SANTA MARGARITA RIVER

Riverside and San Diego Counties

GEOGRAPHIC RESPONSE PLAN

OIL SPILL RESPONSE

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

OFFICE OF SPILL PREVENTION AND RESPONSE

MAY 2022

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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 and the Field Rule for San Joaquin Valley.	**(800) 852-7550***
Certified Unified Program Agency (CUPA) (CalOES Spill Report will be emailed to CUPA as part of their immediate notification)	
Riverside County Environmental Health's Hazardous Materials Emergency Response Team	**(951) 358-5055* (888) 722-4234 (951) 782-2968***
San Diego County Department of Environmental Health and Quality San Diego County Environmental Health's Hazardous Incident Response Team (HIRT)	**(858) 505-6880* (858) 505-6657**
Federal Notification - National Response Center (as appropriate): If the spill equals or exceeds CERCLA Federal Reportable Quantities ‡Federal Reportable Quantities: http://www.epa.gov/superfund/policy/release/rq/index.htm	**(800) 424-8802***
Infrastructure Emergency Notification: Promptly Notify	
Railroad, Pipeline, Fixed Facilities	
Kinder Morgan Pipeline Emergency	**(866) 762-8442***
UPRR Railroad Emergency	**(888) 877-7267***
BNSF Railroad Emergency	**(800) 832-5452***
Amtrak Emergency	**(800) 331-0008***
Metrolink	**(866) 640-5190***
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*/(760) 643-3400 (Oceanside), (951) 506-2000 (Temecula)**
Vail Dam, District Duty Operator Rancho California Water District	**(951) 296-6900***
Fallbrook Public Utilities District	**(760) 728-1125***
State Water Resources Control Board, Division of Drinking Water, San Diego and Riverside	**OES Warning Center (800) 852-7550* or (619) 525-4159 Ask for SWRCB - Division of Drinking Water - Field Operations Branch**

	* Staffed 24-Hours/Day
Infrastructure Emergency Notification: Promptly Notify (continued)	
Marine Corps Base Camp Pendleton	
Marine Corps Base Camp Pendleton Spill Hotline	(760) 542-5758*
E911 Dispatch	(760) 725-3888*
Emergency Operations Center, Command Duty Officer	(760) 725-5061* (760) 725-6759*
Environmental Security, Spill Prevention and Planning Section Head	C: (760) 542-5758* O: (760) 763-1120
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*
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	
MCB Camp Pendleton Provost Marshal's Office	(760) 763-2077*
MCB Camp Pendleton Fire Department, Non-Emergency Dispatch	(760) 725-4321*
Fallbrook San Diego County Sheriff	(760) 451-3100* (858) 868-3200*, Dispatch
Fallbrook Fire Department	(760) 723-2006
Riverside County Sheriff, Southwest Station, Murrieta	(951) 696-3000
Riverside County Sheriff, Non-Emergency Dispatch, Temecula	(951) 696-4357
CAL FIRE - Dept. of Forestry and Fire Protection, Southern Region - San Diego Unit	(619) 590-3100
Affected or Adjacent Agencies to Notify Early-On as Appropriate; If In Doubt, Notify	
Utilities, Dams, Hydroelectric, Infrastructure (non-emergency)	
Santa Margarita Ecological Reserve - San Diego State University (SDSU)	(619) 507-0944
Santa Margarita Ecological Reserve, SDSU Public Safety, Police Department Dispatch	(619) 594-1991 ext. 1
Santa Margarita River Trail Preserve	(909) 372-0138
Water Districts, Water Intakes and County Water Agencies	
MCB Camp Pendleton Water Resources Division	C: (760) 214-4553 O: (760) 725-0602

	* Staffed 24-Hours/Day
Water Districts, Water Intakes and County Water Agencies (continued)	
Fallbrook Public Utilities District	(760) 728-1125*
Rancho California Water District	(951) 296-6900* (951) 296-6953, Operations Dept.
Western Municipal Water District Operations Center Emergency After Hours	(951) 789-5100 (951) 789-5109*
Eastern Municipal Water District, Integrated Operations Center	(800) 698-0400* (951) 928-3777 x 6265*
Public Works and Traffic Control	
San Diego County Public Works	(858) 694-2212
San Diego County Public Works Transportation After Hours Hotline	(858) 565-5262
San Diego County Flood Control and Watershed Protection	(858) 495-5318
Riverside County Public Works, Flood Control and Water Conservation District	(951) 955-1200 (951) 955-1230* After Hours
Riverside County Transportation Department	(951) 955-6880
CalTrans District 8 (San Bernardino/Riverside)	(909) 383-4631
CalTrans District 11 (San Diego)	(619) 688-6699
AWP Safety, Poway	(858) 679-7292
Additional Contact Information as Appropriate; If In Doubt, Notify	
Federal Agencies	
U.S. Department of the Interior, Regional Environmental Officer	(415) 420-0524
USDA Forest Service: Forest Spill Coordinator, Belinda Walker, Asst. Regional Environmental Engineer	(909) 229-5201
U.S. Coast Guard, Sector San Diego, Command Center	(619) 278-7000*
U.S. Coast Guard, Sector San Diego Incident Mgmt. Division, Duty Officer	(619) 571-2621
U.S. Army Corps of Engineers, Southern California Area Office	(661) 265-7222
Bureau Of Reclamation, Lower Colorado Region, Southern California Area, Temecula Office	(951) 695-5310
USFWS Oil Spill Response Coordinator, Southern Response Zone, Jeff Phillips	(805) 402-6612
USFWS Oil Spill Response Coordinator, Southern Response Zone, Kirby Bartlett	(805) 223-5852
NOAA Fisheries (San Diego Field Office)	(206) 526-6133
NOAA Spill Hotline, HazMat Duty Officer	(206) 526-4911*
FEMA Region IX, 24-Hour Duty Officer	(800) 395-6042*

	*** Staffed 24-Hours/Day**
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**
San Diego Regional Water Quality Control Board	**(619) 516-1990**
State Water Resources Control Board, Emergency Management Program	**Sarah Ries (916) 809-2558* Laura Fisher (916) 747-5501***
Calif. Department of Water Resources	**(916) 574-2714***
Calif. Geologic Energy Management Division	**(916) 322-1110**
CAL FIRE - Dept. of Forestry and Fire Protection, Southern Region - Chief	**(951) 377-5031**
Calif. Dept. 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 142)	
Native American Heritage Commission (NAHC) – Andrew Green or Cody Champagne	**(916) 373-3710**
California Historic Resources Information System (CHRIS), South Coastal Information Center (San Diego and Riverside County)	**(619) 594-5682**
State and Federally Managed Lands	
Calif. State Parks Southern Comms Center (Dispatch)	**(951) 443-2944***
Emergency Response Resources	
Ambulance Service	
AMR San Diego	**(858) 492-8111***
Operations & EMS City of Oceanside	**911* Non-Emergency, (760) 435-4100**

	*** Staffed 24-Hours/Day**
Emergency Response Resources (continued)	
Hospitals	
Naval Hospital Camp Pendleton	**(760) 725-1288 Emergency Department, 760-719-3994* 760-719-3106***
Tri-City Emergency Center Oceanside	**(760) 940-3505***
Temecula Valley Hospital	**(951) 331-2200***
Airports	
Oceanside Municipal Airport	**(760) 901-4260**
Fallbrook Airpark	**(760) 723-8395**
McClellan Palomar Airport	**(760) 431-4646**
CHEMTREC 24-Hour Hotline (Emergency information for chemical releases and fire control measures, assistance with chemical identification, and notification of manufacturer and/or shipper.	**(800) 424-9300***
California Poison Control System 24-Hour Hotline (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.	**(800) 222-1222***

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
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 31-32
- Chapter 3, Figure 3-3, pages 39-40
- Chapter 3, Figure 3-4, pages 55-56
- Chapter 3, Figure 3-5, pages 77-78
- Chapter 3, Figure 3-6, pages 81-82
- Chapter 4, Table 4-1 on pages 109 – 136

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

- Chapter 3, Table 3-1, pages 25-28

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

- Appendix F, Table F-2, pages 168-169

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

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Santa Margarita 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 Santa Margarita 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; revisions to the GRP will be completed every five years.

Purpose

1. This GRP establishes spill response guidance for oil spill incidents occurring within the Santa Margarita River area. The plan boundary begins upstream and includes portions of the two main tributaries: Murrieta and Temecula Creeks. The upper boundary on Murrieta Creek was selected near Wildomar just downstream of Lake Elsinore, while the boundary on Temecula Creek was placed just below the outfall of Vail Lake. These two creeks converge in the City of Temecula (near old town) forming the Santa Margarita River. The boundary extends through Temecula Canyon and passes across the southern end of Camp Pendleton Marine Corp Base, before the plan and river terminate in Oceanside at the confluence with the Pacific Ocean. The GRP area is within Riverside and San Diego Counties and Local Emergency Planning Committee (LEPC) Region 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 response.

Guiding Principles for GRPs

1. The safety and health of responders and the public 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.

Santa Margarita River Geographic Response Plan

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Santa Margarita River
Geographic Response Plan

Chapter 1 – Introduction

1.0 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 Santa Margarita River within Riverside and San Diego Counties (Figure 1-1). The plan boundary begins upstream and includes portions of the two main tributaries: Murrieta and Temecula Creeks. The upper boundary on Murrieta Creek was selected near Wildomar just downstream of Lake Elsinore, while the boundary on Temecula Creek was placed just below the outfall of Vail Lake. These two creeks converge in the City of Temecula (near old town) forming the Santa Margarita River. The boundary extends through Temecula Canyon and passes across the southern end of Camp Pendleton Marine Corp Base, before the plan and river terminate in Oceanside at the confluence with the Pacific Ocean (Figure 1-2). The defined boundary encompasses approximately 36 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 Santa Margarita River GRP, this includes emergency plans for Riverside and San Diego Counties.

1.1 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.

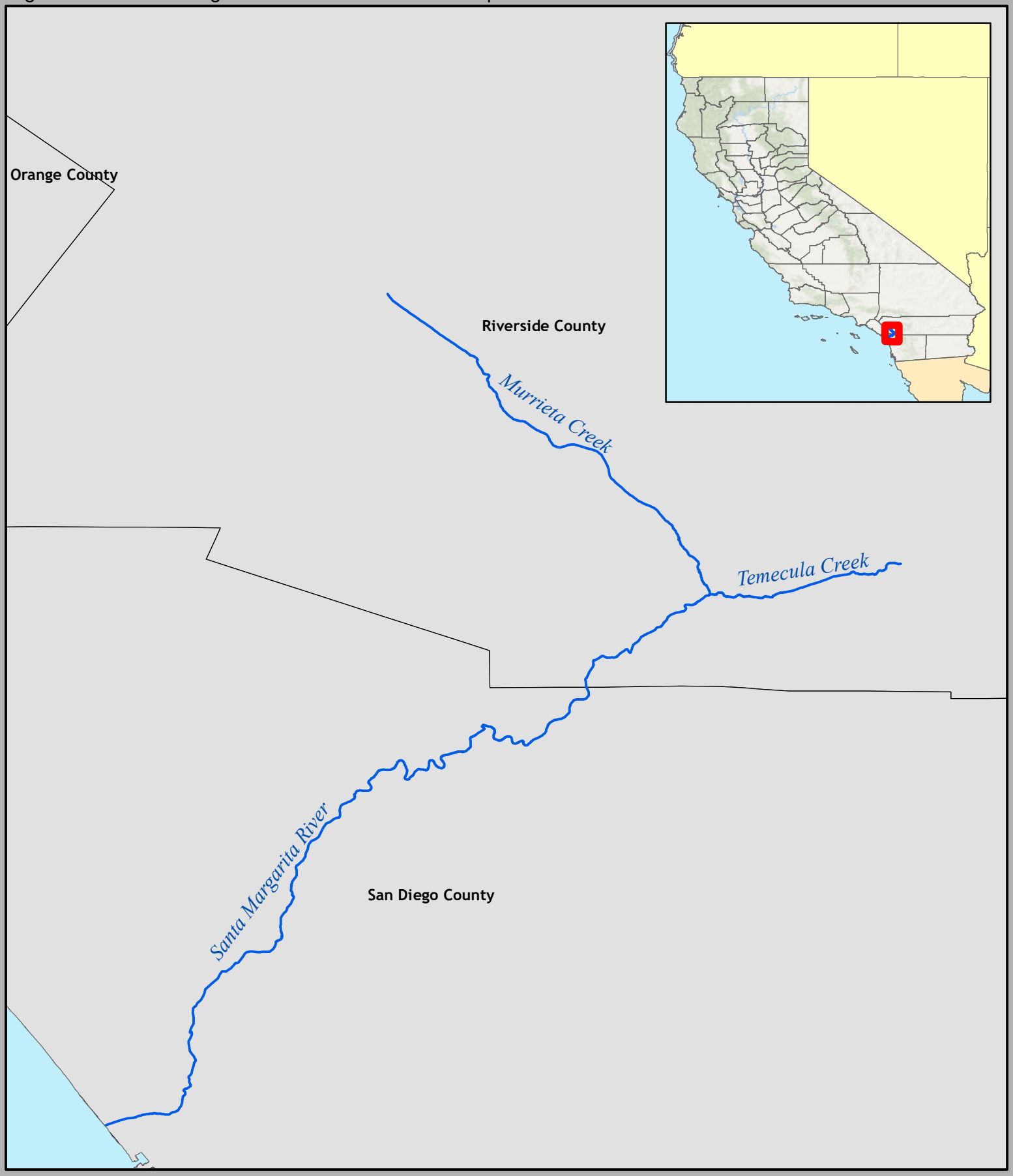
Responsible Party

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: Santa Margarita 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: L. Guphy Gustafson
Date Created: 09/22/2020

Santa Margarita River Geographic Response Plan Location

0 3.5 7 Miles
0 4.5 9 Kilometers

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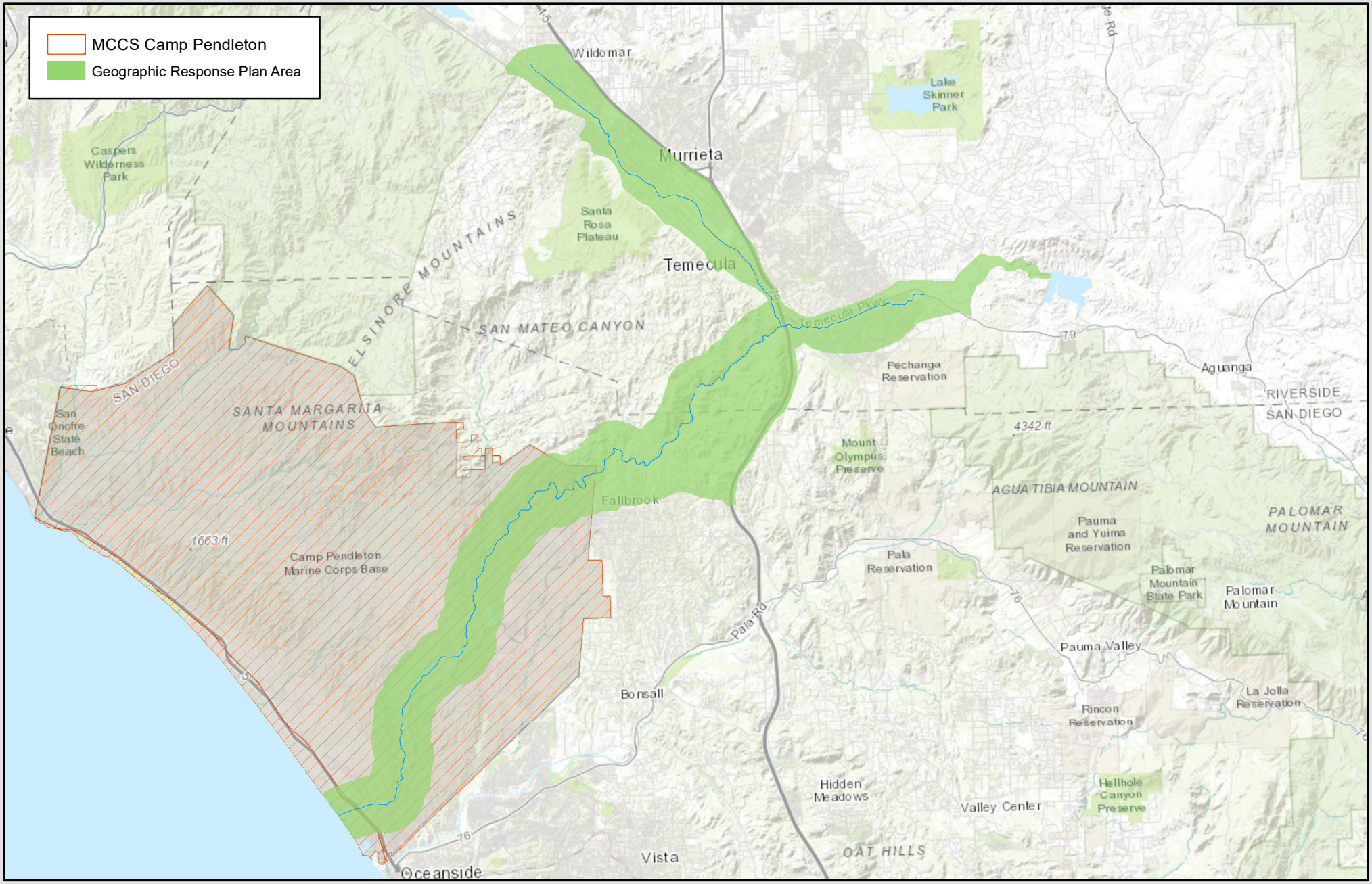
Figure 1-2: Santa Margarita River GRP Boundary Map



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

Data Source: CDFW-OSPR
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 9/22/2020

Santa Margarita Geographic Response Plan Boundary

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Santa Margarita 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, including the unhoused.

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.
- If there are unhoused encampments in the area, consider the following potential hazards:
    - Being approached by aggressive or unpredictable persons or pets.
    - Biological hazards including human waste, needles/syringes/sharps, bedbugs, and lice.
    - Chemical hazards including petroleum products, aerosols, paints, solvents, and drug labs.
    - Open flames/ignition sources or electrical hazards.
- 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?
- Are there unhoused encampments in the area?
- 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 regarding 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 including those associated with unhoused encampments.
- Consider current and expected weather.

- Consider worst-case scenario.
- Prepare for first responder rescue.
- Establish an accountability system for incident personnel.
- Establish a buddy-system for entering or passing by unhoused encampments.

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, unhoused encampments, 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.
        - Identify through CUPA (Section 2.9 below) or County Health (if not the CUPA), a shelter-in-place location for evacuated unhoused encampments.
        - 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 Santa Margarita 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 Santa Margarita River based on average velocity from the U.S. Geological Survey (USGS) National Hydrology Dataset is 4.169 feet per second (2.47 knots).

Current river stage for the Santa Margarita 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
City of Oceanside, Dept. of Harbors & Beaches	Oceanside Harbor Boat Launch 1540 N Harbor Dr, Oceanside, CA	6 x 12, 1000 feet	Richard Green, Harbor Manager (760) 801-0332 (24/7)
Orange County Sheriff's Dept. Harbor Patrol	1901 Bayside Drive, Corona Del Mar, CA	6 x 12, 1000 feet	Deputy Devin Fischer (949) 723-1002
City of Newport Beach	1600 W. Balboa Blvd. Newport Beach, CA	6 x 12, 1000 feet	Paul Blank (949) 270-8158 office (949) 547-7265 cell Kurt Borsting (949) 270-8158 office (562) 241-0098 cell

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
- Unoccupied Aircraft System
- 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. See Appendix F, Table F-1, for additional UAS assets.

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 Santa Margarita 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
Springhill Suites by Marriott Temecula Valley Wine Country	28220 Jefferson Avenue Temecula, CA	(951) 699-4477
Camp Pendleton Pacific Views Event Center	Building 202850 Camp Pendleton North, CA	(760) 725-2231
Courtyard by Marriott San Diego Oceanside	3501 Seagate Way Oceanside, CA	(760) 966-1000
Holiday Inn Oceanside Camp Pendleton Area	1401 Carmelo Drive Oceanside, CA	(760) 231-7000

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

There are five water districts operating within the GRP boundary for the Santa Margarita River. The Western Municipal Water District, Eastern Municipal Water District, and Rancho California Water District operate in the upper reaches of the GRP boundary including the City of Wildomar, City of Murrieta, and the City of Temecula. These districts manage numerous reservoirs including Vail Lake and Lake Elsinore which feed into Temecula Creek and Murrieta Creek, respectively.

The Rancho California Water District (District) serves the area known as Temecula/Rancho California, which includes the City of Temecula, portions of the City of Murrieta, and unincorporated areas of southwest Riverside County. The District's current service area represents 100,000 acres, and the District has 970 miles of water mains, 39 storage reservoirs, 5 storage reservoirs (recycled water), 5 wet weather storage ponds (recycled water), one surface reservoir (Vail Lake), 48 groundwater wells, and 45,000 service connections. More than 150,000 people are served by Rancho California Water District (https://www.ranchowater.com/, retrieved 01/27/2021). Emergency phone numbers for Western and Eastern Municipal Water District's and Rancho California Water District can be found in the Contact Sheet.

The Fallbrook Public Utilities District (FPUD), along with Marine Corp Base (MCB) Camp Pendleton Water Division, draw water from the Santa Margarita River within the bounds of MCB Camp Pendleton. Facilities currently exist within MCB Camp Pendleton to divert surface water from the Santa Margarita River and recharge the groundwater basins. This existing system consists of a steel sheet pile diversion weir constructed across the Santa Margarita River that diverts water through a headgate and ditch to a series of five interconnected groundwater percolation ponds, Lake O'Neill, or back to the Santa Margarita River via an outlet ditch. O'Neill Ditch is used to convey water either to the seven groundwater percolation ponds or Lake O'Neill, depending on the time of year, available supply, and required demand. During the diversion season, a series of control structures and measuring devices allows MCB Camp Pendleton personnel to manage, control, and measure the diversion to each of the different facilities (USBR et al., 2016).

FPUD provides service to approximately 35,000 residents and includes 28,000 acres in its service area. The FPUD service area includes portions of the community of Fallbrook that border Detachment Fallbrook and MCB Camp Pendleton to the west and extends into both the Santa Margarita River and the San Luis Rey River basins (USBR et al., 2016).

MCB Camp Pendleton satisfies more than 99% of its total water demand from four stream systems that run through the Base: San Mateo Creek, San Onofre Creek, Las Flores Creek, and the Santa Margarita River. The Lower Santa Margarita groundwater basin supports the service areas at the south end of MCB Camp Pendleton and supplies more than 70% of MCB Camp Pendleton's water (USBR et al., 2016).

FPUD has a 24/7 number in case of emergency which is provided in the Contact Sheet along with the hydrologic technician for Camp Pendleton's Water Division.

The State Water Resources Control Board (SWRCB), Division of Drinking Water, 24/7 duty officer will receive CalOES Warning Center notifications and route emergency information to the appropriate office in the state. Emergency phone numbers for the CalOES Warning Center, SWRCB and San Diego Regional Water Quality Control Board are listed in the Contact Sheet.

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. For additional information on Public Health Officer authorities see: https://www.cdph.ca.gov/Programs/CCLHO/CDPH%20Document%20Library/HORespInEmergencies1998.pdf.

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 at: https://www.arb.ca.gov/capcoa/roster.htm.

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 (see http://cersapps.calepa.ca.gov/public/directory/). Table 2-3 below lists the CUPAs for Riverside and San Diego Counties (current as of 04/2022). 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 2-3: Riverside and San Diego County CUPAs

Agency Name	Address	Phone Number
Riverside County Department of Environmental Health	4065 County Circle, Room 104 Riverside, CA	(951) 358-5055
San Diego County Department of Environmental Health	P.O. Box 129261 San Diego, CA	(858) 505-6880

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.

Santa Margarita 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 strategies 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 Santa Margarita 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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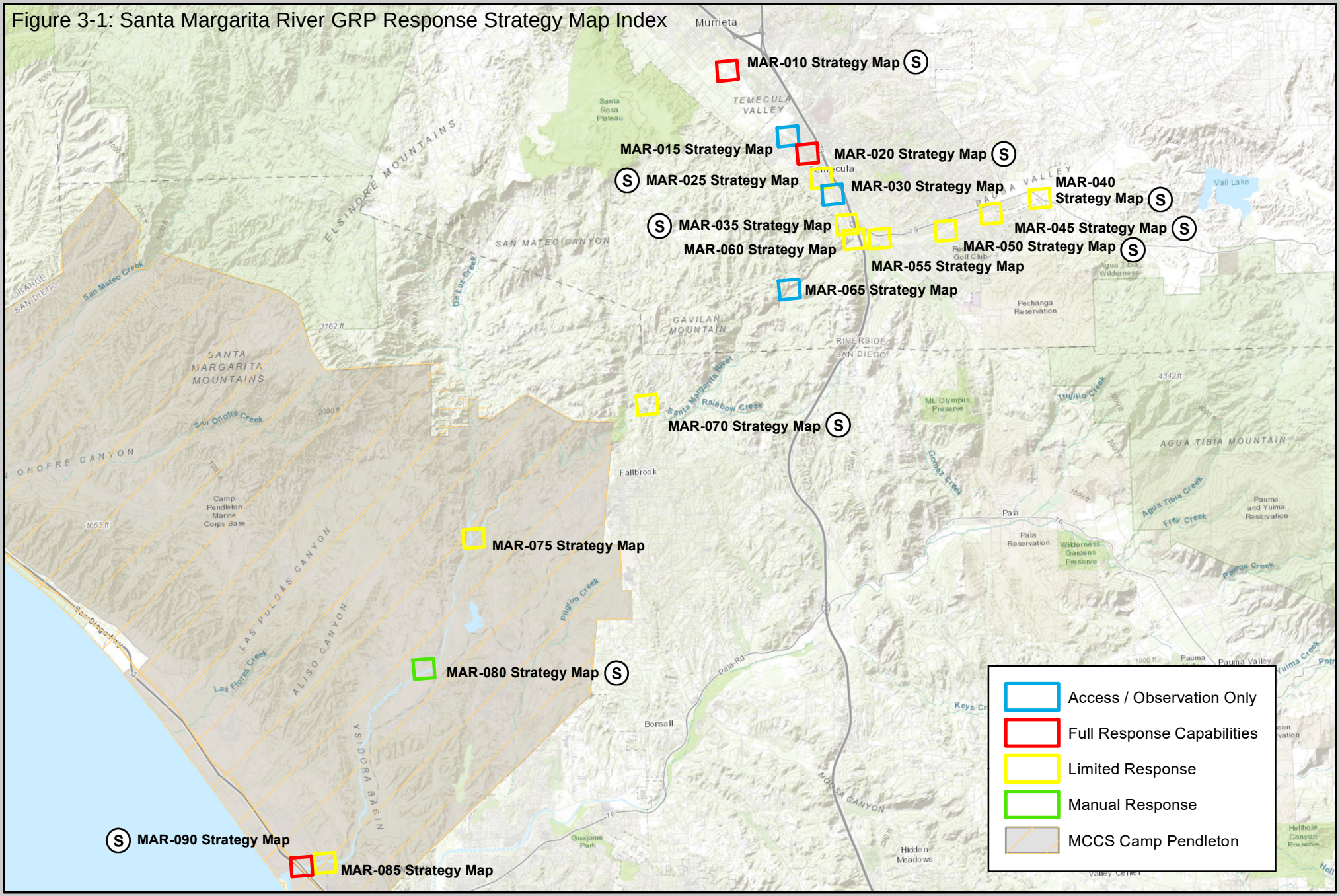
Figure 3-1: Santa Margarita River GRP Response Strategy Map Index



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

Data Source: CDFW- OSPR
Requestor: K. Weise
Author: L. Guphy Gustafson
Date Created: 10/13/20

NAD_1983_California_Teale_Albers

Santa Margarita River Geographic Response Plan Map Index

0 2.5 5 Miles

0 5 10 Kilometers

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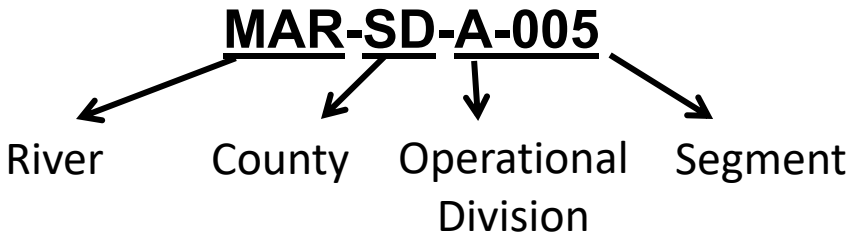
3.2 Naming Conventions – Operational Division and Segments and Site Strategies

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.



MAR = Santa Margarita River

RV = Riverside County

SD = San Diego 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., MAR-010) 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 Santa Margarita 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 Santa Margarita 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 have 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 #
S MAR-010	Murrieta Creek at Guava Street	33.5415° -117.198°	Containment and recovery	200	No	Good site access with good deployment options as conditions allow.	Space for establishing a staging area nearby on Adams Avenue.	Flash floods	RIV 15 9.399	31	33
MAR-015	Murrieta Creek at Winchester Road	33.5154° -117.170°	Observation	N/A	N/A	N/A	N/A	Hazardous traffic	RIV 15 6.523	31	37
S MAR-020	Murrieta Creek at Via Montezuma Road	33.5083° -117.1615°	Containment and recovery	300	No	Flooded road allows low flow deployment.	Space for establishing a staging area nearby.	Flash floods	RIV 15 5.714	39	41
S MAR-025	Murrieta Creek at Rancho California Road	33.499° -117.1548°	Containment	500	No	Deploy boom from bridge to control oil.	Potential space for establishing a staging area nearby.	Flash floods	RIV 15 4.982	39	45
MAR-030	Murrieta Creek at Main Street	33.4824° -117.150°	Observation	N/A	N/A	N/A	N/A	Hazardous traffic	RIV 15 4.499	39	49
S MAR-035	Murrieta Creek at Temecula Parkway	33.481° -117.144°	Containment	50	Yes	Low water flow in summer.	Suitable equipment staging area is available at the foot of Temecula Parkway.	Flash floods	RIV 15 3.52	39	51
S MAR-040	Temecula Creek at Highway 79	33.489° -117.0541°	Containment and recovery	400	No	Low to zero water flow in summer.	Space for establishing a staging area may be found along Anza Road.	Flash floods	RIV 79 14.526	55	57
S MAR-045	Temecula Creek at Butterfield Stage Road	33.4828° -117.0771°	Containment and recovery	400	No	Low to zero water flow in summer.	Minimal area for local staging behind the locked gate.	Flash floods	RIV 79 15.74	55	61
S MAR-050	Temecula Creek at Redhawk Parkway	33.4775° -117.0983°	Containment and recovery	400	No	Low to zero water flow in summer.	Minimal area for local staging behind the locked gate.	Flash floods	RIV 15 R2.612	55	65
S MAR-055	Temecula Creek at Pechanga Parkway	33.4744° -117.1291°	Observation	300	No	Low to zero water flow in summer.	Minimal area for local staging behind the locked gate.	Flash floods	RIV 15 R2.78	55	69
MAR-060	Santa Margarita River Headwaters	33.4743° -117.141°	Containment	50	Yes	Contact Santa Margarita River Ecological Reserve for access.	N/A	Flash floods	RIV 15 3.034	55	73
MAR-065	Santa Margarita River at Tornado Road	33.4555° -117.1715°	Observation	N/A	Yes	N/A	N/A	Narrow winding road to access site.	N/A	77	79

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) MAR-070	Santa Margarita River at Sandia Creek Road	33.4137° -117.2416°	Containment	100	Yes	Dynamic site can change with each flood.	Contact Santa Margarita River Trail Preserve to use space in the paved parking lot.	Flash floods	N/A	81	83
MAR-075	Santa Margarita River at De Luz Road	33.3624° -117.3217°	Containment	50	Yes	This may be a good site to deploy a Watergate.	N/A	Water flows across the road. Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton.	N/A	87	89
(S) MAR-080	Santa Margarita River at Basilone Road	33.3117° -117.346°	Containment	100	Yes	Low to zero water flow in summer.	Covered area beneath Basilone Road Bridge.	Flash floods. Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton.	N/A	87	93
MAR-085	Santa Margarita River at Stuart Mesa Road	33.238° -117.395°	Containment and recovery	300	No	Deploy boom from bridge.	N/A	Traffic and flash floods. Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton.	SD 5 R56.088 R	97	99

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 MAR-090	Santa Margarita River at I-5	33.236215° -117.405411°	Containment and recovery	400	Yes	Mirror of ACP6 site strategy (6-145).	Covered staging beneath I-5 Bridge.	Flash floods. Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton.	SD 5 R56.501R	97	103

Table Legend		
RED	Full Response Capabilites	Access to site for large equipment and full deployment.
YELLOW	Limited Response	Access to site may be limited; have to cross railroad tracks, etc., may not get large equipment to site.
GREEN	Manual Response	Sorbent boom/clean-up; slow, backwater areas.
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.
S	Staging Areas	Sites that could accommodate staging are denoted by the S Circle.

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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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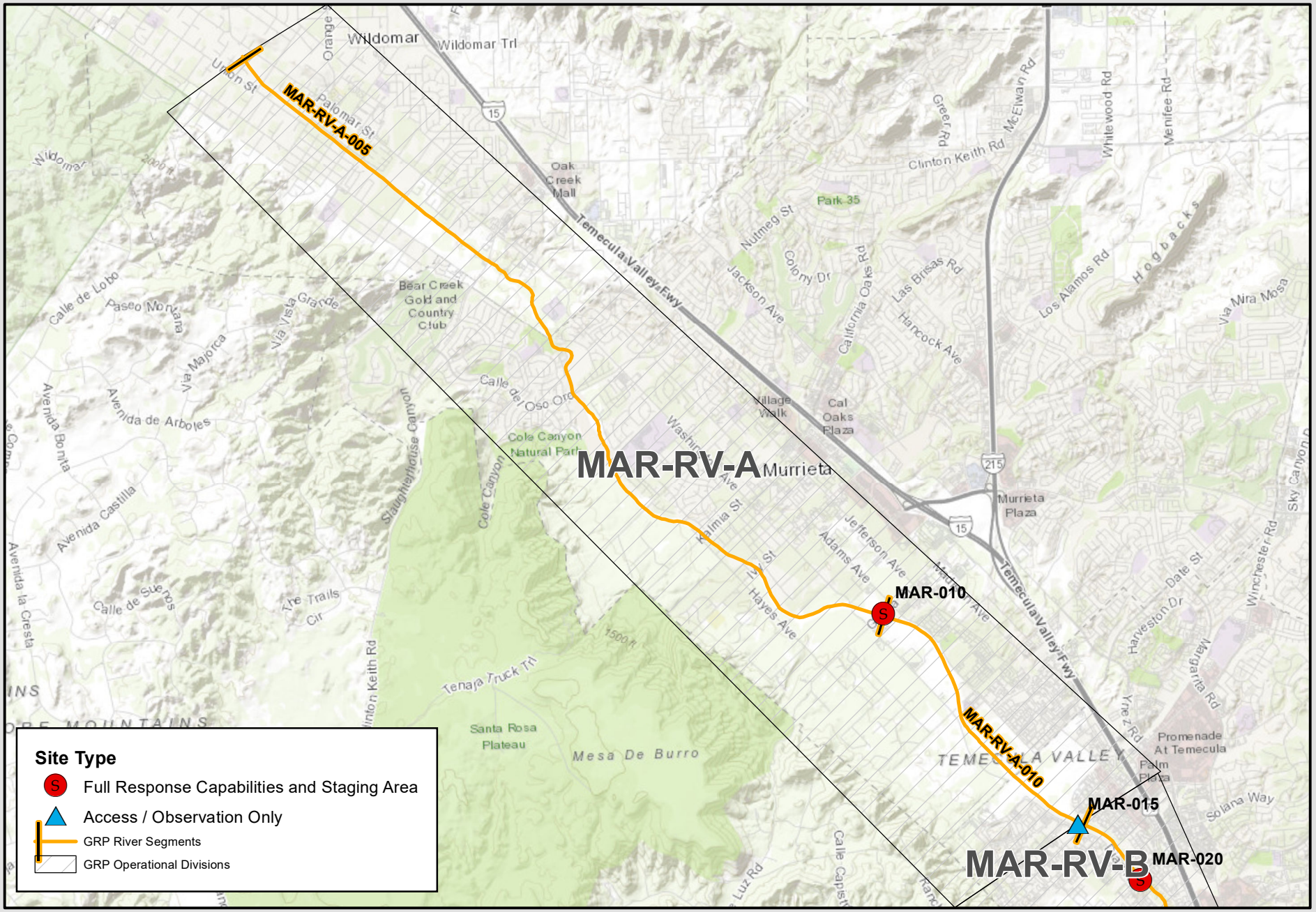
Figure 3-2: Santa Margarita River GRP Division MAR-RV-A Map



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

Data Source: CDFW-OSPR, NHD (USGS). DOC
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 08/02/2021

Santa Margarita River Geographic Response Plan Division MAR-RV-A

0 0.375 0.75 1.5 2.25 3 Miles
0 1.5 3 Kilometers

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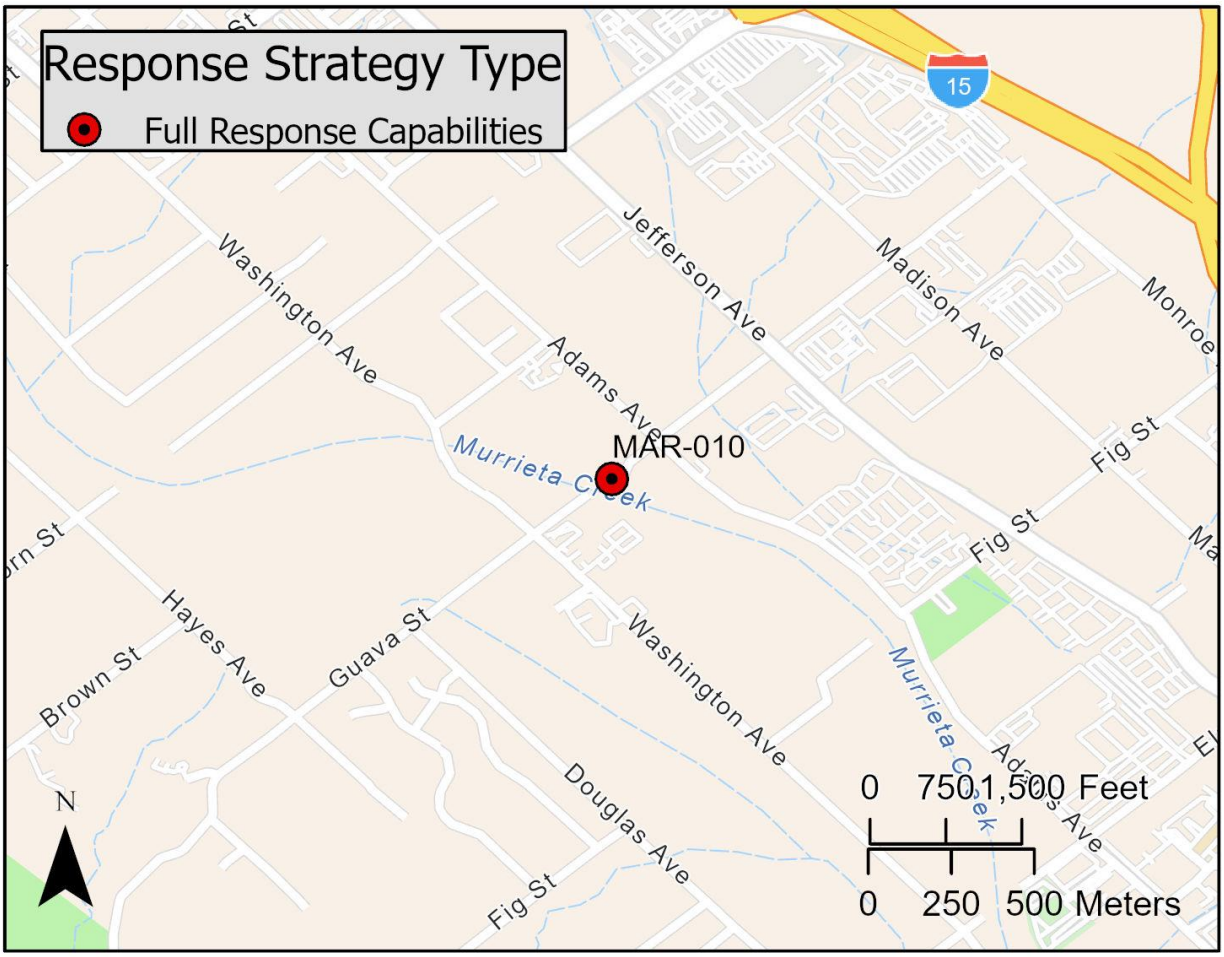
Response Strategy Site: Murrieta Creek at Guava Street (MAR-010) (S)			Page 1 of 3
Driving Directions:	From I-15 exit Murrieta Hot Springs Road and travel west to Jefferson Avenue. Turn left on Jefferson and drive ½ mile to Guava Street and turn right. Drive west to Murrieta Creek.		
Latitude: 33.5415 **Longitude:** -117.198	**Highway Postmile:** RIV 15 9.399	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 25698 Adams Ave. Murrieta, CA 92562, **Thomas Guide #:** 958/C1			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Consider on-site conditions and the weather forecast before deploying at this site. The suggested boom deployment presumes slow flowing water is present in the channel of Murrieta Creek.

Resources-At-Risk

Ecological: Burrowing Owl, Least Bell's Vireo, Red Diamond Rattlesnake, Smooth Tarplant

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Murrieta Creek at Guava Street (MAR-010)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-RV-A-010	**Site Description and Field Notes:** Murrieta Creek is a desert wash that is dry much of the year. The site has natural substrate bottom (sand) that requires excavation in most scenarios.			
Gradient: Low	**River Width:** 40 m (130 ft)	**Vehicular Access?** City street access is adjacent to the site, or 4WD pickup truck.	**Recreational Use?** 4-wheeling and equestrian use.	**Boat Launches:** N/A
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	4 -Sandy bars and beaches with gently sloping banks			

Site Images

Upstream

Downstream

Entrance

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

Photo Date: 1/23/2020

Site Objectives: Install a boom containment to direct oil to the shoreline for recovery.

Implementation: Set up a collection area with containment if site conditions allow.

Staging Area Location and Capabilities/Amenities/Waste Management: The parking strip adjacent to the site on Adams Avenue can provide a reasonable area for response staging.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		8	inch	200-feet	
Stakes				6	Shoreline attachment
Personnel				4	

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Access/Observation Site: Murrieta Creek at Winchester Road (MAR-015)			Page 1 of 2
Driving Directions:	From I-15 exit onto Winchester Road. Continue west to the Murrieta Creek overcrossing.		
Latitude: 33.5154 **Longitude:** -117.170	**Highway Postmile:** RIV 15 6.523	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 41980 Diaz Rd. Temecula, CA 92590, **Thomas Guide #:** 958/G5			

Overview Street Map

Hazards, Restrictions and Advice for Responders

- Heavy traffic on this road
- Unhoused encampment under the river overpass

Access/Observation Site: Murrieta Creek at Winchester Road (MAR-015)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: MAR-RV-B-005	**Site Description and Field Notes:** The creek is visible under the bridge. Site parking is available on Diaz Road.	
Site Contact/s: N/A		

Site Images

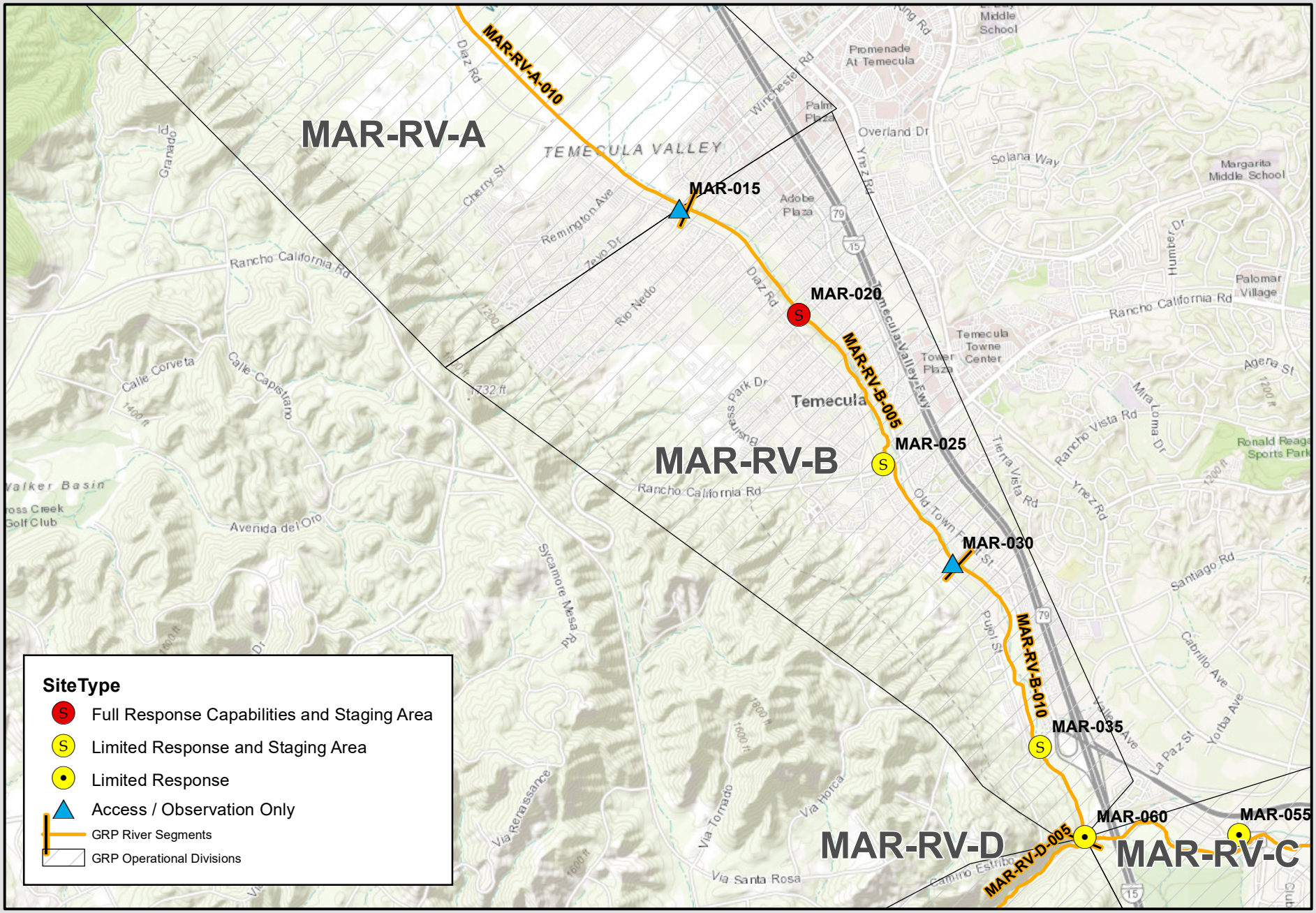
Upstream

Downstream

Entrance

RR = River Right **RL = River Left**	**Photo Date:** 1/23/2020

Figure 3-3: Santa Margarita River GRP Division MAR-RV-B Map



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

Data Source: CDFW-OSPR, NHD (USGS). DOC
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 08/02/2021

Santa Margarita River Geographic Response Plan Division MAR-RV-B

0 0.75 1.5 Miles
0 0.9 1.8 Kilometers

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Response Strategy Site: Murrieta Creek at Via Montezuma Road (MAR-020)			S Page 1 of 3
Driving Directions:	Exit I-15 on Winchester Road and continue west to Diaz Road. Turn left on Diaz Road and travel south to Via Montezuma and Murrieta Creek.		
Latitude: 33.508300 **Longitude:** -117.1615	**Highway Postmile:** RIV 15 5.714	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 28696 Vía Montezuma, Temecula, CA. **Thomas Guide:** 958/G5-6			

Overview Street Map

Hazards, Restrictions and Advice for Responders

Consider onsite conditions and the weather forecast before deploying at this site. The suggested boom deployment presumes slow flowing water in Murrieta Creek.

Resources-At-Risk

Ecological: Least Bell's Vireo, Western Spadefoot Toad, Smooth Tarplant

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-RV-B-005	**Site Description and Field Notes:** Via Montezuma Road is paved but Murrieta Creek flows over the road. Deployment of boom or other barrier can be performed by personnel wearing hip waders during low flow conditions.			
Gradient: Low	**River Width:** 70 m (230 ft)	**Vehicular Access?** Yes, all vehicles.	**Recreational Use?** Fishing	**Boat Launches:** Response crews can launch punts by hand at this site.
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	9B Vegetated low banks			

Site Images

Upstream

Downstream

Straight Across

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

Photo Date: 1/22/2020

Site Objectives: Containment and recovery

Implementation: Deploy boom or Watergate equipment to contain floating oil in Murrieta Creek.

Staging Area Location and Capabilities/Amenities/Waste Management: Staging areas may be established on site with a local road closure.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		8	inch	300-feet	
Stakes				6	
Watergate					
Personnel				4	

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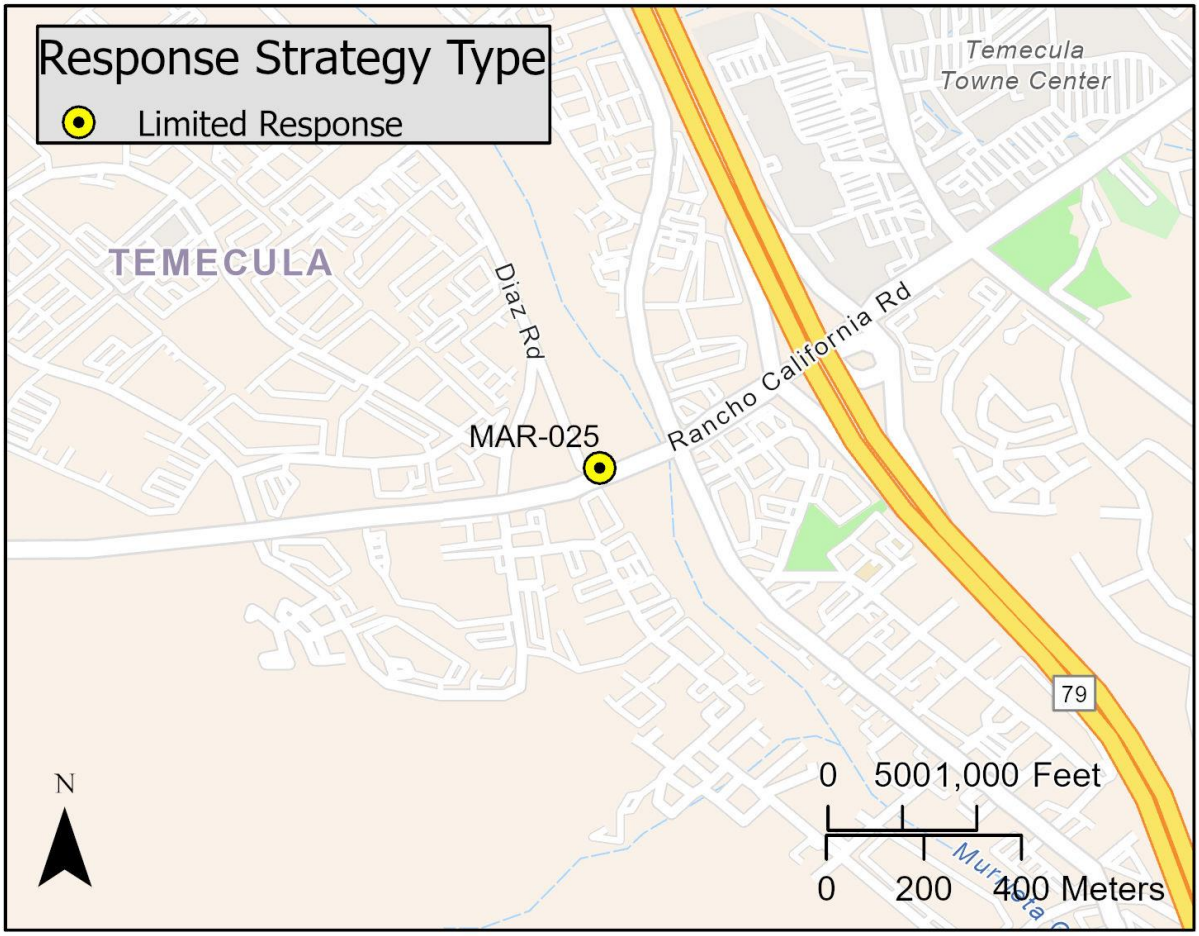
Response Strategy Site: Murrieta Creek at Rancho California Road (MAR-025) (S)			Page 1 of 3
Driving Directions:	Exit I-15 at Rancho California Road and continue west to the Murrieta Creek overpass.		
Latitude: 33.499 **Longitude:** -177.1548	**Highway Postmile:** RIV 15 4.982	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 28751 Rancho California Rd. Temecula, CA 92590 **Thomas Guide #:** 958/H7			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Rancho California is a very busy road. Access to the creek is down steep banks behind a locked gate.

Resources-At-Risk

Ecological: Least Bell's Vireo, Western Spadefoot Toad, Smooth Tarplant

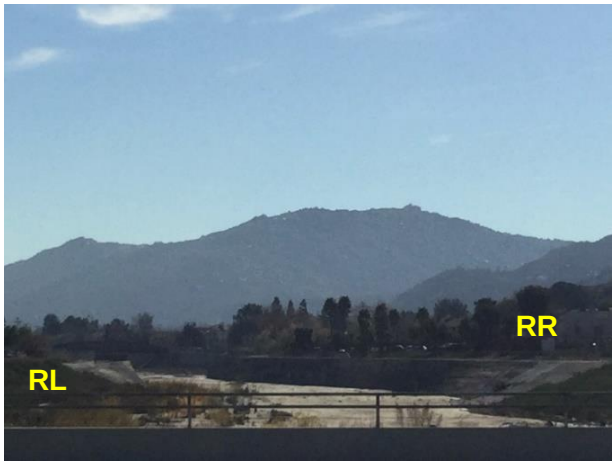
Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Murrieta Creek at Rancho California Road (MAR-025) (S)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-RV-B-005	**Site Description and Field Notes:** Murrieta Creek at this site has a natural sediment bottom and steep channelized banks.			
Gradient: Low	**River Width:** 115 m (377 ft)	**Vehicular Access?** None	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	9B-Vegetated low banks, 10B-Freshwater marsh			

Site Images

Upstream



Downstream

Straight Across

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

Photo Date: 1/23/2020

Response Strategy Site: Murrieta Creek at Rancho California Road (MAR-025) Ⓢ **Page 3 of 3**

Site Objectives: Containment

Implementation: Hand deploy boom from the bridge to stop oil movement downstream.

Staging Area Location and Capabilities/Amenities/Waste Management: With traffic control, staging space may be available adjacent to the creek near the intersection of Rancho California and Diaz Roads.

Response Strategy Map (overview)

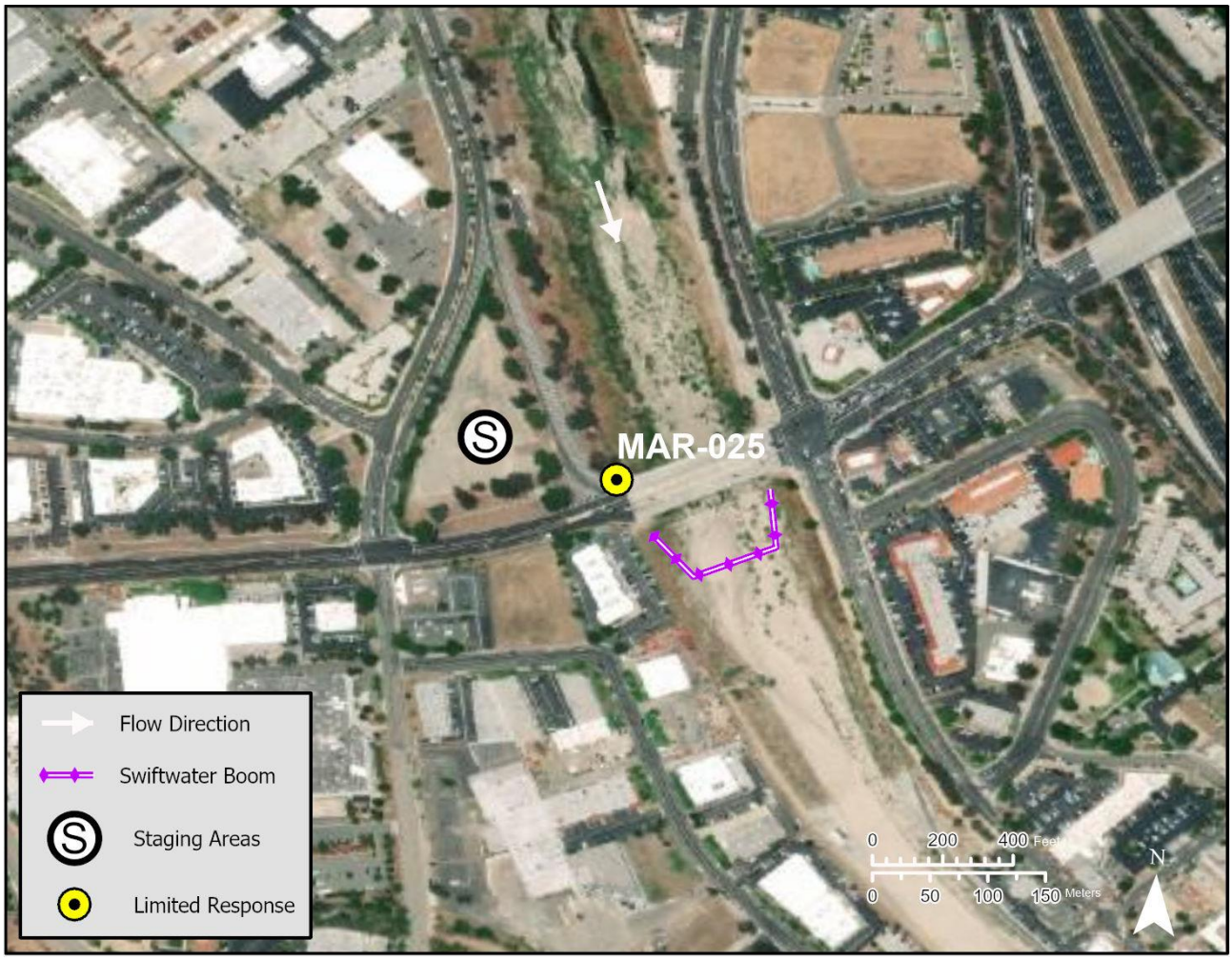


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		8	inch	500 feet	
Watergate					
Stakes				4	Anchor boom in place with stakes
Personnel				4	

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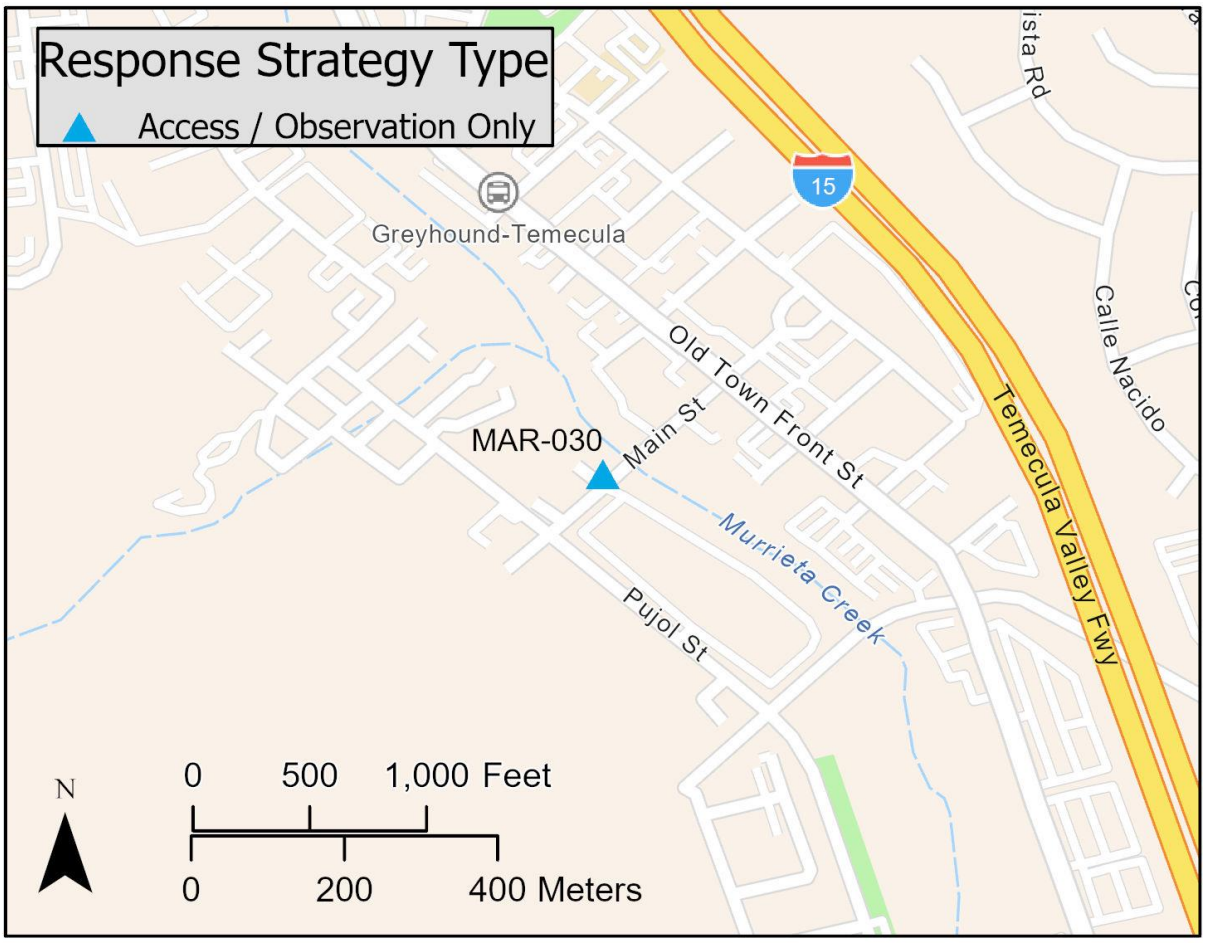
Access/Observation Site: Murrieta Creek at Main Street (MAR-030)			Page 1 of 2
Driving Directions:	From I-15 exit Rancho California Road. Continue west one block to Old Town Front Street. Turn left and travel south to Main Street. Turn right and go to the overcrossing at Murrieta Creek.		
Latitude: 33.4924 **Longitude:** -117.150	**Highway Postmile:** RIV 15 4.499	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 42100 Main St, Temecula, CA 92590, **Thomas Guide #:** 978/H1			

Overview Street Map



Hazards, Restrictions and Advice for Responders

- Beware of brisk traffic on this narrow bridge
- The overpass provides a clear view of the creek below

Access/Observation Site: Murrieta Creek at Main Street (MAR-030)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: MAR-RV-B-0010	**Site Description and Field Notes:** The creek is visible under the bridge. Site parking is available on surface streets.	
Site Contact/s: N/A		

Site Images

Upstream

Downstream

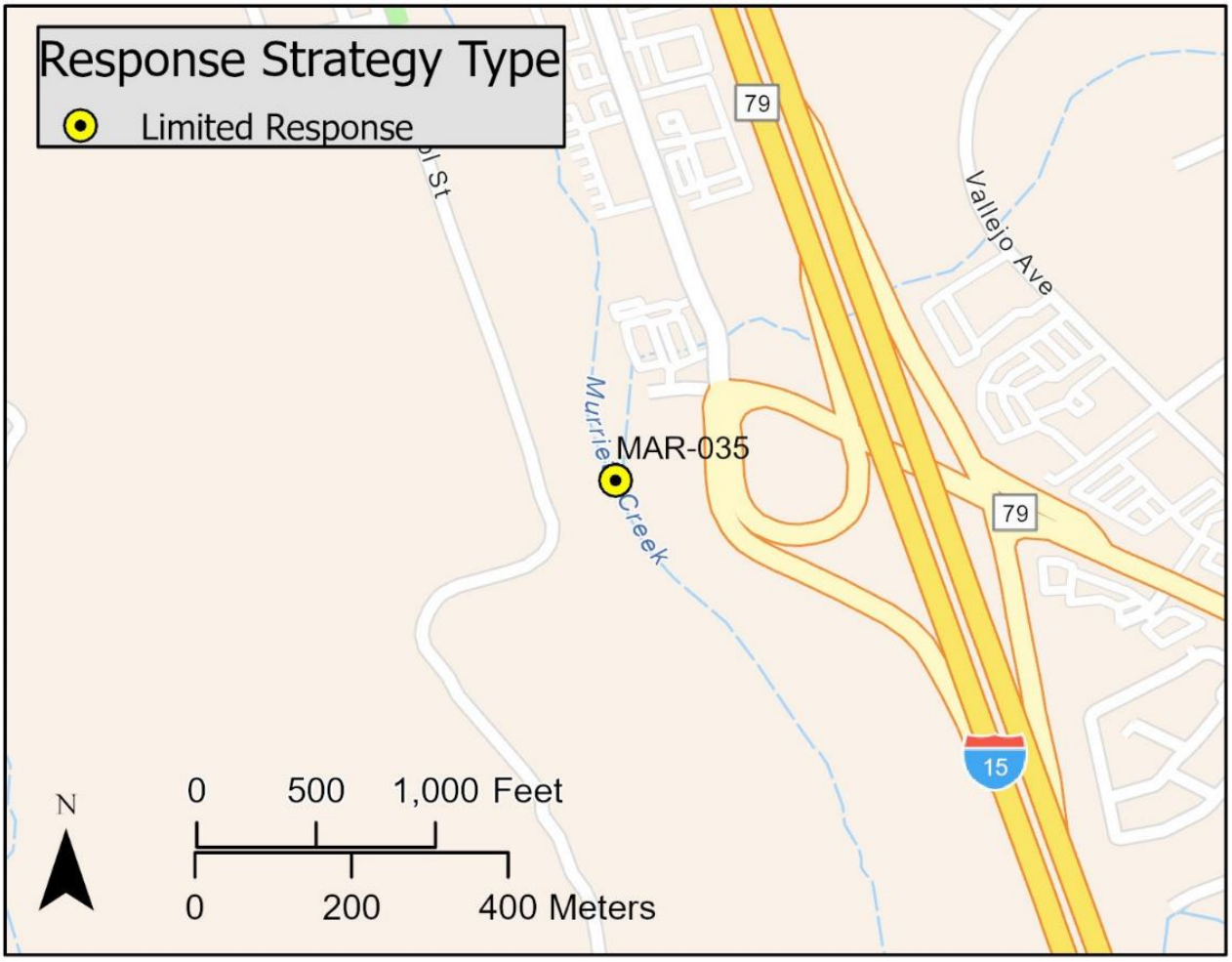
Straight Across

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

Photo Date: 1/23/2020

Response Strategy Site: Murrieta Creek at Temecula Parkway (MAR-035) (S)			Page 1 of 3
Driving Directions:	Exit I-15 at Temecula Parkway. Go west to Murrieta Creek. Drive beyond the gate at the end of the parking lot behind the Jack-in-the-Box restaurant for quick access to the site.		
Latitude: 33.480514 **Longitude:** -177.144155	**Highway Postmile:** RIV 15 3.52	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 29105 Old Town Temecula Front St. Temecula, CA 92590, **Thomas Guide #:** 978/J2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Unhoused encampments in this area.

Resources-At-Risk

Ecological: Coastal California Gnatcatcher, Western Mastiff Bat, Arroyo Chub, Western Pond Turtle, Crotch's Bumble Bee, Rainbow Manzanita

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact theSouth Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-RV-B-010	**Site Description and Field Notes:** Murrieta Creek at this site has a natural sediment bottom and steep banks. Access to the deployment site is by a short walk through dense riparian vegetation.			
Gradient: Low	**River Width:** 10 m (33 ft)	**Vehicular Access?** 4WD pickup trucks	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	9B-Vegetated low banks, 10B-Freshwater marsh			

Site Images

Upstream

Downstream

Entrance

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

Photo Date: 1/23/2020

Response Strategy Site: Murrieta Creek at Temecula Parkway (MAR-035) Ⓢ **Page 3 of 3**

Site Objectives: Containment

Implementation: When possible, deploy boom across the creek to stop oil movement. Slow ponded water, oil can be collected on either bank.

Staging Area Location and Capabilities/Amenities/Waste Management: Suitable equipment staging space is available at the foot of Temecula Parkway. Traffic control may be required for safety.

Response Strategy Map (overview)

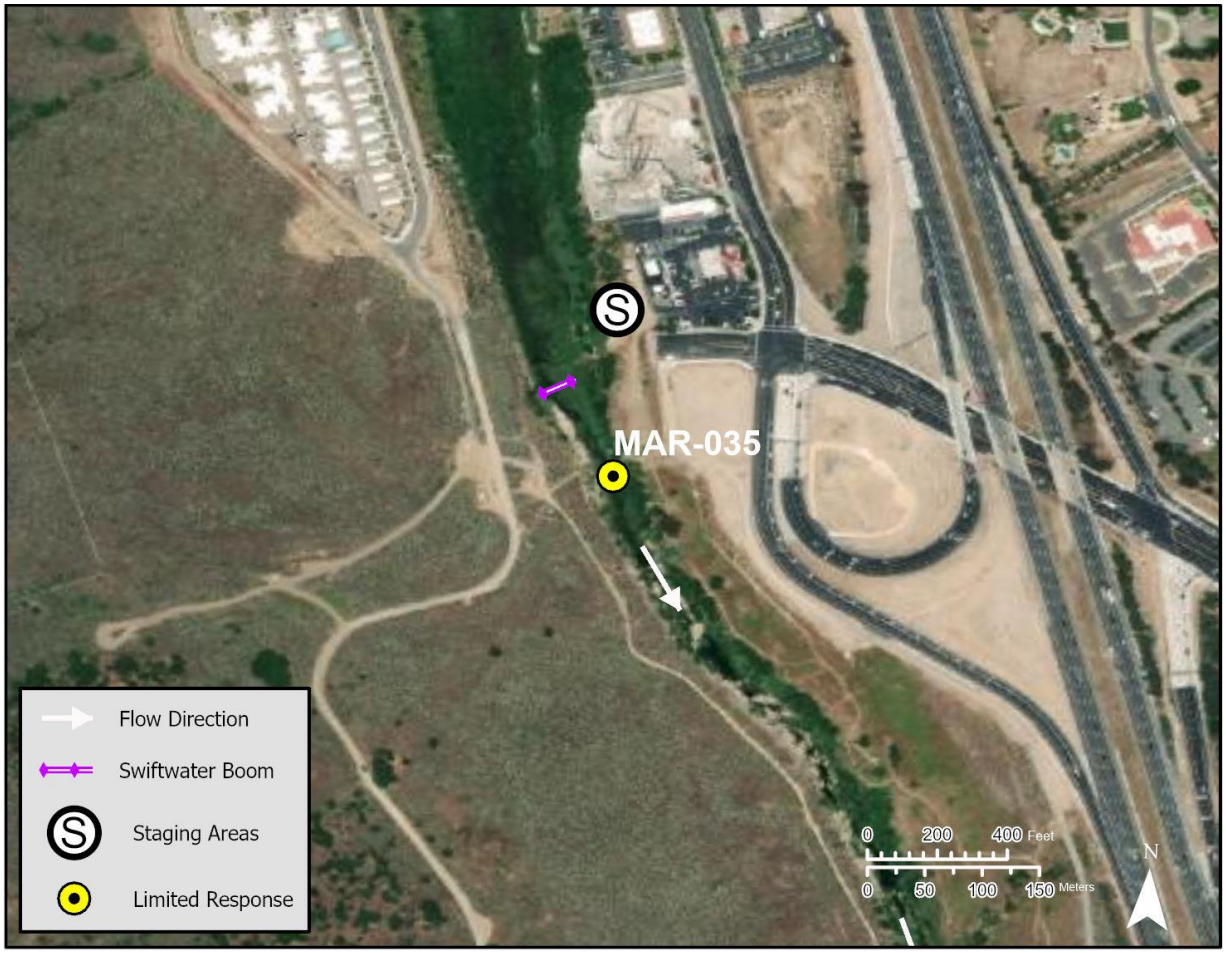


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	50 feet	
Stakes				2	Anchor boom or sorbent in place with stakes
Sorbent				50 feet	Sweep or sausage boom
Personnel				4	

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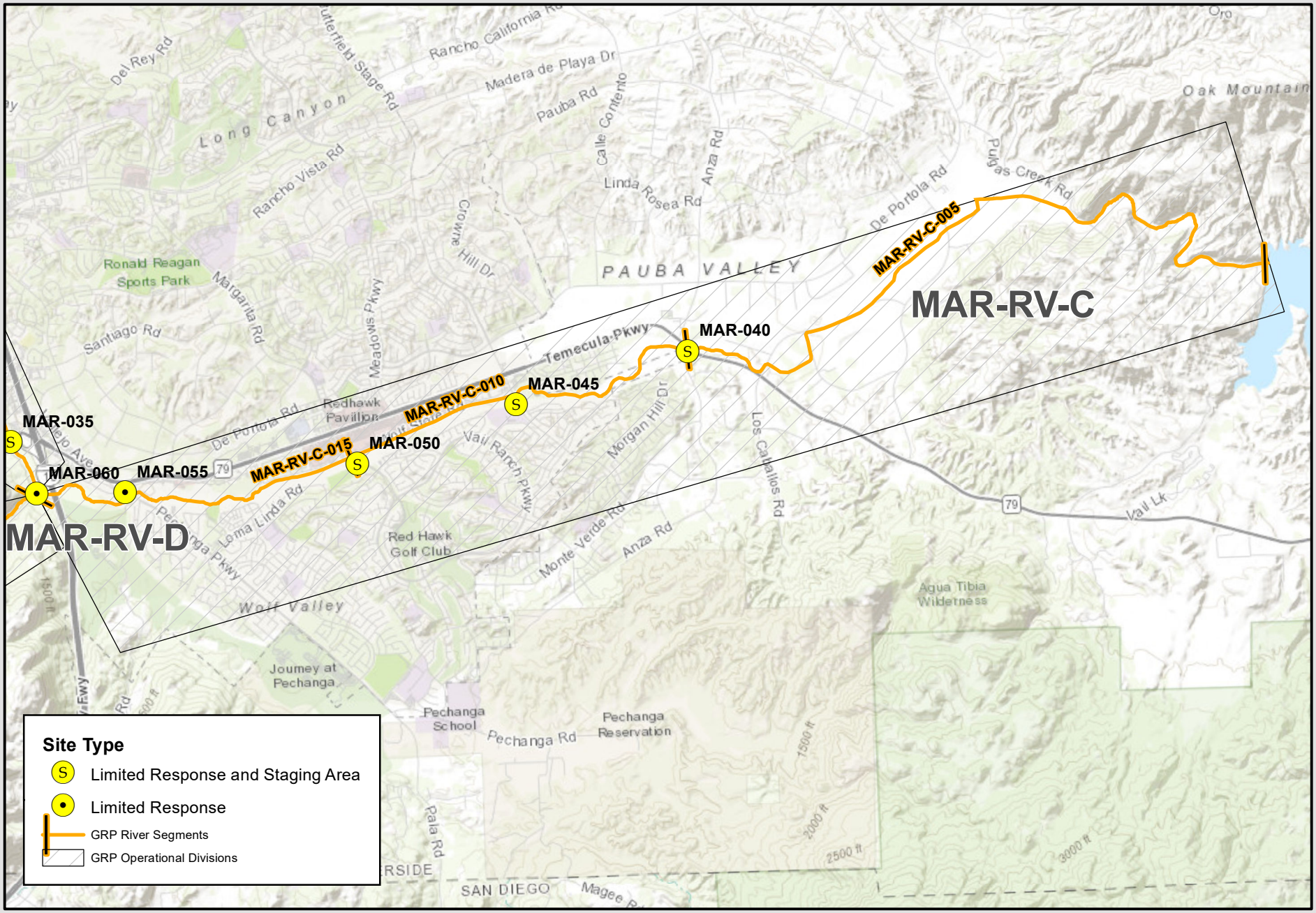
Figure 3-4: Santa Margarita River GRP Division MAR-RV-C Map



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

Data Source: CDFW-OSPR, NHD (USGS), DOC
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 08/02/2021

Santa Margarita River Geographic Response Plan Division MAR-RV-C

0 0.75 1.5 Miles
0 1.5 3 Kilometers

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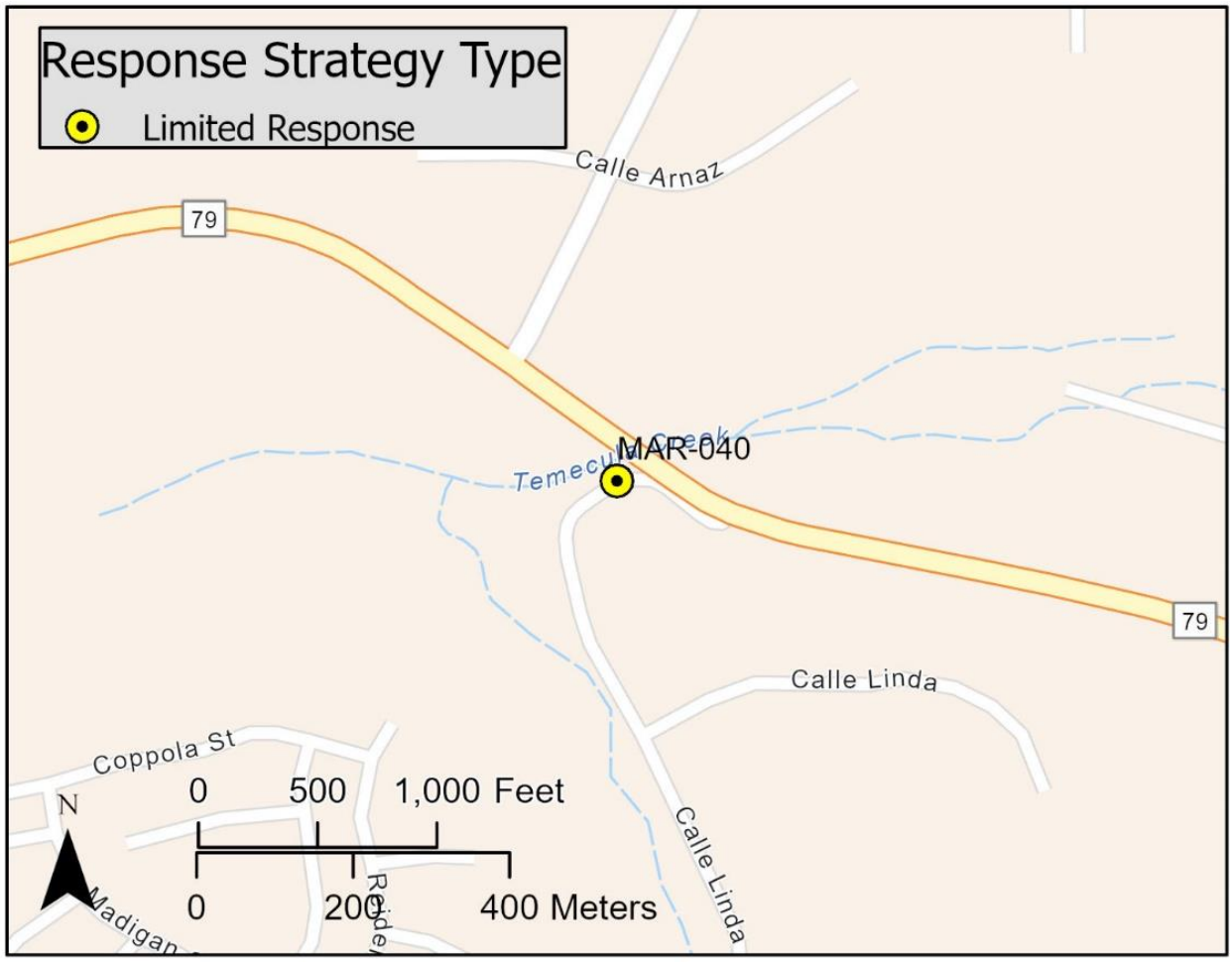
Response Strategy Site: Temecula Creek at Highway 79 (MAR-040)			**Page 1 of 3**
Driving Directions:	Exit I-15 on Highway 79 East and continue inland approximately 5 miles to the Temecula Creek overcrossing. The site is accessible for 4WD response equipment from Anza Road and Highway 79 intersection.		
Latitude: 33.489 **Longitude:** -117.0541	**Highway Postmile:** RIV 79 14.526	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 43483 Anza Rd., Temecula, CA 92592, **Thomas Guide #:** 980/A1-B1			

Overview Street Map



Hazards, Restrictions and Advice for Responders

Highway 79 is a busy route with good response access off Anza Road from the northeast field. The creek is subject to flash flood flows following rainstorms.

Resources-At-Risk

Ecological: Stephens' Kangaroo Rat, California Glossy Snake

Economic: Temecula Creek Trail Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-RV-C-010	**Site Description and Field Notes:** Temecula Creek at this site has a natural sediment bottom and banks and flows under Highway 79.			
Gradient: Low	**River Width:** 120 m (400 ft)	**Vehicular Access?** 4WD Pickup, 5000-gallon vac truck (dry season)	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	9B-Vegetated low banks			

Site Images

Upstream

Downstream

Straight Across

RR = River Right RL = River Left

Photo Date: 3/3/2020

Response Strategy Site: Temecula Creek at Highway 79 (MAR-040) Ⓢ **Page 3 of 3**

Site Objectives: Containment and recovery

Implementation: Deploy boom or excavators as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: Suitable staging space may be available in or near the Tractor Supply Hardware parking lot off Anza Road.

Response Strategy Map (overview)

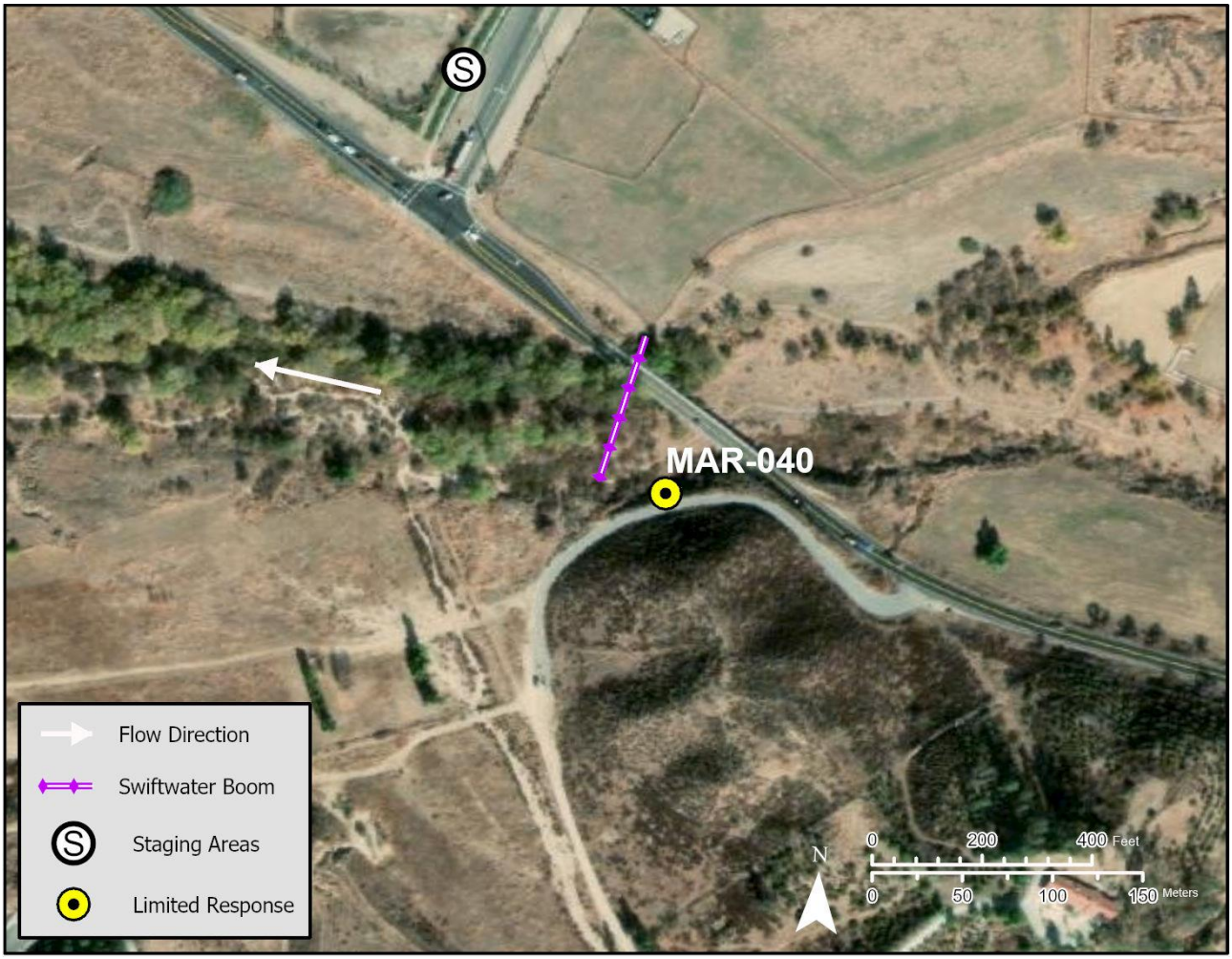


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	200 feet	
Stakes				2 each	Secure boom in place
Backhoe					Excavate contaminated soil
Personnel				4	

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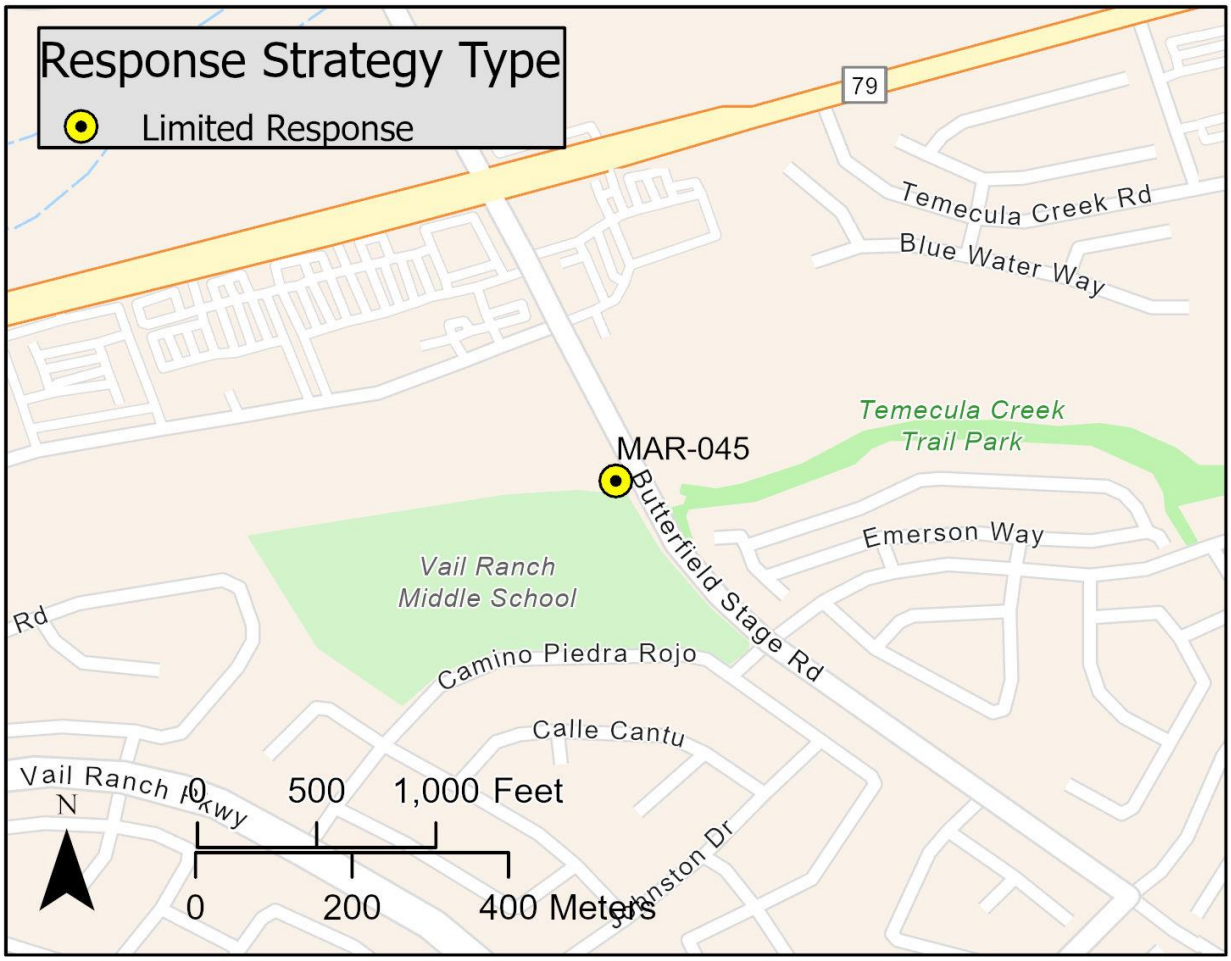
Response Strategy Site: Temecula Creek at Butterfield Stage Road (MAR-045) (S) **Page 1 of 3**			
Driving Directions:	Exit I-15 on Highway 79 East and continue inland to Butterfield Stage Road. Turn right and continue south to the Temecula Creek overcrossing. Site has access for 4WD response equipment at a ramp near the southern corner of the response site.		
Latitude: 33.4828 **Longitude:** -117.0771	**Highway Postmile:** RIV 79 15.74	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 43920 Butterfield Stage Road, Temecula, CA 92592, **Thomas Guide #:** 979/H2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

The creek is subject to flash flood flows following rainstorms.

Resources-At-Risk

Ecological: Stephens' Kangaroo Rat, Blainville's Horned Lizard, Mesa Horkelia

Economic: Temecula Creek Trail Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-RV-C-010	**Site Description and Field Notes:** Temecula Creek at this site has a natural sediment bottom and flows beneath Butterfield Stage Road.			
Gradient: Low	**River Width:** 60 m (200 ft)	**Vehicular Access?** 4WD Pickup, 5000-gallon vac truck (dry season)	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	4-Sandy bars			

Site Images

Upstream

Downstream

Straight Across

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

Photo Date: 3/3/2020

Response Strategy Site: Temecula Creek at Butterfield Stage Road (MAR-045) Ⓢ **Page 3 of 3**

Site Objectives: Containment and recovery

Implementation: Deploy boom or excavators as needed according to conditions and weather forecast. Collect oil in a dry creek, if possible.

Staging Area Location and Capabilities/Amenities/Waste Management: Onsite staging may be found near the access ramp at the southern edge of Butterfield Stage Road, behind a locked gate.

Response Strategy Map (overview)

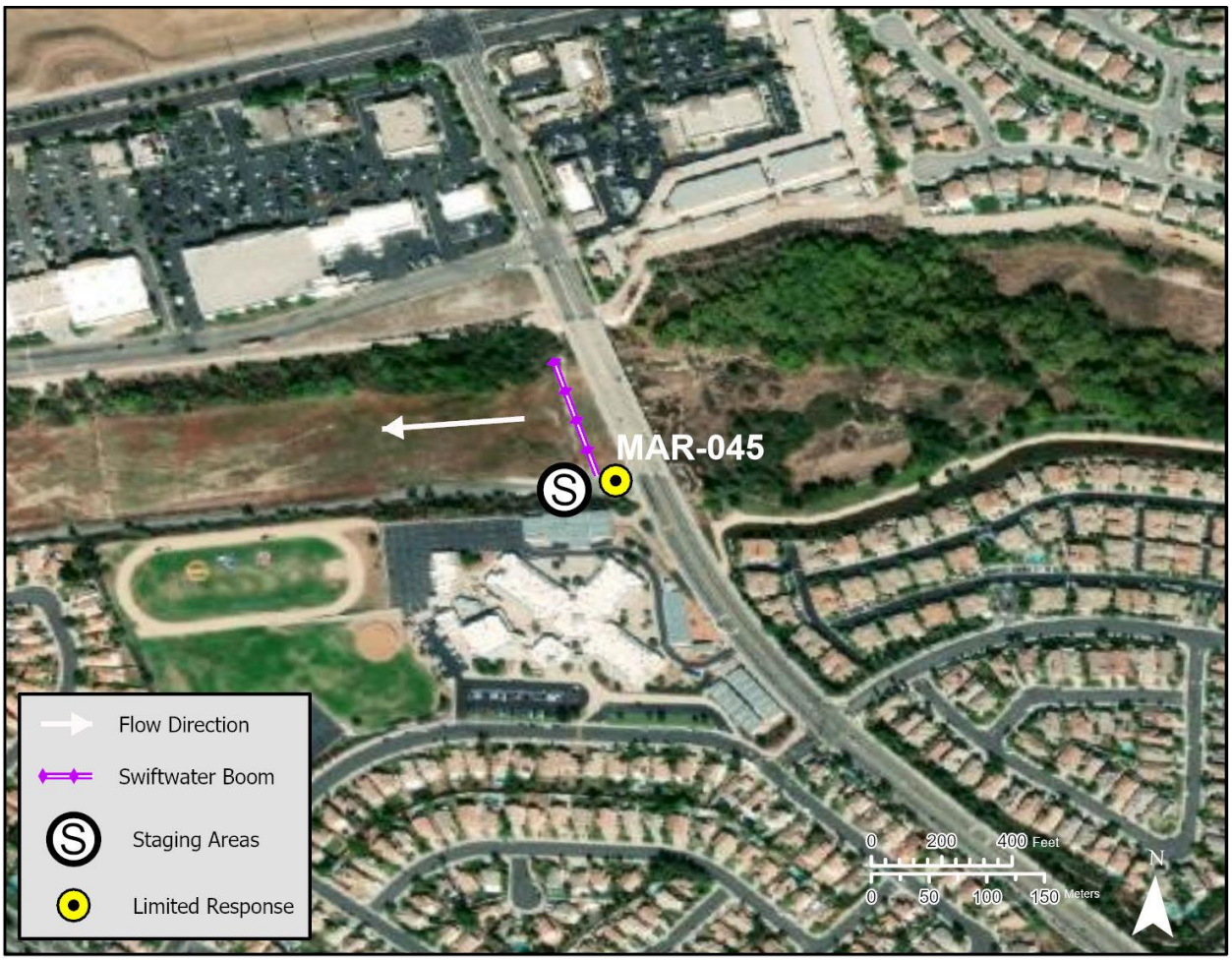


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	400 feet	
Stakes				8 each	Secure boom in place
Backhoe					Excavate contaminated soil
Personnel				4	

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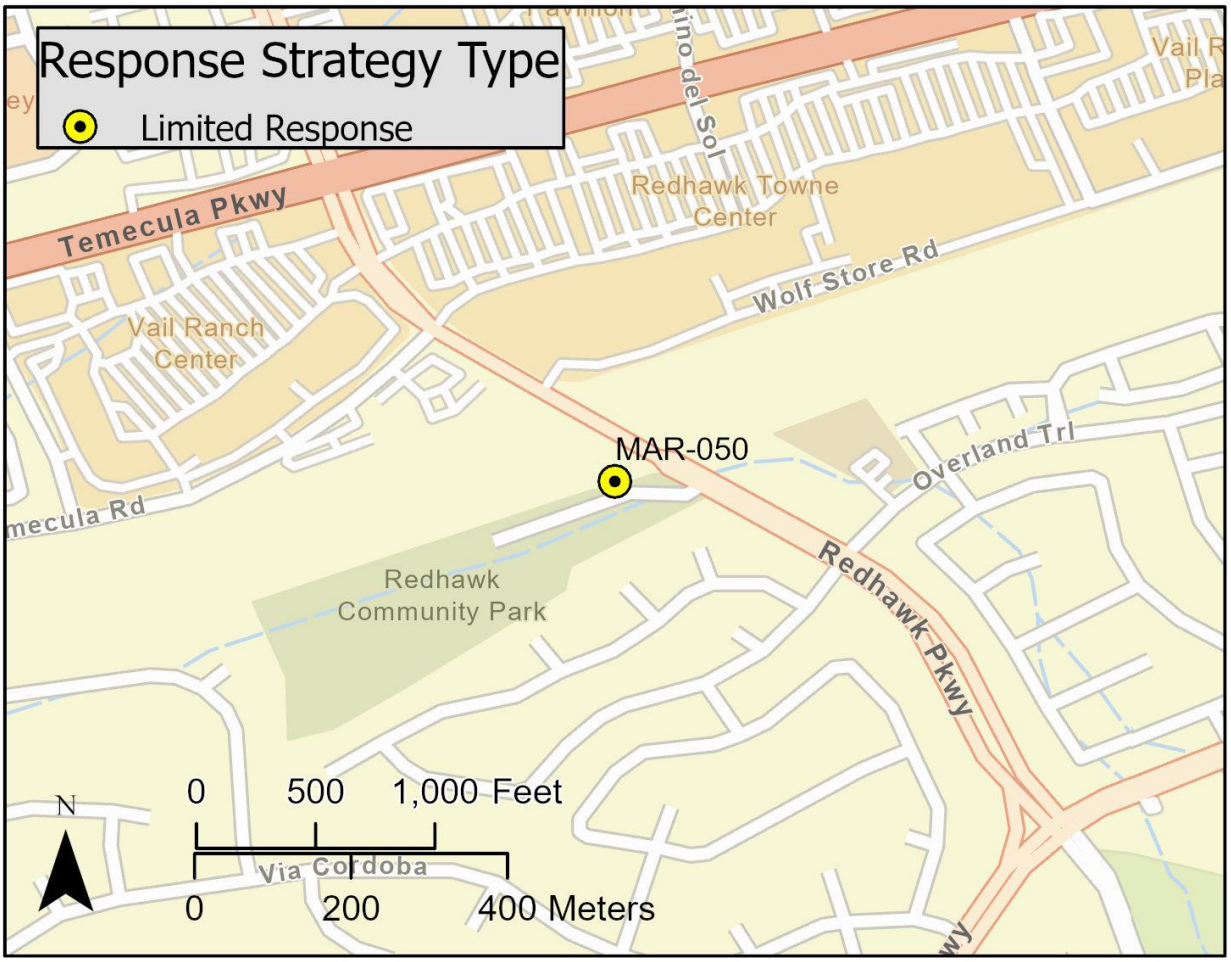
Response Strategy Site: Temecula Creek at Redhawk Parkway (MAR-050) (S) **Page 1 of 3**			
Driving Directions:	Exit I-15 on Highway 79 East and continue inland to Margarita Road/Redhawk Parkway. Turn right on Redhawk Parkway and continue south to the Temecula Creek overcrossing. The site has access for 4WD response equipment at the ramp near the southwest edge of Redhawk Parkway.		
Latitude: 33.4775 **Longitude:** -117.0983	**Highway Postmile:** RIV 15 R2.612	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 44747 Redhawk Parkway Temecula, CA 92592, **Thomas Guide #:** 979/E2			

Overview Street Map



Hazards, Restrictions and Advice for Responders

The creek is subject to flash flood flows following rainstorms.

Resources-At-Risk

Ecological: Stephens' Kangaroo Rat, Blainville's Horned Lizard, Mesa Horkelia

Economic: Redhawk Community Park

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Temecula Creek at Redhawk Parkway (MAR-050) (S)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-RV-C-015	**Site Description and Field Notes:** Temecula Creek at this site has a natural sediment bottom and flows beneath Redhawk Parkway.			
Gradient: Low	**River Width:** 120 m (400 ft)	**Vehicular Access?** 4WD Pickup, 5000-gallon vac truck (dry season)	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	4-Sandy bars			

Site Images

Upstream

Downstream

Straight Across

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

Photo Date: 3/3/2020

Response Strategy Site: Temecula Creek at Redhawk Parkway (MAR-050) Ⓢ **Page 3 of 3**

Site Objectives: Containment and recovery

Implementation: Deploy boom or excavators as needed according to conditions and weather forecast. Collect oil in a dry creek, if possible.

Staging Area Location and Capabilities/Amenities/Waste Management: Suitable onsite staging space may be found near the access ramp at the southern edge of Redhawk Parkway, behind a locked gate.

Response Strategy Map (overview)

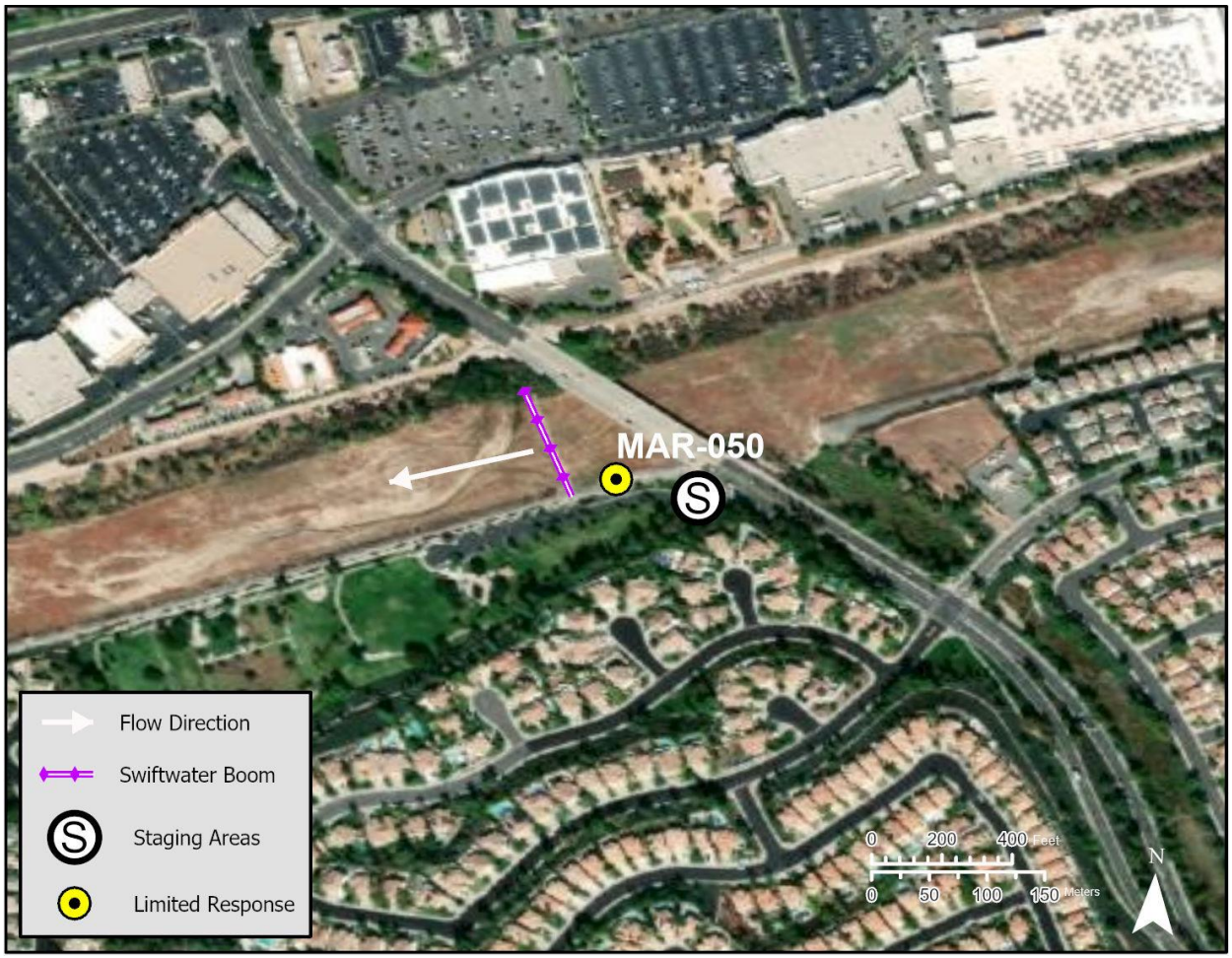


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	400 feet	
Stakes				8 each	Secure boom in place
Backhoe					Excavate contaminated soil
Personnel				4	

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Response Strategy Site: Temecula Creek at Pechanga Parkway (MAR-055) Ⓢ			**Page 1 of 3**
Driving Directions:	Exit I-15 on Highway 79 East and continue inland to Pechanga Parkway. Turn right and continue south to the Temecula Creek overcrossing. Site has limited access for 4WD response equipment at the corner of Cupeno Lane and Pechanga Parkway, behind a locked gate.		
Latitude: 33.4744 **Longitude:** -117.1291	**Highway Postmile:** RIV 15 R2.78	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 30417 Cupeno Lane Temecula, CA 92592, **Thomas Guide #:** 979/B3			

Overview Street Map

Hazards, Restrictions and Advice for Responders

The creek is subject to flash flood flows following rainstorms.

Resources-At-Risk

Ecological: Los Angeles Pocket Mouse, Stephens' Kangaroo Rat, Arroyo Chub, Blainville's Horned Lizard, Western Pond Turtle, Mesa Horkelia, Nevin's Barberry

Economic: Temecula Creek Golf Club

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Temecula Creek at Pechanga Parkway (MAR-055)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-RV-C-015	**Site Description and Field Notes:** Temecula Creek at this site has a natural sediment bottom and flows beneath Pechanga Parkway.			
Gradient: Low	**River Width:** 70 m (230 ft)	**Vehicular Access?** None	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Riverside Co. Flood Control No Fee Access Permit (951) 955-1200 After Hours: (951) 955-1230			
ESI Shoreline Type:	4-Sandy bars.			

Site Images

Upstream

Downstream

Straight Across

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

Photo Date: 3/3/2020

Response Strategy Site: Temecula Creek at Redhawk Parkway (MAR-050) (S) **Page 3 of 3**

Site Objectives: Containment and recovery

Implementation: Hand deploy boom as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: Suitable onsite staging space may be found near the access ramp off Pechanga Parkway at Cupeno Lane behind a locked gate.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	300 feet	
Stakes				6 each	Secure boom in place
Personnel				4	

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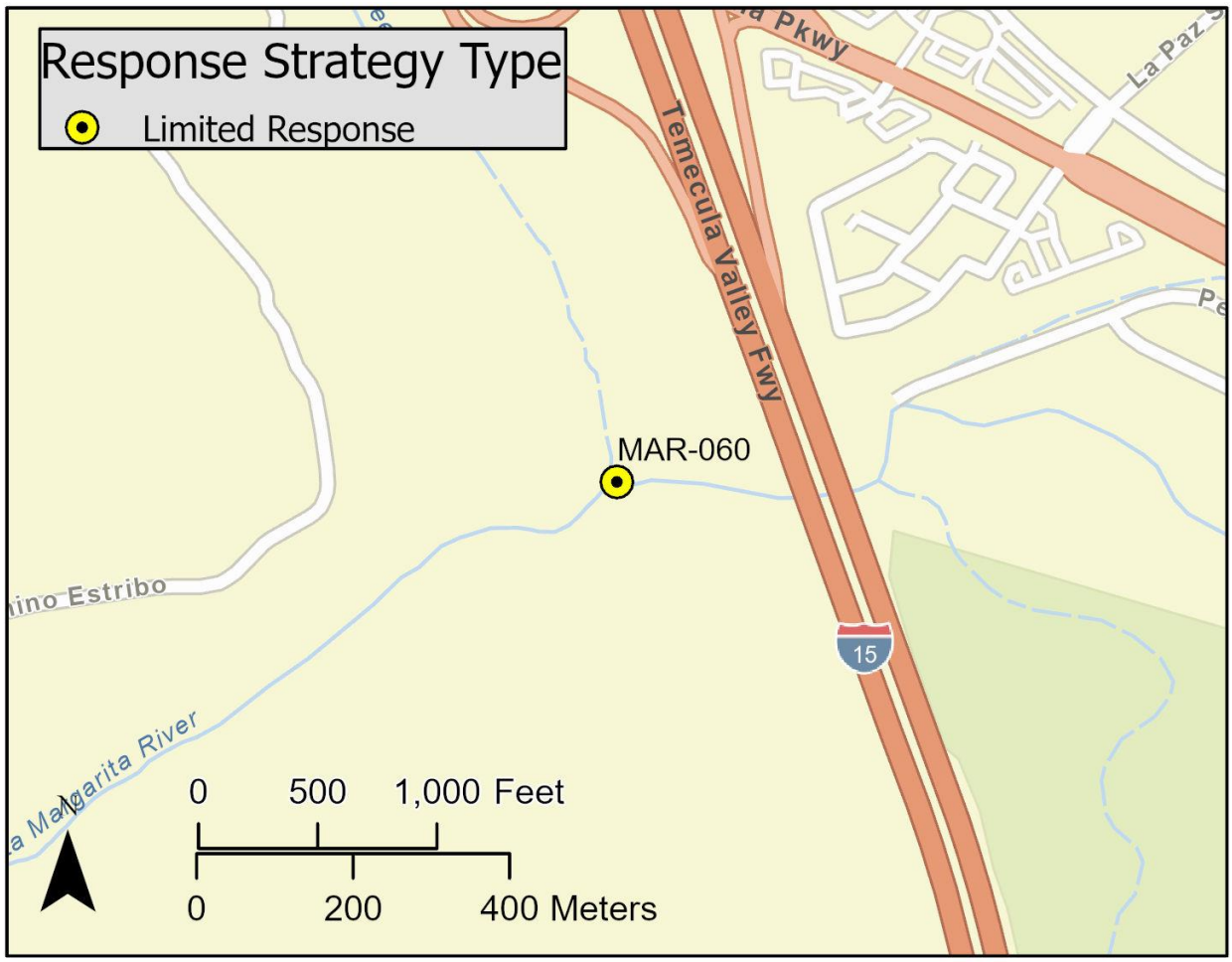
Response Strategy Site: Santa Margarita River Headwaters (MAR-060) (S)			Page 1 of 3
Driving Directions:	Exit I-15 on Highway 79/Temecula Parkway. Travel west to the end of the paved road. Continue south driving on the unpaved frontage road parallel to I-15 (through a locked gate) to the response site.		
Latitude: 33.4743 **Longitude:** -117.141	**Highway Postmile:** RIV 15 3.034	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 29105 Old Town Temecula Front St., Temecula, CA 92590, **Thomas Guide #:** 979/A3			

Overview Street Map



Hazards, Restrictions and Advice for Responders

The river can experience flash flooding following rainstorms.

Resources-At-Risk

Ecological: Western Yellow-billed Cuckoo, Arroyo Chub, Western Spadefoot Toad, Blainville's Horned Lizard, Two-striped Garter Snake, Western Pond Turtle, Rainbow Manzanita, Jaeger's Milk-vetch, Sticky Dudleya

Economic: Santa Margarita Ecological Reserve

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Santa Margarita River Headwaters (MAR-060)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-RV-D-005	**Site Description and Field Notes:** Temecula and Murrieta Creeks join at this site. The natural sediment bottom forms a pond that empties into Santa Margarita River Canyon.			
Gradient: Low	**River Width:** 10 m (33 ft)	**Vehicular Access?** 4WD Pickup	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Santa Margarita Ecological Reserve (619) 507-0944			
ESI Shoreline Type:	4-Sandy bars			

Site Images

Upstream Murrieta Creek

Upstream Temecula Creek

Downstream Santa Margarita River

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

Photo Date: 8/1/2019

Response Strategy Site: Santa Margarita River Headwaters (MAR-060) (S) **Page 3 of 3**

Site Objectives: Containment

Implementation: Hand deploy boom as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: Minimal site staging space may be found along the frontage road that leads to the site, or at MAR-035.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	50 feet	
Stakes				4 each	Secure boom in place
Personnel				4	

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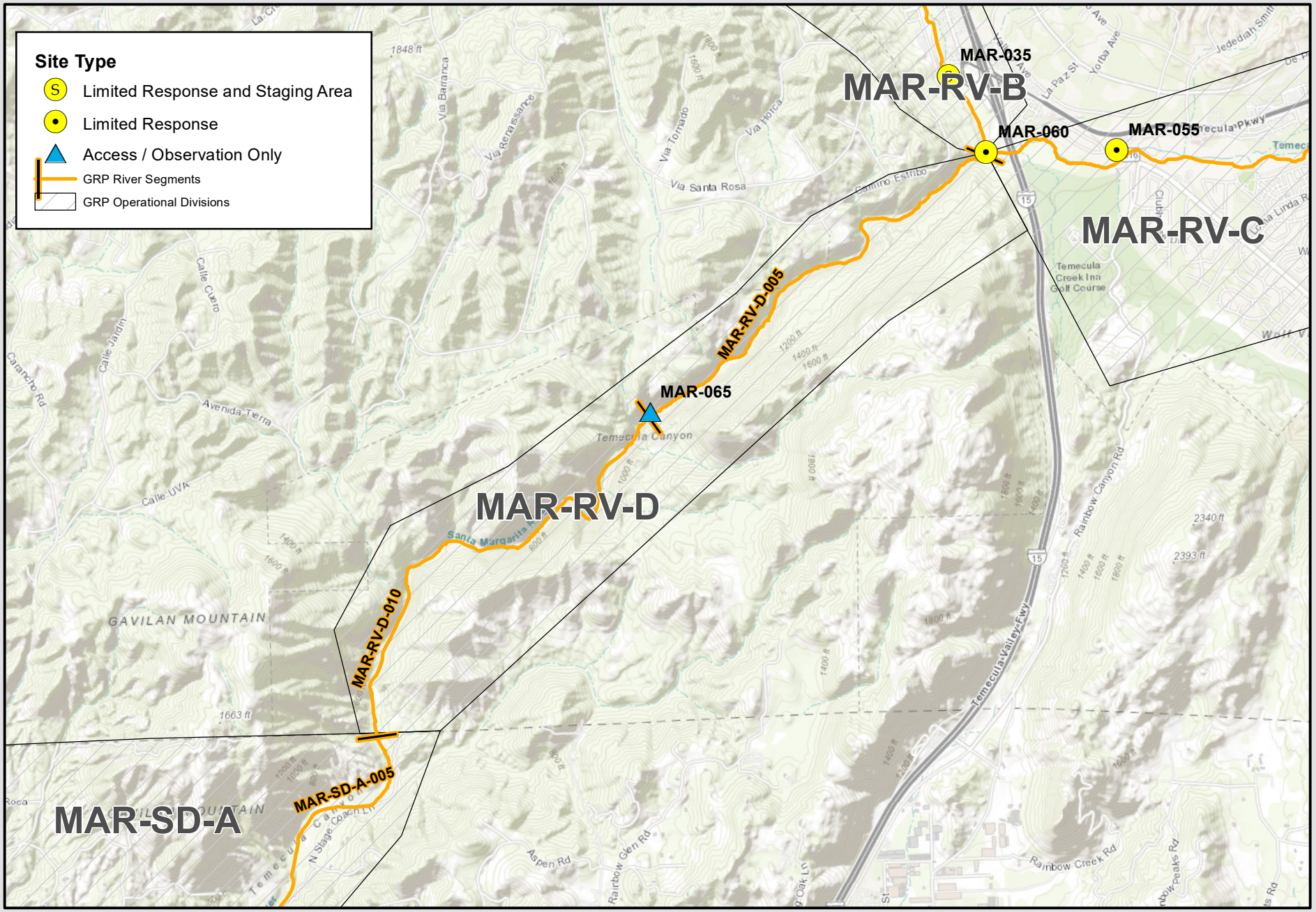
Figure 3-5: Santa Margarita River GRP Division MAR-RV-D Map



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

Data Source: CDFW-OSPR, NHD (USGS), DOC
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 08/02/21

Santa Margarita River Geographic Response Plan Division MAR-RV-D

0 0.75 1.5 Miles
0 1 2 Kilometers

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Access/Observation Site: Santa Margarita River at Tornado Road (MAR-065)			Page 1 of 2
Driving Directions:	From I-15 exit Mission Road-Fallbrook. Go east and turn left onto Old Highway 395. Go north to Rainbow Valley Blvd and turn left onto Rainbow Glen Road through Rainbow. Turn left onto Red Mountain Truck Trail. Turn right onto Via Tornado and continue to the site.		
Latitude: 33.4555 **Longitude:** -117.1715	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Limited
Nearest Address 45985 Via Tornado Road, Temecula, CA 92590. **Thomas Guide #:** 978/F6			

Overview Street Map

Hazards, Restrictions and Advice for Responders

- Narrow winding roads prevent quick access to this site
- Tornado Road is blocked by gates in both directions

Access/Observation Site: Santa Margarita River at Tornado Road (MAR-065)		Page 2 of 2
Site Description and Field Notes		
Site Location/Segment: MAR-RV-D-010	**Site Description and Field Notes:** Tornado Road was paved at the river crossing, but the road is not well maintained at the intersection.	
Site Contact/s:	Santa Margarita Ecological Reserve-SDSU (619) 507-0944	

Site Images

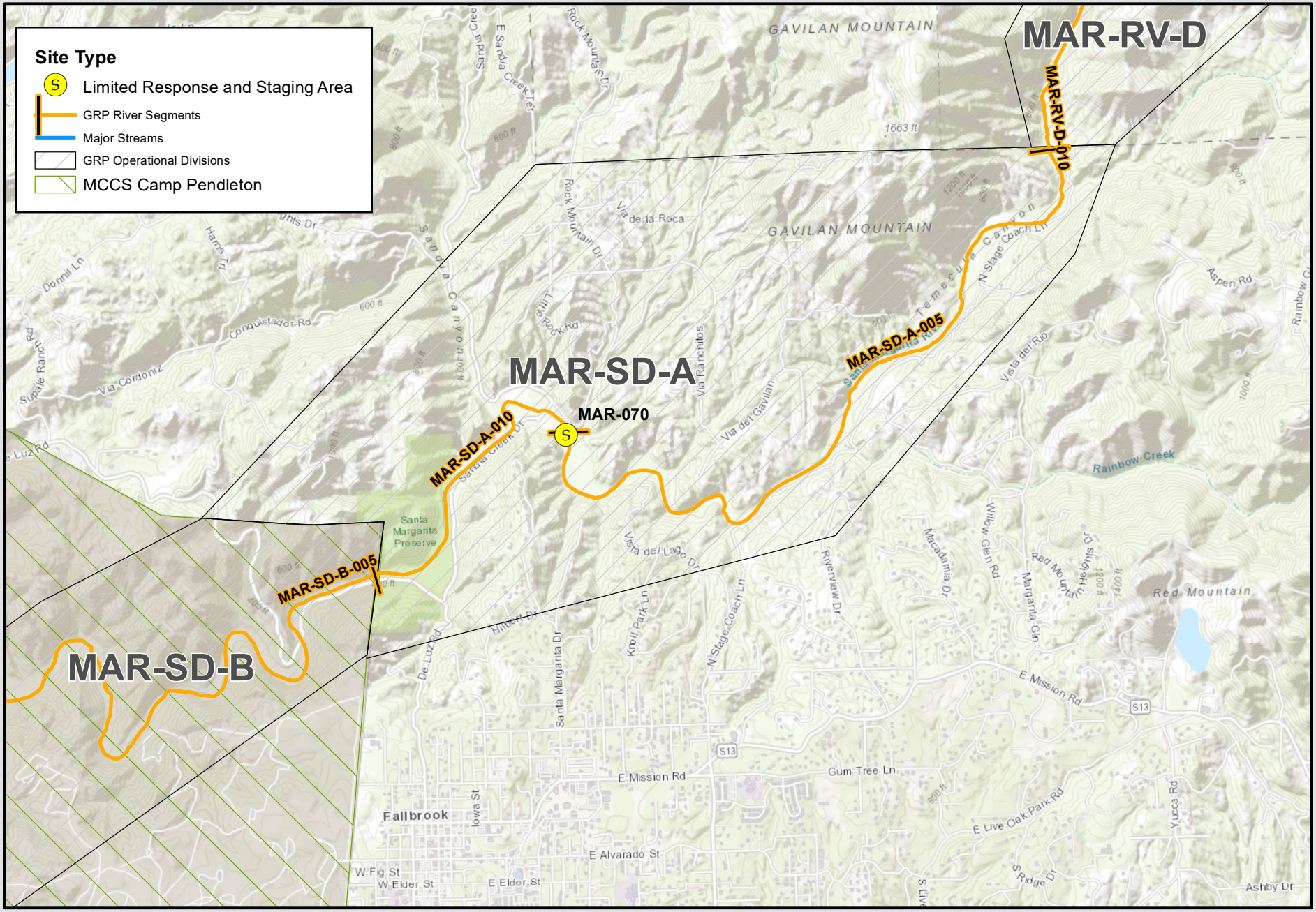
Upstream

Downstream

Straight Across

RR = River Right RL = River Left	**Photo Date:** 6/4/2019

Figure 3-6: Santa Margarita River GRP Division MAR-SD-A Map



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

Data Source: CDFW-OSPR, NHD (USGS). DOC
Requestor: OSPR
Author: L. Guphy Gustafson
Date Created: 08/02/21

Santa Margarita River Geographic Response Plan Division MAR-SD-A

0 0.75 1.5 Miles
0 1 2 Kilometers

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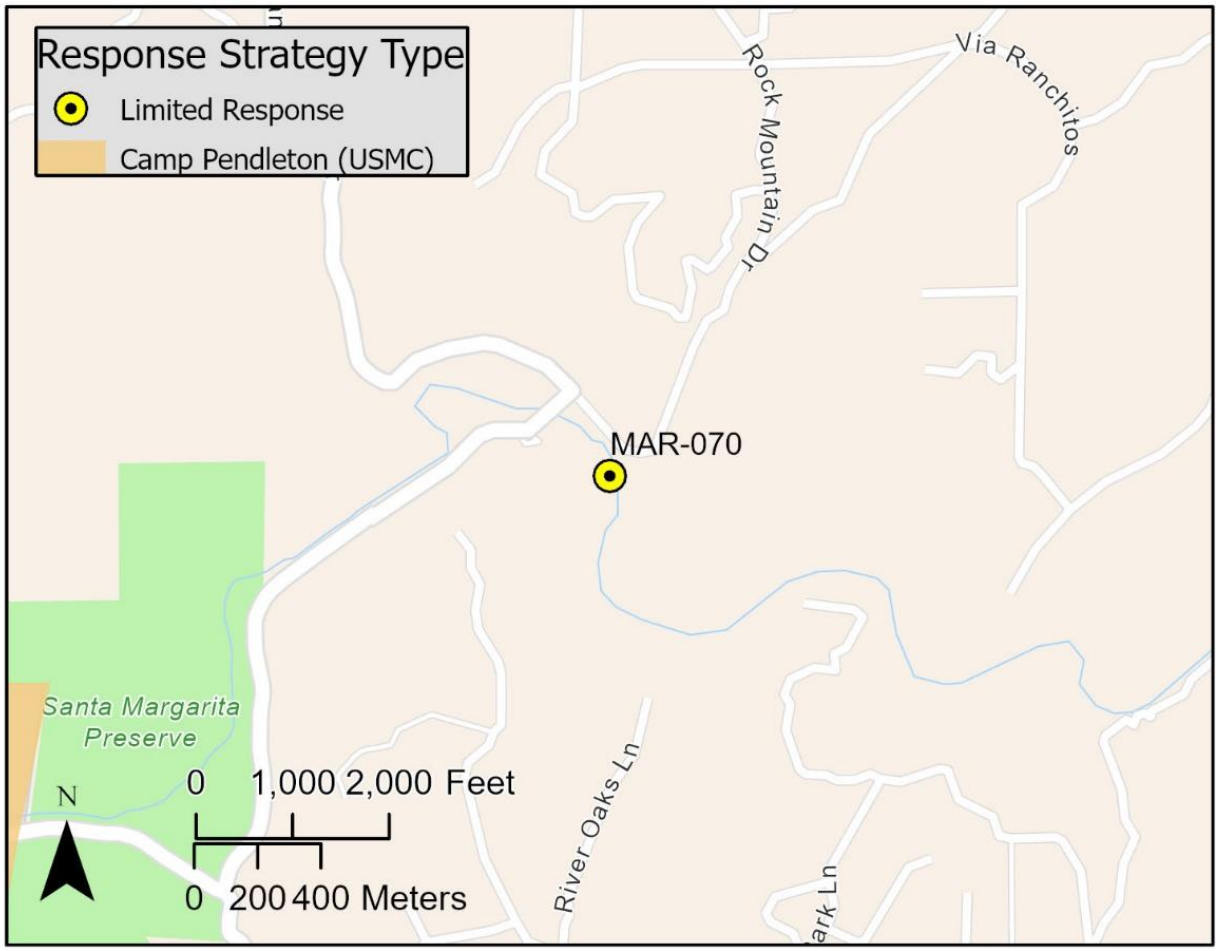
Response Strategy Site: Santa Margarita River at Sandia Creek Road (MAR-070) (S)			Page 1 of 3
Driving Directions:	From I-15 exit onto East Mission Road (S13). Continue west to Fallbrook. From Fallbrook take a right on De Luz Road north, approximately 1.25 miles to Sandia Creek Drive. Turn right on Sandia Creek Drive and continue to the river crossing.		
Latitude: 33.4137 **Longitude:** -117.2416	**Highway Postmile:** RIV 15 R50.98	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 4251 River Edge Road Fallbrook, CA 92028, **Thomas Guide #:** 977/G5			

Overview Street Map



Hazards, Restrictions and Advice for Responders

The river can experience flash flooding following rainstorms.

Resources-At-Risk

Ecological: Least Bell's Vireo, Arroyo Toad, Blainville's Horned Lizard, Chaparral Sand-verbena, Rainbow Manzanita

Economic: Santa Margarita Trail Preserve

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-SD-A-010	**Site Description and Field Notes:** The Santa Margarita River flows under Sandia Creek Road near this site.			
Gradient: Medium	**River Width:** 20 m (66 ft)	**Vehicular Access?** All to the site parking lot.	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s:	Santa Margarita River Trail Preserve (760) 728-2302			
ESI Shoreline Type:	4-B Sandy bars and beaches with gentle banks			

Site Images

Upstream

Downstream

Trail Access

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

Photo Date: 6/4/2019

Response Strategy Site: Santa Margarita River at Sandia Creek Road (MAR-070) Ⓢ **Page 3 of 3**

Site Objectives: Containment

Implementation: Hand deploy boom as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: Suitable onsite staging space may be available in the paved parking lot at this site.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	100 feet	
Stakes				4 each	Secure boom in place
Skimmer				1 each	
Personnel				4	

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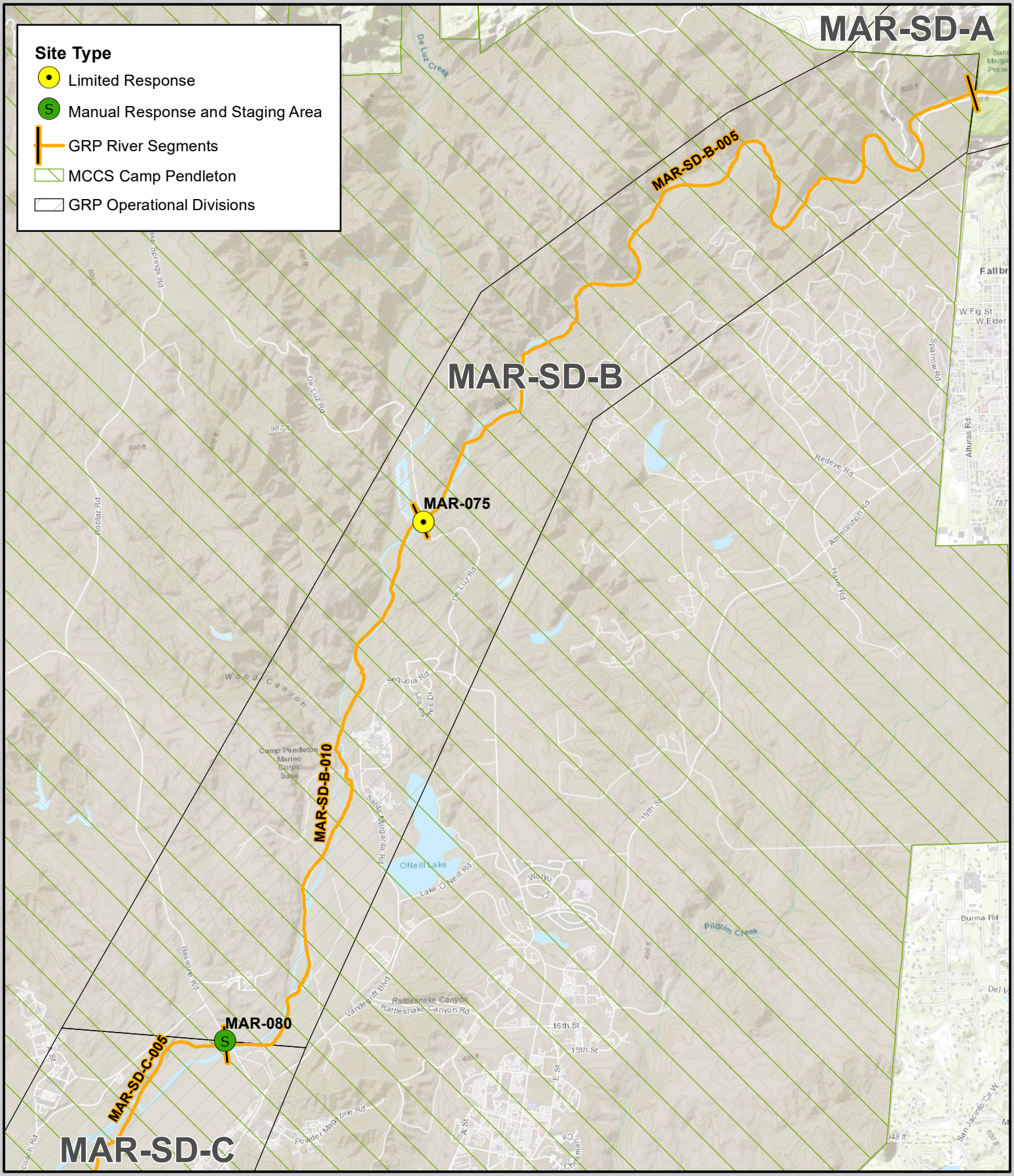
Figure 3-7: Santa Margarita River GRP Division MAR-SD-B Map



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

Author: LGustafson, CDFW
Date Created: 8/2/2021
Data Source: CDFW-OSPR, USGS

Santa Margarita River Geographic Response Plan Division MAR-SD-B

0 0.5 1 Miles
0 1 2 KMs

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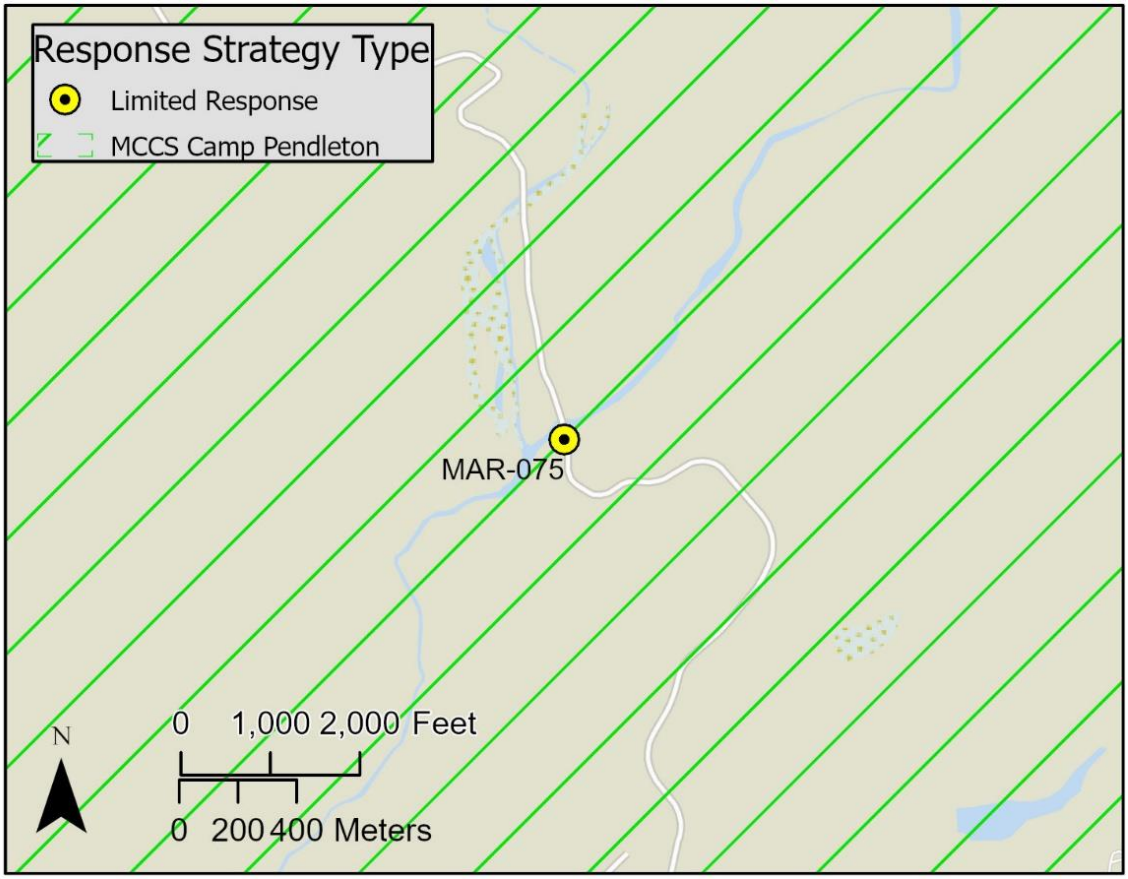
Response Strategy Site: Santa Margarita River at De Luz Road (MAR-075)			**Page 1 of 3**
Driving Directions:	From Camp Pendleton's main entrance in Oceanside, continue northeast on Vandergrift Boulevard towards Fallbrook. Turn left on De Luz Road and drive north approximately 1.0 miles to the wet crossing through the Santa Margarita River.		
Latitude: 33.3624 **Longitude:** -117.3217	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 181 Los Padres Drive, Oceanside, CA 92058, **Thomas Guide #:** 409/A6			

Overview Street Map



Hazards, Restrictions and Advice for Responders

The river can experience flash flooding following rainstorms.

Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton. Gate access and guided travel within Camp Pendleton work sites should be coordinated to help avoid extensive delays clearing the gate security office and to speed up response time.

Resources-At-Risk

Ecological: Southwestern Willow Flycatcher, San Diego Cactus Wren, Least Bell's Vireo, Dulzura Pocket Mouse, Arroyo Toad, Red Diamond Rattlesnake, Least Pepperwort, Thread-leaved Brodiaea

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Response Strategy Site: Santa Margarita River at De Luz Road (MAR-075)				Page 2 of 3
Site Description and Field Notes				
Site Location/Segment: MAR-SD-B-010	**Site Description and Field Notes:** The Santa Margarita River flows over De Luz Road at this remote Camp Pendleton site.			
Gradient: Low	**River Width:** 20 m (66 ft)	**Vehicular Access?** 4WD Pickup	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s: Provost Marshal's Office Camp Pendleton Desk Sergeant (760) 763-2077	MCB Camp Pendleton Spill Hotline (760) 542-5758		MCB Camp Pendleton Commanding Officer (760) 725-5061	
ESI Shoreline Type:	9B Vegetated low banks			

Site Images

Upstream

Downstream

Straight Across

RR = River Right RL = River Left	**Photo Date:** 1/30/2019

Response Strategy Site: Santa Margarita River at De Luz Road (MAR-075) **Page 3 of 3**

Site Objectives: Containment

Implementation: Hand deploy boom as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: N/A

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	200 feet	
Stakes				4 each	Secure boom in place
Personnel				4	

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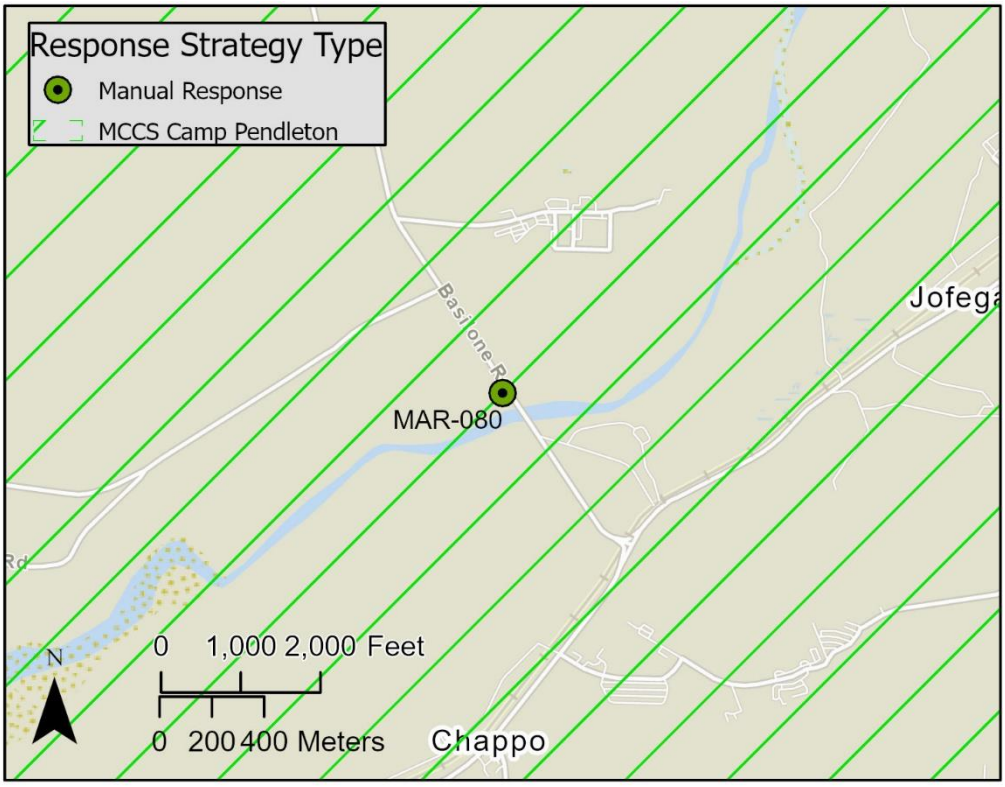
Driving Directions:	Driving Directions: From the Oceanside Camp Pendleton main entrance take Vandegrift Road to Basilone Road. Turn left on Basilone Road and cross over the river. Turn left on Stagecoach Road and make an immediate left turn onto a dirt access road on the west side of Basilone Road. The dirt road ends at a covered staging area on the edge of the Santa Margarita River.		
Latitude: 33.3117 **Longitude:** -117.346	**Highway Postmile:** N/A	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address and Thomas Guide #: 409/A7

Overview Street Map



Hazards, Restrictions and Advice for Responders

The Santa Margarita River is subject to occasional flash floods.

Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton. Gate access and guided travel within Camp Pendleton work sites should be coordinated to help avoid extensive delays clearing the gate security office, and to speed up response time.

Resources-At-Risk

Ecological: Coastal California Gnatcatcher, Least Bell's Vireo, Swainson's Hawk, Dulzura Pocket Mouse, Arroyo Toad, Western Pond Turtle, Chaparral Sand-verbena, White Rabbit-tobacco

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-SD-C-005	**Site Description and Field Notes:** Basilone Road passes over the river at this site. The long overpass can provide good cover for staging underneath.			
Gradient: Low	**River Width:** 30 m (98 ft)	**Vehicular Access?** 4WD Pick-Up	**Recreational Use?** Hiking	**Boat Launches:** None
Site Contact/s: Provost Marshal's Office Camp Pendleton Desk Sergeant (760) 763-2077	MCB Camp Pendleton Spill Hotline (760) 542-5758		MCB Camp Pendleton Commanding Officer (760) 725-5061	
ESI Shoreline Type:	4-Sandy bars			

Site Images

Upstream

Downstream

Entrance

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

Photo Date: 1/30/2019

Site Objectives: Containment

Implementation: Hand deploy boom as needed according to conditions and weather forecast.

Staging Area Location and Capabilities/Amenities/Waste Management: The covered area has no amenities other than covered space to operate underneath.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		8	inch	300 feet	Deployable in low flows.
Stakes				4 each	Secure boom in place
Personnel				4	

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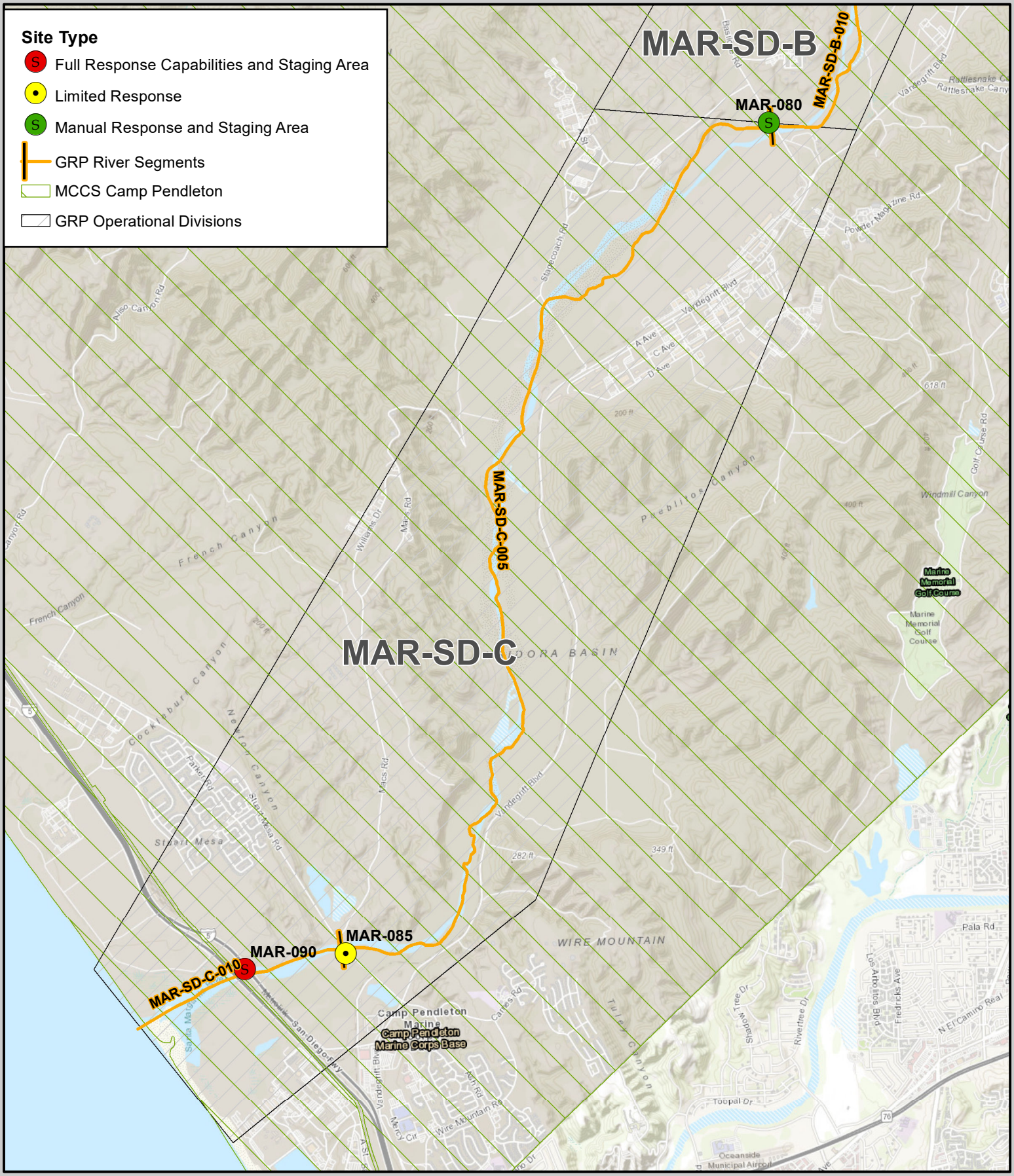
Figure 3-8: Santa Margarita River GRP Division MAR-SD-C Map



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

Author: LGustafson, CDFW
Date Created: 8/2/2021
Data Source: CDFW-OSPR, USGS

Santa Margarita River Geographic Response Plan Division MAR-SD-C

0 0.5 1 Miles
0 1 2 KMs

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Response Strategy Site: Santa Margarita River at Stuart Mesa Road (MAR-085)			**Page 1 of 3**
Driving Directions:	From I-5 in Oceanside, enter through the main Camp Pendleton gate on Vandergrift Boulevard. Continue on Vandergrift Boulevard for approximately 1.25 miles. Turn left on Stuart Mesa Road. The site is approximately 0.5 miles ahead.		
Latitude: 33.238 **Longitude:** -117.395	**Highway Postmile:** SD 5 R 56.088 R	**Railroad Milepost:** N/A	**Cell Service:** Yes
Nearest Address: 20884 Vandergrift Blvd, Oceanside, CA 92058, **Thomas Guide #:** 408/L9			

Overview Street Map

Hazards, Restrictions and Advice for Responders

Stuart Mesa Road overcrossing may require traffic control to respond safely at this site.

Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton. Gate access and guided travel within Camp Pendleton work sites should be coordinated to help avoid extensive delays clearing the gate security office, and to speed up response time.

Resources-At-Risk

Ecological: Light-footed Ridgway's Rail, Coastal California Gnatcatcher, Belding's Savannah Sparrow, California Least Tern, Little Pocket Mouse, Western Spadefoot Toad, Fairy Shrimp, Coulter's Goldfields, Coulter's Saltbrush, Coast Woolly-heads, Coast Wallflower

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916) 373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-SD-C-010	**Site Description and Field Notes:** The Santa Margarita River flows under Stuart Mesa Road at this site.			
Gradient: Medium	**River Width:** 70 m (230 ft)	**Vehicular Access?** All vehicles	**Recreational Use?** None	**Boat Launches:** None
Site Contact/s: Provost Marshal's Office Camp Pendleton Desk Sergeant (760) 763-2077	MCB Camp Pendleton Spill Hotline (760) 542-5758		MCB Camp Pendleton Commanding Officer (760) 725-5061	
ESI Shoreline Type:	9-B Vegetated low banks			

Site Images

Upstream

Downstream

Straight Across

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

Photo Date: 1/30/2019

Response Strategy Site: Santa Margarita River at Stuart Mesa Road (MAR-085) **Page 3 of 3**

Site Objectives: Containment

Implementation: Deploy boom from the road. A road closure may be needed.

Staging Area Location and Capabilities/Amenities/Waste Management: N/A

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		6	inch	300 feet	
Stakes				4 each	Secure boom in place
Personnel				4	

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Driving Directions:	From I-5, exit at Harbor Drive and follow the signs to Camp Pendleton main gate (on Vandergrift Boulevard.) Enter and continue ahead approximately 1 mile to Stuart Mesa Road. Turn left and pass over the river and immediately turn left on the dirt trail (Macs Road-Unmarked). Continue approximately 0.5 miles to the site under I-5.		
Latitude: 33.236215 **Longitude:** -117.405411	**Highway Postmile:** SD 5 R56.501R	**Railroad Milepost:** N/A	**Cell Service:** Yes

Nearest Address: 200 Vandergrift Blvd, Oceanside, CA 92058, **Thomas Guide #:** 408/L9

Overview Street Map

Hazards, Restrictions and Advice for Responders

Evaluate currents, tides, and weather for safe operations before attempting to deploy equipment.

Response efforts at this site will require coordination with the Commanding Officer of Marine Corps Base Camp Pendleton. Gate access and guided travel within Camp Pendleton work sites should be coordinated to help avoid extensive delays clearing the gate security office, and to speed up response time. The base routinely conducts amphibious training and other maritime operations along the beachfront. Early coordination to avoid conflict between responders and military operations is critical.

Resources-At-Risk

Ecological: Light-footed Ridgway's Rail, Coastal California Gnatcatcher, Belding's Savannah Sparrow, California Least Tern, Little Pocket Mouse, Western Spadefoot Toad, Fairy Shrimp, Coulter's Goldfields, Coulter's Saltbrush, Coast Woolly-heads, Coast Wallflower

Economic: N/A

Tribal: Contact the Native American Heritage Commission at (916)-373-3710
Cultural and Historic: Contact the South Coastal Information Center at (619) 594-5682

Site Description and Field Notes

Site Location/Segment: MAR-SD-C-010	**Site Description and Field Notes:** Unlined, natural river that is subject to dynamic flow and tidal influence. This site is also contained in the Sector San Diego Area Contingency Plan (ACP6-145).			
Gradient: Low	**River Width:** 100 m (328 ft)	**Vehicular Access?** Stake bed trucks and pick-up trucks towing trailers can generally access the site year-round.	**Recreational Use?** Area closed to recreation.	**Boat Launches:** Good hand deployment of skiffs on-site.
Site Contact/s: Provost Marshal's Office Camp Pendleton Desk Sergeant 760-763-2077	MCB Camp Pendleton Spill Hotline (760) 542-5758		MCB Camp Pendleton Commanding Officer (760) 725-5061	
ESI Shoreline Type:	7 & 9B, exposed tidal flats and vegetated low banks			

Site Images

Upstream

Downstream

Entrance

RR = River Right RL = River Left

Photo Date: 1/30/2019

Site Objectives: Install a boom containment to direct oil to the northwest shoreline for recovery.

Implementation: Set up a collection area under the overpass on the north shore with containment boom extending southeast to the opposite shoreline.

Staging Area Location and Capabilities/Amenities/Waste Management: A covered work area under the I-5 bridge can provide sufficient area for a full decontamination station, plus a 5000-gallon vac truck.

Response Strategy Map (overview)

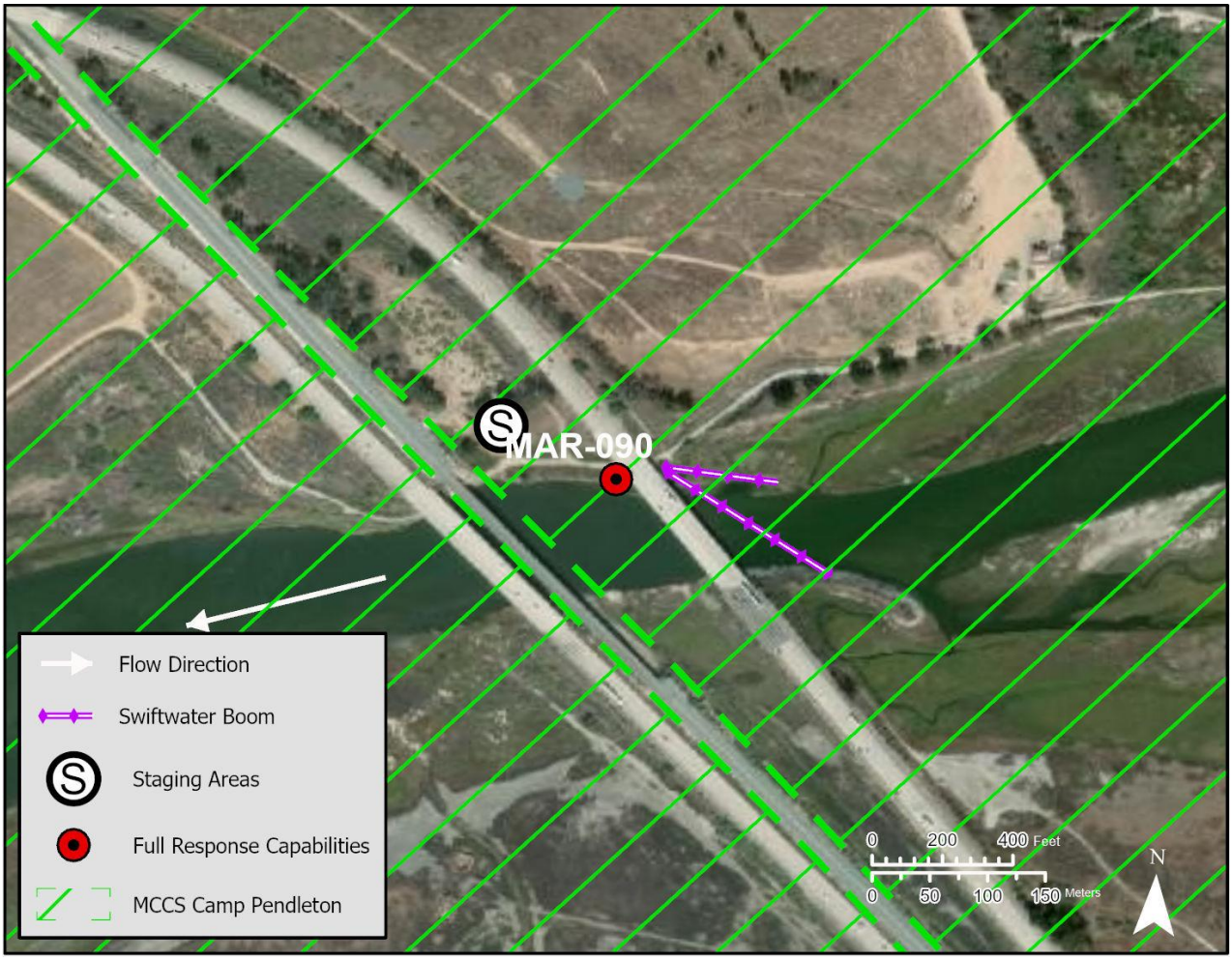

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom		8	inch	400 feet 200 feet	
Anchor	Danforth	25	pound	2 each	Mid-stream security
Stakes				3	Shoreline attachment
Boat	Skiff	12	feet	2	1 for site safety
Personnel				6	4 boat operators, 2 shore support.

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Santa Margarita River
Geographic Response Plan

Chapter 4 - Resources at Risk

4.0 Chapter Overview

This chapter provides information on the environmental, economic, tribal, cultural and historic resources-at-risk in the Santa Margarita 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 Santa Margarita 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 utilizing https://www.fws.gov/wetlands/data/mapper.html. 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; and http://resources.ca.gov/wetlands/introduction/defining_wetlands.html).

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

Common Name	Scientific Name	Status^	CHWR (General Habitat Description) and USFWS (Critical Habitat Designated) *	Microhabitat 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	Dense low vegetation. Frequents pickleweed in tidal situations or non-tidal alkaline flats nearby.	Permanent resident. Breeds from April to July. Nests in a hollow on ground usually concealed by overhanging vegetation.
Bell's Sage Sparrow	*Artemisiospiza belli*	State: SSC Fed: FT	CWHR: Coastal scrub. USFWS: N/A	Seeks cover in fairly dense stands in chaparral and scrub habitats in breeding season.	Permanent resident. Breeds from late March to mid-August. Nest located on ground beneath a shrub or in a shrubbery.
Burrowing Owl	*Athene cunicularia*	State: SSC Fed: N/A	CWHR: Heavily grazed or low grassland or desert vegetation with available burrows. USFWS: N/A	Microhabitats highly altered by humans including flood risk management and irrigation basins, dikes, banks, abandoned fields surrounded by agriculture, and road cuts and margins. Requires suitable soil for burrows.	Permanent resident. Breeds from March through August. Diurnal and Nocturnal. Frequently perches or stands at burrow entrance in daytime.
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 or lagoons where small fish are abundant. After breeding, family groups regularly occur at lacustrine waters near the coast.	Present in summer months. Breeds from late-April to September. Nests above the high tide line. Nesting colony near river mouth. Abandons nesting areas readily if disturbed.

Coastal Cactus Wren	*Campylorhynchus brunneicapillus*	State: SSC Fed: N/A	CWHR: Desert succulent 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 1.5m (4-5 ft) above the ground.
Coastal California Gnatcatcher	*Polioptila 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.
Golden Eagle	*Aquila chrysaetos*	State: FP Fed: N/A	CWHR: N/A USFWS: N/A	Needs open terrain for hunting; grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats.	Uncommon permanent resident and migrant throughout California.
Least Bell's Vireo	*Vireo bellii pusillus*	State: E Fed: E	CWHR: Lowland 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	*Rallus obsoletus levipes*	State: E Fed: E	CWHR: Salt marsh. USFWS: N/A	Coastal marshes with active tidal flow and dense pickleweed and cordgrass thickets.	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.
Northern Harrier	*Circus cyaneus hudsonius*	State: SSC Fed: N/A	CWHR: Salt marsh. USFWS: N/A	Coastal marshes with low cover.	Feeds mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, insects, and, rarely on fish.
Southern California Rufous-crowned Sparrow	*Aimophila ruficeps canescens*	State: SSC Fed: N/A	CWHR: Coastal scrub. USFWS: N/A	Secretive; seeks cover in shrubs, rocks, and grass and forb patches. Frequently found in open shrubland in valley foothill hardwood-conifer savannah and open chaparral.	Nest concealed on ground at base of grass tussock or shrub, occasionally in a shrubbery.
Southwestern Willow Flycatcher	*Empidonax trailii extimus*	State: E Fed: E	CWHR: Lowland riparian. USFWS: Critical habitat	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. Open, cup nest is placed in an upright fork of willow or other shrub, or occasionally on a horizontal limb, at height of 0.5 to 3.0 m.
Swainson's Hawk	*Buteo swainsoni*	State: T Fed: N/A	CWHR: Lowland riparian USFWS: N/A	Nests in open riparian habitat, in scattered trees or small groves in sparsely vegetated flatlands.	In southern California, now mostly limited to spring and fall transient.

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.
Western Yellow-billed Cuckoo	*Coccyzus americanus*	State: E Fed: T	CWHR: Valley foothill riparian. USFWS: N/A	Densely foliaged, deciduous trees and shrubs, especially willows, required for roosting sites.	Gleans grasshoppers, cicadas, caterpillars, and other larger insects from foliage. Occasionally preys on frogs or lizards.
White-tailed Kite	*Elanus leucurus*	State: FP Fed: N/A	CWHR: Alkali desert scrub. USFWS: N/A	Inhabits herbaceous and open stages of most habitats mostly in cismontane California.	Uses trees with dense canopies for cover. In southern California, also roosts in saltgrass and Bermudagrass.
Mammals					
Dulzura Pocket Mouse	*Chaetodipus californicus femoralis*	State: SSC Fed: N/A	CWHR: Coastal scrub. USFWS N/A	Occurs in brushy areas but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance.	Permanent resident. Forages on seeds of forbs, grasses, and shrubs.
Jacumba Pocket Mouse	*Perognathus longimembris internationalis*	State: SSC Fed: N/A	CWHR: Alkali desert scrub/coastal scrub. USFWS: N/A	Sandy soil is preferred for burrowing. Burrows sealed during the day.	Permanent resident. Life history similar to Palm Springs pocket mouse.
Little Pocket Mouse	*Perognathus longimembris brevinasus*	State: SSC Fed: S	CWHR: Alkali desert scrub/coastal scrub. USFWS: N/A	Sandy soil is preferred for burrowing. Burrows sealed during the day.	Permanent resident. Young born February through May. Nocturnal. Peak activity 1st two hours after sunset. Enters torpor under conditions of food-stress or low temperature. Inactive above ground from fall to spring, depending on food reserves and minimum nightly temperature.

Northwestern San Diego Pocket Mouse	*Chaetodipus fallax fallax*	State: SSC Fed: N/A	CWHR: Arid shrubland or pinyon-juniper habitats near rocky slopes and sandy areas. USFWS: N/A	Coastal scrub, chamise redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper and annual grassland.	Permanent resident. Solitary, reproduction in spring, litters of 2-6 individuals. Forages on seeds.
Pacific Pocket Mouse	*Perognathus longimembris pacificus*	State: SSC Fed: E	CWHR: Coastal scrub. USFWS: N/A	Prefers soils of fine alluvial sands near the ocean. Sandy soil is preferred for burrowing. Burrows sealed during the day.	Permanent resident. Prefer to eat a wide variety of forb seeds over readily available grass seed.
Pallid Bat	*Antrozous pallidus*	State: SSC Fed: N/A	CWHR: Intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with high canopy closure. USFWS: N/A	Dens found in cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles.	Permanent resident. Young born February through May. Nocturnal.
Pocketed Free-tailed Bat	*Nyctinomops femorosaccus*	State: SSC Fed: N/A	CWHR: Alkali desert scrub/coastal scrub. USFWS: N/A	Feeds on flying insects detected by echolocation high over ponds, streams, or arid desert habitat. During dry seasons, utilizes water sources with open access and large surface areas from which to drink.	Nocturnal. Probably active yearlong. Probably a yearlong resident. Usually roosts in small groups. Prefers rock crevices in cliffs as roosting sites. Reproduces in rock crevices, caverns, or buildings. Young are born in June and July, peaking in late June. The single litter has 1 young. Lactation occurs in July and August.
San Bernardino Merriam's Kangaroo Rat	*Dipodomys merriami parvus*	State: SSC Fed: E	CWHR: Alkali desert scrub, coastal scrub. USFWS: N/A	Needs early to intermediate seral stages. Burrows, with 2-5 entrances, most often located at bases of shrubs.	Permanent resident. Solitary, nocturnal mammals. Reproduce from February to May.

San Diego Black-tailed Jackrabbit	*Lepus californicus bennettii*	State: SSC Fed: N/A	CWHR: Alkali desert scrub. USFWS: N/A	Abundant at lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats.	Permanent resident. Preferred habitats include open grasslands, agricultural fields, and sparse coastal scrub.
San Diego Desert Woodrat	*Neotoma lepida intermedia*	State: SSC Fed: N/A	CWHR: Alkali desert scrub. USFWS: N/A	Elevation range from sea level to 2600 m.	Permanent resident. Houses are constructed with twigs, sticks, cactus parts, rocks, depending on availability of materials.
Stephens's Kangaroo Rat	*Dipodomys stephensi*	State: T Fed: E	CWHR: Alkali desert scrub. USFWS: N/A	Elevation range from sea level to 2600 m.	Permanent resident. Nocturnal and generally found in arid and semiarid environments but are active year-round. Highest densities in grassland communities dominated by forbs and characterized by moderate to high amounts of bare ground, gentle slopes, and well-drained soils. Construct burrows systems which can be as deep as 18 inches. Young are born in spring or early summer with the potential for multiple litters.

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					
Arroyo Chub	*Gila orcutti*	State: SSC Fed: N/A	CWHR: Aquatic, south coast flowing waters. USFWS: N/A	Obligate riverine species. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Native to Southern California coastal streams.
Pacific Lamprey	*Entosphenus tridentatus*	State: SSC Fed:	CWHR: N/A USFWS: N/A	Pacific lampreys share many habitat requirements with Pacific salmonids (e.g., they move from the ocean up streams to reproduce), particularly cold, clear water for spawning and egg incubation.	Adults move from ocean to streams to reproduce between March and late June, but migration has also been documented in January and February. Adults use gravel areas to build nests, while juveniles need soft sediments in which to burrow during rearing.

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.
Tidewater Goby	*Eucyclogobius newberryi*	State: N/A Fed: E	CWHR: Aquatic, south coast flowing waters. USFWS: N/A	Obligate riverine species. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Native to California coastal brackish streams.

Amphibians					
Arroyo Toad	*Anaxyrus californicus*	State: SSC Fed: E	CWHR: Riparian and desert scrub. USFWS: Critical habitat	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.
California Red-legged Frog	*Rana draytonil*	State: SSC Fed: T	CWHR: Riverine. USFWS: N/A	Highly aquatic. Prefers shorelines with extensive vegetation.	Occurs in the vicinity of quiet, permanent pools of streams, marshes, and occasionally ponds.
Coast Range Newt	*Taricha torosa torosa*	State: SSC Fed: N/A	CWHR: Riverine. USFWS: N/A	Optimum habitats are in or near streams in valley-foothill hardwood and hardwood-conifer habitats.	All newts of the genus *Taricha* possess a potent skin toxin "tetrodotoxin."

Western Spadefoot	*Spea hammondii*	State: SSC Fed: S	CWHR: Grassland, fresh emergent wetlands, and vernal pools. USFWS: N/A	Grasslands with shallow temporary pools are optimal habitat for these toads.	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					
Blainville's Horned Lizard	*Phrynosoma blainvillii*	State: SSC Fed: S	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. This species relies on camouflage for protection and often hesitates to move at the approach of a predator.
California Glossy Snake	*Arizona elegans occidentalis*	State: SSC Fed: N/A	CWHR: Desert scrub USFWS: N/A	Prefers open sandy areas with scattered brush, but also found in rocky areas.	Mostly nocturnal, and most active in May and June. Lays from 3 - 23 eggs (more often 5-12) in June and July. Eggs most likely to hatch in late summer and early fall.
Coastal Whiptail	*Aspidoscelis tigris stejnegeri*	State: SSC Fed: N/A	CWHR: Coastal scrub USFWS: N/A	Whiptails are always most common in and around dense vegetation.	Often found associated with sand areas along gravelly arroyos or washes. Diurnal. Mating usually begins in May and females lay eggs shortly thereafter.

Red Diamond Rattlesnake	*Crotalus ruber*	State: SSC Fed: S	CWHR: Coastal chaparral USFWS: N/A	This snake occurs in rocky areas and in dense vegetation.	This snake is active from mid-spring to mid-fall. Primarily nocturnal, not active during cooler periods in Winter. Mating typically occurs in the spring. Females are viviparous.
San Diego Banded Gecko	*Coleonyx variegatus abbotti*	State: SSC Fed: N/A	CWHR: Desert wash, chaparral, coastal scrub. USFWS: N/A	San Diego banded gecko prefers rocky or granite outcrops in coastal scrub and chaparral habitats.	They are active April through October with a peak in May. Active at night, hiding in burrows or under surface objects during daylight. Hibernates through the winter (generally November to February). Breeding occurs during April and May. Females lay 1 or two eggs from May to September.
Two-striped Garter Snake	*Thamnophis hammondii*	State: SSC Fed: S	CWHR: Fresh emergent wetland USFWS: N/A	Found near water in lakes, ponds, and rivers.	Highly aquatic, forage primarily in and along streams. Diurnal. Also active at night and at dusk during hot weather. Mating has been observed in late March and early April. An average litter of about 15 live young are born from July to October.

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 habitat types. 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					
Crotch's Bumble Bee	*Bombus crotchii*	State: SSC Fed: N/A	CWHR: N/A USFWS: N/A	Requires flowers to forage.	Permanent resident. Nests underground; males perch and chase moving objects in search of mates. Found in open grassland and scrub.
Mimic Tryonia	*Tryonia imitator*	State: S2 Fed: N/A	CWHR: N/A USFWS: N/A	Brackish water snail found only in permanently submerged areas in a variety of sediment types near the tideline. Aquatic, brackish marsh, salt marsh.	Permanent resident.

Quino Checkerspot Butterfly	*Euphydryas editha quino*	State: N/A Fed: E	CWHR: N/A USFWS: N/A	Require flowers to forage. Found amongst chapparal and coastal scrublands in Riverside and San Diego Counties in California.	Permanent resident. 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.
Riverside Fairy Shrimp	*Streptocephalus woottoni*	State: N/A Fed: E	CWHR: N/A USFWS: N/A	Vernal pool dependent. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Permanent resident. During dry periods, cysts of the species lay dormant in the soil and hatch when adequate rainfall fills the ponds and pools.
San Diego Fairy Shrimp	*Branchinecta sandiegonensis*	State: N/A Fed: E	CWHR: N/A USFWS: Critical habitat	Vernal pools and similar ephemeral wetland types, including artificial habitats, typically less than 30 cm (12 in) deep.	Permanent resident. 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.
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	State: N/A Fed: T	CWHR: N/A USFWS: N/A	Vernal pool dependent. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Permanent resident. During dry periods, cysts of the species lay dormant in the soil and hatch when adequate rainfall fills the ponds and pools.

Plants**					
Alkali Marsh Aster	*Almutaster pauciflorus*	State: R Fed: N/A Plant Rank: 2B.2	CWHR: N/A USFWS: N/A	Wetland-riparian plant found in meadows and seeps.	Rare in California. Blooms June – October.
Blochman's Dudleya	*Dudleya blochmaniae*	State: R Fed: N/A Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in coastal sage scrub on open, rocky slopes. Often in shallow clays over serpentine or in rocky areas with little soil. 5-290 m.	Perennial herb. Blooms in March and April.
Brand's Star Phacelia	*Phacelia stellaris*	State: R Fed: N/A Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Coastal sand dunes and coastal sage scrub on open areas. 3-370 m.	Annual herb. Blooms March to June.
California Orcutt Grass	*Orcuttia californica*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Vernal-pool habitats in valley grassland, freshwater wetland, and wetland riparian communities.	Annual grass. Blooms April to August.
California Screw Moss	*Tortula californica*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Moss growing on sandy soil. 45-750 m.	Perennial evergreen shrub. Blooms February to April.
Chaparral Ragwort	*Senecio aphanactis*	State: R Fed: N/A Plant Rank: 2B.2	CWHR: N/A USFWS: N/A	Coastal sage scrub and drying alkaline flats. 20-1020 m..	Annual herb. Blooms January to April.
Coast Wallflower	*Erysimum ammophilum*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Drying alkaline flats with sandy openings. 3-320 m.	Perennial herb. Blooms February to June.

Coast Woolly-heads	*Nemacaulis denudata var. denudata*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Coastal dune habitat. 0-5 m.	Annual herb. Blooms April to September. Long, smooth, threadlike reddish flower stems grow horizontally along the sand with tiny, white to pinkish symmetrical flowers in clusters along the stem.
Coastal Dunes Milk Vetch	*Astragalus tener var. titi*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Moist, sandy depressions of coastal bluff scrub, dunes, and prairie along and near the Pacific Ocean; one site on a clay terrace. 1-45 m.	Annual herb. Blooms March to May.
Coulter's Goldfields	*Lasthenia glabrata ssp. coulteri*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Usually found on alkaline soils in playas, sinks, grasslands, vernal pools, coastal salt marshes, and freshwater riparian wetlands. 1-1375 m.	Annual herb. Blooms February to June. Yellow daisy-like flower.
Coulter's Saltbush	*Atriplex coulteri*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Coastal dune, ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m.	Perennial herb. Blooms March to October.
Decumbent Goldenbush	*Isocoma menziesii var. decumbens*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Sandy soils, often in disturbed sites. 1-915 m.	Native Shrub. Blooms April to November.
Del Mar Manzanita	*Arctostaphylos glandulosa ssp. Crassifolia*	State: R Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Sandy coastal mesas and ocean bluffs in chaparral or Torrey pine forest. 30-365 m.	Native Shrub. Blooms December to June.
Desert Sand-verbena	*Abronia villosa var. aurita*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Sandy areas in coastal scrub, chaparral, and desert dunes. 60-1570 m.	Annual herb. Blooms January to September.

Intermediate Mariposas Lily	*Calochortus weedii var. intermedius*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Found in rocky, calcareous soils in chaparral, coastal scrub, and valley and foothill grasslands communities.	Perennial bulbiferous herb. Blooms May to July. Flowers bell shaped, purplish and light cream to yellow, fringed, and flecked.
Jaeger's Milk-vetch	*Astragalus pachypus var. jaegeri*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Dry ridges and valleys and open sandy slopes. Often in chaparral, valley grassland, and foothill woodland communities. 365-1040 m.	Native Shrub. Blooms December to June.
Little Mouse Tail	*Myosurus minimus*	State: R Fed: N/A Plant Rank: 3.1	CWHR: N/A USFWS: N/A	Wetlands in vernal pools. Alkaline soils. 20-640 m.	Annual herb. Blooms from April to May.
Long Spined Spineflower	*Chorizanthe polygonoides var. longispina*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Found in clay soils in chaparral, coastal scrub, meadows, seeps, valley and foothill grasslands, and vernal pools.	Annual herb. Blooms from April to July. Flowers reddish on a red stem that grows along the ground; hairy and spiky in appearance.
Many Stemmed Dudleya	*Dudleya multicaulis*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in Chaparral, valley grassland and coastal sage scrub communities on heavy, often clayey soils or grassy slopes. 1-910 m.	Perennial herb. Blooms April to July.
Mesa Horkelia	*Horkelia cuneata var. puberula*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in chaparral, cismontane woodland, coastal scrub on sandy or gravelly sites. 15-1645 m.	Perennial herb. Blooms February to July.
Munz's Onion	*Allium munzii*	State: T Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Grows on heavy clay soils in grasslands and openings within chaparral, shrublands, or woodlands. 375-1040 m.	Perennial herb. Blooms March to May.

Nevin's Barberry	*Berberis nevinii*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in riparian zones within chaparral, foothill woodland, and valley grassland communities on steep, North facing slopes or in low grade sandy washes. 90-1590 m.	Native Shrub. Blooms March to June.
Nuttall's Acmispon	*Acmispon prostratus*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in coastal strand, sage scrub, and dune communities. 0-20 m.	Annual herb. Blooms from March to June.
Nuttall's Scrub Oak	*Quercus dumosa*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in chaparral and coastal sage scrub communities generally on sandy soils near the coast, sometimes on clay loam. 15-640 m.	Native shrub. Blooms February to March.
Orcutt's Brodiaea	*Brodiaea orcuttii*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in meadows, vernal pools, and small drainages on mesic, clay soils. 30-1615 m.	Perennial herb. Blooms May to July.
Parry's Spineflower	*Chorizanthe parryi var. parryi*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in chapparal and coastal sage scrub communities on dry slopes and flats. Sometimes at interface of 2 vegetation types, such as chaparral and oak woodland on dry, sandy soils. 90-1220 m.	Annual herb. Blooms from April to June.
Parry's Tetracoccus	*Tetracoccus dioicus*	State: R Fed: N/A Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Found in chapparal and coastal sage scrub communities on stony, decomposed gabbro soil. 135-705 m.	Native shrub. Blooms April to May.

Payson's Wild Cabbage	*Caulanthus simulans*	State: R Fed: S Plant Rank: 4.2	CWHR: N/A USFWS: N/A	Found in chapparal and coastal sage scrub communities. Frequently in burned areas, or in disturbed sites such as streambeds and on rocky, steep slopes. Sandy, granitic soils. 90-2200 m.	Annual herb. Blooms from March to May.
Rainbow Manzanita	*Arctostaphylos rainbowensis*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Usually found in gabbro chaparral. 100-870 m.	Native shrub. Blooms December to March.
Robinson's Pepper Grass	*Lepidium virginicum var. robinsonii*	State: R Fed: N/A Plant Rank: 4.3	CWHR: N/A USFWS: N/A	Found in chaparral and coastal sage scrub communities on dry soils, shrubland. 4-1435 m.	Annual herb. Blooms from January to July.
San Bernardino Aster	*Symphyotrichum defoliatum*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Found in wetlands, meadows, and seeps on vernally mesic grassland or near ditches, streams and springs, disturbed areas. 3-2045 m.	Perennial herb. Blooms July to November.
San Diego Ambrosia	*Ambrosia pumila*	State: R Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: Critical habitat	Vernal pool habitats in chaparral, valley grassland, coastal sage scrub, and freshwater wetland communities. Sandy loam or clay soil, sometimes alkaline. In valleys, persists where disturbance has been superficial. 3-580 m.	Perennial herb. Blooms April to October.
San Diego Button-celery	*Eryngium aristulatum var. parishii*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools, usually surrounded by scrub. 15-880 m.	Annual herb. Blooms from April to June.

San Diego Thorn Mint	*Acanthomintha ilicifolia*	State: E Fed: T Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Endemic to active vertisol clay soils of mesas and valleys. Usually on clay lenses within vernal pool, freshwater wetland, valley grassland, coastal sage scrub, or chaparral communities. 25-945 m.	Annual herb. Blooms from April to June.
San Miguel Savory	*Clinopodium chandleri*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Riparian habitat in chapparal, foothill woodland, coastal sage scrub, and valley grassland communities. Rocky, gabbroic, or metavolcanic substrate. 120-975 m.	Perennial herb. Blooms March to July.
Slender-horned Spineflower	*Dodecahema leptoceras*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found on alluvial fans on chaparral and coastal sage scrub communities. Flood deposited terraces and washes on sandy soils. 200-765 m.	Annual herb. Blooms from April to June.
Smooth Tarplant	*Centromadia pungens ssp. laevis*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Found in riparian, alkali meadow and scrub, and in disturbed places. 5-1170 m.	Annual herb. Blooms from April to September.
Southern Tarplant	*Centromadia parryi ssp. australis*	State: R Fed: S Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Margins of marshes and swamps, valley and foothill grasslands, and vernal pools. Often in disturbed sites near the coast at marsh edges. Also, in alkaline soils sometimes with saltgrass. 0-975 m.	Annual herb. Blooms May to November. Flowers yellow with conspicuous brown or black anthers; petals ray shaped and lobed.
Spreading Navarretia	*Navarretia fossalis*	State: R Fed: T Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	San Diego hardpan and San Diego claypan vernal pools. Freshwater marsh in swales, often surrounded by other habitat types. 15-850 m.	Annual herb. Blooms from April to June.

Sticky Dudleya	*Dudleya viscida*	State: R Fed: S Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Chaparral and coastal sage scrub on north and south-facing cliffs and banks. 20-870 m.	Perennial herb. Blooms May to June.
Thread-leaved Brodiaea	*Brodiaea filifolia*	State: E Fed: T Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Vernal-pool habitats in valley grassland, coastal sage scrub, freshwater wetland, and wetland riparian communities. Occurs in openings on clay soils. 15-1030 m.	Perennial herb. Blooms March to June.
White Rabbit-tobacco	*Pseudognaphalium leucocephalum*	State: R Fed: N/A Plant Rank: 2B.2	CWHR: N/A USFWS: N/A	Chaparral and coastal sage scrub on sandy, gravelly sites. 35-515 m.	Perennial herb. Blooms August to November.

^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 - https://www.arcgis.com/home/item.html?id=2c2453ee613f47cdae9dbd0ed7939409

NOAA Fisheries West Coast Critical Habitat Mapper - http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html

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 Unconsolidated Bottom	Consists of deep-water 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 deep-water 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.	Irregularly Flooded water regime.

Estuarine Unconsolidated Shore	Consists of deep-water 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.	Regularly Flooded, and Irregularly Flooded water regimes.
Palustrine Aquatic Bed	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergent, 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 20 acres; (2) active wave formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Wetlands and deep-water 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.	Semi-permanently Flooded water regime.

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 20 acres; (2) active wave formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) 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.	Temporary Flooded, Seasonally Flooded, Semi-permanently Flooded, and Seasonally Flooded-Tidal water regimes.
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 20 acres; (2) active wave formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) 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 20 ft (6 m) in height.	Temporary 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 the following four characteristics: (1) area less than 20 acres; (2) active wave formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.	Woody plants less than 20 ft (6 m) tall are the dominant life form — i.e., the tallest life form with at least 30% areal coverage. The “shrub” life form includes true shrubs, young specimens of tree species that have not yet reached 20 ft (6 m) in height, and woody plants (including tree species) that are stunted because of adverse environmental conditions.	Temporary Flooded, Seasonally Flooded, and Temporary Flooded-Tidal water regimes.
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 20 acres; (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) 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%.	Permanently Flooded and Semi-permanently 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 20 acres; (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 ft (2.5 m) 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 water regime.
Riverine Unconsolidated Bottom	Includes all wetlands and deep-water 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, Permanently Flooded, and Semi-permanently Flooded water regimes.

Riverine Unconsolidated Shore	Includes all wetlands and deep-water 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, Temporary Flooded, and Seasonally Flooded water regimes.
Riverine Streambed	Includes all wetlands and deep-water 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.	Temporary Flooded and Seasonally Flooded water regime.

Source: Classification of Wetlands and Deepwater Habitats of the US
Source: https://www.fws.gov/wetlands/data/mapper.html

Commercial and Recreational Fisheries (Public Health, Fisheries Closure)			
Common Name	**Scientific Name**	**Contact Information**	**Seasonal and Special Considerations, Notes**
N/A	N/A	N/A	N/A
Designated or Protected Lands			
Area Name	**Designation****	**Contact Information**	**Seasonal and Special Considerations, Notes**
San Diego State University - Santa Margarita Ecological Reserve	Ecological Reserve	Reserve Contact (619) 507-0944	The reserve lies on the Riverside/San Diego County line between Temecula and Fallbrook. The 4344-acre reserve encompasses a 5-mile reach of the Santa Margarita River and is not open to the public.
The Wildlands Conservancy - Santa Margarita River Trail Preserve	Ecological Preserve	South Coast Regional Director (909) 732-4029	The preserve is open daily from 8:00 am to 5:00 pm for hiking and equestrian use.
Marine Corps Base Camp Pendleton	Military Base	Wildlife Management (760) 725-9729	Camp Pendleton's Wildlife Management Section oversees 125,000 acres of largely undeveloped training land, including 17 miles of shoreline, three major watersheds and coastal foothills with elevations up to 3,000 feet above sea level.

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

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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 at:
http://www.wildlife.ca.gov/OSPR/Preparedness/Wildlife-Response.

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 Wildlife Branch Director (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 a Memorandum of Understanding (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 (CHRIS) centers, the Native American Heritage Commission (NAHC) 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: Resources-At-Risk - Economic Resources Susceptible to Oiling

Name	Agency/ Company	Contact Info.	Phone
Drinking Water, Power Plant, Wastewater Treatment Facility Intakes and Outflows			
Camp Pendleton Marine Corps Base Water Services	Marine Corps Base Camp Pendleton	Building 22300 USMC Camp Pendleton Oceanside, CA 92058	C: (760) 214-4553 O: (760) 725-0602
Dams and Hydroelectric Facilities			
N/A			
Tide Gates, Aquaculture/Fish Hatcheries			
N/A			
Public Marinas, City/County/State Parks and Beaches			
Santa Margarita River Trail Preserve	The Wildlands Conservancy	4251 River Edge Road Fallbrook, CA 92028	(909) 372-0138
Santa Margarita Ecological Reserve	San Diego State University	45985 Via Tornado Temecula, CA 92590	(619) 507-0944
Redhawk Community Park	City of Temecula	44747 Redhawk Parkway Temecula, CA 92592	(951) 694-6480
Temecula Creek Trail Park	City of Temecula	33662 Channel Street Temecula, CA 92592	(951) 694-6445
Temecula Creek Golf Club	Temecula Creek Inn	44501 Rainbow Canyon Road Temecula, CA 92592	(844) 290-7372
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 Coastal Information Center (Imperial and San Diego Counties) and Eastern Information Center (Inyo, Mono, and Riverside 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

Cultural and Historic Resources			
CHRIS Information Center	**County**	**Email/Website**	**Phone**
South Coastal Information Center San Diego State University Jaime Lennox	Imperial, Riverside, San Diego	jaime@scic.org https://scic.sdsu.edu/	(619) 594-5682
Tribal Resources (State Agency)			
Agency/Contact	**County**	**Email**	**Phone**
Native American Heritage Commission 1550 Harbor Blvd, Ste. 100 West Sacramento, CA	Statewide	NAHC@nahc.ca.gov	(916) 373-3710
Andrew Green		Andrew.Green@nahc.ca.gov	(916) 373-3710
Cody Champagne		Cody.Champagne@nahc.ca.gov	(916) 373-3710
CDFW OSPR Tribal Coordinator			
Cindy Murphy	Statewide	OSPRTribalLiaison@wildlife.ca.gov	(916) 616-4515
CDFW Tribal Liaison			
Sarah Fonseca	Statewide	Tribal.Liaison@wildlife.ca.gov	(916) 902-9000

Local Tribal Contact Information			
Tribal Name and Contact	**County**	**Email**	**Phone**
Agua Caliente Band of Cahuilla Indians Lacy Padilla, Director of Historic Preservation/THPO 5401 Dinah Shore Drive Palm Springs, CA 92264	Riverside, San Diego	ACBCI-THPO@aguacaliente.net	(760) 333-5222 Fax: (760) 699-6919
Augustine Band of Cahuilla Mission Indians Tribal Operations 84-001 Avenue 54 Coachella, CA, 92236	Riverside, San Diego	info@augustinetribe-nsn.gov	(760) 398-4722
Barona Group of the Capitan Grande Art Bunce, Attorney	San Diego	buncelaw@aol.com	(760) 489-0329
Cabazon Band of Cahuilla Indians Doug Welmas, Chairperson 84-245 Indio Springs Parkway Indio, CA 92203	Riverside, San Diego	jstapp@cabazonindians-nsn.gov	(760) 342-2593 Fax: (760) 347-7880
Cahuilla Band of Indians Anthony Madrigal, Tribal Historic Preservation Officer 52701 U.S. Highway 371 Anza, CA 92539	Riverside, San Diego	anthonymad2002@gmail.com	(951) 763-5549
Cahuilla Band of Indians BobbyRay Esparza, Cultural Director 52701 U.S. Highway 371 Anza, CA 92539	Riverside, San Diego	besparza@cahuilla-nsn.gov	(951) 763-5549
Cahuilla Band of Indians Erica Schenk, Chairperson 52701 U.S. Highway 371 Anza, CA 92539	Riverside, San Diego	chair@cahuilla-nsn.gov	(951) 590-0942 Fax (951) 763-2808
Campo Band of Diegueno Mission Indians Ben Dyche, Vice Chairperson 36190 Church Road, Suite1 Campo, CA, 91906	San Diego	bdyche@campo-nsn.gov	(619) 478-9046

Tribal Name and Contact	County	Email	Phone
Campo Band of Diegueno Mission Indians Daniel Tsosie, THPO 36190 Church Road, Suite1 Campo, CA, 91906	San Diego	dtsosie@campo-nsn.gov	(619) 760-6480
Campo Band of Diegueno Mission Indians Marcus Cuero, Chairperson 36190 Church Road, Suite1 Campo, CA, 91906	San Diego	marcuscuero@campo-nsn.gov	(619) 478-9046
Ewiiaapaayp Band of Kumeyaay Indians Robert Pinto, Chairperson 4054 Willows Road Alpine, CA, 91901	San Diego	ceo@ebki-nsn.gov	(619) 368-4382 Fax: (619) 445-9126
Ewiiaapaayp Band of Kumeyaay Indians Michael Garcia, Vice Chairperson 4054 Willows Road Alpine, CA, 91901	San Diego	michaelg@leaningrock.net	(619) 933-2200 Fax: (619) 445-9126
Gabrieleno Band of Mission Indians - Kizh Nation Andrew Salas, Chairperson P.O. Box 393, Covina, CA 91723	Riverside	admin@gabrielenoindians.org	(844) 390-0787
Gabrieleno Band of Mission Indians - Kizh Nation Christina Swindall Martinez, Secretary P.O. Box 393, Covina, CA 91723	Riverside	admin@gabrielenoindians.org	(844) 390-0787
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson P.O. Box 693 San Gabriel, CA 91778	Riverside	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	Riverside	sgoad@gabrielino-tongva.com	(951) 807-0479

Tribal Name and Contact	County	Email	Phone
Gabrielino Tongva Indians of California Tribal Council Robert Dorame, Chairperson P.O. Box 490 Bellflower, CA 90707	Riverside	gtongva@gmail.com	(562) 761-6417 Fax: (562) 761-6417
Gabrielino Tongva Indians of California Tribal Council Christina Conley, Cultural Resource Administrator P.O. Box 941078 Simi Valley, CA, 93094	Riverside	christina.marsden@alumni.usc.edu	(626) 407-8761
Gabrielino-Tongva Tribe Charles Alvarez, 23454 Vanowen Street West Hills, CA 91307	Riverside	Chavez1956metro@gmail.com	(310) 403-6048
Gabrielino-Tongva Tribe Sam Dunlap, Cultural Resource Director P.O. Box 3919 Seal Beach, CA, 90740	Riverside	tongvatcr@gmail.com	(909) 262-9351
Iipay Nation of Santa Ysabel Clint Linton, Director of Cultural Resources P.O. Box 507 Santa Ysabel, CA, 92070	San Diego	clint@redtailenvironmental.com	(760) 803-5694
Inaja-Cosmit Band of Indians Rebecca Osuna, Chairperson 2005 S. Escondido Blvd. Escondido, CA, 92025	San Diego	N/A	(760) 737-7628 Fax: (760) 747-8568
Jamul Indian Village Erica Pinto, Chairperson P.O. Box 612 Jamul, CA, 91935	San Diego	epinto@jiv-nsn.gov	(619) 669-4785 Fax: (619) 669-4817
Jamul Indian Village Lisa Cumper, Tribal Historic Preservation Officer P.O. Box 612 Jamul, CA, 91935	San Diego	lcumper@jiv-nsn.gov	(619) 669-4855
Juaneno Band of Mission Indians Sonia Johnston, Chairperson P.O. Box 25628 Santa Ana, CA, 92799	Riverside, San Diego	sonia.johnston@sbcglobal.net	N/A

Tribal Name and Contact	County	Email	Phone
Juaneno Band of Mission Indians Acjachemen Nation - Belardes Joyce Perry, Cultural Resource Director 4955 Paseo Segovia Irvine, CA 92603	Riverside, San Diego	kaamalam@gmail.com	(949) 293-8522
Kwaaymii Laguna Band of Mission Indians Carmen Lucas, Chairperson P.O. Box 775 Pine Valley, CA, 91962	San Diego	N/A	(619) 709-4207
La Jolla Band of Luiseno Indians Norma Contreras, Chairperson 22000 Highway 76 Pauma Valley, CA, 92061	Riverside, San Diego	N/A	(760) 742-3771
La Posta Band of Diegueno Mission Indians Gwendolyn Parada, Chairperson 8 Crestwood Road Boulevard, CA, 91905	San Diego	LP13boots@aol.com	(619) 478-2113 Fax: (619) 478-2125
Los Coyotes Band of Cahuilla and Cupeño Indians Ray Chapparosa, Chairperson P.O. Box 189 Warner Springs, CA 92086-0189	Riverside, San Diego	N/A	(760) 782-0711 Fax: (760) 782-0712
Manzanita Band of Kumeyaay Nation Angela Elliott Santos, Chairperson P.O. Box 1302 Boulevard, CA, 91905	San Diego	N/A	(619) 766-4930 Fax: (619) 766-4957
Mesa Grande Band of Diegueno Mission Indians Michael Linton, Chairperson P.O. Box 270 Santa Ysabel, CA, 92070	San Diego	mesagrandeband@msn.com	(760) 782-3818 Fax: (760) 782-9092
Morongo Band of Mission Indians Robert Martin, Chairperson 12700 Pumarra Road Banning, CA 92220	Riverside, San Diego	abrierty@morongo-nsn.gov	(951) 755-5110 Fax (951) 755-5177

Tribal Name and Contact	County	Email	Phone
Morongo Band of Mission Indians Ann Brierty, THPO 12700 Pumarra Road Banning, CA 92220	Riverside, San Diego	abrierty@morongo-nsn.gov	(951) 755-5259 Fax (951) 572-6004
Pala Band of Mission Indians Shasta Gaughen, Tribal Historic Preservation Officer PMB 50, 35008 Pala Temecula Rd. Pala, CA, 92059	Riverside, San Diego	sgaughen@palatribe.com	(760) 891-3515 Fax: (760) 742-3189
Pala Band of Mission Indians Christopher Nejo, Legal Analyst/Researcher PMB 50, 35008 Pala Temecula Rd. Pala, CA, 92059	Riverside, San Diego	cnejo@palatribe.com	(760) 891-3564
Pala Band of Mission Indians Alexis Wallick, Assistant THPO PMB 50, 35008 Pala Temecula Rd. Pala, CA, 92059	Riverside, San Diego	awallick@palatribe.com	(760) 891-3537
Pauma Band of Luiseno Indians Temet Aguilar, Chairperson P.O. Box 369 Pauma Valley, CA, 92061	Riverside, San Diego	bennaecalac@aol.com	(760) 742-1289 Fax: (760) 742-3422
Pechanga Band of Indians Steve Bodmer, General Counsel for Pechanga Band of Indians P.O. Box 1477 Temecula, CA 92593	Riverside, San Diego	sbodmer@pechanga-nsn.gov	(951) 770-6171 Fax: (951) 695-1778
Pechanga Band of Indians Tuba Ebru Ozdil, Pechanga Cultural Analyst P.O. Box 2183 Temecula, CA, 92593	Riverside, San Diego	eozdil@pechanga-nsn.gov	(951) 770-6313 Fax: (951) 695-1778
Quechan Tribe of the Fort Yuma Reservation Jill McCormick, Historic Preservation Officer P.O. Box 1899 Yuma, AZ 85366	Riverside, San Diego	historicpreservation@quechantribe.com	(928) 261-0254

Tribal Name and Contact	County	Email	Phone
Quechan Tribe of the Fort Yuma Reservation Jordan Joaquin, President, Quechan Tribal Council P.O. Box 1899 Yuma, AZ 85366	Riverside, San Diego	executivesecretary@quechantribe.com	(760) 919-3600
Ramona Band of Cahuilla Joseph Hamilton, Chairperson P.O. Box 391670 Anza, CA 92539	Riverside, San Diego	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 Diego	jgomez@ramona-nsn.gov	(951) 763-4105 Fax: (951) 763-4325
Rincon Band of Luiseno Indians Cheryl Madrigal, Tribal Historic Preservation Officer One Government Center Lane Valley Center, CA, 92082	Riverside, San Diego	cmadrigal@rincon-nsn.gov	(760) 648-3000
Rincon Band of Luiseno Indians Joseph Linton, Tribal Council/Culture Committee Member One Government Center Lane Valley Center, CA, 92082	Riverside, San Diego	jlinton@rincon-nsn.gov	(760) 803-3548
San Luis Rey Band of Mission Indians Carmen Mojado, Secretary of Government Affairs 1889 Sunset Drive Vista, CA, 92083	Riverside, San Diego	cjmojado@slrmissionindians.org	(760) 917-1736
San Manuel Band of Mission Indians Alexandra McCleary, Senior Manager of Cultural Resources Management 26569 Community Center Drive Highland, CA 92346	Riverside	alexandra.mccleary@sanmanuel-nsn.gov	(909) 633-0054

Tribal Name and Contact	County	Email	Phone
San Pasqual Band of Diegueno Mission Indians Allen Lawson, Chairperson P.O. Box 365 Valley Center, CA, 92082	San Diego	allenl@sanpasqualtribe.org	(760) 749-3200 Fax: (760) 749-3876
San Pasqual Band of Diegueno Mission Indians John Flores, Environmental Coordinator P.O. Box 365 Valley Center, CA, 92082	San Diego	johnf@sanpasqualtribe.org	(760) 749-3200 Fax: (760) 749-3876
Santa Rosa Band of Cahuilla Indians Steven Estrada, Tribal Chairperson P.O. Box 391820 Anza, CA 92539	Riverside, San Diego	sestrada@santarosa-nsn.gov	(951) 659-2700 Fax: (951) 659-2228
Santa Rosa Band of Cahuilla Indians Vanessa Minott, Tribal Administrator P. O. Box 391820 Anza, CA 92539	Riverside, San Diego	vminott@santarosa-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	serranonation1@gmail.com	(909) 578-2598
Serrano Nation of Mission Indians Wayne Walker, Co-Chairperson P. O. Box 343 Patton, CA 92369	Riverside	serranonation1@gmail.com	(253) 370-0167
Soboba Band of Luiseno Indians Joseph Ontiveros, Tribal Historic Preservation Officer P.O. BOX 487 San Jacinto, CA 92581	Riverside, San Diego	jontiveros@soboba-nsn.gov	(951) 663-5279 Fax: (951) 654-4198
Soboba Band of Luiseno Indians Jessica Valdez, Cultural Resource Specialist P. O. Box 487 San Jacinto, CA 92583	Riverside, San Diego	jvaldez@soboba-nsn.gov	(951) 663-6261 Fax: (951) 654-4198

Tribal Name and Contact	County	Email	Phone
Sycuan Band of the Kumeyaay Nation Bernice Paipa, Cultural Resource Specialist 1 Kwaaypaay Court El Cajon, CA, 92019	San Diego	bpaipa2@sycuan-nsn.gov	(619) 445-6917
Sycuan Band of the Kumeyaay Nation Cody Martinez, Chairperson 1 Kwaaypaay Court El Cajon, CA, 92019	San Diego	cmartinez@sycuan-nsn.gov	(619) 445-2613 Fax: (619) 445-1927
Torres-Martinez Desert Cahuilla Indians Gary Resvaloso, TM MLD P.O. Box 1160 Thermal, CA 92274	Riverside, San Diego	grestmtm@gmail.com	(760) 777-0365
Torres-Martinez Desert Cahuilla Indians Alesia Reed, Cultural Committee Chairwoman P.O. Box 1160 Thermal, CA 92274	Riverside, San Diego	lisareed990@gmail.com	(760) 397-0300
Torres-Martinez Desert Cahuilla Indians Thomas Tortez, Chairperson P.O. Box 1160 Thermal, CA 92274	Riverside, San Diego	thomas.tortez@tmdci.org	(760) 397-0300 Fax (760) 397-8146
Torres-Martinez Desert Cahuilla Indians Abraham Becerra, Cultural Coordinator P.O. Box 1160 Thermal, CA 92274	Riverside, San Diego	abecerra@tmdci.org	(760) 397-0300
Torres-Martinez Desert Cahuilla Indians Mary Belardo, Cultural Committee Vice Chair P.O. Box 1160 Thermal, CA 92274	Riverside, San Diego	belardom@gmail.com	(760) 397-0300

Tribal Name and Contact	County	Email	Phone
Viejas Band of Kumeyaay Indians Ray Teran, Resource Management Director 1 Viejas Grade Road Alpine, CA, 91901	San Diego	rteran@viejas-nsn.gov	(619) 659-2312
Viejas Band of Kumeyaay Indians Ernest Pingleton, Tribal Historic Officer 1 Viejas Grade Road Alpine, CA, 91901	San Diego	epingleton@viejas-nsn.gov	(619) 445-3810

Appendix A
GRP Development and Contributors

The Santa Margarita 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, Regions 9 and 10
U.S.D.A. Forest Service
U.S. Department of the Interior
U.S. Fish and Wildlife Service
Marine Corp Base Camp Pendleton

State Representatives
Calif. Department of Fish and Wildlife, Office of Spill Prevention and Response
Calif. Environmental Protection Agency
Calif. Office of Emergency Services
Calif. Department of Fish and Wildlife, Region 5
CALFIRE State Fire Marshal's Office, Pipeline Safety Division
Native American Heritage Commission
University of California San Diego

Local Representatives
Santa Barbara County Public Health
San Diego County Parks and Recreation

Tribal Representatives
Bear River Band of Rohnerville Rancheria
San Manuel Band of Mission Indians

Industry and Response Contractors
Patriot Environmental Services
Marine Spill Response Corporation
Union Pacific Railroad
Burlington Northern Santa Fe Railroad
Kinder Morgan Pipeline
Crimson Pipeline
Shell Pipeline Company
Shell Oil Company

Environmental Non-Governmental Organizations
Trout Unlimited

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Appendix B
Site Description

1.0 Overview

This section provides a description of the physical features, hydrology, and climate, found along the Santa Margarita River corridor and includes an overview of the oil spill risks in the region. The Santa Margarita River, a southwestward-flowing river, is approximately 31 miles long. The Santa Margarita River is a unique area because it is the least disturbed watershed along the southern California coast and is the longest free flowing, undammed river in the region. The lower 27 miles of the Santa Margarita River and its estuary are not channelized and support a large population of federally- or state-listed endangered species (County of Riverside et al., 2018). The mainstem of the Santa Margarita River begins at the confluence of Temecula Creek (USGS 1981*) and Murrieta Creek (USGS 1981**) in southwestern Riverside County, east of Interstate 15, 0.5 miles southeast of Temecula (USGS 1981*). The river is formed when the two creeks merge (Johnson 2014). It flows southwest through Temecula Canyon at the south end of the Santa Ana Mountains. Along its lower 10 miles the river forms a large floodplain as it crosses Camp Pendleton Marine Corps Base. It enters the Pacific Ocean approximately 3 miles northwest of Oceanside.

1.1 Physical Features

The Santa Margarita River Watershed encompasses a total area of 741+/- square miles, spanning the southern border of Riverside County and the northern border of San Diego County. It includes parts of the Cleveland National Forest, the Santa Rosa Plateau Ecological Preserve, and Agua Tibia Wilderness. It also includes portions of the Pechanga, and Cahuilla Indian Reservations, the cities of Murrieta, Temecula, the community of Fallbrook, and portions of the Marine Corps Base Camp Pendleton. The principal land uses in the Santa Margarita Watershed are open space, developed land, agricultural land, and military facilities that include open space. Open space in the Santa Margarita Watershed plays a vital role as a wildlife corridor between the Santa Ana Mountains and Inland San Diego and provides habitat to hundreds of native species and critical habitat for threatened and endangered species including the southern California steelhead (*Oncorhynchus mykiss*) (California Waterboards, retrieved 01/15/2021).

The Middle Santa Margarita River Subwatershed includes two major basins, drained by Murrieta and Temecula Creeks. Murrieta Creek flows between two lengthy strands of the Elsinore fault zone on land that has been down dropped, relatively, by the faulting. Murrieta Creek flows southeasterly from the Wildomar area through the cities of Murrieta and Temecula to the confluence with Temecula Creek. Temecula Creek has a drainage area of 366 square miles, with steep rugged topography in the Palomar and Thomas Mountain areas and rolling hills below. At the Elsinore fault zone, located at the top of Temecula Gorge and near the City of Temecula, Temecula and Murrieta Creeks merge forming the Santa Margarita River. The Temecula Gorge and Santa Ana Mountains just south of the confluence of the Temecula and Murrieta Creeks serve as a natural barrier delineating the Middle and Lower Santa Margarita River Subwatersheds (Rancho California Water District 2014). From this point, the river flows through the Temecula Gorge and then west into San Diego County for approximately thirty miles. The mainstem of the Santa Margarita River flows through undeveloped, protected lands. The river has unusual habitats with the upper mainstem being one of the few remaining natural gorge rivers in southern California and the lower mainstem has expansive riparian strips, some up to almost a mile across (Stein et al., September 1998).

Along its lower 10 miles the river forms a large floodplain as it crosses Marine Corps Base Camp Pendleton before ultimately draining to the Santa Margarita River Estuary and into the Pacific Ocean. Marine Corps Base Camp Pendleton occupies approximately 125,000 acres, with more than 17 miles of coastline, in northwestern San Diego County. Less than 20% developed, Camp Pendleton stands as an ecological buffer between the heavily urbanized areas that abut the northern and southern borders of the Base. Within Camp Pendleton, tidal estuaries, riparian corridors, coastal plains, rolling hills and canyons, and mountains that rise in elevation to 2,700 feet above sea level provide essential habitat for over 1,100 species of flora and fauna, to include 19 federally listed threatened and endangered species and a free roaming herd of bison (Marine Corp Base Camp Pendleton, retrieved 02/17/2021).

Hydrology

Draining 741+/- square miles, the Santa Margarita Watershed is the second largest river basin on the southern California coastal plain (Stein et al., 1998). The watershed is comprised of the following waterbodies: Diamond Valley Lake, Lake Skinner, Vail Lake, Murrieta Creek, Temecula Creek, the Santa Margarita River, and the Santa Margarita River Estuary (County of Riverside et al., 2018). The upper watershed consists of the 222 square mile Murrieta Creek Subwatershed and the 366 square mile Temecula Creek Subwatershed. Although there are two dams in the upper watershed, both dams must release water that roughly corresponds to natural flows in the tributaries that they are on. As a result, the flow of water in the Santa Margarita River is very close to what it would be in the absence of those two dams (SDSU, retrieved 02/10/2021).

Below the confluence of Murrieta and Temecula Creeks, the primary tributaries of the Santa Margarita River mainstem are Rainbow Creek on the left (heading downstream) and Sandia and De Luz Creeks on the right. The two latter creeks drain the Santa Rosa Plateau (Shapiro 1997). The Lower Santa Margarita River flows through the Marine Corps Base Camp Pendleton and discharges to the Pacific Ocean through the Santa Margarita Estuary (California Waterboards, retrieved 01/15/2021).

Climate

Climate in the Santa Margarita River watershed is characteristic of a Mediterranean climate, experiencing hot dry summers and mild, wet winters. This semi-arid, coastal climate is typical of southern California. The lower watershed's climate is controlled by the Pacific Ocean, which provides light to moderate precipitation during the winter months (November to April). Occasional heavy rains, creating major flooding events for this region, typically occur in the winter months between December and March. Temperatures generally range between 33° and 90° Fahrenheit (F). The region is exposed to dry easterly Santa Ana winds in the fall and heavy fog in the summer. Frosts are light and infrequent, occurring occasionally in winter, with the growing season ranging from 345 to 360 days. Temperatures are cooler near the ocean and warmer inland. On the coast, the average high temperature is 67° F, and the average low is 53° F. Inland, the average high is 80° F, and the average low is 47° F. Precipitation occurs mostly between December and April, averaging 10.4 inches in the City of Oceanside and approximately 14 inches in the City of Wildomar. Most precipitation is associated with low intensity storms in winter and spring (USBR 2010).

Tides and Currents

The Santa Margarita River Estuary is a coastal lagoon at the mouth of the Santa Margarita River that is typically subject to tidal influence from the Pacific Ocean but can become separated from the ocean by a sand berm. The configuration of the lower estuary near the mouth area can change from one year to another with the shifting sand berm. The area of tidal influence extends from the ocean to slightly

above the Stuart Mesa Road bridge that crosses the Santa Margarita River approximately 1.5 miles upstream. The main riverine channel of the estuary is approximately 7,000 feet long with a width ranging from 125 to 1,400 feet. The Santa Margarita River Estuary extends to the upstream limit of the tidal marine circulation and occupies 190 acres comprising several different types of coastal wetlands differentiated by the degree of inundation and salinity (USBR et al., 2016).

1.2 Risk Assessment

The Santa Margarita River is an important hydrological resource in southern California with natural, cultural, and historical resources, all at risk of injury from oil spills. The natural and beneficial uses of the Santa Margarita River and associated riparian forests, canyons, and floodplains include fish and wildlife foraging, migration, and breeding; drinking water conveyance and storage; groundwater recharge; and military activities. Approximately 70 species of special concern (rare, threatened, or endangered) regularly inhabit the watershed, including 30 that are currently protected under the federal Endangered Species Act (Stein et al., September 1998). The potential risks to these resources include oil transportation via vehicles and roads, pipelines, railroad, military aircraft refueling, and other risk factors. Prevention of and preparation for oil spills impacting this river is critical.

Road Systems

Roadways that run adjacent to or cross over rivers and/or have storm drains pose an oil spill risk. The Santa Margarita River is vulnerable to incidents occurring on several highways and road crossings. Interstate 15 runs north to south parallel with Murrieta Creek and over the Santa Margarita River at its origins with the confluence of Temecula and Murrieta Creeks. California Highway 79 runs east to west and parallels Temecula Creek in its final reach before turning into the Santa Margarita River. From Temecula, the Santa Margarita River runs through a canyon with rural roads running parallel or occasionally crossing the river. Once onto Camp Pendleton, there are three road crossings over the Santa Margarita River before it flows under the San Diego Freeway, Interstate 5, and enters the Pacific Ocean. Commercial trucks and military vehicles and equipment that can contain hundreds to thousands of gallons of fuel and oil utilize these roadways daily. An accident on these roadways, especially with commercial fuel trucks, can result in spilled oil reaching the river.

Camp Pendleton Military Base

The lower 10 miles of the Santa Margarita River run through MCB Camp Pendleton before it meets the Pacific Ocean. A diverse array of training occurs within the natural setting of Camp Pendleton to promote the combat readiness of the Marines and other military personnel who call the base home. Camp Pendleton is the only West Coast military installation where comprehensive air, sea, and ground assault training is routinely executed (Marine Corp Base Camp Pendleton, retrieved 02/17/2021). Several roads cross over the river on the base and there is an active airfield adjacent to the river. The Marine Corp Air Station Camp Pendleton, or Munn Field, supports a large fleet of military helicopters, a wide variety of other Marine Corps Units, and visiting aircraft from other branches of the Armed Forces. Jet fuel to supply the airfield poses a potential risk to the Santa Margarita River. The operation of other military equipment and exercises on base may add risk to fuels and hydraulic fluid reaching the river.

Railroad

The only rail routes pass over the Santa Margarita River near the Pacific Ocean along the I-5 freeway. No other rail lines run over or next to the river (ERMA Southwest, retrieved 01/28/2021). Whereas the risk is low of a derailment and it can only occur in one location in relation to the GRP boundary, if an oil spill were to occur, an incoming tide could carry oil about 1.5 miles upstream.

Pipelines

Kinder Morgan operates two different hazardous liquid pipelines running through Camp Pendleton, crossing under or next to the Santa Margarita River. The upstream-most pipeline is just downstream of Basilone Road. A pipeline rupture at this location could send oil downstream approximately 7.5 miles to the Pacific Ocean. The lower pipeline crossing, if ruptured, would contaminate the lower 5 miles of river to the ocean (ERMA Southwest, retrieved 01/28/2021).

Other Spill Risks

Other potential spill risks in the area include road runoff during rain events, construction activities where heavy equipment is being operated, and earthquakes. The GRP boundary is in the vicinity of three earthquake fault lines: Elsinore, San Jacinto, and San Andreas. The Elsinore fault runs through the cities of Temecula and Lake Elsinore and is a relatively quiet fault whereas the San Jacinto and San Andreas faults are more active.

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. OSPR values stakeholder input and welcomes suggestions about how the 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
Jan. 14/2026	1	Updated the Contact Sheet, contacts in Chapter 2, 4, Appd. F, and the Response Strategy Sheets in Chapter 3	Anna Burkholder, David Lyons

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Appendix E
Other Relevant Emergency Response Plans

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, and provides future mitigation planning and maintenance of existing plan. (Riverside County, July 2018)

City of Temecula Local Hazard Mitigation Plan, Annex to the Riverside County LHMP

The City of Temecula's efforts to update the 2017 Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan began in 2016. The goal was to bring all members of the Riverside County Operational Area (county, cities, special districts, and tribes), along with local businesses and interested members of the public, together to create a multi-jurisdictional plan that identifies and assesses the various hazards in the entire county of Riverside. The desire was to have the county, along with the cities, special districts, and tribes develop an all-inclusive plan, rather than have each city, special district, and tribe develop their own plan. While the county of Riverside is responsible for adopting the 2017 Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan, the City of Temecula is responsible for adopting the annex to the county's plan – more specifically, the 2017 City of Temecula Local Hazard Mitigation Plan Annex.

The city's current planning process evaluated the potential impact of each identified hazard on the county, cities, special districts, and tribes. All participating jurisdictions helped establish a list of potential mitigation efforts (via their LHMP Annex) and prioritized those efforts based on the needs of their jurisdiction. In addition, each participating jurisdiction developed a specific hazard mitigation strategy based on information from 2012 through 2017. (City of Temecula, June 2017)

San Diego County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan

This Multi-Hazard Mitigation Plan for San Diego County, California (the Plan), was prepared with input from county residents, responsible officials, the San Diego County Water Authority, the Alpine and Rancho Santa Fe Fire Protection Districts, the Padre Dam Municipal Water District, the San Diego Foundation, Local Governments for Sustainability (ICLEI), the California Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA). The process to develop the Plan included over a year of coordination with representatives from all of the jurisdictions in the region. The Plan will guide the region toward greater disaster resilience in harmony with the character and needs of the community.

Technological hazards involving hazardous material releases can occur at facilities (fixed site) or along transportation routes (off-site). They can occur as a result of human carelessness, technological failure, intentional acts, and natural hazards. When caused by natural hazards, these incidents are known as secondary hazards, whereas intentional acts are terrorism. Hazardous materials releases, depending on the substance involved and type of release, can directly cause injuries and death and contaminate air, water, and soils. While the probability of a major release at any particular facility or at any point along a known transportation corridor is relatively low, the consequences of releases of these materials can be very serious.

Numerous facilities in San Diego County generate hazardous wastes in addition to storing and using large numbers of hazardous materials. There are a total of 12,747 sites with permits to store and maintain chemical, biological, and radiological agents, and explosives in the county. Although the scale is usually small, emergencies involving the release of these substances can occur daily at both these fixed sites and on the county's streets and roadways. The major transit corridors of Interstates 5 and 805 have been the locations of the majority of incidents the Hazardous Incident Response Team (HIRT) has responded to in recent years. (San Diego County, October 2017)

Local Emergency Planning Committee Hazardous Materials Emergency Plan's

There are six 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 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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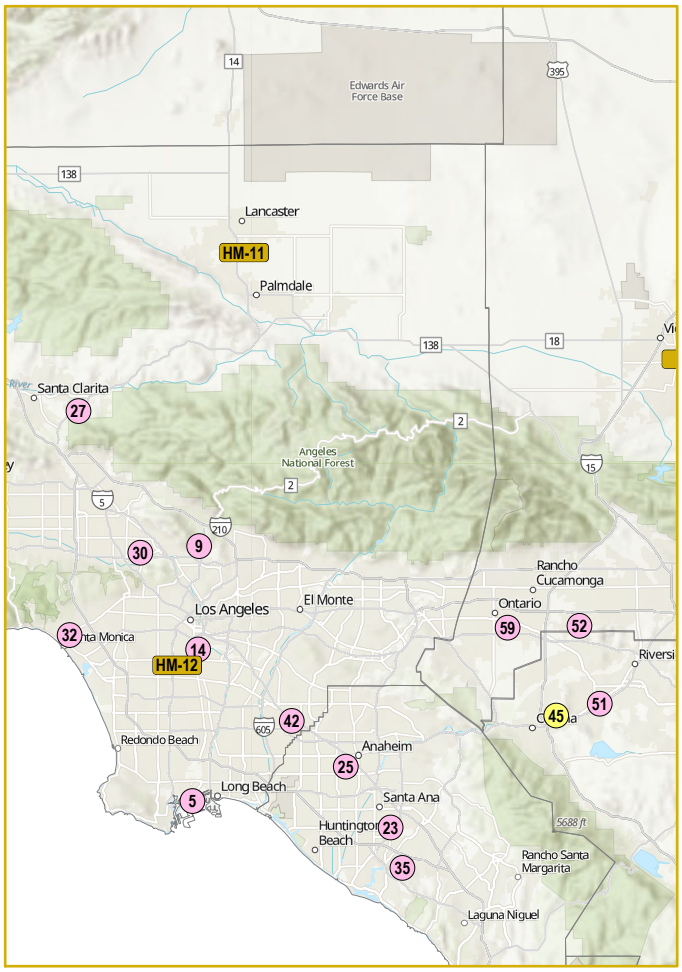
Table F-1: Local/Regional Asset Resources Table

Local/Regional Assets

Resource	Home Base/Owner	Contact Information/ Comments
Response Trailers (in addition to those granted by OSPR or supplied by Oil Spill Response Organizations)		
N/A		
Water Supplies for Firefighting		
CALFIRE/Riverside County Fire		County Fire Dispatch (951) 657-2161
Fallbrook Fire Department		(760) 723-2006
CALFIRE/San Diego County Fire		County Fire Dispatch (619) 590-3100
Foaming Operations		
A-FFF 30,000 gallons	Chevron El Segundo Refinery Dispatch	24-Hour Emergency Number (310) 615-5172
CALFIRE/Riverside County Fire		County Fire Dispatch (951) 657-2161
Camp Pendleton Fire		(760) 725-4321
Air Monitoring Equipment		
CALFIRE/Riverside County Fire		County Fire Dispatch (951) 657-2161
CALFIRE/San Diego County Fire		County Fire Dispatch (619) 590-3100
Fallbrook Fire Department		(760) 723-2006
Camp Pendleton Fire		(760) 725-4321
Communication Equipment: Portable Radio/Mobile Repeaters		
San Diego County Sheriff		County Sheriff Dispatch (760) 451-3100
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	U.S Marine Corp Base, Camp Pendleton	(760) 725-4321
HazMat Team - Type 2	Riverside County Fire	(951) 358-5055 24-hour emergencies
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		
San Diego Life Guard Services	San Diego River Rescue Team	(619) 221-8899
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
Camp Pendleton Swift Water Rescue Team	Camp Pendleton Fire Department	(760) 725-4321
Oceanside Fire Department, Stations 1 and 2, Coastal	Oceanside Fire Department	(760) 435-4100

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



State of California
CALIFORNIA OFFICE OF EMERGENCY SERVICES

Certified Hazardous Material Teams

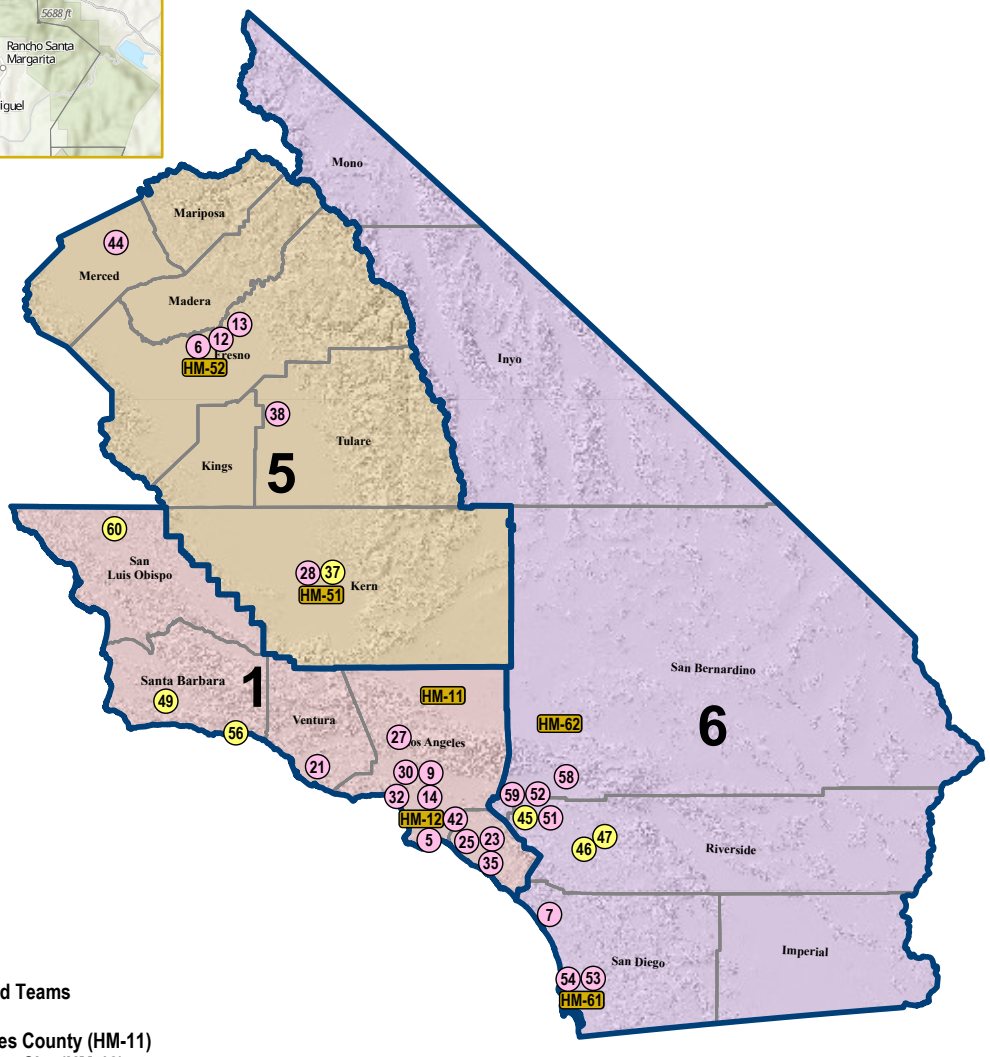
By Type as of April, 2018

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
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Source: Cal OES Hazardous Materials Div
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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

PA Participating Agency

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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