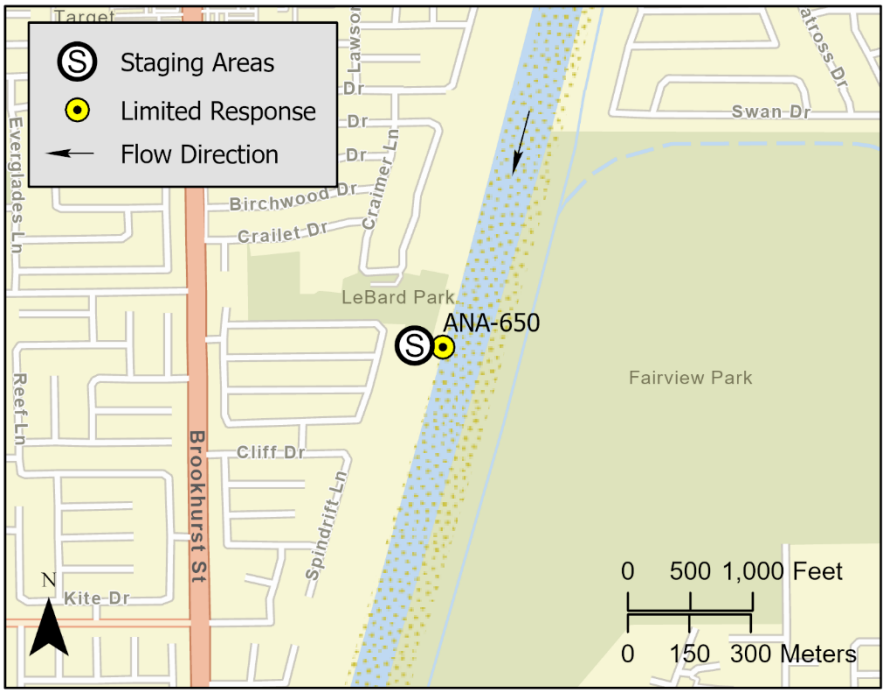
Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Response Strategy Site: LeBard Park (ANA-650) Ⓢ			**Page 1 of 3**
Driving Directions:	From southbound I-405, take exit 14 for Brookhurst St. Head south on Brookhurst St., turn left onto Hercules Dr., and right onto Cynthia Dr. towards LeBard Park. Park address: 20461 Craimer Ln., Huntington Beach, CA 92646 Access road to the Santa Ana River is on the south side of LeBard Park off Hercules Dr.		
Latitude: 33.66387431 **Longitude:** -117.9483606	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 20562 Lavonne Lane, Huntington Beach, CA 92646 **Thomas Guide #:** ORG 858 F-7			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Resources-At-Risk

Ecological: Belding's Savannah Sparrow, California Least Tern, Coastal California Gnatcatcher, Least Bell's Vireo, light-footed Ridgway's rail, Southwestern Willow Flycatcher, Western Snowy Plover, Yellow-breasted Chat, Pacific pocket mouse, steelhead - southern California DPS, San Diego fairy shrimp, chaparral sand-verbena, coast woolly-heads, Coulter's goldfields, southern tarplant, San Diego button-celery

Economic: Le Bard Park, Talbert Nature Preserve

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Site Description and Field Notes

Site Location/Segment: **ANA-OR-C-015**	**Site Description and Field Notes:** Access road to the Santa Ana River is on the south side of LeBard Park off Hercules Dr. Limited staging on So Cal Edison right of way under power lines. Boom trucks, trailer, vacuum trucks and temporary storage tanks could use the space, but it is limited. Observations can be made from the bicycle/pedestrian bridge. Vehicles can access the river bottom from the bike path and vehicle ramp.			
Gradient: Medium	**River Width:** 60 meters (200 feet)	**Vehicular Access?** Passenger vehicles, small trucks, and small trailers.	**Recreational Use?** Bike path	**Boat Launches:** N/A
Site Contact/s:	Orange County Public Works (714) 955-0200		So Cal Edison (800) 655-4555	
ESI Shoreline Type:	8C Sheltered riprap			

Site Images

Upstream

Downstream

Straight Across

Entrance

RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Response Strategy Site: LeBard Park (ANA-650) Ⓢ **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Deploy containment boom across river with appropriate angle. Use Danforth anchors to secure.

Staging Area Location and Capabilities/Amenities/Waste Management: Limited staging on So Cal Edison right of way under power lines. Boom trucks, trailer, vacuum trucks and temporary storage tanks could use the space, but it is limited.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Swiftwater, Swamp or Harbor	8, 12, or 18	Inch	700 ft.	
Staff	Staff to Deploy			5	
Boat	Punt			1	
Anchors	Danforth	40	lb	2	

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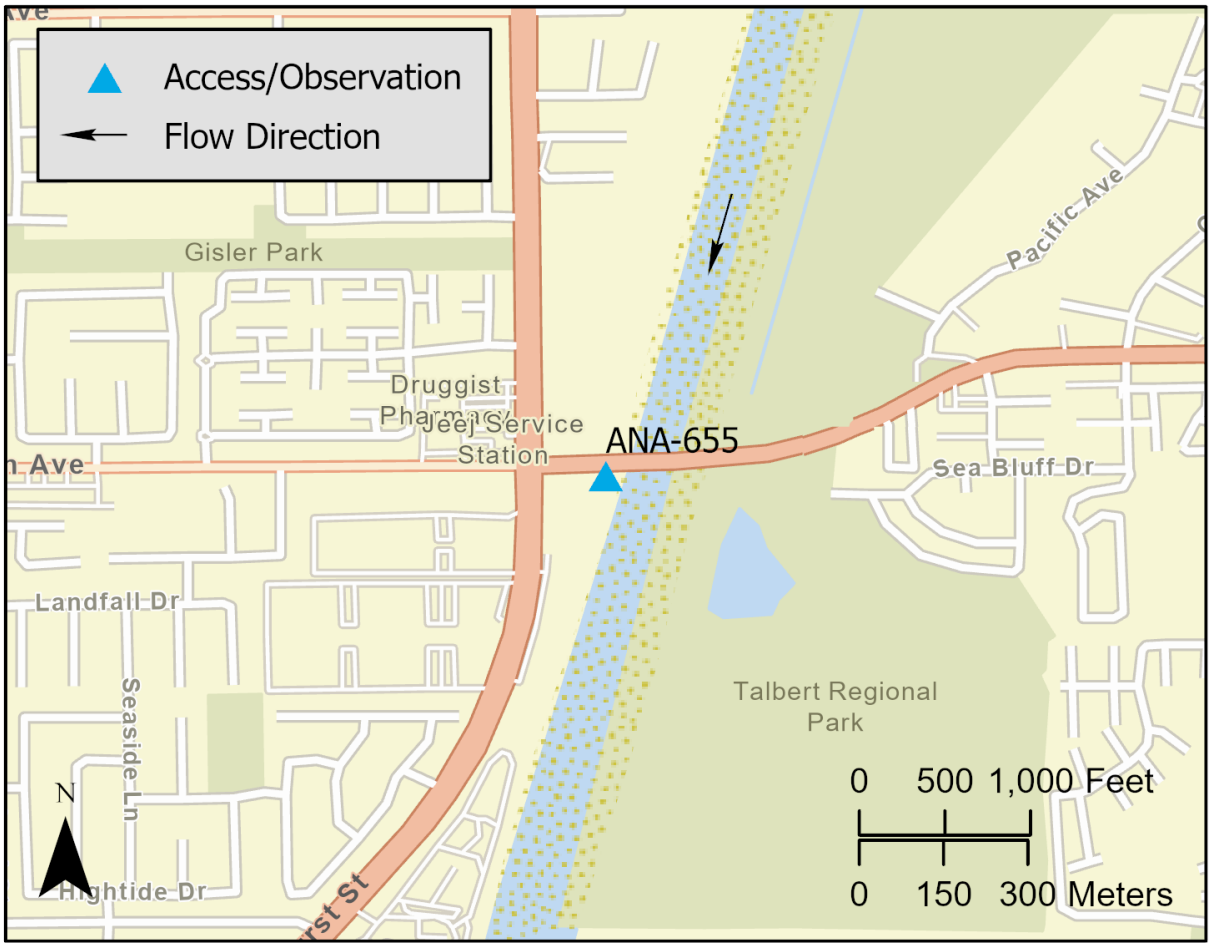
Access/Observation Site: Hamilton Ave (ANA-655)			Page 1 of 2
Driving Directions:	From southbound I-405, take exit 14 for Brookhurst St. Head south on Brookhurst St. to Hamilton Ave. Head east on Hamilton Ave. to the Santa Ana River.		
Latitude: 33.650453 **Longitude:** -117.952367	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 21452 Brookhurst St., Huntington Beach, CA 92646
Thomas Guide #: ORG 888E-2

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Steep manmade slopes
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments
- Locked gates

Access/Observation Site: Hamilton Ave (ANA-655)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: **ANA-OR-C-015**	**Site Description and Field Notes:** Access location from southwest gates. Response equipment can use utility road to access riverbed. River width is 75 meters (246 feet).	
Site Contact/s: Orange County Public Works (714) 955-0200		

Site Images

Upstream

Downstream

Entrance

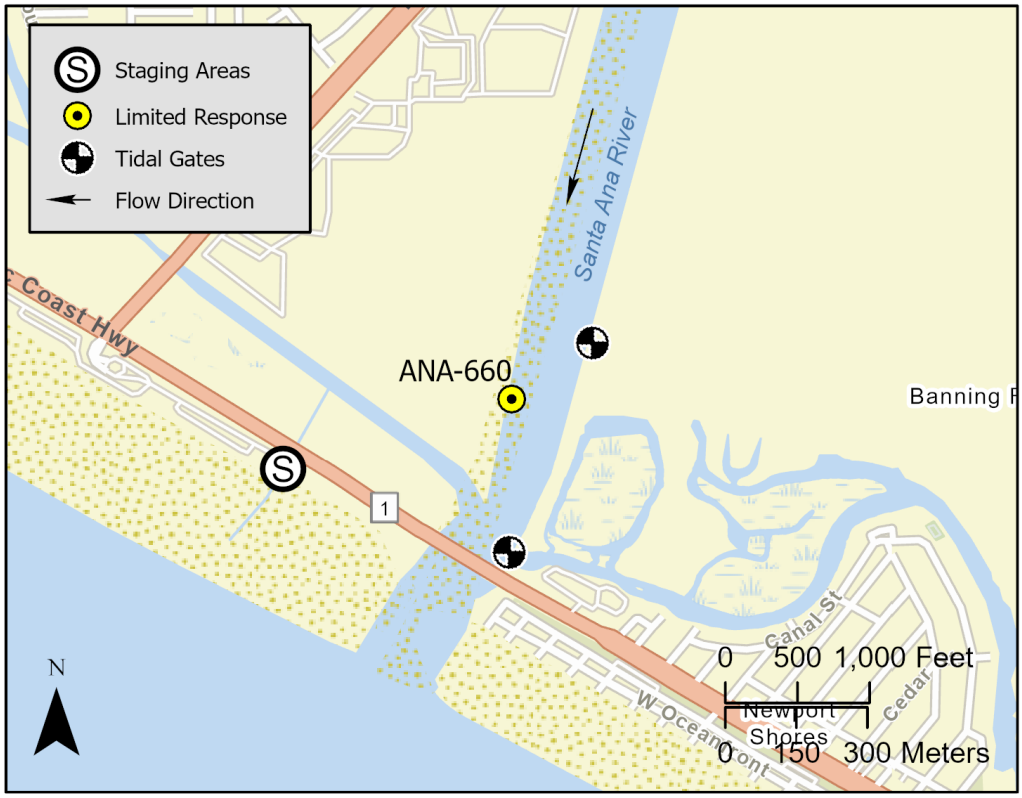
RR = River Right **RL = River Left**

Photo Date: 8/23/2019

Response Strategy Site: Pacific Coast Highway (ANA-660) Ⓢ			**Page 1 of 3**
Driving Directions:	From Pacific Coast Highway, enter Huntington State Beach from Magnolia St. Drive to the east end of the parking lot and enter the bike path from the service road near the Huntington State Beach Least Tern Natural Preserve.		
Latitude: 33.634125 **Longitude:** -117.956873	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 21601 Pacific Coast Hwy., Huntington Beach, CA 92646
Thomas Guide #: ORG 858 E-5

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Swift moving water
- Steep manmade slopes and rip rap
- Vehicle/Bicycle/Pedestrian traffic
- Unhoused encampments

Resources-At-Risk

Ecological: Belding's Savannah Sparrow, California Least Tern, Coastal California Gnatcatcher, Least Bell's Vireo, light-footed Ridgway's rail, Southwestern Willow Flycatcher, Western Snowy Plover, Yellow-breasted Chat, Pacific pocket mouse, steelhead - southern California DPS, San Diego fairy shrimp, chaparral sand-verbena, coast woolly-heads, Coulter's goldfields, southern tarplant, San Diego button-celery

Economic: Talbert Nature Preserve, Huntington State Beach

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.

Cultural and Historic: Contact the South Central Coastal Information Center at (657) 278-5395.

Site Description and Field Notes

Site Location/Segment: **ANA-OR-C-015**	**Site Description and Field Notes:** Access to the river is from the east end of the parking lot near the Huntington State Beach Least Tern Natural Preserve.			
Gradient: Medium	**River Width:** 137 meters (450 feet)	**Vehicular Access?** Passenger vehicles, small trucks, and small trailers.	**Recreational Use?** Fishing and bike path.	**Boat Launches:** Small ramp available on county property (see upstream photo).
Site Contact/s:	Orange County Public Works (714) 955-0200		California State Parks (949) 492-0802	
ESI Shoreline Type:	8C Sheltered riprap			

Site Images

Upstream

Downstream

Entrance

RR = River Right **RL = River Left**

Photo Date: 8/29/2019

Response Strategy Site: Pacific Coast Highway (ANA-660) Ⓢ **Page 3 of 3**

Site Objectives: Prevent further movement of oil.

Implementation: Deploy containment boom across river with appropriate angle. Use Danforth anchors to secure.

Staging Area Location and Capabilities/Amenities/Waste Management: Limited staging along bike path and service road. Additional staging available in the California State Parks parking lot. Boom trucks, trailer, vacuum trucks and temporary storage tanks could use the various stagging locations. A small launch ramp is also available.

Response Strategy Map (overview)

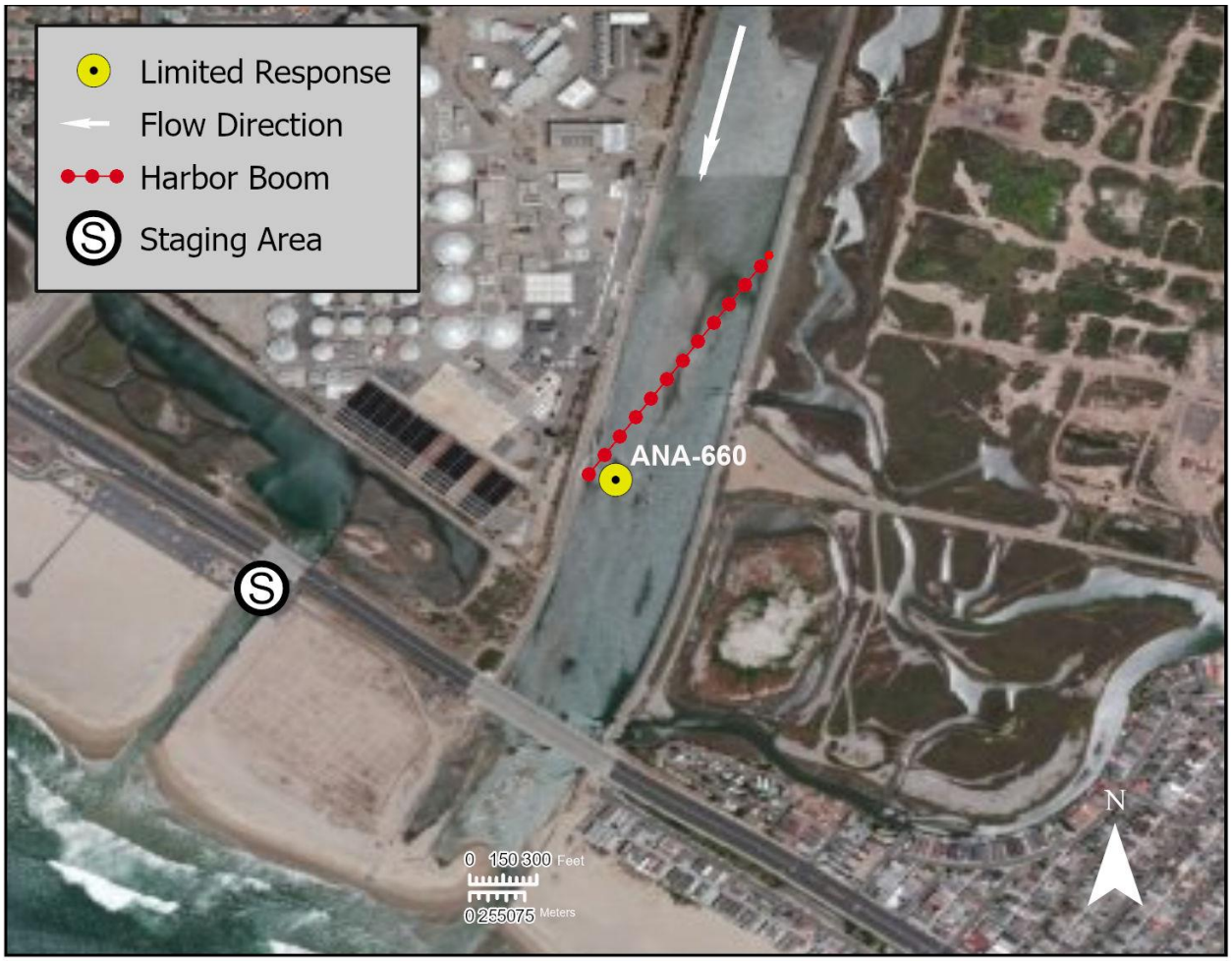


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Swiftwater, Swamp or Harbor	8, 12, or 18	Inch	1000 ft.	
Staff	Staff to Deploy			5	
Boat	Skiff with outboard			1	
Anchors	Danforth	40	lb	4	

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Lower Santa Ana River
Geographic Response Plan

Chapter 4 - Resources at Risk

4.0 Chapter Overview

This chapter provides information on the environmental, economic, and tribal, cultural and historic resources-at-risk in the Lower Santa Ana River GRP area. It provides a list of known sensitive fish, wildlife, plants, and habitats existing within the bounds of this GRP including seasonal concerns for species and protected lands in the area. Information about the Wildlife Response Plan (WRP) for Oil Spills in California, OWCN, and general information about oiled wildlife can be found in this chapter as well. It offers a list of economic resources that may be impacted by a spill including key contact information for those resources. Finally, this chapter provides information, as well as critical contacts, for tribal and cultural resources, historic properties, and tribal representatives.

The information provided in this chapter can be used for:

- Assisting the EU and Operations in developing additional response strategies beyond those found in Chapter 3.
- Providing resource-at-risk "context" to responders, cleanup workers, and others during the initial phase of a spill response in the GRP area.
- Briefing responders and incident command staff that may be unfamiliar with sensitive resource concerns in the GRP area.
- Providing background information for personnel involved in media presentations and public outreach during a spill incident.

4.1 Wildlife, Fisheries, Plants and Sensitive Habitat Matrix

Environmentally sensitive resources listed in this section include state and federally listed species; California species of special concern and fully protected species; California Native Plant Society (CNPS) listed 1A and 1B plants; U.S. Fish and Wildlife Service (USFWS) designated wetland habitats; commercial and recreational fisheries; and protected lands. Table 4-1 below is a comprehensive list of the known species, habitats, and protected lands that exist within the boundaries of the Lower Santa Ana River GRP as well as seasonal and special considerations including nesting and spawning seasons, seasonal migration, large species concentrations, rookeries and blooming periods for special plant species. The CDFW California Wildlife Habitat Relationship (CWHR) system is a state-of-the-art information system for California's wildlife and is the primary resource for the information provided in Table 4-1 below. Information on the species and habitats listed in Table 4-1 were developed using the best information available at the time of preparation; over time, new species occurrences may be added to reference databases (e.g. CWHR), the status of species may change including becoming listed by the State or federal fish and wildlife agencies, or new information may become available regarding nesting locations and seasons. During a spill incident, the Environmental Unit under the Planning Section will utilize reference databases to ensure that the most up-to-date and accurate information on potential species and habitats in the area are addressed and protections put in place.

Wetlands

Table 4-1 includes a list of USFWS Designated Wetlands that have been mapped in the area of the GRP boundary. The USFWS defines wetlands as:

"Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year," (Cowardin, 1979, Classification of Wetlands and Deepwater Habitats of the United States).

The USFWS definition includes: swamps; freshwater, brackish water, and saltwater marshes; bogs; vernal pools; periodically inundated saltflats; intertidal mudflats; wet meadows; wet pastures; springs and seeps; portions of lakes, ponds, rivers and streams; and all other areas which are periodically or permanently covered by shallow water, or dominated by hydrophytic vegetation, or in which the soils are predominantly hydric in nature [Adapted from Cowardin, Carter, Golet and LaRoe (1979) Wetlands Subcommittee Federal Geographic Data Committee, August 2013].

Other types of defined/delineated wetlands may be present within the GRP boundary and will be determined by the EU in the Planning Section during an incident.

Table 4-1: Resources-At-Risk Matrix – Species, Plants, Habitats, Protected Lands

Resources-At-Risk: Species, Critical Habitat, and Designated Wetlands

Common Name	Scientific Name	Status^	CHWR (General Habitat Description) and USFWS (Critical Habitat Designated) *	Micro Habitat Description	Seasonal and Special Considerations, Notes
Birds					
Belding's Savannah Sparrow	*Passerculus sandwichensis beldingi*	State: E Fed: N/A	CWHR: Coastal saltmarsh. USFWS: N/A	Frequents pickleweed (*Salicornia virginica*) in scattered coastal wetlands.	Permanent resident. Breeds April to July. Nests in a hollow on the ground, usually concealed by overhanging vegetation.
California Black Rail	*Laterallus jamaicensis coturniculus*	State: T Fed: N/A	CWHR: Saline, brackish, and fresh emergent wetlands. USFWS: N/A	Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass.	Permanent resident. Breeds March to June. Nest concealed in dense vegetation, often pickleweed, near upper limits of tidal flooding. Builds a deep, loose cup at ground level or elevated several inches.
California Least Tern	*Sternula antillarum browni*	State: E Fed: E	CWHR: Marine and estuarine shores. USFWS: N/A	Prefers undisturbed nest sites on open, sandy, or gravelly shores near shallow-water feeding areas in estuaries. After breeding, family groups regularly occur at lacustrine waters near the coast.	Present April to October and breeds May to August along marine and estuarine shores. Nests on barren to sparsely vegetated site near water, usually on sandy or gravelly substrate. Abandons nesting areas readily if disturbed.

Birds, continued					
Coastal Cactus Wren	*Campylorhynchus brunneicapillus sandiegensis*	State: SSC Fed: N/A	CWHR: Coastal scrub. USFWS: N/A	Frequents deserts and other arid terrain with thickets, patches, or tracts of larger, branching cacti, stiff-twigged, thorny shrubs, and small trees.	Permanent resident. Breeds March to June. Nest usually built in cholla or other large, branching cactus, in yucca, or in stiff-twigged, thorny shrub or small tree, usually 1.2 to 1.5 m (4-5 ft) above the ground.
Coastal California Gnatcatcher	*Polioptila californica californica*	State: SSC Fed: T	CWHR: Arid coastal scrub below about 500 m (1,500 ft). USFWS: Critical Habitat	Most numerous in low, dense coastal scrub habitat in arid washes, on mesas, and on slopes of coastal hills. California buckwheat, coastal sage, and patches of prickly pear are particularly favored.	Permanent resident. Peak egg laying in April and May. Weaves a small, deep cup nest in a shrub 0.6-0.9 m (2-3 ft) above ground.
Least Bell's Vireo	*Vireo bellii pusillus*	State: E Fed: E	CWHR: Desert and valley foothill riparian. USFWS: Critical Habitat	Inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically associated with willow, cottonwood, baccharis, wild blackberry, or mesquite.	Present mid-to-late March to late September; some may overwinter. Peak egg laying May to June. Nests in shrub or low tree 3-5 m (6.5-9.8 ft) above ground, typically near edge of thicket.
Light-footed Ridgway's Rail (aka Light-footed Clapper Rail)	*Rallus obsoletus levipes*	State: E Fed: E	CWHR: Coastal saline, freshwater, and brackish emergent wetlands. USFWS: N/A	Requires emergent wetlands and tidal sloughs. Occasionally uses ecotone between wetland and adjacent upland vegetation.	Permanent resident. Breeds mid-March to July, with peaks in early May and late June. In saline emergent wetlands, nests mostly in lower zones, where cordgrass is abundant and tidal sloughs are nearby. In fresh or brackish water, builds nest in dense cattail or bulrush.

Birds, continued					
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	State: E Fed: E	CWHR: Riparian and wet meadow. USFWS: N/A	Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters.	Present late April to September. Breeds June to July. Builds a cup nest in a shrub, usually near a languid stream, standing water, or seep.
Western Snowy Plover	*Charadrius alexandrinus nivosus*	State: SSC Fed: T	CWHR: Marine, estuarine, riparian, and lacustrine sandy shores. USFWS: Critical Habitat	Nests, feeds, and takes cover on sandy or gravelly beaches along the coast, on estuarine salt ponds, and alkali lakes. Also frequents dry mud or salt flats and sandy shores of rivers, lakes, and ponds.	Permanent resident. Breeds April to August. Nests on the ground on broad open beaches or salt or dry mud flats where vegetation is sparse or absent.
Yellow-breasted Chat	*Icteria virens*	State: SSC Fed: N/A	CWHR: Riparian. USFWS: N/A	Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland.	Present April to September. Breeds from early May into early August with peak activity in June. Nest usually 0.6 to 2.4 m (2-8 ft) above ground in dense shrubs along a stream or river.
Mammals					
Pacific pocket mouse	*Perognathus longimembris pacificus*	State: N/A Fed: E	CWHR: Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush. USFWS: N/A	Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned. Rarely found on rocky sites.	Permanent resident. Nocturnal. Hibernates from November to February. Breeding period likely from April to June, and immatures present June to September. Nest made of green leaves and dry roots, usually beneath shrubs.

Mammals, continued					
western mastiff bat	*Eumops perotis californicus*	State: SSC Fed: N/A	CWHR: Grassland, coastal scrub, riparian, fresh emergent wetland, and wet meadow. USFWS: N/A	Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.	Permanent resident. Nocturnal. Roosts in small colonies (less than 100 individuals). Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 m (10 ft) below the entrance for flight. Breeding begins in March with births occurring from early April to August or September.
Fish					
Santa Ana sucker	*Catostomus santaanae*	State: N/A Fed: T	CWHR: N/A USFWS: Critical Habitat	Habitat includes clear, cool rocky pools and runs of creeks and small to medium rivers. Generally associated with coarse substrates of boulder, rubble, and gravel, but sometimes occurs on sand/mud bottoms. Prefers permanent streams with pools and riparian vegetation that provide cover and refuge from floods.	Breeds from March or April to early July (peak late May to early June). Spawning season may be more protracted in some locations, beginning as early as November.

Fish, continued					
steelhead - southern California DPS	*Oncorhynchus mykiss irideus* pop. 10	State: N/A Fed: E	CWHR: N/A USFWS: N/A	South coast flowing waters. Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Hatch in freshwater and then migrate to the ocean, finally returning home to spawn. Spawning occurs in places where the streambed is composed of gravelly substrate, usually in riffles or pool tails. The smallest fish are mostly found in riffles, medium sized fish in runs, and larger fish predominantly in pools.
Amphibians					
Arroyo Toad	*Anaxyrus californicus*	State: N/A Fed: E	CWHR: Riparian and desert scrub. USFWS: N/A	Washes, streams, arroyos, and adjacent uplands (desert, shrubland). On sandy banks in riparian woodlands (willow, cottonwood, sycamore, or coast live oak). Along rivers that have shallow gravelly pools adjacent to sandy terraces.	Permanent resident. Nocturnal except during breeding season. Active above 22-35 C (72-95 F). Adults obtain shelter by burrowing into sandy soil. Migrates between nonbreeding terrestrial habitats and breeding pools. Breeds March to early late May, sometimes June or July. Lay eggs in water 10-15 cm (4-6 in) deep, over substrates of sand, gravel, or cobble. Tadpoles disperse from the pool margin into the surrounding shallow water for an average of 10 weeks before they metamorphose into juvenile toads.
Western Spadefoot	*Spea hammondii*	State: SSC Fed: N/A	CWHR: Grassland, fresh emergent wetlands, and vernal pools. USFWS: N/A	Grasslands with shallow temporary pools are optimal habitats. Occasional populations also occur in valley-foothill hardwood woodlands.	Permanent resident. Nocturnal. Rarely found on the surface. Most of the year is spent in underground burrows. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains. Egg masses are attached to plant material, or the upper surfaces of small submerged rocks.

Reptiles					
Coast Horned Lizard	*Phrynosoma blainvillii*	State: SSC Fed: N/A	CWHR: Chaparral and coastal scrub. USFWS: N/A	Inhabits open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats. Found chiefly below 900 m (3,000 ft).	Permanent resident. Diurnal. Inactive in fall and winter. Egg-laying extends from late May to June, and hatching occurs late-July to August. Eggs laid in nests constructed in loose soil.
Southern California Legless Lizard	*Anniella stebbinsi*	State: SSC Fed: N/A	CWHR: Chaparral, riparian, and coastal scrub. USFWS: N/A	Found primarily in areas with sandy or loose organic soils or where there is plenty of leaf litter. Little is known about specific habitat requirements for courtship and breeding.	Permanent resident. Circadian. Individuals from coastal and southern localities are probably active all year with only brief periods of winter inactivity. The reproductive season begins in late spring or early summer. Live young are born September to November.
Western Pond Turtle	*Emys marmorata*	State: SSC Fed: Under Review	CWHR: Riparian, lacustrine, fresh emergent wetland. USFWS: N/A	Associated with permanent or nearly permanent water in a wide variety of habitats. Individuals normally associate with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams.	Permanent resident. Diurnal. Active year-round in southern California. During the spring or early summer, females move overland for up to 100 m (325 ft) to find suitable sites for egg-laying. Nesting sites are on sandy banks and bars or in fields or sunny spots up to a few hundred meters from water. Eggs laid March to August depending on local conditions, and hatch mid-June to late-October.

Invertebrates					
Quino checkerspot butterfly	*Euphydryas editha quino*	State: N/A Fed: E	CWHR: N/A USFWS: N/A	Patchy shrub or small tree landscapes with openings of several meters between woody plants, or a landscape of open swales alternating with dense patches of shrubs.	Life cycle includes four distinct life stages: egg, larva (caterpillar), pupa (chrysalis), and adult. Adults frequently bask and remain in sunny areas to increase their body temperature to the level required for active behavior.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	State: N/A Fed: E	CWHR: N/A USFWS: N/A	Vernal pools and similar ephemeral wetland types, including artificial habitats, typically less than 30 cm (12 in) deep.	Adults observed from January to March; however, in years with early or late rainfall the breeding period may be extended. Species hatches and matures within 7 to 14 days, depending on water temperature. Egg banks in the soil may include eggs from several years of breeding.
Plants					
Braunton's milk-vetch	*Astragalus brauntonii*	State: R Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: Critical Habitat	Chaparral, coastal scrub, and valley and foothill grasslands. May be restricted to limestone substrates.	Perennial herb. The seeds germinate after fire or other disturbance and the plants live for 2-3 years. Blooms January to August. Flowers pale purple with recurved petals that grow in a stalk.
chaparral nolina	*Nolina cismontana*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Occurs in coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone and gabbro substrates.	Perennial evergreen shrub. Blooms May to July, sometimes as early as March. Experiences reproduction and prolific blooming after wildfire. Cluster of whitish flowers on a tall stalk with a rosette of long leaves at the base.
chaparral sand-verbena	*Abronia villosa* var. aurita	State: R Fed: N/A Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Sandy habitat including chaparral, coastal scrub, and desert dunes.	Annual herb. Blooms March to September, sometimes as early as January. Showy pink or purple trumpet-shaped flowers in clusters of 15 or more on ends of long stems.

Plants, continued					
coast woolly-heads	*Nemacaulis denudata* var. denudata	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Coastal dunes.	Annual herb. Blooms April to September. Long, smooth, thread-like reddish flower stems grow horizontally along the sand with tiny, white to pinkish symmetrical flowers in clusters along the stem.
Coulter's goldfields	*Lasthenia glabrata* ssp. coulteri	State: R Fed: N/A Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Inhabits coastal salt marshes, playas, and vernal pools.	Annual herb. Blooms February to June. Yellow daisy-like flower.
intermediate mariposa lily	*Calochortus weedii* var. intermedius	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Rocky, calcareous soils in chaparral, coastal scrub, and valley and foothill grasslands.	Perennial bulbiferous herb. Blooms May to July. Flowers bell shaped, purplish and light cream to yellow, fringed, and flecked.
long-spined spineflower	*Chorizanthe polygonoides* var. longispina	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Often found in clay soils in chaparral, coastal scrub, meadows, seeps, valley and foothill grasslands, and vernal pools.	Annual herb. Blooms April to July. Flowers reddish on a red stem that grows along the ground; hairy and spiky in appearance.
Santa Ana River woollystar	*Eriastrum densifolium* ssp. sanctorum	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Sandy or gravelly soils in chaparral and coastal scrub (alluvial fan).	Perennial herb. Blooms April to September. Flowers blue, lavender, or white and funnel-shaped.
southern tarplant	*Centromadia parryi* ssp. Australis	State: R Fed: N/A Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Margins of marshes and swamps, valley and foothill grasslands, and vernal pools.	Annual herb. Blooms May to November. Flowers yellow with conspicuous brown or black anthers; petals ray shaped and lobed.

Plants, continued					
San Diego button-celery	*Eryngium aristulatum* var. parishii	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: E	Coastal scrub, valley and foothill grasslands, and vernal pools.	Annual or perennial herb (depends on growing conditions). Blooms April to June. Tiny white flowers occur in clusters with gray-green toothed leaves along the stem that give it a prickly appearance.

^State and federal threatened and endangered species and California Species of Special Concern. Migratory birds w/o any other status were not included.
T= Threatened, E = Endangered, C= Candidate, SSC= State Species of Concern, R = Rare, FP= Fully Protected

*Use CDFW's CWHR habitat classifications and note if there is USFWS critical habitat designated (or adjacent)

USFWS Critical Habitat Mapper

NOAA Fisheries West Coast Critical Habitat Mapper

For plants: Primary Source = CDFW Native Plant Program; Secondary Source = Calflora and CNPS only

~Large concentrations, rookeries, spawning, breeding, etc. For plants include the blooming season (include months) and flower description (if applicable)

USFWS Designated Wetlands			
Wetland Type (Riverine Assumed Present)	**Federal Wetland System Description**	**Federal Wetland Class Description**	**Seasonal and Special Considerations, Notes**
Estuarine Aquatic Bed	Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.	Wetlands and deepwater habitats where plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) are the uppermost life form layer with at least 30% areal coverage.	Subtidal water regime.
Estuarine Unconsolidated Bottom	Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.	Characterized by at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.	Subtidal water regime.
Estuarine Emergent	Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.	Characterized by emergent plants — i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens— as the tallest life form with at least 30% areal coverage. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.	Regularly Flooded and Irregularly Flooded water regimes.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Estuarine Streambed	Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.	Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.	Regularly Flooded water regime.
Estuarine Unconsolidated Shore	Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.	Characterized by: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) any of the following Water Regimes: Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonally Flooded, Seasonally Flooded Saturated, Temporarily Flooded, Intermittently Flooded, Regularly Flooded-Tidal Fresh, Seasonally Flooded-Tidal Fresh, and Temporarily Flooded-Tidal Fresh.	Irregularly Exposed, Regularly Flooded, and Irregularly Flooded water regimes.
Lacustrine Aquatic Bed	Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres).	Wetlands and deepwater habitats where plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) are the uppermost life form layer with at least 30% areal coverage.	Permanently Flooded water regime.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Lacustrine Unconsolidated Bottom	Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres).	Characterized by at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.	Permanently Flooded water regime.
Lacustrine Emergent	Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres).	Characterized by emergent plants — i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens— as the tallest life form with at least 30% areal coverage. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.	Semi permanently Flooded water regime.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Lacustrine Unconsolidated Shore	Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres).	Characterized by: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) any of the following Water Regimes: Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonally Flooded, Seasonally Flooded Saturated, Temporarily Flooded, Intermittently Flooded, Regularly Flooded-Tidal Fresh, Seasonally Flooded-Tidal Fresh, and Temporarily Flooded-Tidal Fresh.	Temporarily Flooded, Intermittently Flooded, and Seasonally Flooded water regimes.
Marine Unconsolidated Shore	Consists of the open ocean overlying the continental shelf and its associated high-energy coastline. Marine habitats are exposed to the waves and currents of the open ocean and the Water Regimes are determined primarily by the ebb and flow of oceanic tides. Salinities exceed 30 parts per thousand (ppt), with little or no dilution except outside the mouths of estuaries. Shallow coastal indentations or bays without appreciable freshwater inflow, and coasts with exposed rocky islands that provide the mainland with little or no shelter from wind and waves, are also considered part of the Marine System because they generally support typical marine biota.	Characterized by: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) any of the following Water Regimes: Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonally Flooded, Seasonally Flooded Saturated, Temporarily Flooded, Intermittently Flooded, Regularly Flooded-Tidal Fresh, Seasonally Flooded-Tidal Fresh, and Temporarily Flooded-Tidal Fresh.	Regularly Flooded and Irregularly Flooded water regimes.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Palustrine Aquatic Bed	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Wetlands and deepwater habitats where plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) are the uppermost life form layer with at least 30% areal coverage.	Permanently Flooded and Semi permanently Flooded water regimes.
Palustrine Emergent	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Characterized by emergent plants — i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens— as the tallest life form with at least 30% areal coverage. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.	Temporarily Flooded water regime.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Palustrine Forested	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Trees are the dominant life form — i.e., the tallest life form with at least 30% areal coverage. Trees are defined as woody plants at least 6 m (20 ft) in height.	Temporarily Flooded and Seasonally Flooded water regimes.
Palustrine Scrub-Shrub	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Woody plants less than 6 m (20 ft) tall are the dominant life form—i.e., the tallest life form with at least 30% areal coverage. The “shrub” life form actually includes true shrubs, young specimens of tree species that have not yet reached 6 m in height, and woody plants (including tree species) that are stunted because of adverse environmental conditions.	Seasonally Flooded, Temporarily Flooded, and Seasonally Saturated water regimes.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Palustrine Unconsolidated Bottom	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Characterized by at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.	Semi permanently Flooded, Permanently Flooded, and Artificially Flooded water regimes.
Palustrine Unconsolidated Shore	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Characterized by: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) any of the following Water Regimes: Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonally Flooded, Seasonally Flooded Saturated, Temporarily Flooded, Intermittently Flooded, Regularly Flooded-Tidal Fresh, Seasonally Flooded-Tidal Fresh, and Temporarily Flooded-Tidal Fresh.	Seasonally Flooded and Temporarily Flooded water regimes.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Riverine Unconsolidated Bottom	Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.”	Characterized by at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.	Permanently Flooded-Tidal Fresh, Semi-Permanently Flooded, and Permanently Flooded water regimes.
Riverine Unconsolidated Shore	Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.”	Characterized by: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) any of the following Water Regimes: Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonally Flooded, Seasonally Flooded Saturated, Temporarily Flooded, Intermittently Flooded, Regularly Flooded-Tidal Fresh, Seasonally Flooded-Tidal Fresh, and Temporarily Flooded-Tidal Fresh.	Regularly Flooded, Temporarily Flooded, and Seasonally Flooded water regimes.

Wetland Type (Riverine Assumed Present)	Federal Wetland System Description	Federal Wetland Class Description	Seasonal and Special Considerations, Notes
Riverine Aquatic Bed	Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.”	Wetlands and deepwater habitats where plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) are the uppermost life form layer with at least 30% areal coverage.	Permanently Flooded water regime.
Riverine Streambed	Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.”	Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.	Temporarily Flooded, Seasonally Flooded, and Intermittently Flooded water regimes.

Source: Classification of Wetlands and Deepwater Habitats of the US

Source: National Wetlands Inventory, Wetland Mapper

Commercial and Recreational Fisheries (Public Health, Fisheries Closure)			
Common Name	**Scientific Name**	**Contact Information**	**Seasonal and Special Considerations, Notes**
N/A			

Designated or Protected Lands			
Area Name	**Designation****	**Contact Information**	**Seasonal and Special Considerations, Notes**
Chino Hills State Park	State Park	Chino Sector Office (951) 780-6222	The park is open daily year-round. From the first Sunday in April to September 30, park gates are open from 8:00 am to 7:00 pm. From October 1 to the first Sunday in April, park gates are open from 8:00 am to 5:00 pm.
Huntington State Beach	State Beach	Huntington State Beach Headquarters (714) 536-1454	The park is open daily year-round from 6:00 am to 10:00 pm. Monday to Sunday. Gates close at 9:00 pm.
Huntington State Beach Least Tern Natural Preserve	State Natural Preserve	Lana Nguyen (State Parks) (949) 201-0884 Huntington State Beach Headquarters (714) 536-1454	Fenced nesting area monitored by volunteer docents during daylight hours from late April to mid-August.

**State and federal wildlife refuges, wildlife areas, ecological reserves, wild and scenic rivers, etc.

***Environmental Sensitivity Index (ESI) maps provide a concise summary of coastal resources that are at risk if an oil spill occurs nearby.

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4.2 Wildlife Response Plan

Wildlife are put at risk or injured when oil is spilled into marine or inland waters of the state, or the terrestrial environment. Both Federal and State statutes mandate protection, rescue, and rehabilitation of oiled wildlife.

The WRP for Oil Spills in California, OSPR 2016, details the purposes, goals, objectives, responsibilities, and structure of the Wildlife Branch within the ICS. The WRP describes procedures to be used, along with personnel and equipment needed, to meet wildlife protection responsibilities of federal and state governments during a spill. The current WRP can be found here.

The primary goal of the Wildlife Branch within the Operations Section is to provide for coordinated, immediate, and effective protection, rescue, rehabilitation, and minimization of risk of injury to wildlife resources and habitat during oil spills. The principal objectives during a spill response are to:

- Minimize injuries to wildlife and habitats from the contamination and/or the response actions.
- Provide best achievable rescue and care for injured wildlife.
- Document adverse effects to wildlife that result from the spill and cleanup.

These objectives are achieved through a suite of methods that include: communication with/through the Planning Section to response teams in the field; hazing of wildlife; aerial, ground, and on-water wildlife reconnaissance; recovery, stabilization, and transportation of injured wildlife; care and processing of oiled wildlife; and eventual release of rehabilitated wildlife.

Oiled Wildlife

Attempting to capture oiled wildlife can be hazardous to both the animal and the person attempting to capture the animal. Response personnel should NOT approach or attempt to recover oiled wildlife. Responders should report their observations to the Wildlife Branch of the Operations Section via the OWCN Hotline (877) 823-OWCN (6926) so appropriate action can be taken. Information provided should include the location, date, and time of the sighting, and the estimated number and kind of animals observed. This Hotline is active 24/7, including early on in a response, before a UC is established.

Wildlife Avoidance Measures

Avoidance measures may be recommended by the WBD (Operations Section) or EU (Planning Section) for the purpose of minimizing disturbance that could result in injury to wildlife during an oil spill response. By keeping a safe distance from identified sensitive areas, field responders can minimize the risk of direct wildlife and habitat injury, prevent the accidental hazing of wildlife into oiled areas, avoid causing abandonment of nests or dens, and other unintentional injuries. Avoidance measures may include establishing exclusion zones or placing limits on ingress/egress routes and minimizing unnecessary disturbances of sensitive areas by restricting low altitude flights, night operations and other activities.

4.3 Oiled Wildlife Care Network

The OWCN is a cooperative system of specialized wildlife rehabilitation centers and organizations. The OWCN is administered by the Wildlife Health Center at UC Davis. The Wildlife Health Center has an MOU with OSPR for operation of the OWCN to establish and equip wildlife rescue and rehabilitation stations and provide services to rescue and rehabilitate oiled wildlife. During an oil spill, OSPR activates and directs activities of the OWCN within the Wildlife Branch. The OWCN maintains a corps of veterinarians, paid staff, and professionally trained volunteers. The OWCN enlists more than 40 rehabilitation, academic, and private non-profit organizations to actively participate during oil spill responses. This includes more than 10 permanent wildlife care facilities for use during a spill, the majority occurring along the California coast. If a particular wildlife care facility becomes overwhelmed, additional facilities and/or temporary tents can be utilized. For more information on the OWCN, see www.owcn.org.

4.4 Human Health and Safety Sites and Economic Resources Susceptible to Oiling

The primary purpose of this section is to identify and incorporate into emergency oil spill response planning the specific resources subject to impacts of the highest consequence if not protected (e.g., contacts notified, sites boomed, access closed). This section identifies inland waterway infrastructure essential to human health and safety, which will be the first priority for response during any oil spill. Also identified in this section are economic resources that are susceptible to impacts from an inland oil spill. Due to limitations of time, personnel, and the availability of information, not all resources of significant economic value and susceptibility to oil spills are identified in the GRP. The list of human health and safety resources, critical infrastructure, and economic sites and their maintenance are dependent upon input from state and local agencies, and their content will vary by GRP. Response planners recognize that inland waterway resources that are deemed economically sensitive can have environmental, cultural, or historical importance as well, such as parks or important fishing areas. In these cases, a higher environmental ranking would be used to delineate response planning. Therefore, many of those resources are not captured within the List of Economic Resources Susceptible to Oiling. Instead, the GRP provides contact information for the California Historical Resources Information System centers, the Native American Heritage Commission and local tribal representatives in section 4.5 below. The listing of economic resources susceptible to oiling in this plan is provided to assist Liaison Officers and other responders with contact information that may be useful during the early stages of a response before Subject Matter Experts (SMEs) and local Area Representatives (AREPs) are available to assist.

Lists of economic resources are not intended to be exhaustive and may include various types of sites and resources depending on the specific features of each GRP. Regardless of inclusion in the List of Economic Resources Susceptible to Oiling, any entity may submit a third-party claim for damages and costs incurred due to specific oil spill impacts to these resources. Additionally, some businesses, as well as local government offices or departments, may have access to privately owned or contracted response equipment and resources that can be deployed at these locations. It is encouraged that stakeholders with jurisdictional authority over their economic
resources arrange for their protection and/or file a third-party claim for impacts.

Human Health and Safety Resources plus Critical Infrastructure

Inland resources and structures that are essential to public health and safety, such as drinking water intakes

and emergency response facilities, will receive first priority protection during oil spill response operations. This GRP provides contact information for a defined list of human health and safety resources and critical infrastructure, which will facilitate initial notifications and protection considerations. These are not exhaustive lists, more resources may be considered on a spill-specific basis, and some are not included on maps or in plans due to security issues (e.g., power plant intakes). Ultimately, public entities, like water supply and health agencies, are tasked with
ensuring the protection of human health and safety.

Examples of resources or critical infrastructure that would receive a first priority response (because of human health and safety concerns) include:

- Drinking water intakes
- Dams
- Power plant intakes
- Wastewater treatment facility intakes
- Groundwater replenishment
- Other health/safety intakes
- First responders on water facilities

Economic Resources Susceptible to Oiling

Per the federal Oil Pollution Act of 1990, economic resources are categorically designated as the third priority for dedication of oil spill response resources, following human health and safety (including critical infrastructure) and environmental resources. Economic resources that have a greater potential for long-term high consequence impacts receive a higher priority for emergency response and are captured in these lists. Protection of economic resources under direction of Unified Command may occur when response equipment, personnel resources or significant extenuating factors dictate adaptations in a response's priorities. Economic resources susceptible to oiling are listed in Table 4-2 and may include facilities, businesses, or other resources that directly use inland waters to support their economic activity and are at risk of long-term, high consequence impacts due to oiling.

Examples of economic resources that could be captured in the List of Economic Resources Susceptible to Oiling include:

- Aquaculture/fish hatchery facilities
- Tide gates
- Public marinas
- State, county, and city parks and beaches, as appropriate

Economic resources susceptible to oiling with locations and details (excluding sites that have security concerns, e.g., power plant intake locations) can also be found in the NOAA Environmental Response Management Application (ERMA or https://erma.noaa.gov/southwest/erma.html).

Table 4-2: List of Economic Resources Susceptible to Oiling

Name	Agency/ Company	Contact Info.	Phone
Drinking Water, Power Plant, Wastewater Treatment Facility Intakes and Outflows			
Groundwater replenishment facility with emergency outflows	Orange County Water District	18700 Ward St. Fountain Valley, CA 92708	24-Hour (714) 378-3240
Wastewater treatment plant with emergency outflows	Orange County Sanitation District	22212 Brookhurst St. Huntington Beach, CA 92646	24-Hour Control Center (714) 593-7625
Wastewater treatment plant with dry weather urban runoff diversion (water intake)	Orange County Sanitation District	10844 Ellis Ave. Fountain Valley, CA 92708	24-Hour Control Center (714) 593-7025
Dams and Hydroelectric Facilities			
Prado Dam	U.S. Army Corps of Engineers, Los Angeles District	Pomona Rincon Rd. Corona, CA 92880 33.888796, -117.638012	24-Hour (213) 452-3623
Tide Gates, Aquaculture/Fish Hatcheries			
Newport Slough tide gates	Orange County Department of Public Works	Two gates river left just upstream of PCH at: 33.631164, -117.956481 33.635137, -117.954902	(714) 955-0200 After Hours (714) 719-1856
Public Marinas, City/County/State Parks and Beaches			
Anaheim Coves	City of Anaheim	962 S Rio Vista St. Anaheim, CA 92806	(714) 765-5155
Anaheim Wetlands	City of Anaheim	8500 E. La Palma Ave. Yorba Linda, CA 92887	(714) 765-5191
Arevalos Park	City of Huntington Beach	10441 Shalom Dr. Huntington Beach, CA 92646	(714) 536-5486
Edna Park	City of Santa Ana	Santa Ana, CA 92706 33.763419, -117.898857	(714) 571-4239
Fairview Triangle Habitat Restoration	City of Santa Ana	Santa Ana, CA 92703 33.755595, -117.903092	(714) 571-4258
Featherly Regional Park	Orange County Parks	24001 E. Santa Ana Canyon Rd. Anaheim, CA 92808	(714) 637-0210
LeBard Park	City of Huntington Beach	20461 Craimer Ln. Huntington Beach, CA 92646	(714) 536-5486

McFadden Triangle Habitat Restoration	City of Santa Ana	630 S. Susan St. Santa Ana, CA 92704	(714) 571-4254
Memory Lane Park	City of Santa Ana	1668-1680 W Memory Ln. Santa Ana, CA 92706	(714) 571-4239
Moon Park	City of Costa Mesa	3377 California St. Costa Mesa, CA 92626	(714) 754-5300
Riverview Park	City of Santa Ana	1823 W 19th St. Santa Ana, CA 92706	(714) 571-4200
Santa Ana Pony Baseball	City of Santa Ana	1999 W 19th St. Santa Ana, CA 92706	(714) 571-4201
Santa Ana River Trail	Orange County Parks or Riverside County Parks	On one or both sides of the river from Prado Dam to the Pacific Ocean, intermittently moving away from the river between Yorba Linda Blvd. and Prado Dam.	Orange County Parks (717) 973-6680 Riverside County Parks (800) 234-7275
Talbert Nature Preserve	Orange County Parks	1299 Victoria St. Costa Mesa, CA 92627	(949) 923-2250
Public Marinas, City/County/State Parks and Beaches, continued			
Yorba Regional Park	Orange County Parks	7600 E La Palma Ave. Anaheim, CA 92807	(714) 973-6615
River View Golf Course		1800 W. Santa Clara Ave. Santa Ana, CA 92706	(714) 563-8435
First Responder On-Water Facilities, Other Health and Safety Intakes			
N/A			

4.5 Tribal and Cultural Resources and Historic Properties at Risk

Cultural and historic resources are present within this GRP area. Due to the confidential nature of this information, details regarding the location and type of cultural resources present are not included in this document. However, in order to ensure that tactical response strategies do not inadvertently harm cultural and historic sensitive sites, the South Central Coastal Information Center (Los Angeles, Orange, San Bernardino and Ventura Counties) under the California Historical Resources Information System (CHRIS), should be consulted to determine presence/absence of these resources before disturbing any soil or sediment during a response action or addressing contamination on potentially historic structures. As part of their National Historic Preservation Act, Section 106 responsibilities, the USCG or USEPA FOSC may hire an Historic Properties Specialist (HPS) to help identify the location of these sensitive resources, sign-off that cleanup operations are unlikely to impact these resources, and/or assign resources to monitor cleanup operations if there may be potential impacts. Table 4-3 lists contact information for the appropriate CHRIS Information Center for the GRP area.

Tribal Notification

Oil spills which occur on or near federally recognized tribal land may have the potential to impact cultural resources on traditional ancestral lands. These ancestral lands may be of importance to several federally

recognized and non-federally recognized tribes. The CA Public Resource Code (PRC) Section 21073 states "California Native American tribe means a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004." When it is determined that an oil spill has the potential to impact cultural resources, the tribal representatives listed in Table 4-3, provided by NAHC, will be contacted by the response Liaison Officer and invited to participate in the response for the purpose of cultural resource protection. A notification call will also be placed by the response Liaison Officer to the NAHC.

Section 106 of the National Historic Preservation Act of 1966 requires tribal consultation in all steps of the process when a federal agency project or effort may affect historic properties that are either located on tribal lands, or when any Native American tribe or Native Hawaiian organization attaches religious or cultural significance to the historic property, regardless of the property's location. When an oil spill response occurs on tribal land, the federal agency must notify appropriate Native American tribes of the undertaking and give those tribal groups the opportunity to consult, should they wish to do so.

In the event of an oil spill that may impact tribal resources, the federal agency is responsible for notifying appropriate Native American tribes. In the absence of an FOSC, the SOSC will ensure appropriate notification of and coordination with tribes to the extent practicable.

After the UC is established, an Historic Properties Specialist will coordinate with the Liaison Officer and EU on cultural and historic resources-at-risk concerns. Procedures for managing the discovery of human skeletal remains and cultural and historic resources can be found in Section 9 of the GRP CM.

Table 4-3: Resources-At-Risk Matrix – Tribal, Cultural and Historic Properties

Historical and Cultural Resources			
CHRIS Information Center	**County**	**Email/Website**	**Phone**
South Central Coastal Information Center, Ms. Stacy St. James	Los Angeles, Orange, San Bernardino, Ventura	sccic@fullerton.edu http://anthro.fullerton.edu/sccic/	(657) 278-5395
Eastern Information Center Dr. M. C. Hall	Inyo, Mono, Riverside	eickw@ucr.edu	(951) 827-5745
Tribal Resources (State Agency)			
Agency	**County**	**Email**	**Phone**
Native American Heritage Commission, 1550 Harbor Blvd., Suite 100, West Sacramento, CA	Statewide	NAHC@nahc.ca.gov	(916) 373-3710
Andrew Green		Andrew.Green@nahc.ca.gov	(916) 373-3710
CDFW Tribal Liaison			
Nathan Voegeli	Statewide	nathan.voegeli@wildlife.ca.gov	(916) 651-7653

Santa Ana River Tribal Contact Information			
Tribal Name and Contact	**County**	**Email**	**Phone**
Agua Caliente Band of Cahuilla Indians Patricia Garcia-Plotkin, Director 5401 Dinah Shore Drive Palm Springs, CA 92264	Riverside, San Bernardino	ACBCI-THPO@aguacaliente.net	(760) 699-6907 Fax: (760) 699-6924
Agua Caliente Band of Cahuilla Indians Jeff Grubbe, Chairperson 5401 Dinah Shore Drive Palm Springs, CA 92264	Riverside, San Bernardino	N/A	(760) 699-6800 Fax: (760) 699-6919
Augustine Band of Cahuilla Mission Indians Amanda Vance, Chairperson P.O. Box 846 Coachella, CA 92236	Riverside, San Bernardino	hhaines@augustinetribe.com	(760) 398-4722 Fax: (760) 369-7161
Cabazon Band of Mission Indians Doug Welmas, Chairperson 84-245 Indio Springs Parkway Indio, CA 92203	Riverside, San Bernardino	jstapp@cabazonindians-nsn.gov	(760) 342-2593 Fax: (760) 347-7880
Cahuilla Band of Indians Daniel Salgado, Chairperson 52701 U.S. Highway 371 Anza, CA 92539	Riverside, San Bernardino	Chairman@cahuilla.net	(951) 763-5549 Fax: (951) 763-2808
Gabrieleno Band of Mission Indians - Kizh Nation Andrew Salas, Chairperson P.O. Box 393, Covina, CA 91723	Orange, Riverside, San Bernardino	admin@gabrielenoindians.org	(626) 926-4131
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson P.O. Box 693 San Gabriel, CA 91778	Orange, Riverside, San Bernardino	GTTribalcouncil@aol.com	(626) 483-3564 Fax: (626) 286-1262
Gabrielino /Tongva Nation Sandonne Goad, Chairperson 106 1/2 Judge John Aiso St., #231 Los Angeles, CA 90012	Orange, Riverside, San Bernardino	sgoad@gabrielino-tongva.com	(951) 807-0479
Gabrielino Tongva Indians of California Tribal Council Robert Dorame, Chairperson P.O. Box 490 Bellflower, CA 90707	Orange, Riverside, San Bernardino	gtongva@gmail.com	(562) 761-6417 Fax: (562) 761-6417

Tribal Name and Contact	County	Email	Phone
Gabrielino-Tongva Tribe Charles Alvarez, 23454 Vanowen Street West Hills, CA 91307	Orange, Riverside, San Bernardino	roadkingcharles@aol.com	(310) 403-6048
Juaneno Band of Mission Indians Acjachemen Nation - Belardes Joyce Perry, Tribal Manager 4955 Paseo Segovia Irvine, CA 92603	Orange, Riverside	kaamalam@gmail.com	(949) 293-8522
Juaneno Band of Mission Indians Acjachemen Nation - Belardes Matias Belardes, Chairperson 32161 Avenida Los Amigos San Juan Capistrano, CA 92675	Orange, Riverside	kaamalam@gmail.com	(949) 293-8522
Los Coyotes Band of Cahuilla and Cupeño Indians Shane Chapparosa, Chairperson P.O. Box 189 Warner Springs, CA 92086-0189	Riverside, San Bernardino	N/A	(760) 782-0711 Fax: (760) 782-0712
Morongo Band of Mission Indians Robert Martin, Chairperson 12700 Pumarra Road Banning, CA 92220	Riverside, San Bernardino	dtorres@morongo-nsn.gov	(951) 849-8807 Fax: (951) 922-8146
Morongo Band of Mission Indians Denisa Torres, Cultural Resources Manager 12700 Pumarra Road Banning, CA 92220	Riverside, San Bernardino	dtorres@morongo-nsn.gov	(951) 849-8807 Fax: (951) 922-8146
Pechanga Band of Luiseno Indians Mark Macarro, Chairperson P.O. Box 1477 Temecula, CA 92593	Orange, Riverside, San Bernardino	epreston@pechanga-nsn.gov	(951) 770-6000 Fax: (951) 695-1778
Pechanga Band of Luiseno Indians Paul Macarro, Cultural Resources Coordinator P.O. Box 1477 Temecula, CA 92593	Orange, Riverside, San Bernardino	pmacarro@pechanga-nsn.gov	(951) 770-6306 Fax: (951) 506-9491

Tribal Name and Contact	County	Email	Phone
Quechan Tribe of the Fort Yuma Reservation Jill McCormick, Historic Preservation Officer P.O. Box 1899 Yuma, AZ 85366	Riverside, San Bernardino	historicpreservation@quechantribe.com	(760) 572-2423
Quechan Tribe of the Fort Yuma Reservation Manfred Scott, Acting Chairman Kw'ts'an Cultural Committee P.O. Box 1899 Yuma, AZ 85366	Riverside, San Bernardino	scottmanfred@yahoo.com	(928) 750-2516
Ramona Band of Cahuilla Joseph Hamilton, Chairperson P.O. Box 391670 Anza, CA 92539	Riverside, San Bernardino	admin@ramona-nsn.gov	(951) 763-4105 Fax: (951) 763-4325
Ramona Band of Cahuilla John Gomez, Environmental Coordinator P. O. Box 391670 Anza, CA 92539	Riverside, San Bernardino	jgomez@ramona-nsn.gov	(951) 763-4105 Fax: (951) 763-4325
San Fernando Band of Mission Indians Donna Yocum, Chairperson P.O. Box 221838 Newhall, CA 91322	Riverside, San Bernardino	ddyocum@comcast.net	(503) 539-0933 Fax: (503) 574-3308
San Manuel Band of Mission Indians Jessica Mauck, Director of Cultural Resources 26569 Community Center Drive Highland, CA 92346	Riverside, San Bernardino	jmauck@sanmanuel-nsn.gov	(909) 864-8933
Santa Rosa Band of Cahuilla Indians Steven Estrada, Chairperson P.O. Box 391820 Anza, CA 92539	Riverside, San Bernardino	mflaxbeard@santarosacahuillansn.gov	(951) 659-2700 Fax: (951) 659-2228
Santa Rosa Band of Cahuilla Indians Mercedes Estrada, P. O. Box 391820 Anza, CA 92539	Riverside, San Bernardino	mercedes.estrada@santarosacahuilla-nsn.gov	(951) 659-2700 Fax: (951) 659-2228
Serrano Nation of Mission Indians Mark Cochrane, Co-Chairperson P. O. Box 343 Patton, CA 92369	Riverside, San Bernardino	serranonation1@gmail.com	(909) 528-9032

Tribal Name and Contact	County	Email	Phone
Serrano Nation of Mission Indians Wayne Walker, Co-Chairperson P. O. Box 343 Patton, CA 92369	Riverside, San Bernardino	serranonation1@gmail.com	(253) 370-0167
Soboba Band of Luiseno Indians Joseph Ontiveros, Cultural Resource Department P.O. BOX 487 San Jacinto, CA 92581	Orange, Riverside, San Bernardino	jontiveros@soboba-nsn.gov	(951) 663-5279 Fax: (951) 654-4198
Soboba Band of Luiseno Indians Scott Cozart, Chairperson P. O. Box 487 San Jacinto, CA 92583	Orange, Riverside, San Bernardino	jontiveros@soboba-nsn.gov	(951) 654-2765 Fax: (951) 654-4198
Torres-Martinez Desert Cahuilla Indians Michael Mirelez, Cultural Resource Coordinator P.O. Box 1160 Thermal, CA 92274	Riverside, San Bernardino	mmirelez@tmdci.org	(760) 399-0022 Fax: (760) 397-8146

Appendix A
GRP Development and Contributors

The Lower Santa Ana River GRP was developed through a collaborative effort among the state, federal, and local government agencies listed below, as well as industry and oil spill response organization partners and tribal and environmental NGO representatives:

Federal Representatives
U.S. Environmental Protection Agency, Region 9 and 10
U.S.D.A. Forest Service
U.S. Department of the Interior

State Representatives
Calif. Environmental Protection Agency
Calif. Office of Emergency Services
CALFIRE State Fire Marshal's Office, Pipeline Safety Division
Native American Heritage Commission
California State Water Resources Control Boards

Local Representatives
Santa Barbara County Public Health
Orange County Fire Authority

Tribal Representatives
Bear River Band of Rohnerville Rancheria

Industry and Response Contractors
Patriot Environmental Services
Marine Spill Response Corporation
National Response Corporation
West Coast Environmental Solutions
Union Pacific Railroad
Burlington Northern Santa Fe Railroad
Kinder Morgan Pipeline
Crimson Pipeline
Shell Pipeline Company
Shell Oil Company
Custom Chemical Formulators, INC

Environmental Non-Governmental Organizations
Trout Unlimited

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Appendix B
Site Description – Santa Ana River

1.0 Overview

This section provides a description of the physical features, hydrology, and climate found along the Santa Ana River corridor and includes an overview of the oil spill risks in the region. The Santa Ana River, a southwestward-flowing river, is 96 miles long with more than 50 tributaries (USGS, 2011; Water Education Foundation, 2020). It flows through San Bernardino, Riverside and Orange counties in southern California, originating in the southern San Bernardino Mountains in the San Bernardino National Forest (USGS, 1981). It terminates at the Pacific Ocean between the cities of Huntington Beach and Newport Beach. It is the largest watershed drainage south of the Sierra and the longest river in southern California (Water Education Foundation, 2020; Masters, 2012).

The Santa Ana drainage basin has a diversity of terrain, ranging from high peaks of inland mountains in the north and east, to the hot, dry interior and semi-desert basins of the Inland Empire, to the flat coastal plain of Orange County. Although it includes areas of alpine and highland forest, the majority of the watershed consists of arid desert and chaparral environments. Due to low regional rainfall, the river carries only a small flow except during the brief winter season, when it is prone to massive flash floods. The San Jacinto River, which drains the southern half of the watershed, rarely reaches the Santa Ana except in extremely wet years. A wide variety of animal and plant communities depend on the riparian zones and remnant wetlands along the Santa Ana River (Santa Ana River, 2020).

1.1 Physical Features

The Santa Ana River drains the largest watershed of California's South Coast region (OCBOS, USACE, 2009) covering 2,650 square miles in parts of San Bernardino, Riverside, and Orange Counties. The watershed consists mainly of high mountain ranges that surround and divide large, dry alluvial valleys. The San Gabriel, San Bernardino and San Jacinto Mountains encircle the arid Inland Empire lowland on the north and east. The Santa Ana Mountains and Chino Hills divide the Inland Empire from the Orange County coastal plain; the Santa Ana Canyon is the only natural break in the range between the two lowlands (USGS, 2009). The southern part of the watershed, drained by the San Jacinto River into Lake Elsinore and via Temescal Creek into the Santa Ana River, constitutes some 45% of the total area and extend its boundaries as far south as the Colorado Desert at Anza-Borrego Desert State Park. The river has over 50 named tributaries, most of which are intermittent streams (SARWA, 2010).

Humans have lived on the Santa Ana River for at least 9,000 years. In the period immediately before and during European colonization, there were four distinct indigenous groups in the area. The river was first seen by Europeans in 1769, when it received its name from members of the Spanish Portola expedition. Because it was one of the only reliable sources of water in a wide region, many large ranchos developed along the river and one of its major tributaries, Santiago Creek. After the area became part of the United States, the economy transitioned to agriculture, before urbanizing in the 20th century. Many cities established during this time including Santa Ana, Riverside and Anaheim derived their names from the river. In order to protect urban areas from the river's flood threat, major channelization and damming projects were undertaken in the 20th century, resulting in the loss of much of the natural river channel (Santa Ana River, 2020).

The Santa Ana River Watershed is home to over 6 million people, within an area of 2,650 square miles in southern California. According to the U.S. Census Bureau, the watershed population is expected to reach 9.

million by 2050 (SAWPA, 2013). Most of the population is concentrated close to the river in urban centers such as San Bernardino, Riverside, Anaheim and Santa Ana. The Inland Empire still has large areas dedicated to agriculture and ranching, although it is rapidly urbanizing. In Orange County, nearly all the valley lands are urbanized. Some major bodies of water in the watershed include Irvine Lake, Lake Mathews, Lake Perris, Diamond Valley Lake, Lake Skinner, and Big Bear Lake. All of these are water supply reservoirs constructed by county or state water agencies with much of the water being imported from other parts of California due to the arid local climate. Lake Elsinore is the only major natural lake in the watershed (OCWD, 2009).

In Orange County, the river flows across a vast, gently sloping alluvial fan created from its own sediments and thus its drainage basin is extremely narrow because the surrounding land slopes away from the river bed. In its natural state the river would frequently change course into one of many intermittent channels that fan out across the plain. Today, these auxiliary riverbeds have been converted into flood control channels, including the Talbert and Huntington Beach channels, which empty into the Pacific Ocean very near the mouth of the Santa Ana River (WCRD, 2009). The river originally had many different outlets to the Pacific Ocean, one of which even extended as far north as the San Gabriel River (Fehrehbach, 2009). The original mouth of the river was located at Newport Bay, which drained into the Pacific Ocean, at what is today the entrance to Newport Harbor. Based on a U.S. Coastal Survey from 1878, Newport Bay was predominantly a river estuary with few open channels. The river flowed into the bay bringing with it heavy silt and making boating difficult. To eventually create Newport Harbor, sand deposited by the Santa Ana River had to be constantly dredged away. In 1920, the Bitter Point Dam was built to divert the river away from the bay and on its current course to the ocean between Huntington Beach and Newport Beach. Stone jetties were built to form the new river mouth. All of the islands in Newport Harbor are the product of dredging and man-made forming from the sands and silt deposited over time by the Santa Ana River *(*Brown, 2011).

Rock jetties were put in during the ’60s when the area was slammed by strong surf and storms, eroding the beach and threatening beach-front homes. The groin jetties help capture sand to lessen erosion. As part of regular maintenance, Orange County periodically removes large deposits of sand at the Santa Ana River outlet, which typically happens before the start of the storm season in October (Brown, 2011). This activity is a requirement that greatly minimizes the risk of flooding for adjacent communities in Newport Beach, Huntington Beach and Costa Mesa (OCPW, 2017).

Hydrology

The Santa Ana River originates in the southern San Bernardino Mountains, at the confluence of two small streams, Heart Bar Creek and Coon Creek, at an elevation of 6,991 feet. Its highest sources are Dollar Lake, at 9,288 feet, and Dry Lake, at 9,068 feet (USGS, 1981), both on the northern flank of San Gorgonio Mountain, at the headwaters of the South Fork Santa Ana River (Schad and Harris, 2013). The river flows west through a wide, deep and heavily forested mountain valley. About 18 miles from its headwaters, it receives its first major tributary, Bear Creek, which enters from the north. Bear Creek receives its water from Big Bear Lake, a popular recreational mountain lake (Mitchell, 2006). The river turns south, passing through the Seven Oaks Dam, and reaches the arid Inland Empire lowland covering large parts of San Bernardino County and Riverside County. It receives Mill Creek from the south and passes to the south of San Bernardino, then receives City Creek from the north and San Timoteo Creek from the south. Due to water diversions for groundwater recharge, the riverbed is usually dry in this stretch between Mill Creek and the outlet of the Veolia water treatment plant north of Riverside, which restores a year-round flow. From there to Prado Dam the river supports a riparian zone with considerable vegetation (Asbury, 2008).

Not far below the confluence with San Timoteo Creek, Lytle Creek enters from the north. Lytle Creek is one of the largest tributaries of the Santa Ana River, rising from three forks in the San Gabriel Mountains and flowing southeast, before emptying into the Santa Ana River as Lytle Creek Wash. From there, the river turns

southwest, and after passing through western Riverside, it discharges into the normally dry flood control reservoir formed by Prado Dam. Two major tributaries of the river join in the reservoir area: Chino Creek from the north, and Temescal Creek from the south (OCBOS, USACE, 2009). Temescal Creek drains the largest area of all the tributaries, because it provides the outflow from Lake Elsinore, into which the San Jacinto River flows. It is also one of the longest, at 32 miles in length. Except during the wettest years when Lake Elsinore fills high enough to overflow, Temescal Creek contributes little to no water into the Santa Ana River (Asbury, 2008; Mitchell, 2006).

Below Prado Dam, the Santa Ana River crosses into Orange County, and cuts between the Santa Ana Mountains and Chino Hills via the narrow Santa Ana Canyon. The river roughly bisects the county as it flows southwest towards the ocean. In Anaheim, the entire flow of the river (except during wet seasons) is diverted into spreading grounds for groundwater recharge of the north Orange County aquifer, providing about half of the county's municipal water supply. Enhanced recharge of ground water is an important component of the hydrologic cycle in the Santa Ana watershed. The volume of water recharged is 37 percent of the volume pumped, with most of the enhanced recharge consisting of surface water derived from precipitation within the basin. Discharge from wastewater treatment facilities is also an important component of the hydrologic cycle, providing base flow in many parts of the drainage network. These activities are among the many factors affecting water quality in the watershed (USGS, 2016).

Downstream of the aquifer, the river is mostly confined to a concrete channel, serving only for flood control and urban runoff drainage, and is usually dry or a small trickle. At Orange it receives Santiago Creek from the east before entering Santa Ana. After crossing under Interstate 5 it passes through the River View Golf Course, one of its few non-concreted sections within Orange County, and then becomes a concrete channel again through most of Santa Ana and Fountain Valley to a point below the 405 Freeway, where the river bed becomes natural (though the banks remain concrete). The mouth of the river is located in a small tidal lagoon between Huntington Beach and Newport Beach, at the northern end of Santa Ana River County Beach (Asbury, 2008; Mitchell, 2006).

Climate

The climate of the Santa Ana River watershed is considered Mediterranean with hot, dry summers, and cooler, wetter winters. Average annual precipitation ranges from 12 inches per year in the coastal plain to 18 inches per year in the inland alluvial valleys, reaching 40 inches or more per year in the San Bernardino Mountains. Most of the precipitation occurs between November and March in the form of rain with variable amounts of snow in the higher mountains of the Watershed. The climatological cycle of the region results in high surface water flows in the spring and early summer period, followed by typically low flows during the dry season. Winter and spring floods generated by precipitation in the high mountains are not uncommon. Similarly, during the dry season, severe thunderstorms in the high mountains periodically have generated torrential floods in local streams (SAWPA, 2013).

Tides and Currents

The river originally had many different outlets to the Pacific, one of which even extended as far north as the San Gabriel River (Ferenbach, 2009). The original mouth of the river was located at Newport Bay, which drained into the Pacific Ocean, at what is today the entrance to Newport Harbor. Based on a U.S. Coastal Survey from 1878, Newport Bay was predominantly a river estuary with few open channels.

The Santa Ana River is tidally influenced to about 1.5 miles upstream from the river mouth (Santa Ana River Main Stem and Santiago Creek: Environmental Impact Statement). There are two tidal gates near the mouth of the Santa Ana River; both connect to Newport Slough on the southeast side of the river. The Newport

Slough tidal gates are operated manually by the Orange County Department of Public Works (OCDPW, Personal Communication, 2020).

1.2 Risk Assessment

Hundreds of species of animals and plants reflect the Santa Ana River's diversity of climates and vegetation zones, including the increasingly rare riparian forest and marshes along the riverbed. The watershed supports numerous wildlife and fish species, including steelhead trout (Mitchell, 2006). These natural resources are constrained by urban development and threatened by human activities – including oil spills. Cultural and historic resources dating back at least 9,000 years exist throughout the watershed and are also at risk of injury from oil spills (Santa Ana River, 2020).

Road Systems

Roadways that run adjacent to or cross over rivers and/or have storm drains pose an oil spill risk. There are approximately 14 freeways and highways that cross the Santa Ana River, with approximately 40 surface street crossings within San Bernardino, Riverside, and Orange Counties (ERMA Southwest, 2020; Santa Ana River, 2020). Unfortunately spills and releases of hazardous materials during transport are common in Orange County, and the probability of a hazardous materials transportation incident is high. This will most likely occur during a vehicle accident along one of Orange County's major transportation routes and railroad systems (OCCEMP, 2013). The amount of hazardous materials transported over rail and roadways daily in Riverside County is unknown but estimated to be steadily increasing as the economy grows. There is the potential for a hazardous materials incident almost anywhere on the numerous highways and roads that crisscross the county, the greatest concern focuses on the I-10, I-15, I-215, CA-60, and CA-91 freeways (County of Riverside LHMP, July 2018).

Railroads

There are approximately 10 crude by rail crossings over the Santa Ana River beginning in the city of San Bernardino and continuing through the cities of Orange and Anaheim (ERMA Southwest, 2020), as well as areas where the railroad runs adjacent to the river. The railroads have a good safety record regarding the transportation of hazardous materials. Traffic on railroads is not as prevalent as on truck routes but poses a much greater problem when an accident is involved due to the volumes of hazardous materials on board (County of Riverside LHMP, July 2018).

Oil Pipelines and Facilities

Several facilities and pipelines receive, store and distribute crude oil and products such as gasoline and diesel. Along with the pipelines, these facilities are accessible by truck. A spill from a pipeline, or one of the other associated modes of transporting petroleum products, has the potential to significantly impact sensitive resources in the area (County of Riverside LHMP, July 2018). Specifically, there are several hazardous liquid pipelines crossing the Santa Ana River near the city of Colton as well as pipeline crossings carrying refined product and a terminal storage facility adjacent to the river in the city of Orange (ERMA Southwest, 2020).

Other Spill Risks

There is significant commercial movement along the California coast, including at the most trafficked port on the West Coast, the Ports of Los Angeles-Long Beach, located approximately 20 miles northwest of the Santa Ana River. The potential for vessel collisions or groundings presents a significant spill risk. Large commercial

vessels typically carry significant amounts of heavy and blended fuel oils and other petroleum products, increasing the risk for sensitive resources to be impacted if an oil spill incident were to occur (OSPR, 2019).

There is a great deal of air traffic along the airways above San Bernardino, Riverside, and Orange Counties. Of particular interest are the Redlands Municipal, San Bernardino International, Flabob and Corona Municipal Airports which are all adjacent to the river. The potential for a hazardous materials incident exists, particularly due to aviation fuel tanks (County of Riverside LHMP, July 2018; ERMA Southwest, 2020).

Other potential oil spill risks in the area include road run-off during rain events, on-shore or near shore construction activities where heavy equipment is being operated, and the migration of spilled oil through soil on lands adjacent to the river or along creek or storm drains (OSPR, 2019).

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Appendix C
Comments, Corrections, or Suggestions

GRPs are living documents and can be revised at any time based on new information from comments and lessons learned from drills and spills. These changes are typically reflected as interim updates on the website for each GRP until they are fully incorporated into the plan during a future update. We value your input and hope that you'll submit comments on how this plan might be improved. If you have any questions or comments, suggestions for improvement, or find errors in this document please submit comments to the following address:

California Department of Fish and Wildlife
Office of Spill Prevention and Response
1010 Riverside Parkway
West Sacramento, Ca 95605
Attn: Geographic Response Plans

The form below can be used to submit comments by mail. Contact information is requested so that we can give you a call if more information or comment clarification is needed.
Additional information on Geographic Response Plans is available at
http://www.wildlife.ca.gov/OSPR/Contingency.

GRP Comment Form

Today's Date:_____

Your Name:_____ Title:_____

Company/Agency:_____

Address:_____

City:_____State/Province:_____Zip:_____

Email: _____Ph:_____

GRP Page Number:_____ Section or Paragraph:_____

Comment(s)_____

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Appendix D
Record of Changes

Date	Change Number	Summary of Changes	Name of Person Making Changes

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Appendix E
Other Relevant Emergency Response Plans
Lower Santa Ana River GRP

City of Anaheim Emergency Operations Plan

The City of Anaheim Emergency Operations Plan (EOP) establishes a comprehensive framework of policy and guidance for emergency and disaster response operations. This plan details capabilities, authorities, and responsibilities for specific individuals, divisions, departments, agencies, and organizations within the City of Anaheim. The City of Anaheim EOP draws on the system described within the National Response Framework (NRF), which establishes vertical integration and effective coordination across local, State, and Federal resources, as well as private-sector capabilities, as necessary, to preserve the health, safety, and welfare of those persons affected during emergency or disaster situations. This plan is also based on the functions and principles of the Standardized Emergency Management System (SEMS), which is based on the FIRESCOPE Incident Command System (ICS) and the National Incident Management System (NIMS) and identifies how the City fits into the overall SEMS/NIMS structure. (City of Anaheim, May 2017)

City of Corona Local Hazard Mitigation Plan

The purpose of this local hazard mitigation plan is to identify the City's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The plan identifies vulnerabilities, provides recommendations for prioritized mitigation actions, evaluates resources and identifies mitigation shortcomings, provides future mitigation planning and maintenance of existing plan.

The City of Corona is committed to providing protection to residents and businesses from natural and human induced hazards. The City is also committed to coping with and rebuilding from emergency or disaster events in a manner that is efficient, safe, and provides for a quick return to the quality of life that exists daily in Corona. To accomplish this, it is imperative that the City is aware of the hazards it is susceptible to in order to prepare, respond, recover, and mitigate for them. The County of Riverside identified, evaluated, and ranked 23 natural and human-induced public safety risks that could have an impact on the health, safety, and social well-being of the community. The ranking was based on severity of damage and probability of occurrence for each risk. The City of Corona then ranked the same 23 hazards and included the top 10 risks in the City's annex to the Riverside County Multi-Jurisdictional Hazard Mitigation Plan. Identifying the risks posed by these hazards and developing strategies to reduce the impact of these hazards can assist in protecting life and property. (City of Corona, June 2017)

City of Huntington Beach Local Hazard Mitigation Plan

Like virtually all other communities, Huntington Beach could potentially face widespread devastation and loss of life, substantial environmental damage, interruptions to vital services, and other major challenges if a severe disaster occurs in the city. Disasters of a smaller magnitude are still capable of causing substantial disruptions and negative impacts. This Plan builds off of the City's previous Local Hazard Mitigation Plan (LHMP) , which was adopted in 2012 with the intent to help make Huntington Beach a safer place to live, work, and visit by identifying effective and appropriate steps that the City can take to reduce the risks from these hazard

situations. This Plan continues these efforts and outlines resources, information, and mitigation measures to reduce vulnerabilities and improve community awareness. The LHMP continues to foster a basis for coordination and collaboration between the City, other public agencies, applicable private organizations and companies, community members, and key stakeholders. It meets the requirements of current federal grant assistance programs, including FEMA's Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) funding programs. It helps identify and prioritize potential future hazard situations and works in coordination with other planning documents such as the Huntington Beach General Plan. (City of Huntington Beach, March 2017)

City of Orange Local Hazard Mitigation Plan

The City of Orange Local Hazard Mitigation Plan assists Orange in reducing vulnerability to disasters by identifying critical facilities, capabilities, resources, information, and strategies for risk reduction, while helping to guide and coordinate mitigation actions. The City of Orange has created this Plan to ensure that hazard conditions are reflective of current conditions, that policies in the Plan are consistent with current City standards and/or other relevant federal, state, or regional regulations, and that the City has an updated Plan consistent with Federal Emergency Management Agency (FEMA) requirements. The Plan provides a set of strategies intended to reduce risk from natural hazards through education and outreach programs; foster the development of partnerships; and implement risk reduction activities. The Orange LHMP works in conjunction with other plans, including the City's General Plan and Emergency Operations Plan. The planning team reviewed the goals from the County of Orange and Orange County Fire Authority Hazard Mitigation Plan and decided to align the goals for the City of Orange with those of the County. (City of Orange, October 2016)

County of Orange and Orange County Fire Authority Hazard Mitigation Plan

The County of Orange operates a comprehensive emergency management program of which mitigation is a key component. Responsibility for mitigation planning and implementation rests with multiple agencies and departments. The mitigation theory postulates that money spent reducing a community's exposure to hazards is more cost effective than the money spent to respond to and recover from the impacts of those hazards. The mission of the County of Orange and Orange County Fire Authority Hazard Mitigation Plan is to promote sound public policy designed to protect residents, critical facilities, infrastructure, key resources, private property, and the environment from natural hazards in County unincorporated area, fire hazards in the Fire Authority service area, and County and Fire Authority owned facilities. Hazard mitigation will result in increased public awareness, documentation of resources for risk reduction and loss-prevention and identifying activities to guide the County toward building a safer, more sustainable community.

This Local Hazard Mitigation Plan (LHMP) is a multi-jurisdiction plan developed jointly between the County of Orange, a local government, and the Orange County Fire Authority, a Joint Powers Authority. As a multi-jurisdiction plan, the document focuses on mitigating all natural hazards impacting unincorporated areas of the County as well as County and Orange County Fire Authority owned facilities. The Orange County Fire Authority provides fire suppression and prevention services to the County unincorporated areas, as well as a variety of other jurisdictions and contracts under their Joint Powers Authority. As a result, fire mitigation strategies in this plan are inclusive of all areas served by the Fire Authority. (Orange County, November 2015)

Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan

The purpose of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) is to identify the County's hazards, review and assess past disaster occurrences, estimate the

probability of future occurrences and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The LHMP supports the values and goals of the Federal Emergency Management Agency, and the California Office of Emergency Services.

The LHMP supports the broader vision and values of the County of Riverside, along with the cities, special districts, and Tribal Leaders within the County. Riverside County's continual efforts to maintain a disaster-mitigation strategy is on-going. The goal is to develop and maintain an all-inclusive plan to include all jurisdictions, special districts, businesses and community organizations and to promote consistency, continuity and unification. The plan identifies vulnerabilities, provides recommendations for prioritized mitigation actions, evaluates resources and identifies mitigation shortcomings, provides future mitigation planning and maintenance of existing plan. (Riverside County, July 2018)

Local Emergency Planning Committee Hazardous Materials Emergency Plan's

There are six California Governor's Office of Emergency Services (CalOES) mutual aid regions in California that have the same boundaries as the Local Emergency Planning Committees (LEPCs). The LEPCs are designated as emergency planning districts to prepare Hazardous Materials Emergency Plans pursuant to the Superfund Amendments and Reauthorization Act (SARA), Title III (Emergency Planning and Community Right to Know) found in Title 42, United States Code §110003(a).

Region I, California Hazardous Materials Incident Contingency Plan

The purpose of the LEPC Region I, California Hazardous Materials Incident Contingency Plan (Region I Plan) is to assist agencies in coordinating resources, mutual aid, and support for pre-emergency planning and emergency response to hazardous materials incidents. LEPC Region I is comprised of the five coastal California counties of Los Angeles, Orange, San Luis Obispo, Santa Barbara, and Ventura. The Region I Plan describes the role of the Region I LEPC in planning, preparedness, response, and mitigation actions required to implement this plan. It also provides the public with information about facilities that pose a threat or potential hazard to community health and safety, based on business plans developed by local facilities. Finally, the Region I Plan is designed as a management tool to assist in the prevention or mitigation of the damage to the health and safety of persons, property, and the environment from the release or threatened release of hazardous materials. The Region I Plan is a reference document, meant to reflect policy, and does not describe all details and actions necessary to implement an effective emergency response. The Region I Plan works in conjunction with other existing plans, referenced under Authorities and References. (CalOES, July 2002)

Region VI, Hazardous Materials Emergency Response Plan

The LEPC Region VI Hazardous Materials Emergency Plan (Region VI HMEP) is designed to coordinate resources and arrange for mutual aid support for hazardous materials incidents within the OES Region VI counties of Imperial, Inyo, Mono, Riverside, San Bernardino and San Diego. This plan intends to promote effective coordination to facilitate response capability for serious hazardous materials incidents when one or more Operational Areas (County) in CalOES Region VI become involved in a situation that overwhelms its resources.

The objectives of this plan are to: save lives, reduce injuries, and reduce damages to property and impacts on the environment; describe the role of the LEPC in planning, preparedness, response, recovery, and mitigation actions required to implement this plan; describe conditions for implementation

of the plan; identify the responsibilities and tasks of each agency capable of providing assistance and their relationships; establish lines of authority and coordination when the plan is in effect; and promote the development of agreements and cooperative arrangements to use the above personnel and resources that will support this plan. (LEPC Region VI, 2005)

Appendix F
Local/Regional Asset Resources

- **Table F-1: Local/Regional Asset Resources Table**
- **Figure F-1: Cal OES SoCal Certified HazMat Material Teams Map**
- **Table F-2: Cal OES Statewide List of Certified California HazMat Teams by Type**
- **ICP Facility Assessment Check Sheet**

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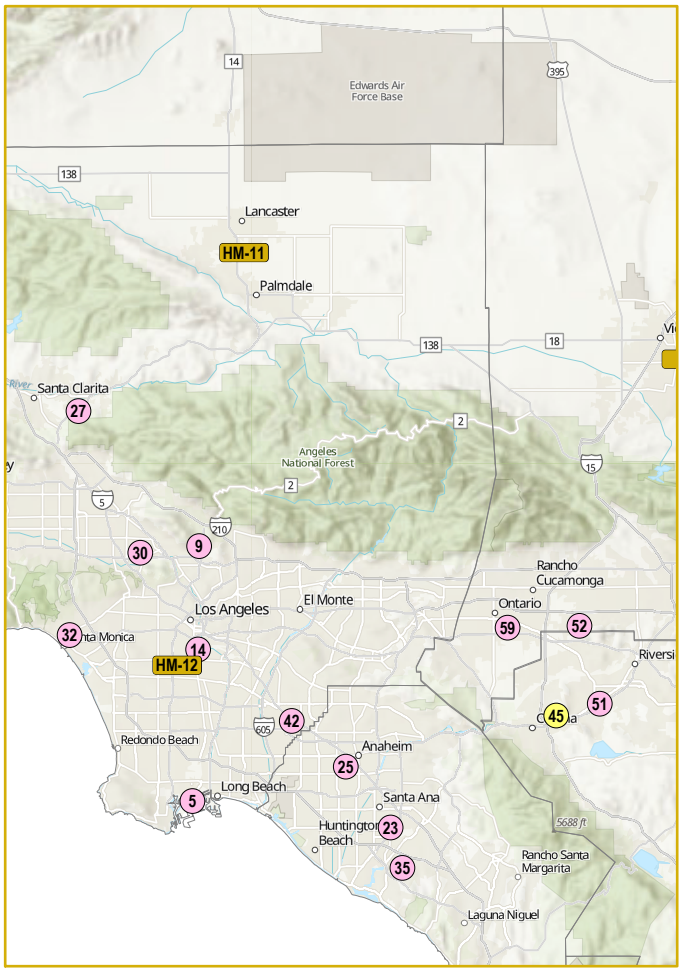
Table F-1: Local/Regional Asset Resources Table

Local/Regional Assets

Resource	Home Base/Owner	Contact Information/Comments
Response Trailers (in addition to those granted by OSPR)		
Water Supplies for Firefighting		
Fire departments in the cities of Anaheim, Fountain Valley, Huntington Beach, and Orange	Metro Fire Authority	Metro Net Fire Dispatch (714) 533-1305
Fire departments in the cities of Santa Ana and Yorba Linda	Orange County Fire Authority	County Fire Dispatch (714) 573-6500 (714) 538-3501
Costa Mesa Fire and Rescue		City Fire Dispatch (714) 549-1111
Riverside County Fire		County Fire Dispatch (951) 657-2161
Orange County Fire Authority		County Fire Dispatch (714) 573-6500 (714) 538-3501
Foaming Operations		
A-FFF 30,000 gallons	Southern California Industrial Mutual Aid Organization	24-Hour Emergency Number (310) 678-0447
Orange County Fire Authority		County Fire Dispatch (714) 573-6500 (714) 538-3501
Riverside County Fire		County Fire Dispatch (951) 657-2161
Air Monitoring Equipment		
Orange County Fire Authority		County Fire Dispatch (714) 573-6500 (714) 538-3501
Riverside County Fire		County Fire Dispatch (951) 657-2161
Communication Equipment: Portable Radio/Mobile Repeaters		
Orange County Sheriff		County Sheriff Dispatch (714) 647-7000 (949) 770-6011
Riverside County Sheriff		County Sheriff Dispatch (951) 776-1099 (760) 836-3215

Unmanned Aerial System Equipment and Pilots		
(3) DJI Mavic Pro 2 drones (2) Mavic 3 drones (3) licensed pilots	Patriot Environmental Services	Kevin Pawson, Senior PM (562) 244-2392 kpawson@patriotenvironmental.com Marc Ruffner, Director (562) 244-2265 mruffner@patriotenvironmental.com
(1) DJI Enterprise drone (1) licensed pilot	MSRC, Long Beach Office	Jeremy Hurd T&IS Remote Surveillance Manager Pacific Region, Everett, WA Office (562) 572-5787
(1) DJI Mavic Pro (1) DJI Mini Pro 3	Graymar Environmental	Steve Sitton - Reno (775) 225-4559 ssitton@graymarenv.com Kent Creighton-Central Calif. (562) 310-6969 kcreighton@graymarenv.com Dan Chuntz-Southern Calif. (562) 244-1680 dchuntz@graymarenv.com
HazMat Teams		
HazMat Team - Type 1	Orange County Fire Authority Santa Ana	County Fire Dispatch (714) 573-6500 (714) 538-3501
HazMat Team - Type 1	Anaheim Fire and Rescue	Dispatch (714) 533-1305
HazMat Team - Type 1	Orange County Fire Authority Irvine	County Fire Dispatch (714) 573-6500 (714) 538-3501
HazMat/Chemical Monitoring	Environmental Protection Agency, Region 9, Southern California Field Office	(213) 244-1800 field office (800) 300-2193 24-hour emergencies
Swift Water Rescue Teams		
Orange County Urban Search and Rescue	Orange County Fire Authority, California Task Force 5 (CA-TF5)	County Fire Dispatch (714) 573-6500 (714) 538-3501
City of Riverside Fire Department, Type 1 Water Rescue Team	City of Riverside Fire Department, California Task Force 6 (CA-TF6)	City Fire and Police Dispatch (951) 354-2007

Figure F-1: Cal OES SoCal Certified HazMat Material Teams Map



State of California
CALIFORNIA OFFICE OF EMERGENCY SERVICES

Certified Hazardous Material Teams

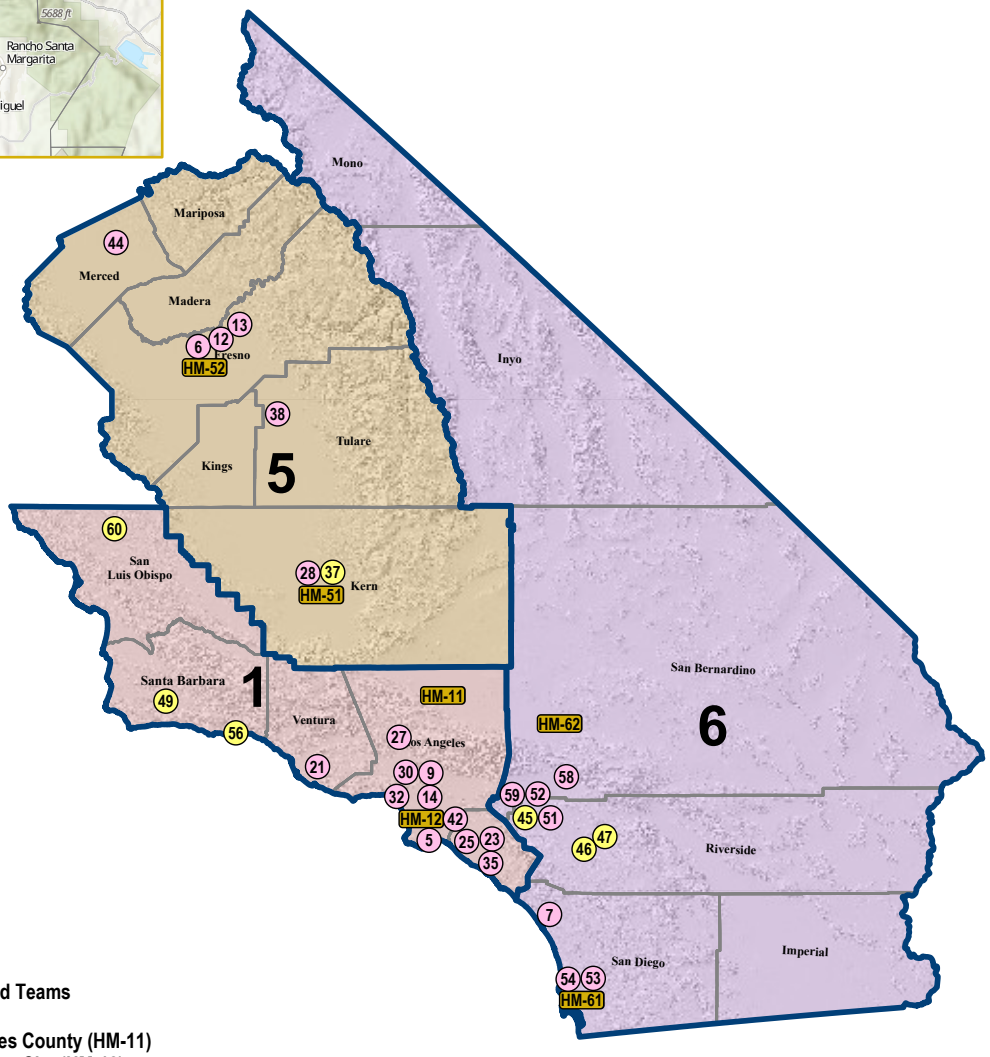
By Type as of April, 2018

Cal OES
GOVERNOR'S OFFICE OF EMERGENCY SERVICES

Certified Haz-Mat Teams

Unit Type

- Type 1
- Type 2
- Type 3
- Type 2 - Cal OES Sponsored
- Mutual Aid Regions
- County Boundaries



ID - Agency (Unit)
5 - Long Beach City Fire (HM-24)
6 - Fresno City Fire (HM-16)
7 - USMC Camp Pendleton (HM-1)
9 - Glendale Fire (HM-24)
12 - Fresno City Fire (HM-1)
13 - Clovis Fire (HM-40)
14 - Vernon Fire (HM-151)
21 - Ventura County Fire (HM-50)
23 - Orange County Fire-Santa Ana (HM-79)
25 - Anahiem Fire (HM-6)
27 - Los Angeles County Fire #76 (HM-150)
28 - Bakersfield Fire (HM-15)
30 - Burbank Fire (HM-12)
32 - Santa Monica Fire (HM-4)
35 - Orange County Fire-Irvine (HM-4)
37 - Kern County Fire (HM-66)
38 - Visalia City Fire (HM-55)
42 - Santa Fe Springs Fire (HM-851)
44 - Merced County Fire (HM-62)
45 - Corona City Fire (HM-4)
46 - Riverside County Fire (HM-34)
47 - Hemet City Fire (HM-1)
49 - Santa Barbara County Fire (HM-31)
51 - Riverside City Fire (HM-2)
52 - San Bernardino County Fire (HM-74)
53 - San Diego City Fire (HM-1)
54 - San Diego City Fire (HM-2)
56 - Santa Barbara City Fire (HM-1)
58 - San Manuel Fire (HM-241)
59 - Ontario City Fire (HM-133)
60 - San Luis Obispo County Fire (HM-1)

Cal OES Sponsored Teams
ID - Agency (Unit)
HM-11 - Los Angeles County (HM-11)
HM-12 - Los Angeles City (HM-12)
HM-51 - Kern County Fire (HM-51)
HM-52 - Fresno City Fire (HM-52)
HM-61 - San Diego County Fire (HM-61)
HM-62 - San Bernardino County Fire (HM-62)

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May 3, 2018
Produced by: Cal OES GIS
Source: Cal OES Hazardous Materials Div
N:\1 Daily Operations\Response\Fire and Rescue \Projects\Fire Rescue Hazmat\1 Project \Hazmat Material Teams.aprx

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Table F-2: Cal OES Statewide List of Certified California HazMat Teams by Type

CERTIFIED CALIFORNIA HAZMAT TEAMS, BY TYPE (Items highlighted is new data since last update) – 4/30/18

	Orig. Req. #	Orig. Insp. #	Recent Pass #	AGENCY	Operational and Local Identifier	Region	Unit Designation	Most Recent Attained	Zip Code
TYPE 1	46	41	28	Anaheim Fire	XOR-ANA	1	HM-8	1/13/2017	92807
	14	13	32	Burbank City FIre	XLC-BRK	1	HM-12	6/08/2017	91505
	10	10	9	Glendale City Fire	XLC-GLN	1	HM-24	7/06/2017	91208
	7	7	5up	Long Beach Fire Dept.	XLF-LOB	1	HM-24	10/06/2016	90802
	18	17	30	Los Angeles County Fire	XLB-LAC	1	HM-150	12/15/2010	91351
	51	46	37	Orange Co Fire Authority	XOR-ORC	1	HM-4	8/15/2017	92612
	49	44	26	Orange Co Fire Auth. (formerly Santa Ana hm-9)	XOR-ORC	1	HM-79	8/15/2017	92705
	45	40	23	Ventura County Fire	XVE-VNC	1	HM-50	6/07/2017	93010
	26	25	15	Vernon City Fire	XLE-VER	1	HM-151	7/15/2017	90058
	55	58	47	Santa Fe Springs Fire	XLE-SFS	1	HM # 851	4/20/2018	90670
	54	48	48	Santa Monica Fire	XLA-SMA	1	HM-4	10/27/2016	90404
	6	6	11	Alameda County Fire	XAL-ACF	2	HM-12	5/23/2017	94546
	5	5	7up	Contra Costa County JPA	XCC-CCH	2	HM-1	10/20/2016	94553
	33	31	17up	Marin County Fire Haz-Mat JPA	XMR-MRN	2	HM-1	8/02/2016	94960
	43	62	52	Oakland City Fire	XAL-OKL	2	HM # 2599	8/23/2013	94607
	61	60	50up	Salinas City Fire – Monterey County JPA	XMY-SLS	2	HM-2	6/14/2017	93901
	22	50	31	San Jose City Fire	XSC-SJS	2	HM-29	4/05/2017	95134
	24	23	19	Santa Clara County Fire	XSC-CNT	2	HM–72	3/14/2017	95014
	50	45	38up	Solano County O.E.S. (Fairfield City FD)	XSO-FRF	2	HM-1	7/18/2017	94533
	1	1	1	Roseville City Fire	XPL-RSV	4	HM-1	5/17/2016	95678
	2	2	2	Sacramento City Fire	XSA-SCR	4	HMRT-7	12/01/2016	95823
	3	3	3	Sacramento City Fire	XSA-SCR	4	HMRT-30	12/01/2016	95835
	4	4	4	Sacramento Metro F.P.D.	XSA-SAC	4	HM-109	11/17/2017	95608
	42	37	25up	Bakersfield Fire. Dept	XKE-BKF	5	HM-15	3/16/2017	93314
	27	26	13	Clovis City Fire	XFR-CLV	5	HM-40	12/21/2016	93611
	17	16	12	Fresno City Fire	XFR-FRN	5	HM-1	4/26/2018	93703
	16	15	6	Fresno City Fire	XFR-FRN	5	HM-16	4/26/2018	93722
	11	11	14up	Merced County F.D.	XMD-MRD	5	HM-62	3/13/2013	95301
	32	30	41	Visalia Fire	XTU-VSA	5	HM-55	7/16/2017	93291
	67	73	62	Ontario City Fire	XBO-OTO	6	HM-133	8/7/2015	91761
	57	55	44u	Riverside City Fire	XRI-RIV	6	HM-2	4/7/2014	92503
	68	66	55	San Bernardino County Fire	XBO-BDC	6	HM-74	4/7/2014	92335
	9	69	56	San Diego City Fire	XSD-SND	6	HM-1	5/30/2014	92126
	48	70	57	San Diego City Fire	XSD-SND	6	HM-2	5/30/2014	92126
	71	72	61up	San Manuel Fire Dept.	XBO-SMI	6	HM-241	4/25/2017	92346
	15	14	7	U.S. Marine Corp Camp Pendleton	XSD-MCP	6	HM-1	8/25/2017	92055
				TYPE 1 TOTAL:			*36*		
TYPE 2	59	67	59	Santa Barbara City	XSB-STB	1	HM-1	11/03/2014	93101
	66	65	53	Santa Barbara County	XSB-SBC	1	HM-31	10/07/2013	93427
	72	74	63	San Luis Obispo County / CAL Fire	XSL-SLU	1	HM-1	1/05/2016	93446
	63	71	58	Belmont City Fire	XSM-BEL	2	HM-14	7/03/2014	94002
	41	35	33	Fremont City Fire	XAL-FRE	2	HM-57	4/04/2018	94538
	31	29	22	Humboldt Bay Fire Dept	XHU-EUR	2	HM-8190	2/26/2018	95501
	53	51	48	Livermore-Pleasanton	XAL-LAP	2	HM-92	1/18/2018	94588
	20	49	36up	Mt. View Fire	XSC-MTV	2	HM-5	3/08/2017	94043
	35	32	29	Napa County Fire	XNA-NPA	2	HM-27	10/24/2010	94558
	73	75	64	Presidio of Monterey	XMY-POM	2	H2MT61	9/20/2017	93955
	44	39	35	San City Francisco Fire	XSF-SFR	2	HM-1	4/05/2011	94102
	28	27	16	San Ramon Fire Prot. Dist	XCC-SRM	2	HM-35	2/01/2017	94506
	23	52	45	Santa Clara City Fire	XSC-SNC	2	HM-9	6/19/2012	95051
	58	56	46up	Santa Rosa City Fire	XSN-SRS	2	HM-1	2/16/2018	95404
	8	8	18	Sonoma County Fire	XSN-SSR	2	HM-2936	3/07/2017	95403
	25	24	24	Sunnyvale Dept. Public Safety	XSC-SNY	2	HM-2	11/30/2016	94085
	36	33	20	Butte County Fire	XBU-BUT	3	HM-5	2/02/2017	95928
	12	54	42	Shasta-Cascade HM JPA (Redding Fire)	XSH-SHS	3	HM-24	2/17/2012	96002
	69	68	60	Placer Co. Fire (CDF)	XPL-PCF	4	HM-10	2/01/2015	95603
	13	12	10up	Truckee Fire Prot. District	XTB-TRK	4	HM-1	4/11/2018	96161
	47	42	40	Kern County Fire	XKE-KRN	5	HM-66	3/16/2017	93308
	60	59	49up	Corona City Fire	XRI-COR	6	HM-4	4/05/2013	92879
	56	57	43up	Hemet City Fire	XRI-HMT	6	HM-1	6/05/2013	92545
	64	63	51	Riverside County Fire	XRI-RRU	6	HM-34	5/14/2013	92596
	~~65~~	~~64~~	~~54~~	~~Riverside County Fire~~	~~XRI-RRU~~	~~6~~	~~HM-81~~	~~10/15/2013~~	~~92211~~
				TYPE 2 TOTAL:			*24*		
TYPE 3	21	20	27	Palo Alto Fire Dept.	XSC-PAF	2	HM-2	8/02/2010	94304
				TYPE 3 TOTAL:			*1*		
				TOTAL TEAMS PASSED INSPECTION			*61*		

THIS CHART IS ALWAYS AVAILABLE ON OUR WEB SITE:
http://www.caloes.ca.gov/FireRescueSite/Pages/Team-Typing-Information.aspx

NOTES: Changes to HM Unit status:

1. Salinas City Fire HM-2 Upgraded from a Type 2 to a Type 1 and passed Re-Certification on 6/24/2017
2. Solano County OES HM-1 Upgraded from a Type 2 to a Type 1 and passed Re-Certification on 7/18/2017
3. San Manuel Fire Dept. HM-241 Upgraded from a Type 2 to a Type 1 on 4/25/2017
4. Mt. View Fire HM-5 Upgraded from a Type 3 to a Type 2 and passed Re-Certification on 3/08/2017
5. Santa Rosa City Fire HM-1 Upgraded from a Type 3 to a Type 2 and passed Re-Certification on 2/16/2018
6. Presidio of Monterey H2MT61 Entered into the Team Typing program as a Type 2 Team on 9/20/2017
7. Riverside Co. Fire, HM-81 discontinued and Removed their Type 3 HazMat Team from the program.
8. Burbank City Fire HM-12 Passed Re-Certification on 6/08/2017
9. Glendale City Fire HM-24 Passed Re-Certification on 7/06/2017
10. Orange Co. Fire Authority HM-4 Passed Re-Certification on 8/15/2017
11. Orange Co. Fire Authority HM-79 Passed Re-Certification on 8/15/2017
12. Ventura Co. Fire HM-50 Passed Re-Certification on 6/07/2017
13. Vernon City Fire HM-151 Passed Re-Certification on 7/15/2017
14. Santa Fe Springs Fire HM-851 Passed Re-Certification on 4/20/2018
15. Alameda Co. Fire HM-12 Passed Re-Certification on 5/23/2017
16. San Jose City Fire HM-29 Passed Re-Certification on 4/05/2017
17. Santa Clara Co. Fire HM-72 Passed Re-Certification on 3/14/2017
18. Sacramento Metro Fire HM-109 Passed Re-Certification on 11/17/2017
19. Bakersfield City FireHM-15 Passed Re-Certification on 3/16/2017
20. Fresno City Fire HM-1 Passed Re-Certification on 4/26/2018
21. Fresno City Fire HM-16 Passed Re-Certification on 4/26/2018
22. Visalia City Fire HM-55 Passed Re-Certification on 7/16/2017
23. USMC Camp Pendleton Fire HM-1 Passed Re-Certification on 8/25/2017
24. Fremont City Fire HM-57 Passed Re-Certification on 4/04/2018
25. Humboldt Bay Fire HM-8190 Passed Re-Certification on 2/26/2018
26. San Ramon Fire Prot. Dist. HM-35 Passed Re-Certification on 2/01/2017
27. Sonoma Co. Fire HM-2936 Passed Re-Certification on 3/07/2017
28. Butte Co. Fire HM-5 Passed Re-Certification on 2/02/2017
29. Truckee Fire HM-1 Passed Re-Certification on 4/11/2018
30. Kern Co. Fire HM-66 Pass Re-Certification on 3//16/2017

Changes to Chart Statistics:

1. The total number of TYPE 1 HM teams boosted to at 36.
2. The total number of TYPE 2 HM teams decreased to 24.
3. The total number of TYPE 3 HM teams decreases to 1.
4. The total number of typed Metropolitan HM Teams stayed the same at 61.

Above changes issued 4/26/2018 and posted on web page.

ICP Facility Assessment Checksheet	
Facility Name:	**Facility Address/phone number:**
Rental/lease cost:	**Maximum Occupancy:**
General Impressions:	
Limitations/Constraints:	

Proximity to services	
Type/Name	Approximate Distances
Interstates-	
State Routes-	
Restaurants-	
Hotels-	
Airport-	
Emergency Services-	
Copy Centers (i.e. Kinko's)-	
Other-	

Cell phone coverage	
Nearest cell tower:	
Signal strength within the ICP (on your cell phone/list provider):	

Parking	**Site Security**
Adequate?	Public access controls:
Secure?	
Number of spaces:	On-site security:
Comments:	Security needs/comments:

ICP physical characteristics

Facility floor plan available? (Attach to checksheet/scan to ICP e-folder)				
Photo documentation? (Photograph each room and attach to checksheet/save to ICP e-folder)				
Number of rooms available:				
Square foot per room				
	Main space:	Meeting room:	Multi-purpose room:	Other:
Wall space per room				
	Main space:	Meeting room:	Multi-purpose room:	Other:
Tables				
Chairs				
Telephone outlets				
Telephones				
Power outlets				
Internet outlets				
Can the facility accommodate a JIC?				

Overall Impressions (comment on placement of Command/General Staff work locations/spaces, placement of Situation and Resource unit displays, capability/capacity of location, and other impressions):

Appendix G
ACRONYMS

A

ACP Area Contingency Plan

ADC Accredited Disaster Council

API American Petroleum Institute

ART Applied Response Technologies

AST Above-Ground Storage Tank

B

BLM Bureau of Land Management

BOR Bureau of Reclamation

C

CA California

CalARP California Accidental Release Prevention Program

CalOES California Office of Emergency Services

CalEPA California Environmental Protection Agency

CalOSHA California Occupational Safety and Health Administration

CalTrans California Department of Transportation

CCR California Code of Regulations

CDF/CalFire California Department of Forestry and Fire Protection

CDFW California Department of Fish and Wildlife

CERT Community Emergency Response Team

CFR Code of Federal Regulations

CFS Cubic Feet per Second

CHEMTREC Chemical Transportation Emergency Center

CHP California Highway Patrol

CHMIRS California Hazardous Materials Incident Reporting System

CHRIS California Historical Resources Information Center

CLEMARS California Law Enforcement Mutual Aid Radio System

CLERS California Law Enforcement Radio System

CNPS California Native Plant Society

COTP Captain of the Port (USCG)

CUPA Certified Unified Program Agency

CWA Clean Water Act

CWHR California Wildlife Habitats Relationship (System)

D

DOGGR Division of Oil, Gas, and Geothermal Resources (Department of Conservation)

DOI Department of the Interior

DOT Department of Transportation

DPH Department of Public Health

DPR California Department of Pesticide Regulation

DSW Disaster Service Worker

DSWVP Disaster Service Worker Volunteer Program

DTSC California Department of Toxic Substances Control

DWR California Department of Water Resources

E

EOC Emergency Operations Center

USEPA Environmental Protection Agency

ERG Emergency Response Guidebook

ESI Environmental Sensitivity Index

EU Environmental Unit

EUL Environmental Unit Leader

F

FGC Fish & Game Code

FOSC Federal On-Scene Coordinator

G

GC Government Code

GRP Geographic Response Plan

H

HAZWOPER Hazardous Waste Operations and Emergency Response

I

IAP Incident Action Plan

IC Incident Commander

ICP Incident Command Post

ICS Incident Command System

IH Industrial Hygienist

IMH Incident Management Handbook

IMT Incident Management Team

ISB In-Situ Burning

J

JIC Joint Information Center

L

LEPC Local Emergency Planning Committee

LGOSC Local Government On-Scene Coordinator

M

MMAA Master Mutual Aid Agreement

MOU Memorandum of Understanding

N

NAHC Native American Heritage Commission

NALEMARS National Law Enforcement Mutual Aid Radio System

NCP National Contingency Plan

NEBA Net Environmental Benefit Analysis

NGO Non-Governmental Organization

NIMS National Incident Management System

NOAA National Oceanic and Atmospheric Administration

NRC National Response Center

NRDA Natural Resource Damage Assessment

NWVP Non-Wildlife Volunteer Program

O

OEHHA Office of Environmental Health Hazard Assessment

OPA 90 Oil Pollution Act of 1990

OSC On-Scene Coordinator

OSCA Oil Spill Clean Up Agent

OSLTF Oil Spill Liability Trust Fund

OSPR Office of Spill Prevention and Response

OWCN Oiled Wildlife Care Network

P

PPE Personal Protective Equipment

PRC Public Resources Code

R

RCP Regional Contingency Plan

RGS Reconnaissance Group Supervisor

RP Responsible Party

RRT Regional Response Team

RWQCB Regional Water Quality Control Board

S

SCAT Shoreline Clean-Up and Assessment Technique

SEMS Standardized Emergency Management System

SHPO State Historic Preservation Officer

SIMA Spill Impact Mitigation Assessment

SMARS Statewide Mutual Aid Radio System

SOFR Safety Officer

SOP Standard Operating Procedures

SOSC State On-Scene Coordinator

SPCC Spill Prevention Containment and Countermeasures

SRT Self-Regulated Tide (gate)

SWA Surface Washing Agent

SWRCB State Water Resources Control Board

T

TSD Treatment, Storage, and Disposal

U

UC Unified Command

USCG United States Coast Guard

USEPA United States Environmental Protection Agency

USFWS United States Fish & Wildlife Service

USGS United States Geologic Survey

UST Underground Storage Tank

V

VC Volunteer Coordinator

VHF Very High Frequency

VU Volunteer Unit

VUL Volunteer Unit Leader

W

WISER Wireless Information System for Emergency Responders

WRGS Wildlife Recovery Group Supervisor

WRP Wildlife Response Plan

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