UPPER SACRAMENTO RIVER

Siskiyou and Shasta Counties

GEOGRAPHIC RESPONSE PLAN

OIL SPILL RESPONSE

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

OFFICE OF SPILL PREVENTION AND RESPONSE

MARCH 2020

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Spill Response Contact Sheet

*** Staffed 24-Hours/Day**

Immediate Emergency Notifications for Oil Spills Call Upon Discovery of Spill	
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)	**Shasta County Environmental Health Division (530) 225-5789, Siskiyou County Environmental Health Division (530) 841-2100**
Federal Notification - National Response Center (as appropriate): If the spill equals or exceeds CERCLA Federal Reportable Quantites ‡Federal Reportable Quantities: http://www.epa.gov/superfund/policy/release/rq/index.htm	**(800) 424-8802***

Infrastructure Emergency Notification: Promptly Notify	
Railroad, Pipeline, Fixed Facilties	
Union Pacific Railroad (UPRR) Response Management Communications Center (RMCC)	**(888) 877-7267***
BNSF Railway, Resource Operations Center (ROC) and Service Interuption Desk (SID)	**ROC (800) 832-5452* SID (817) 352-2833***

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* CHP Northern Division (530) 242-4300**
California Department of Transportation District 2 - Redding	**(530) 225-3016* (530) 225-3256**
U. S. Bureau of Reclamation Shasta Dam and Keswick Dam	**(530) 247-8588* (530) 247-8537* (530) 275-1554**
U.S.D.A. Forest Service Shasta-Trinity National Forest ECC	**(530) 226-2400* (530) 226-2499***
Bureau of Land Management Northern California District Office	**(530) 224-2100 (530) 941-1741***
Siskyou County Power Authority Box Canyon Dam	**(530) 842-8220**
Castle Crags State Park NORCOM Dispatch and Park Entrance	**(916) 358-1310* (530) 235-0956**

*** Staffed 24-Hours/Day**

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*

Oil Spill Response Agency Notifications (Continued): Promptly Notify

Local Government - Shasta County	
Shasta County Sheriff's Office and OES (SHASCOM)	911* or (530) 245-6540*
Shasta Cascade Hazardous Materials Response Team (SCHMRT)	(530) 225-2411
Shasta County Environmental Health Division	(530) 225-5789
Shasta County Public Works	(530) 225-5661
Shasta County Air Quality Management District	(530) 225-5674

Local Government - Siskiyou County	
Siskiyou County Sheriff's Office	911* or (530) 841-2900*
Mt. Shasta Police Department	(530) 926-7540 (530) 841-2900*
Dunsmuir/Castella Fire Department	911* (530) 235-2551
Mt. Shasta Fire Department	911* (530) 926-7546
Siskiyou County Environmental Health Division	(530) 841-2100
Siskyou County OES *Jasen Vela*	(530) 841-2900* (530) 598-4241
Siskiyou County Public Works	(530) 842-8250
Mt. Shasta, Weed, & Dunsmuir Recreation and Parks District	(530) 926-2494
Siskiyou County Air Pollution Control District	(530) 841-4025

U.S. Environmental Protection Agency	
Emergency Response	(800)-300-2193*

CAL FIRE	
Shasta-Trinity Unit (Shasta County Fire)	911/(530) 243-1434* (530) 225-2418
Siskiyou Unit (Siskiyou County Fire)	911/(530) 842-3515* (530) 842-3516
Office of the State Fire Marshall 24-Hour Duty Chief	(916) 323-7390*
On-Call Pipeline Safety Engineer	
Doug Allen	(916) 591-0699

*** Staffed 24-Hours/Day**

Affected or Adjacent Agencies to Notify Early-On as Appropriate; If In Doubt, Notify

Utilities, Dams, Bridges, Hydroelectric, Infrastructure (non-emergency)	
Sierra Pacific Industries *Nick Kroencke*	(530) 356-1292*

Water Districts, Water Intakes and County Water Agencies	
City of Shasta Lake *Tony Thomasy*	(530) 275-7488 (530) 227-0022*
Mountain Gate Community Services District *Tim Heck*	(530) 524-8060 (530) 275-4506*

Traffic Control	
Statewide Traffic Safety and Signs	(714) 468-1919

Additional Contact Information as Appropriate; If In Doubt, Notify

Federal Agencies	
USDA Forest Service Forest Spill Coordinator, Ms. Belinda Walker, Asst. Regional Environmental Engineer	Cell: (909) 229-5201

State Agencies	
Calif. Environmental Protection Agency: Greg Vlasek, Assistant Secretary for CUPA's and Emergency Response	(916) 322-7188

Federal Agencies	
U.S. Department of the Interior Ms. Janet Whitlock	(415) 296-3355
U.S. Fish & Wildlife Service	
Livingston Stone National Fish Hatchery	(530) 275-0549
USFWS, Pacific Southwest Region	(916) 943-8529*
Pacific Southwest Regional Office, Spill Response Coordinator *Damien Higgins*	(916) 414-6548 (916) 943-8529 cell
Local USFWS Spill Responder *Toby McBride*	(916) 414-6603 (916) 798-7904 cell
NOAA Scientific Support Coordinator	(206) 526-6317*
FEMA Region IX, 24-Hour Duty Officer	(510) 627-7250*
Dept. of Health and Human Services	(404) 498-0120*

State Agencies	
CAL FIRE - Office of the State Fire Marshal, Pipeline Safety Division, Sacramento	(916) 263-6300
California Department of Fish and Wildlife - Northern Region	(530) 225-2300
Central Valley Regional Water Quality Control Board Redding Office	(530) 224-4845
California Department of Water Resources - Red Bluff	(530) 529-7300
California Department of Toxic Substance Control - Duty Officer	(800) 852-7550* (800) 260-3972

State and Federally Managed Lands	
Cantara / Ney Springs Wildlife Area	(530) 225-2300

*** Staffed 24-Hours/Day**

Additional Contact Information as Appropriate (Continued) ; If In Doubt, Notify

Tribal and Historic Contacts	
Native American Heritage Commission (NAHC)	**(916) 373-3710**
Katy Sanchez	**(916) 373-3712**
Steven Quinn	**(916) 373-3710**
Amy Huberland, Northeast Information Center, California Historic Resources Information System (CHRIS)	**(530) 898-6256**

**** Individual tribal contacts can be found on page 115**

Emergency Response Resources	
CHEMTREC 24-Hour Hotline	**(800) 424-9300***
Poison Control Centers 24-Hour Hotline	**(800) 876-4766***

CHEMTREC provides emergency information for chemical releases and fire control measures, assistance with chemical identification, and notification of manufacturer and/or shipper.

Poison Control Centers provide poison/exposure information to emergency personnel and the public and has regional hospital capabilities for exposed victims. Calls are automatically forwarded to the nearest center: Sacramento, San Francisco, Fresno, and San Diego.

†Cal OES State Warning Center
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 Cal OES/Warning Center is required.

‡National Response Center
All spills of oil or hazardous substance into navigable waters as defined by the Clean Water Act (CWA) and all spills of a reportable quantity of hazardous substances (40 CFR Part 302) must be immediately reported by the spiller to the National Response Center (NRC). The web address for reportable quantities under CERCLA can be found here: https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release. The NRC will contact appropriate local US Coast Guard (USCG) or Environmental Protection Agency (EPA) offices. Notifying state offices does not relieve the spiller from federal requirements to notify the NRC nor vice versa.

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.

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 "portrait" orientation, paper size 11 x 17:

- Chapter 3, Figure 3-1 pages 23-24

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

- Chapter 3, Table 3-1 pages 27-40

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

- Chapter 3, Figure 3-5, pages 153-154
- Chapter 4, Table 4-1 on pages 199 – 210

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

- Appendix F, Table F-2, pages 237-238

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

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Upper Sacramento 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 releases or threatened oil spill releases to the Upper Sacramento River. This GRP was developed to facilitate oil spill response preparedness and to expedite spill response activities in the GRP coverage area and is meant to aid the response community during the initial phase of an oil spill. The GRP provides tactical response strategies and identifies available access to the shoreline. By using this document, it is hoped that immediate and proper action can be taken to reduce potential impacts that oil may have on the environment as well as any sensitive resources in the area.

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

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

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

- Providing tactical response strategies to be implemented during the early hours of an oil spill.
- Providing detailed information for booming and damming strategies that could be utilized to minimize impacts on predetermined sensitive resources.

- Providing sufficient information for responders to prepare initial ICS 201, 208, and 232 documents and the initial Incident Action Plan (IAP).

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

Purpose

1. This GRP establishes spill response guidance for oil spill incidents occurring within the Upper Sacramento River from Box Canyon Dam, south of the city of Mt. Shasta, down to Keswick Dam, north of the city of Redding; within Siskiyou and Shasta Counties and Local Emergency Planning Committee (LEPC) Region III.

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

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

Response Strategy Selection

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

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

affected by an oil spill. Likewise, this GRP is not intended to be an exhaustive list for all of the tactical strategies that could, or should, be implemented during a spill.

Guiding Principles for GRPs

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

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

3. Environmental conditions (wind, currents, and adverse weather), 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, and tribal, 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.

Information on oil spill response methods including booming, damming, and physical herding of oils can be found in Section 1 of the GRP CM. Shoreline countermeasures, Shoreline Cleanup Assessment Technique (SCAT), and cleanup endpoints can be found in Section 2. This includes information on oiled debris or soil removal, vacuuming, pressure washing, and dry ice blasting. Section 3 of the GRP CM includes a section on Applied Response Technologies and Oil Spill Cleanup Agents to augment cleanup efforts. Section 4 discusses waste management including the handling of dead oiled wildlife, fish and invertebrates. Section 5 provides web links to information resources such as hazardous materials response, flow data, and National Oceanic and Atmospheric Administration (NOAA) and U.S. Fish and Wildlife Service (USFWS) resources. Sections 6 and 7 provide information on mutual aid and volunteers, respectively. Section 8 discusses the Natural Resource Damage Assessment Process, and Section 9 outlines procedures for managing 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 drills 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.

Upper Sacramento River Geographic Response Plan

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Upper Sacramento 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 Upper Sacramento River within Siskiyou and Shasta Counties (Figure 1-1). The upper extent of the GRP boundary begins at Box Canyon Dam on Lake Siskiyou, south of the city of Mt. Shasta (Figure 1-2). The lower extent terminates at Keswick Dam, northwest of the city of Redding. The defined boundary encompasses an area of approximately 68 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 Upper Sacramento River GRP, this includes emergency plans for Shasta and Siskiyou Counties and the State Oil Spill Contingency Plan.

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 environment inland of the coastal 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. National Contingency Plan (NCP) – 40 CFR §300.120.

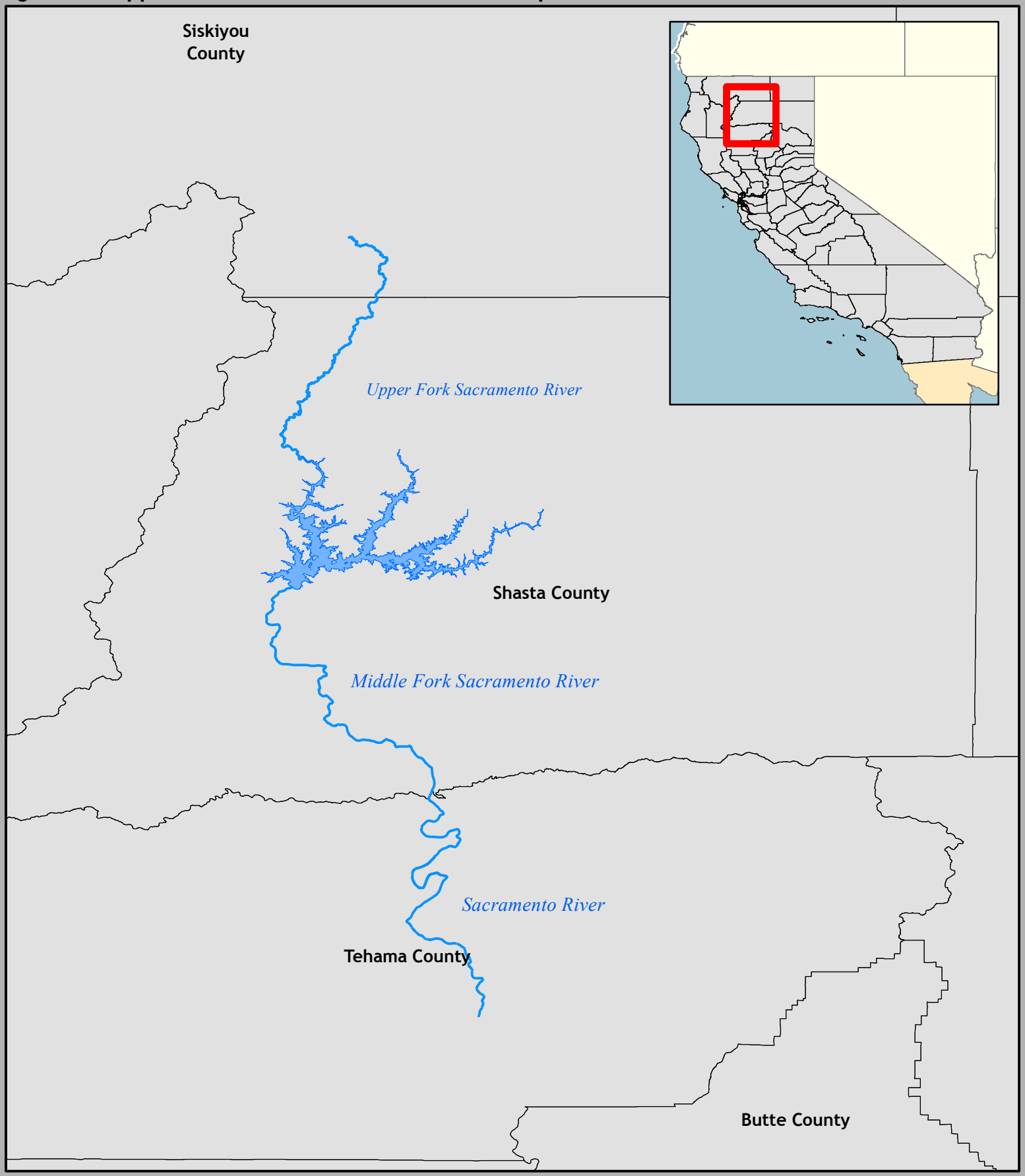
Responsible Party

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. 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: Upper Sacramento 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. Gustafson
Date Created: 01/17/19

NAD_1983_California_Teale_Albers

Upper Sacramento River Geographic Response Plan Location

0 7.5 15 Miles

0 10 20 Kilometers

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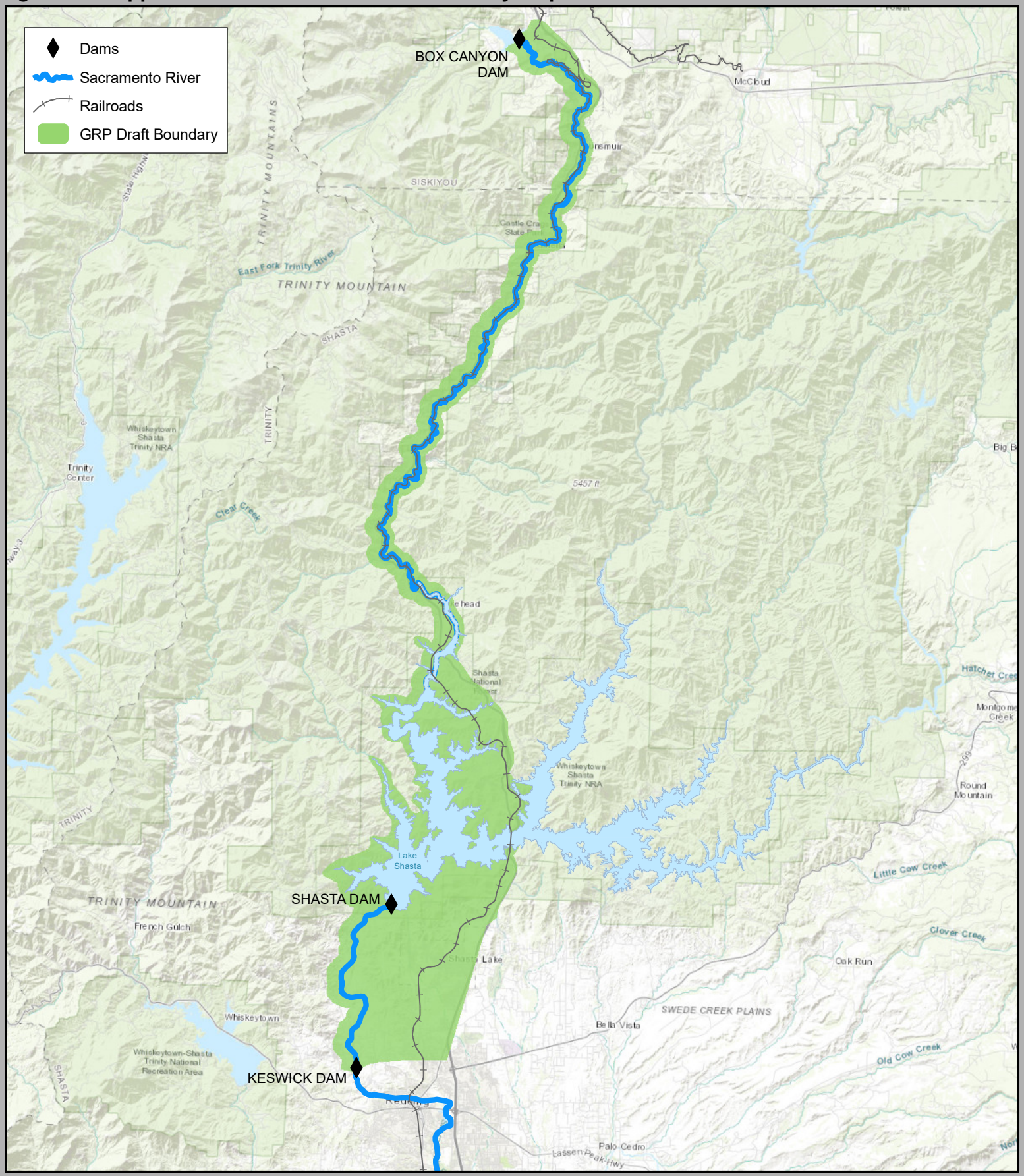
Figure 1-2: Upper Sacramento River GRP Boundary Map



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

Author: S. Paine, CDFW
Date Created: 2/26/2020
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Boundary.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Boundary

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0 5 10 Kilometers

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Upper Sacramento 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 and responders on scene. As additional IC's from local, state, and federal agencies, or the RP, arrive on-scene, they will be incorporated into a UC, as appropriate.

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

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

Incident Objectives

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

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

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

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

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

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

2.1 Safety

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

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

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

Responder Safety

- Resist Rushing In! Respond safely, slowly, and methodically.
- Approach cautiously from uphill, upwind, or upstream.
- Stay clear of vapor, fumes, smoke, and spills.
- Don't assume that gases or vapors are harmless because of lack of a smell – odorless gases or vapors may be harmful.
- Vapors may cause dizziness or asphyxiation without warning.
- Fire may produce irritating, corrosive and/or toxic gases.
- Many gases/vapors are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks) – control ignition sources.
- Keep out of low areas.

- Enter only when wearing appropriate protective gear and in accordance with your training, resources and capabilities.
- Establish an ICP and lines of communication.
- Continually reassess the situation and modify the response accordingly.
- Consider your own safety first, then the safety of people in the immediate area. Rescue attempts and protecting the environment or property must be weighed against you becoming part of the problem.

Area Assessment

- Is there a fire, spill, or leak?
- What are the weather conditions?
- What is the terrain like?
- Who/what is at risk – people, the environment, or property?
- What actions should be taken – evacuation or shelter-in-place?
- What resources are required (human and equipment)?
- What can be done immediately?

Site Safety

- Secure the scene:
    - Isolate the area and protect yourself and others.
- Use the Department of Transportation (DOT) Emergency Response Guidebook (ERG), ERG App or the Wireless Information System for Emergency Responders (WISER) App recommendations for establishing safe distances and safety information. See the GRP CM, Section 5, for Web Links to Information Resources.
- Fire? – Consider a blast radius of 0.6 miles (1 km).
- Gather intelligence from a safe distance before conducting an on-site assessment – understand the problem:
    - Train consist/waybill.
    - Observe placards and types of containers/railcars.
    - Use the appropriate monitoring devices to detect hazardous materials.
    - One product or multiple commodities. If multiple materials are involved, what is the potential outcome of their commingling, will there be reactivity?
- CHEMTREC – Chemical Transportation Emergency Center provides two types of assistance during a hazardous material incident:
    - Relays information in regard to the specific chemical, and
    - Will contact the chemical manufacturer or other expert for additional information or on-site assistance.
    - 24-Hour Hotline: (800) 424-9300.
- If the substance cannot be identified, monitoring and sampling may be needed to determine the substances' physical and chemical properties, concentrations, and its degree of hazard.

- To minimize danger to personnel, this function should be performed by persons who are properly trained and are using the appropriate personal protective equipment (PPE) such as a trained hazardous materials response team following established protocols.
- Position vehicle away from the incident and use binoculars.
- Establish a dedicated Safety Officer.
- Develop an initial Site Safety Plan.
- Verify all information/intelligence.
- Consider all modes of operation:
    - Offensive
    - Defensive
    - Non-Intervention
- Eliminate any ignition sources.
- Consider current and expected weather.
- Consider worst-case scenario.
- Prepare for first responder rescue.
- Establish an accountability system for incident personnel.

Public Safety

- Identify threats to health and safety.
- Keep unauthorized persons away – initiate site access control.
- As an immediate precautionary measure, isolate spill or leak in all directions as recommended by the DOT ERG.
- Establish a Public Information Officer/Joint Information Center.
- Establish a Law Enforcement Branch:
    - Evacuation
        - Establish evacuation groups/divisions as needed.
        - Identify residents, businesses, public buildings and other areas from which occupants and property may need to be evacuated.
        - Locate and identify special needs individuals that require extraordinary care.
        - Provide security for evacuated areas.
    - Shelter-In-Place
        - Create a temporary safe refuge area by using the residence or business place.
        - Ensure, through community outreach, that the public understands what shelter in place means.
        - Limit travel in the affected area, when the process of evacuation puts the public in harm's way.
        - Provide clear information and instruction on the shelter in place process.
- Resource Notifications:
    - Identify resources to assist with shelter in place operations:
        - Local Office of Emergency Services
        - Public health services/offices

        - Local hospitals and disaster control facilities
        - Public Information Officer
        - Utilize mass notification systems:
            - Reverse 911
            - Television, radio
            - Websites, social media
            - Local sirens
- Poison Control Centers:
    - Provide poison/exposure information to emergency personnel and the public. For exposed victims, can provide regional hospital capabilities. Calls are automatically forwarded to the nearest center: Sacramento, San Francisco, Fresno, and San Diego. 24-Hour Hotline: (800) 876-4766.

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 Upper Sacramento River through the American Whitewater 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 Upper Sacramento River based on average velocity from the U.S. Geological Survey (USGS) National Hydrology Dataset is 5.244 feet per second (3.107 knots).

Current river stage for the Upper Sacramento River is available online from American Whitewater: https://www.americanwhitewater.org/content/River/state-summary/state/CA/.

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 (after hours)
Dunsmuir Fire Department	5915 Dunsmuir Ave Dunsmuir, CA 96025	See Table F-1 in Appendix F for full list of equipment.	(530) 235-2551
Union Pacific Railroad	Dunsmuir Rail Yard	See Table F-1 in Appendix F for full list of equipment.	RMCC (888) 877-7267 See Table F-1 in Appendix F for additional information.
U.S. Bureau of Reclamation (USBR)	Shasta Dam and Keswick Dam **Note:** Response assets designated for emergencies related to USBR infrastructure associated with Shasta and Keswick Dam only.	See Table F-1 in Appendix F for full list of equipment.	Senior Operator on Duty (530) 247-8588 Lead Security on Duty (530) 247-8537

2.5 Local/Regional Asset Resources

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

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

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

2.6 Unmanned Aircraft System

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

2.7 Incident Command Post Locations

During initial response, the ICP will likely be near the incident, possibly working from a first responder vehicle. As the incident progresses and responding staff continue to be deployed, the need for an off-site ICP providing space, electricity, and additional amenities and resources becomes apparent. 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.

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 two water intakes and two water districts/agencies along the Upper Sacramento River; City of Shasta Lake and Mountain Gate Community Services. Contact information is listed in the Contact Sheet under “Water Districts, Water Intakes, and County Water Agencies.” During an oil spill incident, notification to these two agencies is imperative as they do not receive CalOES emergency spill notifications.

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. The Siskiyou County Air Pollution Control District, https://www.co.siskiyou.ca.us/airpollution, and Shasta County Air Quality Management District, https://www.co.shasta.ca.us/index/drm_index/aq_index.aspx, are the two local air resources agencies that can be contacted during a spill event to the Upper Sacramento River GRP area. Contact phone numbers are included in the GRP Contact Sheet.

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 and Participating Agencies (PAs). A list of CUPAs and PAs 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 2-2 below lists the CUPAs for Siskiyou and Shasta Counties (current as of 10/2018). 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 2-2: Siskiyou and Shasta County CUPAs

Agency Name	Address	Phone Number
Siskiyou County Environmental Health Division, Community Development Department	806 South Main Street Yreka, CA 96097	(530) 841-2100
Shasta County Environmental Health Division	1855 Placer Street, Suite 201 Redding, CA 96001	(530) 225-5787

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.

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Upper Sacramento River
Geographic Response Plan

Chapter 3 – Response Site Strategies

3.0 Chapter Overview

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

3.1 Response Strategy Map Index

The following map (Figure 3-1) provides an index of the response strategy locations for the Upper Sacramento 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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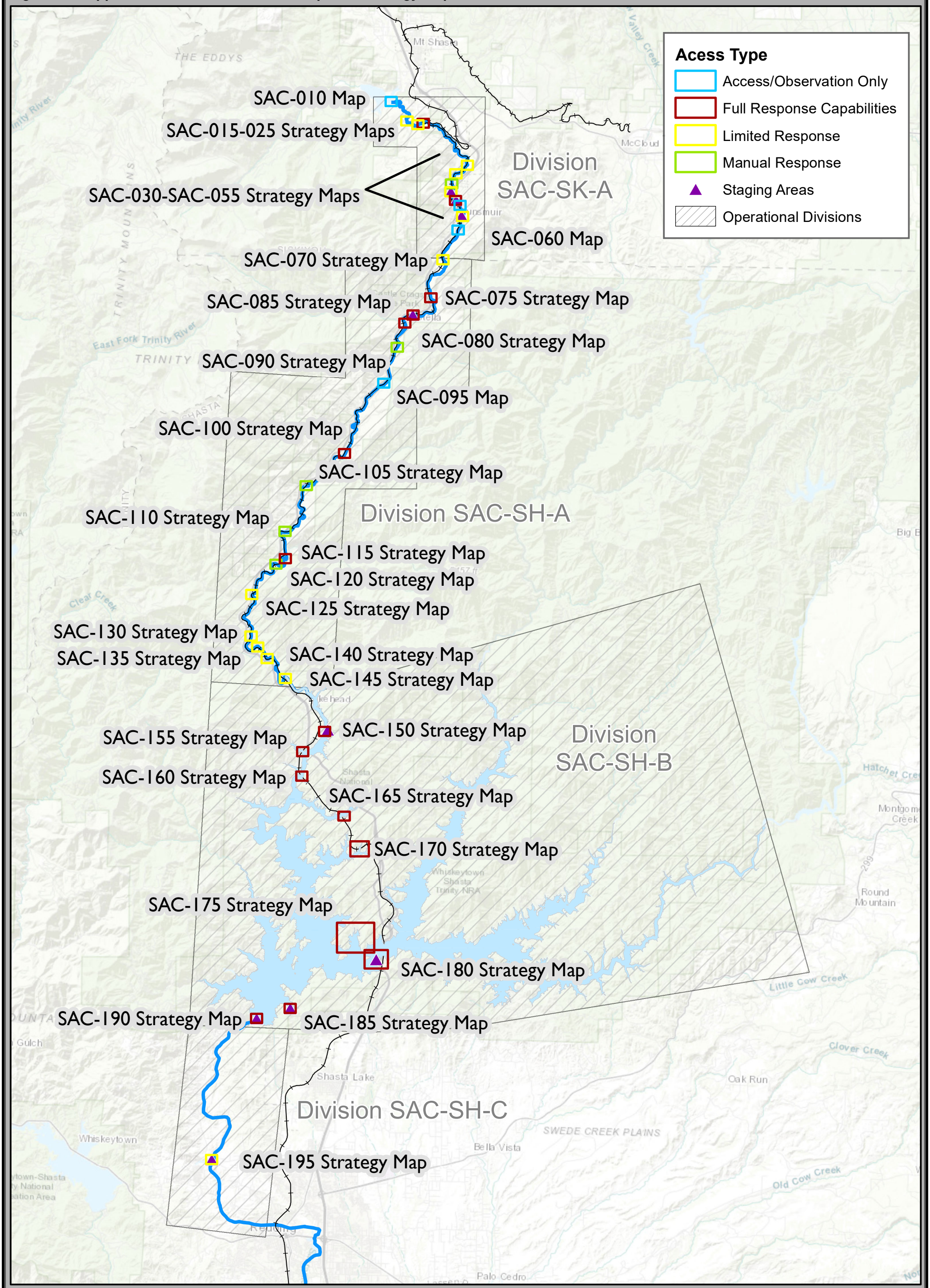
Figure 3-1: Upper Sacramento River GRP Response Strategy Map Index



California Department of Fish and Wildlife
Office of Spill Prevention and Response

Author: LGustafson, CDFW
Date Created: 1/9/2020
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSac_MapIndex.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Map Index

0 5 10 Miles
0 5 10 15 Kilometers

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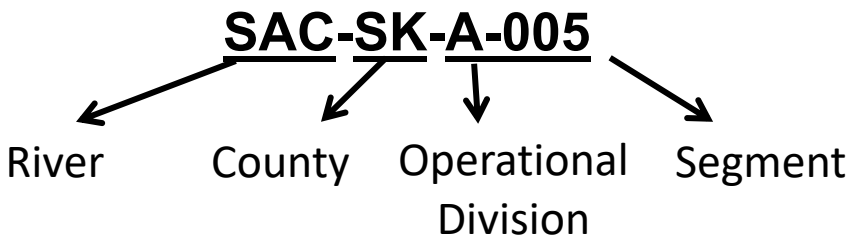
3.2 Naming Conventions – Operational Division and Segments

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 side or west side of the river, respectively, will be the denoted county. Operational divisions (and therefore segments) do not cross county lines.



SAC = Sacramento River

SK and SH = Siskiyou and Shasta

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. SAC-005) and increasing in number by increments of 5 (e.g. 005, 010, 015, etc.). The unique identifier for each Access/Observation or Response Site Strategy is found in the top header of each strategy sheet and corresponds to the locations on the Index Map, Division Maps, and Response Strategy Summary Matrix.

The site strategy numbering is independent of the segment numbering.

3.3 General Response Priorities

The following list provides the priority or order in which GRP strategies should be implemented after an oil spill into the Upper Sacramento 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.

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

Table 3-1: Response Strategy Summary Matrix

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-010	**Box Canyon Dam** W.A. Barr Road, Mt. Shasta	N 41.27969 W -122.3297	Observation site	N/A	N/A	Dam is operated by Siskiyou County Flood Control and Water Conservation District. If spill occurs in Lake Siskiyou, boom could be deployed above dam and lake outlet. **This location is the beginning of Division 1**.	N/A		N/A	43	45
SAC-015	**Cantara/Ney Springs Wildlife Area** Ney Springs Road (off Castle Lake Rd.), Mt. Shasta	N 41.26811 W -122.31651	Limited response, shoreline cleanup site.	600 feet sorbent boom; 350 feet swiftwater boom.	Responders need kayaks/ inflatable raft/waders at low flows to reach the river-left shoreline.	There is low threat of a hazardous materials release affecting this area. Biggest threat is from discharges at Lake Siskiyou and possible releases from Box Canyon Dam facilities.	If dirt access road off Ney Springs Road is improved, stage response assets in parking area of fishing access. Without improvements, stage equipment along Ney Springs Road.	Rough dirt access road will limit larger vehicles. Not accessible in snow. Should have 4WD vehicle.	N/A	43	47
SAC-020	**Cantara Fishing Access** Bottom of Cantara Loop Road, Mt. Shasta	N 41.26595 W -122.30747	Limited response, shoreline cleanup site. Possible swiftwater boom deployment and product collection site across from furthest upstream parking area.	400 feet sorbent boom; 250 feet swiftwater boom.	Responders need kayaks/ inflatable rafts/waders at low flows to reach the river-right shoreline.	There is low threat of a hazardous materials release affecting this area. Biggest threat is from discharges at Lake Siskiyou and possible releases from Box Canyon Dam facilities. Hiking trails along river-left shore provide additional access upstream and downstream of parking lot.	Staging area available at fishing access and Cantara Loop Rail Bridge site.	Swift water during high flows.	UPRR MP 328 - Black Butte Subdivision (Cantara Loop Bridge) located ~ 1/4 mile downstream of parking lot.	43	51
SAC-025	**Cantara Loop Rail Bridge** Behind locked gate off Cantara Loop Road, Mt. Shasta	N 41.26692 W -122.30324	Deflection boom and product collection.	600 feet of sorbent boom; 400 feet of swiftwater boom.	Access both shorelines via rail bridge, no boat required.	Need UPRR track control assistance for work near tracks. Site is accessible to all necessary response equipment.	Large staging area.	Site is accessible beyond a locked gate off Cantara Loop Road. Coordinate with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.	UPRR MP 328 - Black Butte Subdivision	43	55

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-030	**Mossbrae Falls** 1.21 miles north of the Simpson Avenue bridge, Dunsmuir	N 41.241755 W -122.266541	Deflection boom and product collection at the rail bridge. Deflection boom away from Mossbrae Falls with possible product collection at downstream eddies.	400 feet of swiftwater boom at rail bridge. 250 feet of swiftwater boom at falls. 1,000 feet of sorbent boom.	Responders need kayaks/ inflatable rafts/waders at low flows.	Deploy 300 feet of boom from river-left shoreline to eddy above rail bridge on river-right shoreline. At falls, deploy 200 feet of containment boom to keep product in main current for collection in eddies along river-right shoreline.	Very limited equipment staging downstream at Cave Avenue/Simpson Avenue bridge. Best nearby staging areas are Dunsmuir City Park, Tauhindauli River Park, and UPRR Dunsmuir Rail Yard.	There is no vehicle access to this site. Coordinate with UPRR RMC at (888) 877-7267 for access via rail car or high rail vehicle. It's possible to hike into the site, which is located approximately 1.21 miles upstream of the Cave Avenue/Simpson Avenue bridge, along the UPRR tracks. However, responders need to coordinate with UPRR for traffic control.	UPRR MP 324.95 - Black Butte Subdivision	43	59
SAC-035	**Prospect Avenue Fishing Access** Dirt access road off of Prospect Avenue, Dunsmuir	N 41.2366 W -122.27576	Deflection boom and product collection.	600 feet sorbent boom; 350 feet swiftwater boom.	Responders need kayaks/ inflatable rafts/waders at low flows or use UPRR track escort to access river-right shoreline.	Narrow dirt road leads to small parking area. Can get a 70-bbl vacuum truck to site. A private residence is located about 200 yards downstream and uphill of parking area.	Nearest staging areas are Dunsmuir City Park, Tauhindauli River Park, and UPRR Dunsmuir Rail Yard.	Swift water during high flows.	UPRR MP 324.32 - Black Butte Subdivision	43	63
SAC-040	**Cave Avenue/ Simpson Avenue Bridge** Dunsmuir	N 41.230274 W -122.278965	Manual shoreline cleanup site.	500 feet sorbent boom and 60 bales of pads.	Best water access point is on river-left shoreline above the bridge. Difficult water access from river-right shoreline.	Manual sorbent cleanup site. SCAT location. Some small eddies are accessible from shore at low flows.	Nearest staging areas are Dunsmuir City Park, Tauhindauli River Park, and UPRR Dunsmuir Rail Yard.	Swift water. River banks are steep and vegetated creating difficult water access. Dense residential housing exists along the river-left shoreline.	UPRR MP 323.77 - Black Butte Subdivision	43	67
SAC-045	**Dunsmuir City Park** Dunsmuir Avenue, Dunsmuir	N 41.22553 W -122.27927	Deflection boom and product collection.	600 feet sorbent boom; 400 feet swiftwater boom.	Responders need kayaks/ inflatable rafts/waders at low flows or use UPRR track escort to access river-right shoreline.	Best boom deployment area is at north end of parking lot. Can get 70-bbl vacuum truck into site.	Large staging area. Restrooms on site. Locking gate at entrance to park. Public access to park is 0700 to dusk.	Locking gate at entrance to park. Public access to park is 0700 to dusk.	UPRR MP 323.45 - Black Butte Subdivision	43	71

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-050	**Tauhindauli Park** Stagecoach Road to Upper Soda Road, Dunsmuir	N 41.22024 W -122.27548	Deflection boom and product collectioin.	400 feet sorbent boom; 250 feet swiftwater boom.	Access both sides of the river via Dunsmuir Avenue bridge, no boat required.	Boom location below I-5 bridge. Best collection point is at eddy on river-left shore.	Large staging area at park.	Swift water during high flows.	UPRR MP 322.87 - Black Butte Subdivision	43	75
SAC-055	**Sacramento Avenue Bridge** Dunsmuir	N 41.21748 W -122.27174	Access/ Observation site.	N/A	Access water under bridge from river-right shoreline.	SCAT site.	Stage response assets at UPRR Dunsmuir Rail Yard.	Steep banks with dense vegetation. Swift water.	UP MP 322.56 - Black Butte Subdivision	43	79
SAC-060	**UPRR Dusnmuir Rail Yard** Access rail yard from Bush Street on east side of tracks	N 41.210781 W -122.269486	Deflection boom and product collection.	400 feet of sorbent boom; 300 feet of swiftwater boom.	Access river-right shoreline from a metal ladder at a concrete retaining wall behind the 3rd building north of Bush Street bridge. Access river-left shore from east side of Bush Street bridge. No boat required.	Best boom deployment site is located at concrete retaining wall on river-right shore at back of rail yard behind buildings. Access water via metal ladder on retaining wall. A concrete pad exists at base of retaining and can be used to launch response equipment.	Large staging area.	Swift water during high flows.	UPRR MP 321.90 - Black Butte Subdivision	43	81
SAC-065	**Bridge Street Bridge** Dunsmuir	N 41.20206 W -122.27229	Access/ Observation site.	N/A	Access both shorelines via bridge. No boat required.	SCAT site. Railroad right-of-way on west side of bridge provides additional access to river-right shoreline downstream of bridge.	Stage response assets along UPRR tracks south of Bridge Street.	Swfit water during high flows. Steep banks.	UPRR MP 321.70 - Black Butte Subdivision	43	85
SAC-070	**South 1st Street Bridge** Dunsmuir	N 41.18410 W -122.28433	Deflection boom and product collection.	800 feet of sorbent boom; 500 feet of swiftwater boom.	Access both shorelines via bridge. No boat required.	Eddies exist at river-left shoreline upstream of bridge at low flows. Good underflow dam location along river-left shoreline at low flows. **This location is the last access point for Division 1**.	Stage response assets along UPRR tracks south of Bridge Street. Possible additional staging at the Dunsmuir Wastewater Treatment Plant near the response location.	Swift water during high flows.	UPRR MP 319.91 - Valley Subdivision	87	89

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-075	**Soda Creek Road Bridge** Castella	N 41.16047 W -122.29416	Deflection boom and product collection.	800 feet sorbent boom; 650 feet swiftwater boom (for a primary and secondary boom set).	Access both shorelines via bridge, no boat required.	Collection point exists at eddy on river-left shore above and below the bridge. **This location is the first access point for Division 2**.	Stage response equipment and manage wastes on west side of bridge.	Swift water during high flows. The Pacific Crest Trail crosses this bridge.	UPRR MP 318.06 - Valley Subdivision	87	93
SAC-080	**Castle Crags State Park Picnic Area & Campground** Castella	N 41.14938 W -122.30805	Deflection boom and product collection.	600 feet of sorbent boom; 350 feet of swiftwater boom. Consider deploying a second 350-foot section of swiftwater boom to enhance recovery.	Responders need kayaks/ inflatable rafts/waders at low flows or use UPRR track escort to access river-right shoreline.	Boom deployment and collection site is located below Campsite #5 at the south end of the campground during low river flows. At higher flows, the area below Campsite #11 may be a better deployment and collection site.	The picnic area and campground provide a suitable area for staging response equipment and managing wastes.	Swift water during high flows. Park entrance is locked in winter.	UPRR MP 316.42 - Valley Subdivision	87	97
SAC-085	**Castle Creek Response Site** Castella Loop Road on east side of Castle Creek, Castella	N 41.144633 W -122.31438	Deflection boom and product collection.	600 feet of sorbent boom; 350 feet of swiftwater boom.	Responders need kayaks/ inflatable rafts to reach the river-left shoreline.	Boom deployment location and collection point along gravel bar on river-right shoreline downstream of Castle Creek.	Stage equipment on west side of UPRR track crossing on Castella Loop Road. If a larger staging area is needed, contact Castle Crags State Park for assistance.	Castella Loop Road is very narrow with no parking along it. Castella Loop Road runs along Castle Creek on the north end before heading south at the response site and eventually circling back to the Frontage Road. It may be necessary to close the north end of Castella Loop Road during response operations. Contact Shasta County Public Works Department if a road closure is considered.	UPRR MP 315.82 - Valley Subdivision	87	101

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-090	**Falls Avenue/ Sweetbriar Bridge** Shasta County	N 41.129944 W -122.319658	Manual shoreline cleanup site.	800 feet sorbent boom	Responders may need kayaks/ inflatable rafts/waders to assist with shoreline access.	Responders can access the river-right shoreline beneath the bridge over the Sacramento River to begin shoreline cleanup with sorbents. Contact local residents for work below the houses lining both shorelines. There is additional water access at a small beach on the river-left shoreline upstream of the bridge, accessible via foot. **NOTE: There is a dirt road on the east side of the NB I-5 Sweetbriar Avenue off ramp that leads south to the UPRR tracks and additional water access points.**	Stage equipment along the UPRR track right-of-way.	Swift water during high flows.	UPRR MP 314.72 - Valley Subdivision	87	105
SAC-095	**Conant Road** Shasta County	N 41.10780 W -122.32994	Access/ Observation site.	N/A	SCAT teams may need rafts or kayaks to assess shoreline impacts. Responders would need to launch vessels from an upstream location. UASs may also be useful for SCAT purposes in this area.	Trail on east side of UPRR tracks just north of the 313 track milepost marker leads to the river.	N/A	Thick vegetation blocks most river shoreline access.	UPRR MP 313 - Valley Subdivision	87	109

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-100	**Sims Road Bridge** Shasta County	N 41.06432 W -122.36011	Deflection boom and product collection.	2,000 feet of sorbent boom and 1,000 feet of swiftwater boom (two 500-foot boom sets) to deploy at the Sims Road bridge and below the footbridge downstream.	Access river under Sims Road bridge or at USDA Forest Service footbridge in Sims Campground on river-left shore. No boat required.	Full response capabilities. Product collection will still be difficult due to swift water. Best collection points are at eddy on river-right shore under Sims Road bridge and on river-left shore at footbridge. There are additional river access points via hiking trails along the river-right shore at the UPRR rail siding yard upstream of the Sims Road bridge.	Full staging capabilities are available on the west side of the Sacramento River. Additional staging is available along the UPRR track siding upstream of the Sims Road bridge.	Swift water during high flows.	UPRR MP 309.16 - Valley Subdivision	87	111
SAC-105	**UPRR Bridge at Milepost 306.72** Unmarked dirt road off NB I-5 north of Gibson Road, Shasta County	N 41.044272 W -122.390134	Manual shoreline cleanup site.	500 feet sorbent boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline.	Hiking trail on east side of UPRR tracks at north end of the rail bridge leads down to the river. Pool and eddy at low flows located about 150 yards upstream of bridge. Rail cars or highrail truck could be used to ferry equipment and personnel to the site. An unmarked dirt road off NB I-5 between Gibson Road and Sims Road leads down to the rail bridge.	Staging area available along NB I-5, north of Gibson Road and north of the dirt access road leading to the UPRR bridge.	Site access is via a steep, narrow, dirt road. Need 4WD vehicle. Best access would utilize UPRR rail cars or high rail vehicles to access hiking trail to response site.	UPRR MP 306.72 - Valley Subdivision	87	115
SAC-110	**Gibson Road I-5 Undercrossing** At mouth of Boulder Creek, Shasta County	N 41.01603 W -122.40635	Manual shoreline cleanup site.	400 feet sorbent boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline.	Swift water in this area makes for difficult boom deployment. However, the river-right shoreline is accessible for response crews to clean. Another track and river access point exists downstream at UPRR MP 304.	Stage equipment at turnout on west side of Gibson Road immediately south of Boulder Creek. Additional staging area is available at the UPRR track siding located 0.22 miles downstream from the I-5 undercrossing, at track milepost 304.00.	Steep rocky shoreline is difficult to navigate. Area is subject to swift water during high flows.	UPRR MP 304.22 and 304 - Valley Subdivision	119	121

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-115	**Sierra Pacific Industries (SPI) North Salt Creek Road Bridge** Eagles Roost Road to North Salt Creek Road, Pollard Flat	N 40.99933 W -122.40556	Deflection boom and product collection.	400 feet of sorbent boom; 400 feet of swiftwater boom.	Use SPI bridge to access river-left shoreline. Kayaks/ inflatable rafts would also be useful.	Full response capabilities at this location. Deploy boom from river-left shoreline to collection point at eddy on downstream side of bridge on river-right shoreline.	Stage equipment and manage wastes at open area near UPRR tracks on west side of Sacramento River.	Site access is controlled by UPRR and Sierra Pacific Industries (SPI). SPI owns the bridge over the Sacramento River. Coordinate response with UPRR and SPI personnel. There is a locked gate at North Salt Creek Road off Eagles Roost Road and another locked gate at the SPI owned bridge over the river.	UPRR MP 302.80 - Valley Subdivision	119	125
SAC-120	**Pollard Gulch Fishing Access** Eagles Roost Road, Pollard Flat	N 40.99599 W -122.41316	Manual shoreline cleanup site.	400 feet sorbent boom.	Use UPRR rail bridge to access river-left shore.	Response crews can access various areas of shoreline upstream and downstream of the main fishing access point. Remove oiled debris and clean shoreline with sorbents or other methods approved by the Unified Command.	Stage response assets at parking lot above river.	Coordinate response work near rail tracks with UPRR RMCC at (888) 877-7267.	UPRR MP 302.24 - Valley Subdivision	119	129
SAC-125	**Slate Creek Response Site** Slate Creek Road to Moine Road, Shasta County	N 40.977023 W -122.431892	Deflection boom and product collection.	600 feet sorbent boom; 350 feet swiftwater boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline.	Best collection point is at eddy below UPRR generator station. Deploy deflection boom to this eddy at river-right shore. Consider using high-line boom formation. Coordinate with UPRR for any response work in this area.	Stage response assets under I-5 overpass and along UPRR right-of-way.	UPRR controls a locked gate under I-5.	UPRR MP 300.17 - Valley Subdivision	119	133
SAC-130	**McCardle Flat Response Site** McCardle Flat Road, Shasta County	N 40.951563 W -122.431664	Deflection boom and product collection.	400 feet sorbent boom; 300 feet swiftwater boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline.	Best response location is at mouth of Mosquito Creek. Consider running vacuum truck suction lines through culvert under tracks.	Stage response assets in open space of McCardle Flat. Some equipment can be staged at small turnout on west side of tracks at mouth of Mosquito Creek.	Coordinate response work near rail tracks with UPRR RMCC at (888) 877-7267.	UPRR MP 297.94 - Valley Subdivision	119	137
SAC-135	**Delta Road Response Site** Delta Road, Delta	N 40.944541 W -122.425751	Deflection boom and product collection.	600 feet of sorbent boom; 400 feet of swiftwater boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline.	Locate response site via hiking trail on east side of UPRR tracks, slightly upstream of the track siding access point. Best collection point is at eddy near downstream end of beach.	Stage response assets along UPRR track siding and further up Delta Road.	Coordinate response work near rail tracks with UPRR RMCC at (888) 877-7267.	UPRR MP 296.73 - Valley Subdivision	119	141

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-140	**Fenders Ferry Road Response Site** Fenders Ferry Road (off Dog Creek Road), Shasta County	N 40.93826 W -122.41789	Deflection boom and product collection.	800 feet of sorbent boom; 450 feet of swiftwater boom.	Use bridge to access river-left shoreline. Kayak/inflatable raft may be useful.	Use boom to deflect product to eddy along gravel bar on river-left shoreline downstream of bridge.	Stage response assets along UPRR track right-of-way or off Dog Creek Road.	Coordinate response work near rail tracks with UPRR RMCC at (888) 877-7267.	UPRR MP 296.24 - Valley Subdivision	119	145
SAC-145	**Riverview Drive Response Site** Riverview Drive, Lakehead	N 40.926723 W -122.402642	Deflection boom and product collection.	800 feet of sorbent boom; 500 feet of swiftwater boom.	Responders need kayaks/ inflatable rafts to access the river-left shoreline. Response site is also accessible via Lake Shasta when lake elevation is high. Launch vessel at Antlers Public Boat Ramp in Lakehead.	Use deflection boom strategy to direct floating product to eddies on river-right shoreline. A shallow drafting barge could be used for on-water collection. Additional resources can be driven to the response site via a poorly maintained dirt road off Riverview Drive. **This location is the last access point of Division 2**.	If dirt access road is improved, stage equipment at bottom of Riverview Drive. Additional staging is available at the Antlers Public Boat Ramp facility in Lakehead.	Rough dirt access road at bottom of Riverview Drive needs improvement to get response assets to the site.	UPRR MP 287.89 - Valley Subdivision	119	149
SAC-150	**Lake Shasta Headwaters** Antlers Road, Lakehead	N 40.896012 W -122.369031	Deflection boom and on-water product collection.	1,500 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Antlers Public Boat Ramp.	Use deflection boom strategy to keep floating product in lake current away from shoreline. Use horseshoe-shaped boom deployment to corral product for skimming and on-water collection. **This is the first response location of Division 3**.	Stage response assets at Antlers Public Boat Ramp. Additional staging may be available at the USDA Forest Service Antlers Campground.	Use appropriate on-water safety procedures.	N/A	153	155

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-155	**Doney Creek Inlet** Lakeshore Drive, Lakehead	N 40.881882 W -122.387429	Containment and on-water product collection.	1,250 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Antlers Public Boat Ramp. Additional boat launch located at Sugarloaf Marina.	Deploy containment boom as close to Doney Creek Inlet as possible. If product has moved downstream, attempt to set the boom in a location that will assist with on-water product collection. Use skimmer inside boom set for on-water collection.	Stage response assets at Antlers Public Boat Ramp. Additional staging located at the USDA Forest Service Antlers Campground.	Use appropriate on-water safety procedures.	UPRR MP 283.82 - Valley Subdivision	153	159
SAC-160	**UPRR Bridge Over Sacramento River Arm** Lakeshore Drive, Lakehead	N 40.866465 W -122.388498	Containment and on-water product collection.	1,900 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Antlers Public Boat Ramp. Additional boat launch located at Sugarloaf Marina.	Deploy boom around leading edge of floating product. Use skimmer inside boom set for on-water product collection.	Stage response assets at Antlers Public Boat Ramp. Additional staging located at USDA Forest Service Antlers Campground.	Use appropriate on-water safety procedures.	UPRR MP 282.71 - Valley Subdivision	153	163

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-165	**Salt Creek Inlet** Salt Creek Lodge Road, Shasta County	N 40.843271 W -122.358315	Containment and on-water product collection.	1,300 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Salt Creek Lodge Road boat ramp if lake elevation is high. If lake elevation is low, then launch vessels from Antlers Public Boat Ramp.	Deploy boom around leading edge of floating product. Use skimmer inside boom set for on-water product collection.	Nearest staging area is USDA Forest Service Nelson Point Campground. Additional staging area at Packers Bay Public Boat Ramp.	Use appropriate on-water safety procedures.	UPRR MP 280.24 - Valley Subdivision	153	167
SAC-170	**UPRR Bridge at O'Brien Inlet** O'Brien Road, Shasta County	N 40.823597 W -122.340081	Containment and on-water product collection.	1,400 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Packers Bay Public Boat Launch.	Deploy 700 feet of containment boom between the east and west shoreline at the mouth of the cover on the south side of the UPRR bridge to contain floating product inside the cove. The length of boom necessary will depend on the elevation of Lake Shasta. If product has moved downstream, attempt to set boom in a location that will assist with on-water product collection.	Shasta Marina controls the property beyond a locked gate at the head of the O'Brien Inlet at the bottom of O'Brien Road. This area would be the best location to stage equipment. There is additional staging area available at Packers Bay Public Boat Launch.	Use appropriate on-water safety procedures.	UPRR MP 278.47 - Valley Subdivision	153	171
SAC-175	**Packers Bay Inlet** Packers Bay Road, Shasta County	N 40.76412 W -122.341185	Containment and on-water product collection.	2,400 feet of containment boom.	Responders need a shallow-draft barge and two additonal response vessels for on-water product collection. Launch vessels from Packers Bay Public Boat Launch.	Deploy 1,600 feet of containment boom across Packers Bay Inlet to keep floating product inside the inlet. Consider using Shasta Marina's existing bouy line for the boom deployment. Use skimmer inside boom for on-water product collection.	Stage response assets at Packers Bay Public Boat Launch.	Use appropriate on-water safety procedures.	N/A	153	175

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-180	**Bridge Bay** Bridge Bay Road, Mountain Gate	N 40.756318 W -122.324448	Containment and on-water product collection.	3,700 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Bridge Bay Marina's public boat ramp.	Depending on location of spill, deploy 2,700 feet of containment boom from south end of I-5/UPRR Rail Bridge out to Beaver Island. Consider using existing bouy lines at the north side of Bridge Bay Marina. Use additional 1,000 feet of containment boom to deflect floating product away from Beaver Island and keep it in the main channel of the lake. Use standard on-water product collection procedures to recover oil. **NOTE: THERE IS A PUBLIC DRINKING WATER INTAKE IN THE VICINITY OF THIS RESPONSE LOCATION.**	Stage response assets at Bridge Bay at Shasta Lake.	Use appropriate on-water safety procedures.	UPRR MP 273.00 - Valley Subdivision	153	179
SAC-185	**Digger Bay Inlet** Digger Bay Road, Shasta Lake City	N 40.730357 W -122.399473	Containment and on-water product collection.	1,600 feet of containment boom.	Responders need a shallow-draft barge and two additional response vessels for on-water product collection. Launch vessels from Centimudi Public Boat Launch or Digger Bay Marina boat ramp.	Deploy 1,600 feet of containment boom across Digger Bay Inlet to prevent floating product from entering the main body of Lake Shasta. Consider using Digger Bay Marina's existing bouy line for the boom deployment. Use standard on-water product collection procedures to recover oil.	Stage response assets at Centimudi Public Boat Launch and/or Digger Bay Marina.	Use appropriate on-water safety procedures.	N/A	153	183

Response Strategy Number	Response Strategy Name and Location	Coordinates Latitude/ Longitude	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	Operational Division and Segment Map Page #	Response Strategy Detail Sheet Page #
SAC-190	**Shasta Dam** Shasta Dam Boulevard, Shasta Lake City	N 40.718685 W -122.418765	Deflection, protection, and containment boom strategies with shoreline and/or on-water product collection.	4,000 feet of containment boom.	Responders need a shallow-draft barge and two additonal response vessels for on-water product collection. Launch vessels from Centimudi Public Boat Launch.	Various boom configurations can be deployed using existing I-beam anchors attached to the upstream side of Shasta Dam. Existing buoy lines maintained by the U. S. Bureau of Reclamation may be useful for the initial boom deployment location(s). Depending on the spill location, boom may be used to deflect floating product toward either shoreline for easier product collection. Protection boom strategies may be used to isolate the dam's water intakes. **NOTE: THERE IS A PUBLIC DRINKING WATER INTAKE IN THE VICINITY OF THIS RESPONSE LOCATION. This is the last response site of Division 3.**	Stage response assets at US Bureau of Reclamation offices at Shasta Dam. Additional staging area available at Centimudi Public Boat Launch.	Use appropriate on-water safety procedures.	N/A	153	187
SAC-195	**Keswick Reservoir Boat Launch** Iron Moutain Road, Keswick	N 40.631877 W -122.452114	Deflection and containment boom with shoreline and/or on-water product collection.	1,900 feet of containment boom.	Responders need a shallow-draft barge and two additonal response vessels for on-water product collection. Launch vessels from Keswick Boat Launch.	Deploy 1,200 feet of containment boom from the river-left shoreline to a small eddy near the boat launch dock. For secondary strategy, deploy 500 feet of containment boom across the Spring Creek Inlet to prevent floating product from impacting the Spring Creek Power Plant. **This is the only response site for Division 4.**	Stage response assets at Keswick Public Boat Ramp. Additional staging available at the U. S. Bureau of Reclamation Keswick Dam, on Keswick Dam Road, Redding.	Use appropriate on-water safety procedures.	N/A	191	193

Table Legend					
RED	Full Response Capabilites	Access to site for large equipment and full deployment.	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.
YELLOW	Limited Response	Access to site may be limited; have to cross railroad tracks, etc., may not get large equipment to site.		Staging Areas	Response Strategy and Access/Observation Sites with a potential staging area are denoted with a purple triangle.
GREEN	Manual Response	Sorbent boom/clean-up; slow, backwater areas.		Boat Launch	

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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.

Sierra Pacific Industries Properties

Response strategy site SAC-115, is on private property. Access is controlled by Sierra Pacific Industries (SPI); there is a second gate on the west side of the bridge over the Sacramento River that is also controlled by SPI. There is no public access to this site. A permit is required from SPI for any non-emergency access. Please see the Response Strategy sheet for SPI contact information.

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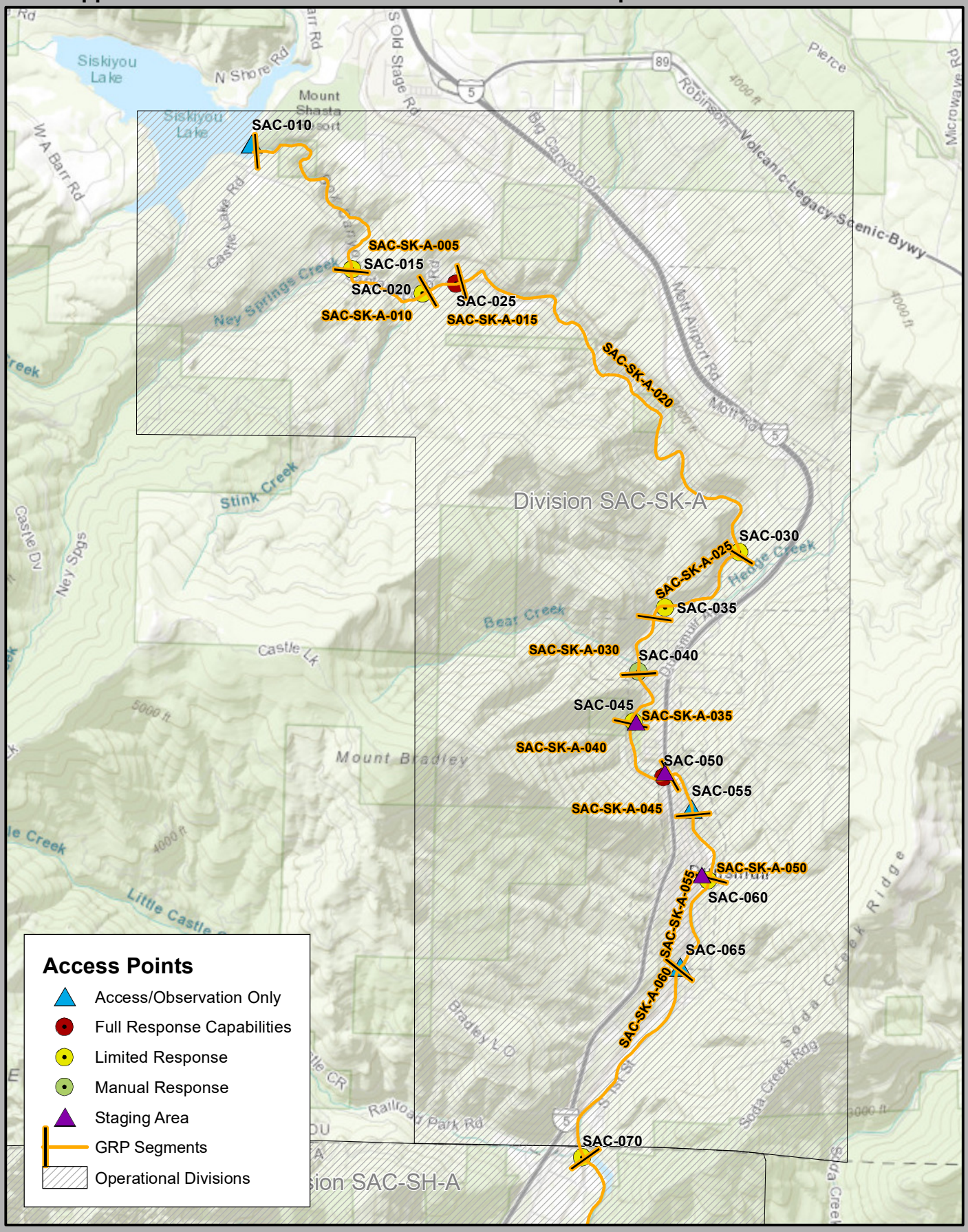
Figure 3-2: Upper Sacramento River GRP Division SAC-SK-A Map



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

Author: spaine, CDFW
Date Created: 2/26/2020
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Div-SAC-SK-A.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Division SAC-SK-A

0 0.5 1 1.5 Miles
0 1 2 Kilometers

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Access/Observation Site: Box Canyon Dam (SAC – 010) Page 1 of 2

Latitude: N 41.278894 **Longitude:** W -122.329021	**Driving Directions**
Highway Postmile: N/A	Take I-5 to the West Lake Street exit in Mt. Shasta, Exit #738. Head west on West Lake Street until you reach the stop sign at Old Stage Road. Turn left and head south on Old Stage Road. After 0.25 miles, veer right onto W.A. Barr Road. Continue southwest on W.A. Barr Road until you reach Box Canyon Dam at Lake Siskiyou.
Railroad Milepost: N/A	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes, on top of dam – Verizon tested	

Overview Street Map

Hazards, Restrictions and Advice for Responders

- Steep narrow canyon. Difficult access to river below dam.
- Snowy/icy roads in winter.
- Restricted access to Box Canyon Power Plant.
- Box Canyon Power House stores oil, diesel fuel, and mineral oil.
- Nearest river access is downstream of Box Canyon Dam at Cantara/Ney Springs Wildlife Area.

Access/Observation Site: Box Canyon Dam (SAC – 010) Page 2 of 2

Site Description and Field Notes

Site Location/Segment: SAC-SK-A-005

From the dam, responders have some access to the lower reach of Lake Siskiyou. There is a hiking trail heading downstream of Box Canyon Dam starting on the river-left side of the dam off W.A. Barr Road.

Site Contact/s:

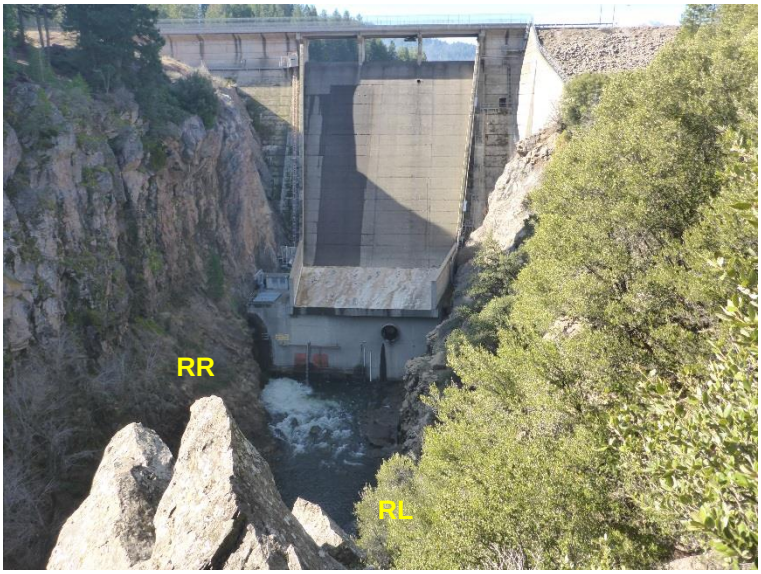
Box Canyon Dam is owned by the Siskiyou Power Authority
190 Greenhorn Road, Yreka, CA 96097
(530) 842-8220

Box Canyon Power House
2623 W.A. Barr Road, Mt. Shasta, CA 96067
Business Phone: (530) 926-4168
24-Hour Phone: (530) 905-0838

Site Images

Upstream

Downstream



Box Canyon Dam

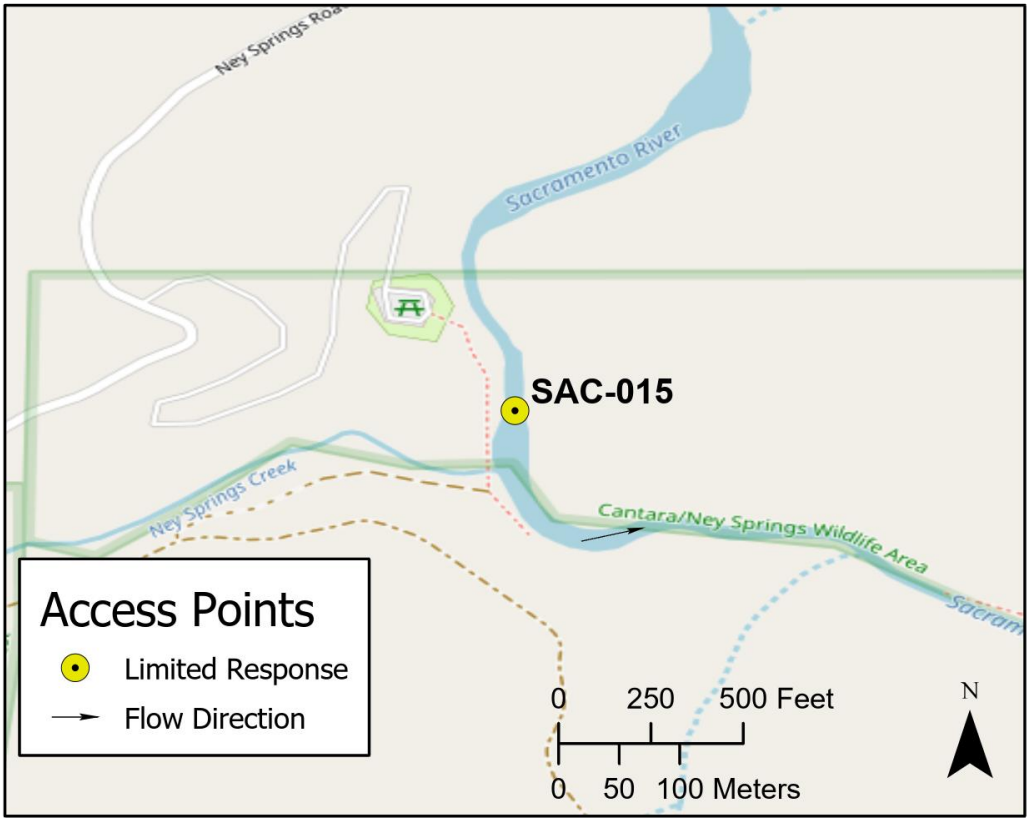
RR = River-Right RL = River-Left

Photo Date: 02/01/2019

Location Name: Cantara/Ney Springs Wildlife Area (SAC – 015) Page 1 of 3

Latitude: N 41.26811 **Longitude:** W -122.31651	**Driving Directions**
Highway Post Mile: N/A	Take I-5 to the West Lake Street exit in Mt. Shasta, Exit #738. Head west on West Lake Street until you reach the stop sign at Old Stage Road. Turn left and head south on Old Stage Road. After 0.25 miles, veer right onto W.A. Barr Road. Continue southwest on W.A. Barr Road and cross over Box Canyon Dam at Lake Siskiyou. Take first left after crossing dam and head south on Castle Lake Road. At first bend in the road about 200 yards up from W.A. Barr Road, continue south onto dirt road named Ney Springs Road. A sign indicates the location of the Cantara/Ney Springs Wildlife Area. Turn left at dirt road leading to Cantara/Ney Springs Wildlife Area. Follow this road down to a dirt parking area where trails lead down to the river and the response site.
Railroad Milepost: N/A	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

There is no snow removal on the dirt Ney Springs Road. Need high-clearance vehicle or 4wd vehicle to access Cantara/Ney Springs Wildlife Area.

Several hiking trails above and immediately below the parking area lead to the Sacramento River. Best boom deployment site is downstream of the parking area. Elevation at river level is 2,847 feet above MSL.

There is not much threat of a hazardous materials release affecting this area. Biggest threat is from discharges out of Lake Siskiyou and possible releases from Box Canyon Dam facilities.

Wildlife area access road needs improvement to get large equipment into site. Need raft or kayak to reach river-left shore.

Resources-At-Risk

Ecological: fisher (West Coast DPA), Foothill Yellow-legged Frog, Cascade Frog, Bank Swallow, Bald Eagle, Osprey, Shasta chaenactis

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Cantara/Ney Springs Wildlife Area (SAC – 015)

Site Description and Field Notes

River Width: 23 meters (75 feet)

Gradient: Medium

Site Contact/s:

California Department of Fish and Wildlife – Region 1
(530) 225-2300

NORCOM Dispatch
(916) 358-1310

Site Location/Segment: SAC-SK-A-005

Narrow canyon below Lake Siskiyou. Good background site for natural resource damage assessment sampling.

Vehicular Access: High-clearance vehicle or 4wd vehicle

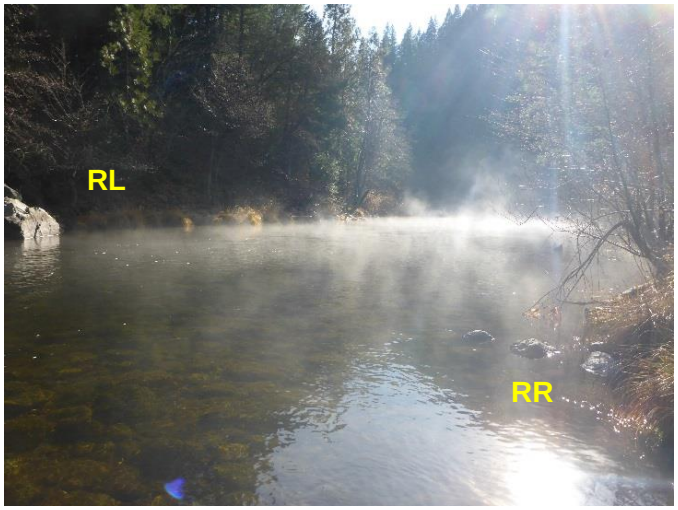
Recreational Use: Fishing, rafting/kayaking, water-contact, hiking

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

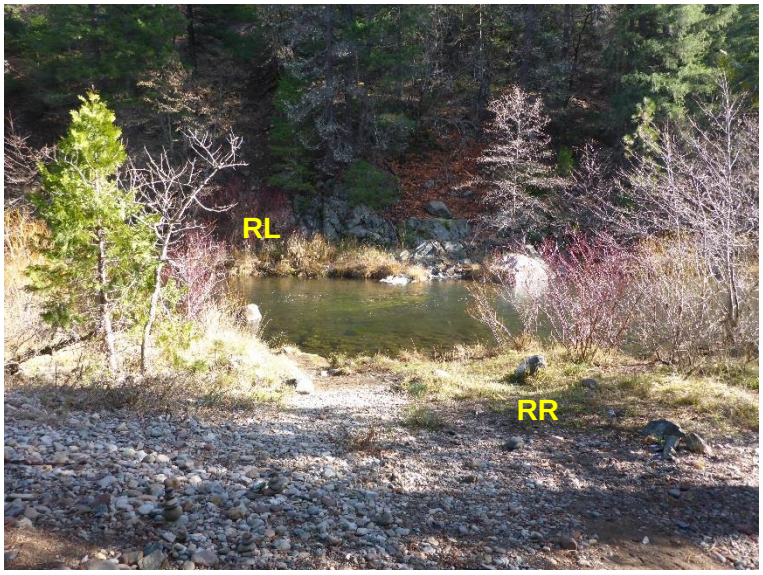
ESI Shoreline Type: Exposed rocky banks (1A); exposed rocky cliffs with boulder talus base (1C); gravel bars and gently sloping banks (6A); vegetated, steeply-sloping bluffs (8F)

Site Images

Upstream



Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Location Name: Cantara/Ney Springs Wildlife Area (SAC – 015)

Site Objectives: Limited response, shoreline cleanup; possible deflection boom and product collection site.

Implementation: Clean shoreline using sorbent pads. If deploying boom, use 350 feet of swiftwater boom to deflect product to eddies along river-right shore and to protect shoreline at the collection area.

Staging Area Location and Capabilities/Amenities/Waste Management: If wildlife area access road has not been improved, stage equipment in open space along Ney Springs Road at junction with access road to wildlife area.

Response Strategy Map (overview)

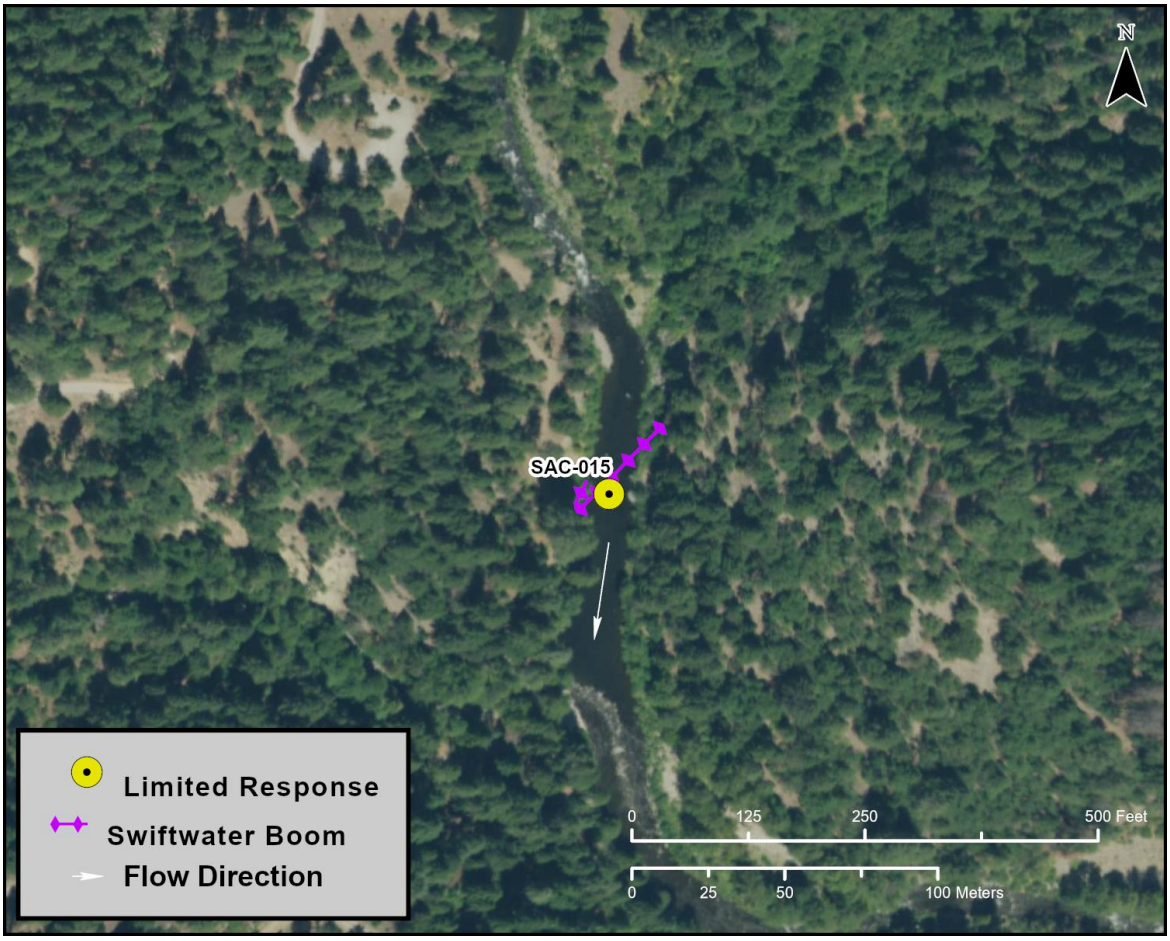


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	350 feet	
Skimmer	Disc or Drum			1	If attempting to recover product.
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	Stage on Ney Springs Road away from response site.
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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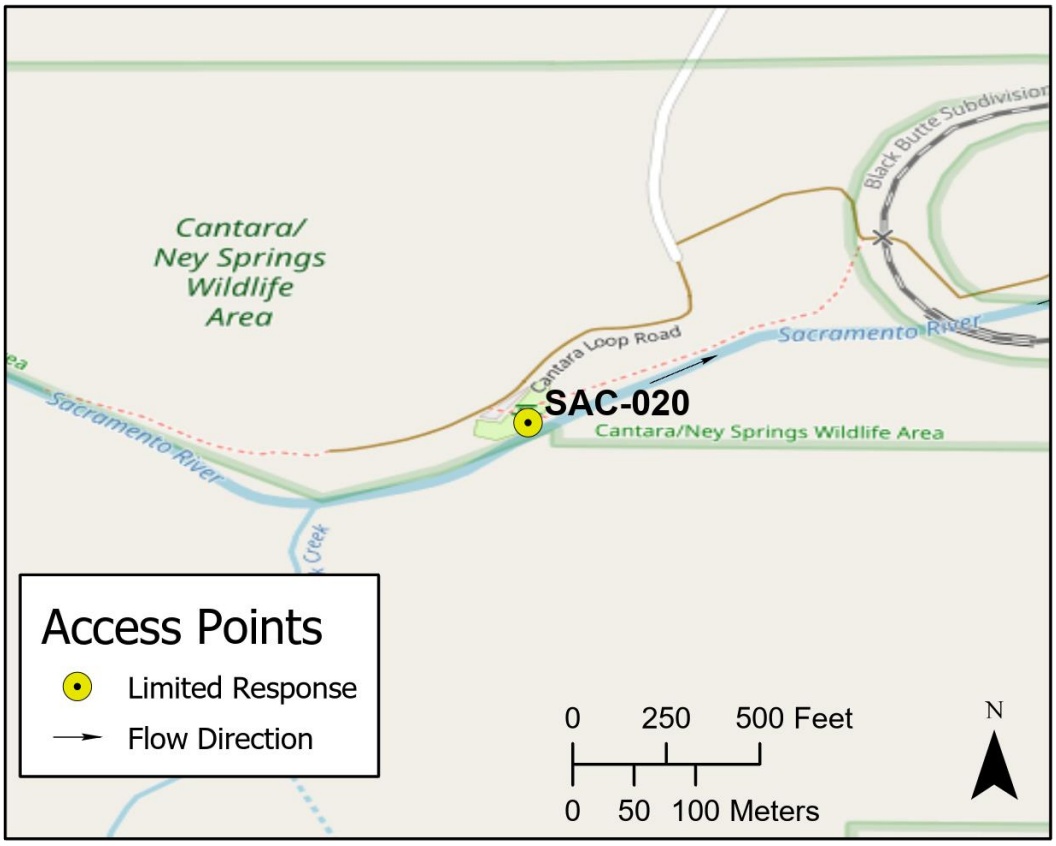
Location Name: Cantara Fishing Access (SAC – 020)

Latitude: N 41.26595 **Longitude:** W -122.30747	**Driving Directions**
Highway Post Mile: N/A	Take Mott Road exit off I-5, Exit #734. Head west to South Old Stage Road. Head north on South Old Stage Road to Cantara Loop Road. Head west on Cantara Loop Road and follow road down to a dirt parking area along the Sacramento River.
Railroad Milepost: N/A	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

This property is part of the Cantara/Ney Springs Wildlife Area. River access is via hiking trails upstream and downstream of the parking area along the river-left shoreline.

There is not much threat of a hazardous materials release affecting this area. Biggest threat is from discharges out of Lake Siskiyou and possible releases from Box Canyon Dam facilities.

Site elevation is 2,810 feet above MSL.

Need raft or kayak to reach river-right shoreline. Additional river-right shoreline access may be gained by crossing the UPRR Cantara Loop bridge located about ¼ mile downstream.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, Shasta chaenactis,

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Cantara Fishing Access (SAC – 020)

Site Description and Field Notes

River Width: 17 meters (55 feet)

Gradient: Medium

Site Contact/s:

California Department of Fish and Wildlife – Region 1
(530) 225-2300

NORCOM Dispatch
(916) 358-1310

Site Location/Segment: SAC-SK-A-010

Narrow canyon below Lake Siskiyou. Good background site for natural resource damage assessment sampling.

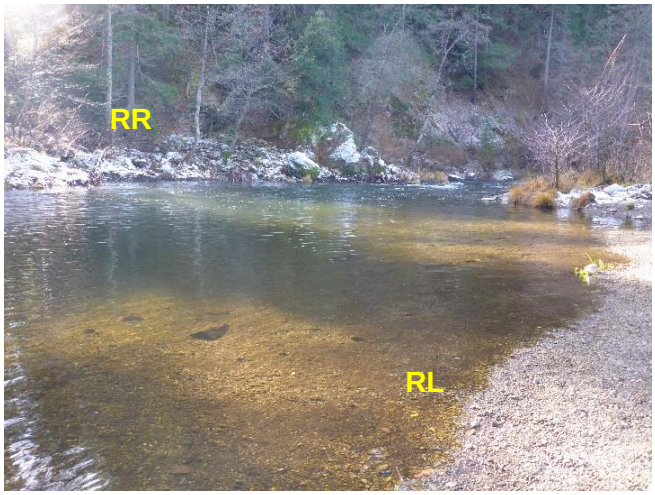
Vehicular Access: All vehicle types can access this location.

Recreational Use: Fishing, water-contact, rafting/kayaking, hiking

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

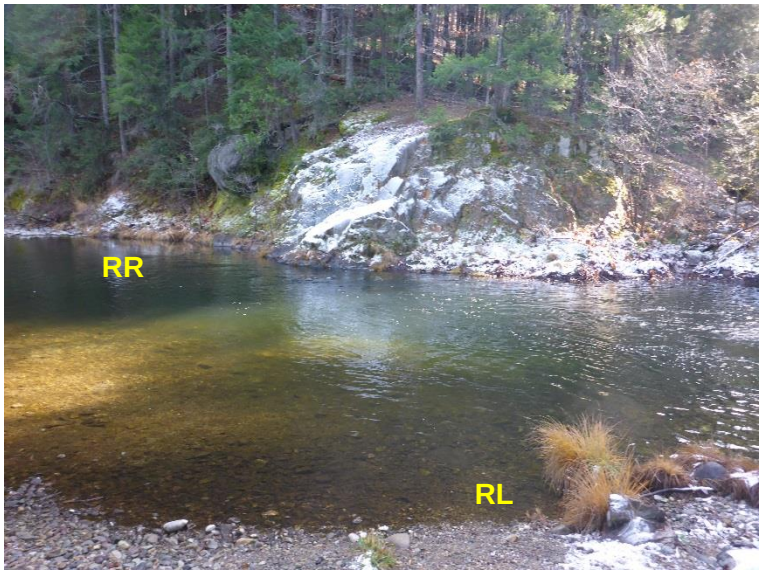
ESI Shoreline Type: Exposed rocky banks (1A); exposed rocky cliffs with boulder talus (1C); Vegetated, steeply-sloping bluffs (8F); vegetated low banks (9B)

Site Images



Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Location Name: Cantara Fishing Access (SAC – 020)

Site Objectives: Limited response, shoreline cleanup; possible deflection boom and product collection site.

Implementation: Best boom deployment area is straight out from the furthest upstream parking area. Clean shoreline using sorbent pads. If deploying boom, use 250 feet of swiftwater boom to deflect product to eddies along river-left shore and to protect shoreline at the collection area.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment in the dirt parking area of the Cantara/Ney Springs Wildlife Area. Site is accessible to a 70-bbl vacuum truck.

Response Strategy Map (overview)

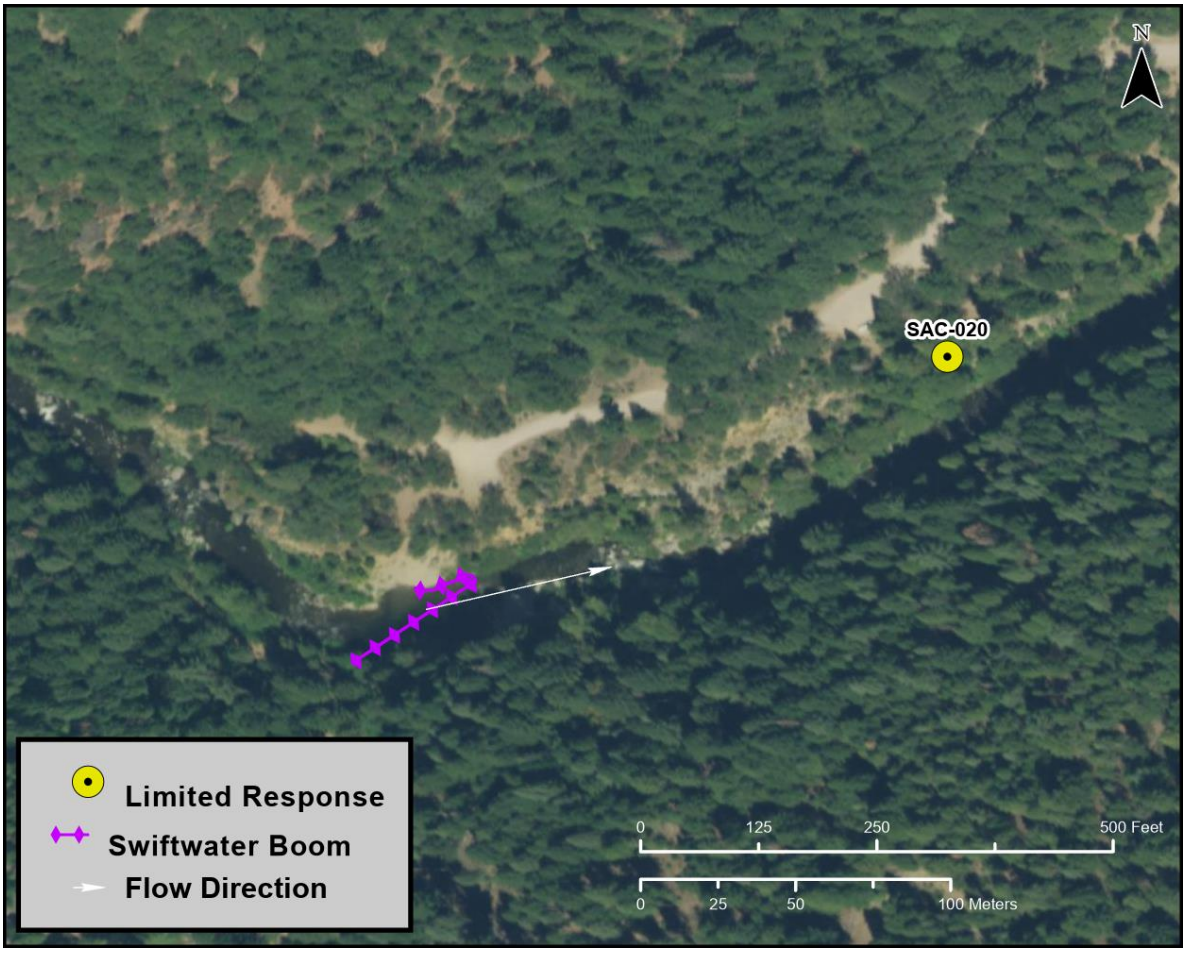


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	400 feet	
Boom	Swiftwater	8 to 12	inch	250 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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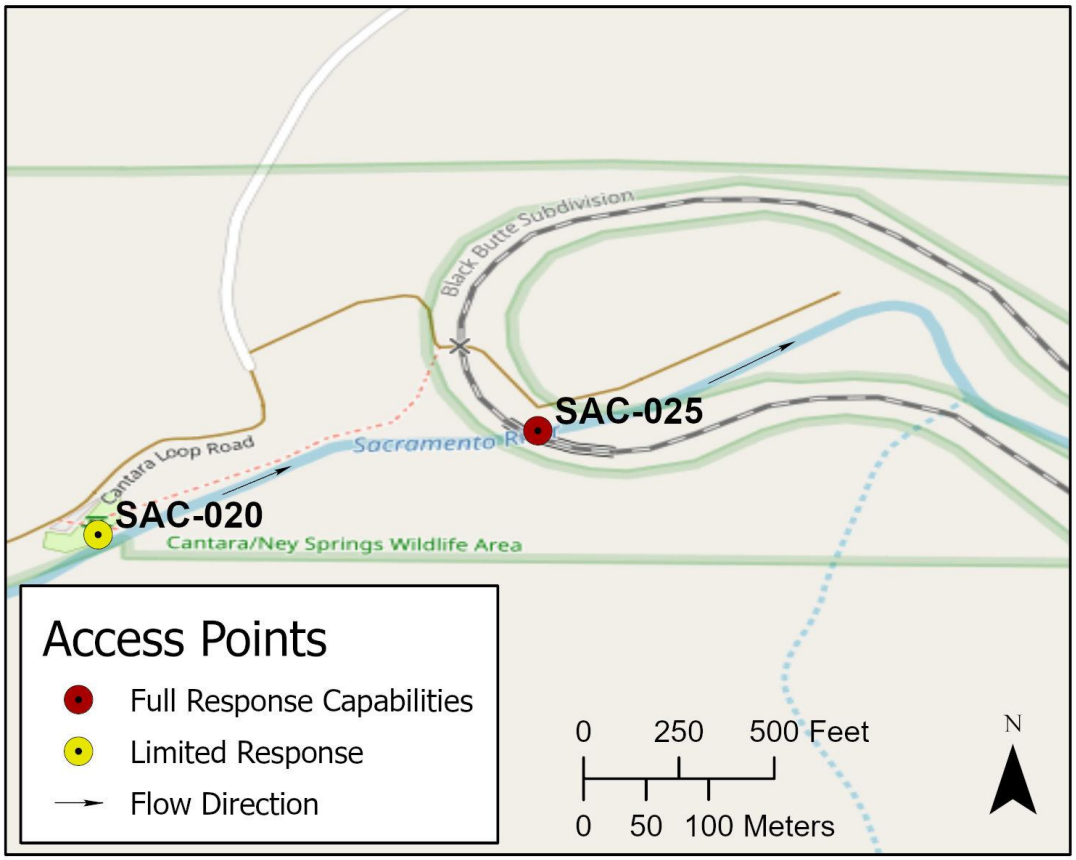
Location Name: Cantara Loop Rail Bridge (SAC – 025)

Latitude: N 41.26692 **Longitude:** W -122.30324	**Driving Directions**
Highway Post Mile: N/A	Take Mott Road exit off I-5, Exit #734. Head west to South Old Stage Road. Head north on South Old Stage Road to Cantara Loop Road. Head west on Cantara Loop Road and follow road down to gated unnamed paved access road on the left. This road leads down to the rail crossing and the Cantara Loop bridge.
Railroad Milepost: UPRR 328 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes - Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Response site is located beyond a locked gate. For access and work around UPRR tracks, contact UPRR Response Management Communications Center (RMCC) at (888) 877-7267. UPRR Cantara Road Crossing #411012E is located at bottom of access road.

Best boom deployment location is about 100 to 200 yards downstream of the rail bridge.

The rail bridge is the site of a previous derailment in July 1991 that released 19,000 gallons of the herbicide Metam Sodium into the Sacramento River.

Resources-At-Risk

Ecological: Osprey, Bald Eagle, Foothill Yellow-legged Frog, Shasta chaenactis

Economic: Fishing guide services; UPRR tracks and infrastructure

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 27 meters (90 feet)

Gradient: Low to Medium

Site Contact/s:
UPRR RMCC
(888) 877-7267

California Department of Fish and Wildlife – Region 1
(530) 225-2300

NORCOM Dispatch
(916) 358-1310

Site Location/Segment: SAC-SK-A-015

Elevation at this site is 2,806 feet above MSL.

Vehicular Access: High-clearance vehicle recommended for crossing rail tracks.

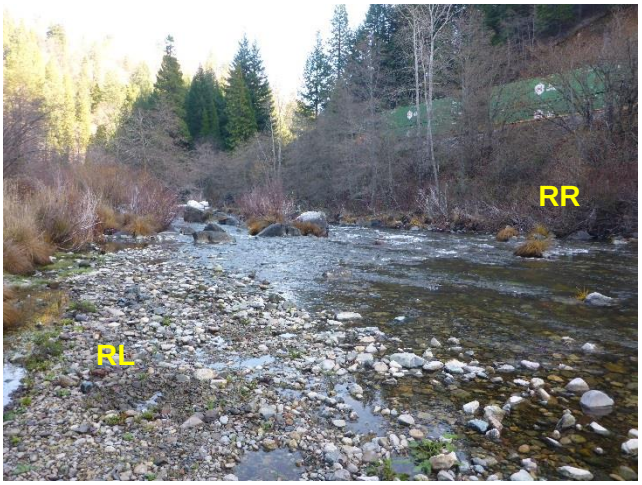
Recreational Use: Fishing, kayaking/rafting, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

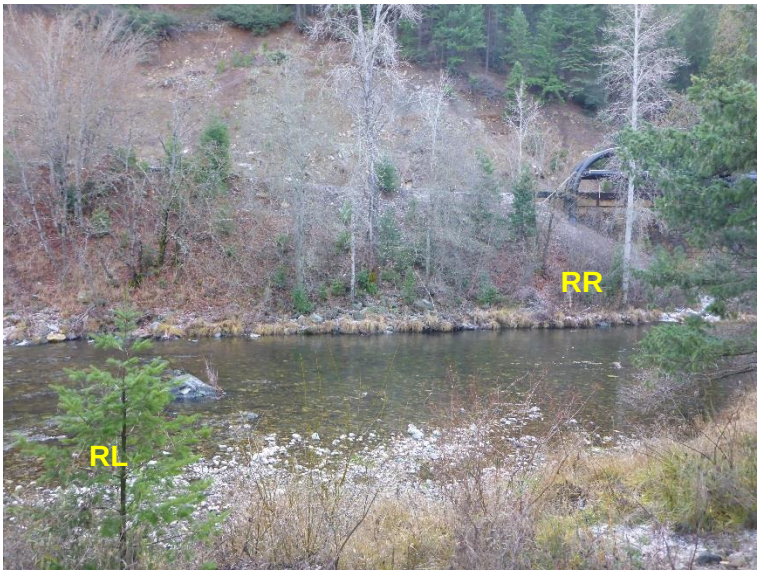
ESI Shoreline Type: Exposed, solid man-made structure (1B); gravel bars and gently sloping banks (6A); vegetated low banks (9B)

Site Images

Upstream



Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Location Name: Cantara Loop Rail Bridge (SAC – 025)

Site Objectives: Deflection boom and product collection.

Implementation: Deploy 400 feet of swiftwater boom from upstream on river-right shoreline near rail bridge to downstream eddy along river-left shoreline. Use extra boom to protect shoreline at the collection area. Collect product with skimmer and pump to storage tank up bank.

Staging Area Location and Capabilities/Amenities/Waste Management: Good resource staging area in open space above river-left shore on east side of track crossing. Additional nearby staging at Cantara/Ney Springs Wildlife Area – Cantara Fishing Access parking lot at bottom of Cantara Loop Road. Area is capable for vacuum truck access and sufficient for storing large quantities of liquid and/or solid wastes.

Response Strategy Map (overview)

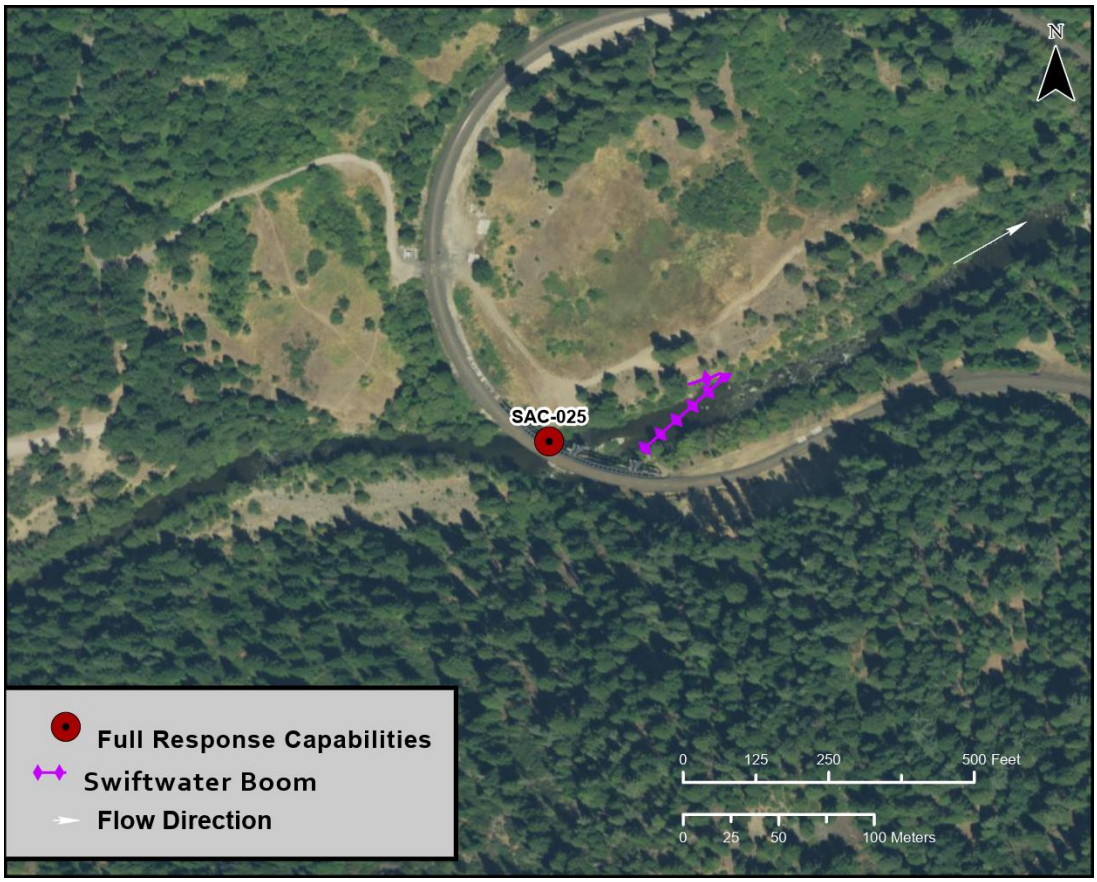


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	400 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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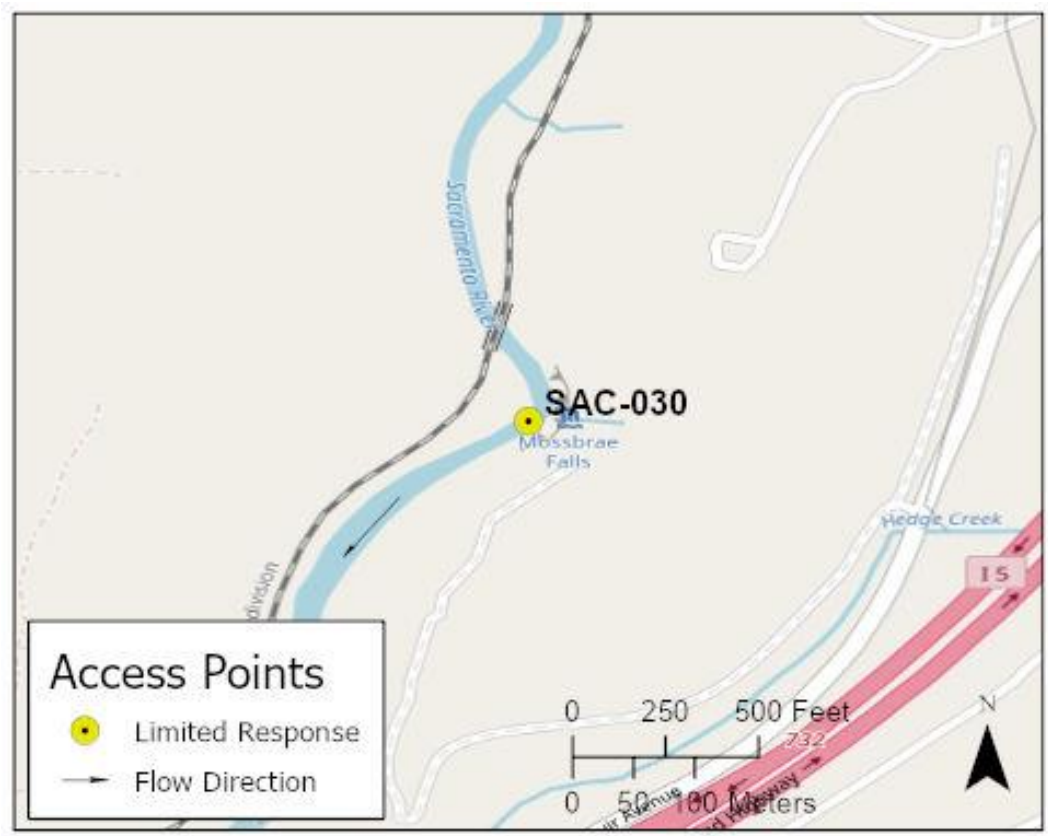
Location Name: Mossbrae Falls (SAC – 030)

Latitude: N 41.241755 **Longitude:** W -122.266541	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730. Head north on Dunsmuir Avenue until you reach Scarlet Way. Follow Scarlet Way west down to Cave Avenue, which turns into Simpson Avenue on the west side of the Sacramento River. Equipment can be loaded onto rail cars or high rail trucks at the turnout on the west side of the river. Response location (Mossbrae Falls) is located approximately 1.21 miles north of the Simpson Avenue bridge along the UPRR tracks. If hiking into this location along the tracks, park along Dunsmuir Avenue south of Scarlet Way. Coordinate with UPRR for traffic control.
Railroad Milepost: UPRR 324.95 - Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Response site is located on upstream side of rail bridge approximately 1.21 miles north of the Simpson Avenue bridge. Coordinate with UPRR to transport equipment to the response site. Contact UPRR Response Management Communications Center (RMCC) at (888) 877-7267. Mossbrae Falls is located about 200 yards downstream of the rail bridge at UPRR Milepost 324.95. Additional protection strategies can be implemented along the base of the falls to keep product in the current for collection in eddies along the river-right shoreline.

If hiking into this site along the rail tracks, coordinate with UPRR regarding train traffic.

NOTE: Scarlet Way, Cave Avenue, Simpson Avenue and all of the streets in the Shasta Retreat community are very narrow and difficult for large vehicles to maneuver in.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Black Swift

Economic: Fishing guide services; UPRR infrastructure; Mossbrae Falls is a local tourist attraction drawing many people to the site year-round.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Mossbrae Falls (SAC – 030)

Site Description and Field Notes

River Width: 24 meters (80 feet) at rail bridge

Gradient: Low to Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SK-A-020

UPRR Simpson Avenue track crossing #748858N is located on the west side of the Simpson Avenue bridge, at UPRR track milepost 323.20.

Elevation at this site is 2,494 feet above MSL.

Vehicular Access? There is no vehicle access to this site. Coordinate with UPRR for access via rail car or high rail vehicle. It's possible to hike into the site along the rail tracks, but responders need to coordinate with UPRR for traffic control.

Recreational Use? Fishing, water-contact, hiking, tourist destination

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky cliffs with boulder talus base (1C); Vegetated, steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Straight Across at Rail Bridge

RR = River-Right RL = River-Left

Photo Date: 12/13/2017

Location Name: Mossbrae Falls (SAC – 030)

Site Objectives: Deflection boom and product collection at rail bridge. Deflection boom away from Mossbrae Falls with possible product collection at eddy downstream.

Implementation: Attempt to collect product above rail bridge by deploying 400 feet of swiftwater boom from upstream river-left shore to an eddy on the upstream side of the rail bridge at the river-right shore. Use series of high-speed pumps to collect product in tanks stationed on the tracks on the south end of the rail bridge. Additionally, deploy 250 feet of swiftwater boom at base of Mossbrae Falls to keep floating product in the current for collection in eddies along the river-right shoreline downstream of the falls. Use additional boom as necessary to protect shoreline at collection areas.

Staging Area Location and Capabilities/Amenities/Waste Management: Response assets can be transported to the site from the north at the Cantara Loop Road track crossing #411012E or from the south at the Simpson Avenue track crossing #748858N. There is more space available for staging at the Cantara Loop Rail Bridge response site. Additional staging in Dunsmuir is at the UPRR Dunsmuir Rail Yard, Tauhindauli River Park, and Dunsmuir City Park. Remove collected wastes at end of each workday and manage waste quantification and disposal at one of the staging areas.

Response Strategy Map (overview)

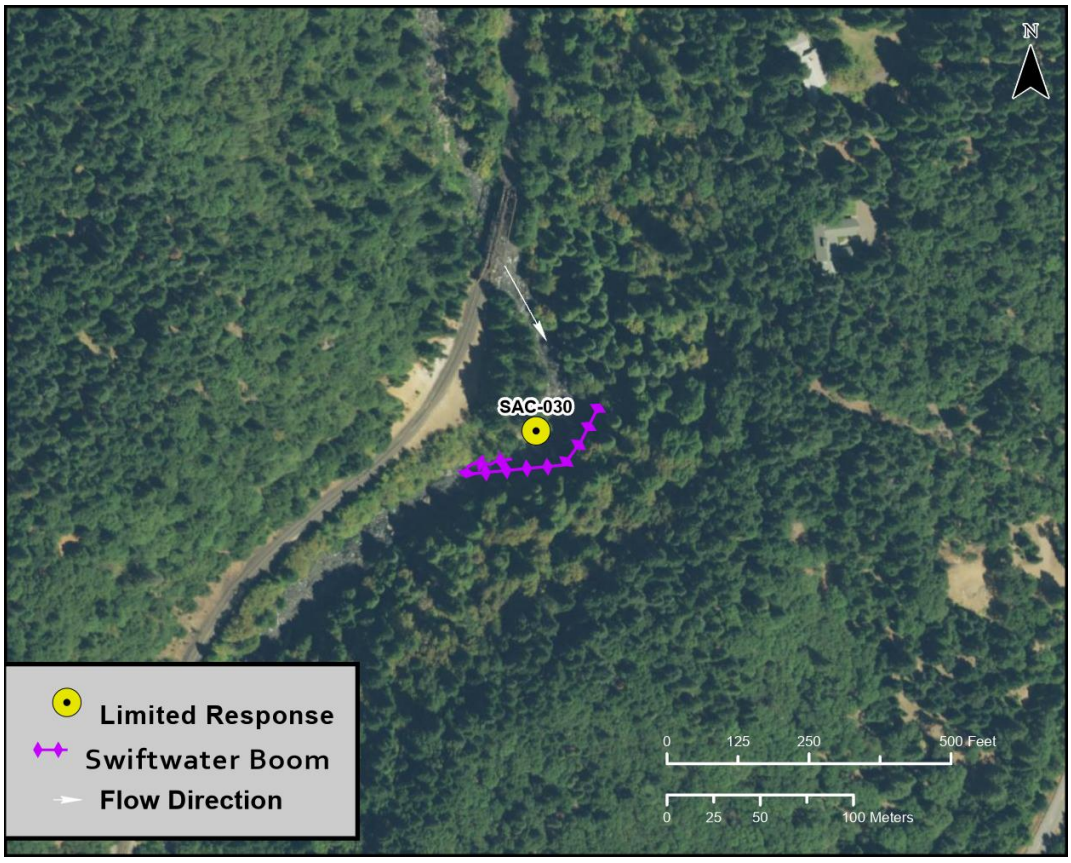


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	1,000 feet	
Boom	Swiftwater	8 to 12	inch	650 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Pumps	High-Speed			2	To pump recovered product up to storage tanks at track elevation.
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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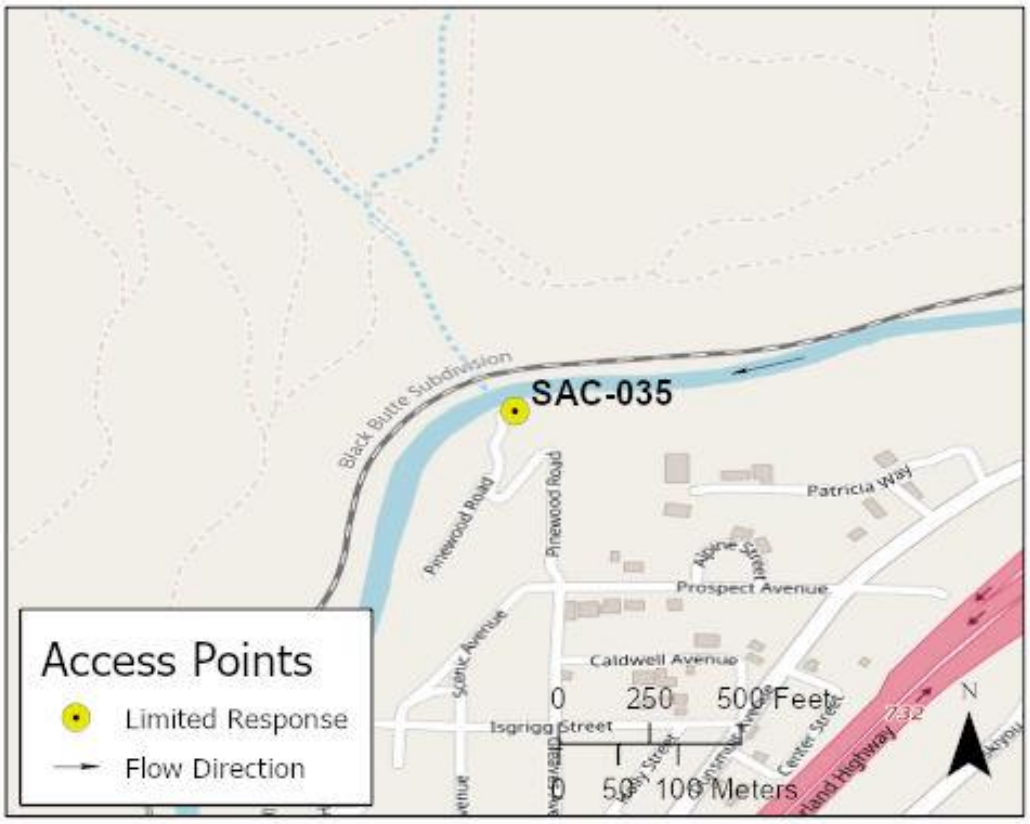
Location Name: Prospect Avenue Fishing Access (SAC – 035)

Latitude: N 41.2366 **Longitude:** W -122.27576	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730. Head north on Dunsmuir Avenue until you reach Prospect Avenue. Turn onto Prospect Avenue and head west until Prospect Avenue intersects Gleaves Avenue. Continue heading west onto a narrow dirt road with sign indicating Prospect Avenue Fishing Access. Follow dirt road down to small parking area at the river.
Railroad Milepost: UPRR 324.32 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Access to river is via a narrow one-lane dirt road. Access road is accessible for a 70-bbl vacuum truck.

Elevation at river is 2,409 feet above MSL.

A private residence is located approximately 250 yards downstream and up the dirt access road from the parking area by the river.

UPRR tracks are located immediately above river-right shoreline. Nearest track crossing is the Simpson Avenue Crossing #748858N at UPRR Milepost 323.77, on west side of Simpson Avenue bridge, about ½ mile downstream.

Resources-At-Risk

Ecological: Bald Eagle, Osprey

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

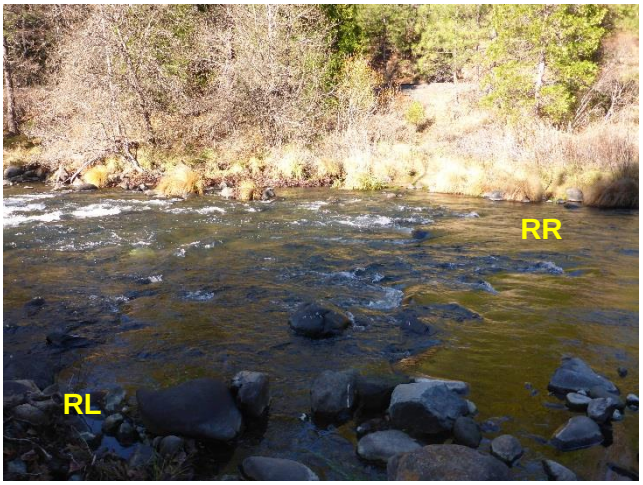
Location Name: Prospect Avenue Fishing Access (SAC – 035)

Site Description and Field Notes

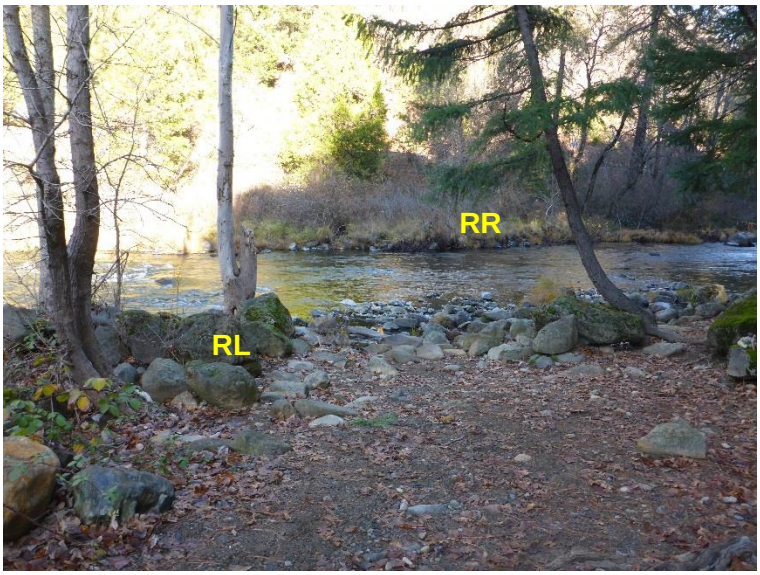
River Width: 27 meters **(**90 feet)	**Site Location/Segment: SAC-SK-A-025**
Gradient: Medium to high	This site is a popular fishing location.
Site Contact/s: UPRR RMCC (888) 877-7267 California Department of Fish and Wildlife – Region 1 (530) 225-2300	**Vehicular Access:** Accessible to all types of vehicles. Coordinate with UPRR personnel for access to river-right shoreline. **Recreational Use:** Fishing, water-contact, rafting/kayaking **Boat Launches:** Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A). **ESI Shoreline Type:** Exposed rocky banks (1A); Exposed rocky cliffs with boulder talus base (1C); Vegetated, steeply-sloping bluffs (8F); Vegetated low banks (9B)

Site Images

Upstream



Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Location Name: Prospect Avenue Fishing Access (SAC – 035)

Site Objectives: Deflection boom and product collection.

Implementation: Deploy 350 feet of swiftwater boom from upstream river-right shore to eddy at parking area on river-left shore. Use additional boom to protect shoreline at collection area. Collect floating product with skimmer inside of boom and pump directly to 70-bbl vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Nearest staging area is at Dunsmuir City Park. Additional staging locations available at Tauhindauli River Park and UPRR Dunsmuir Rail Yard. Remove collected wastes at end of each workday and manage waste quantification and disposal at one of the staging areas.

Response Strategy Map (overview)

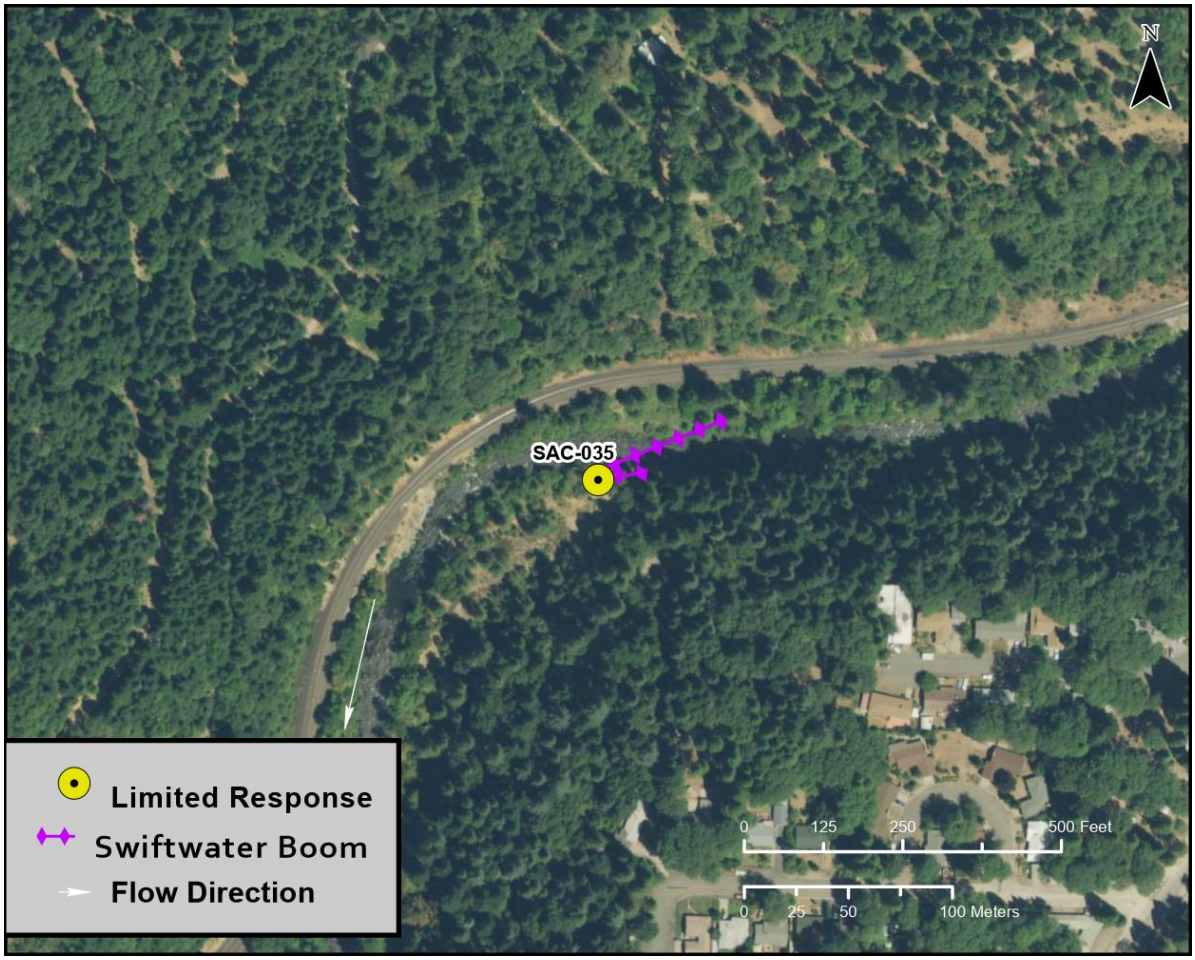


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	350 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	Storage tanks can be staged at Dunsmuir City Park.
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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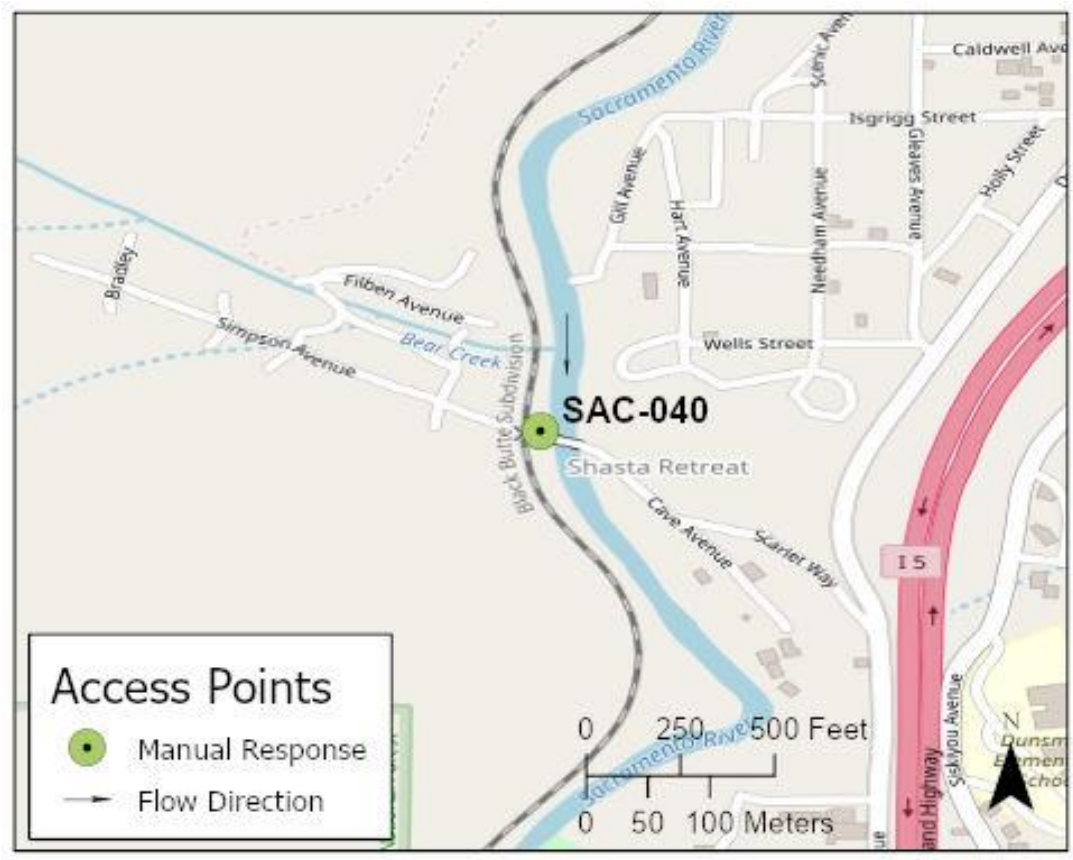
Location Name: Cave Avenue/Simpson Avenue Bridge (SAC – 040)

Latitude: N 41.230274 **Longitude:** W -122.278965	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit, Exit #730, off I-5 and head north on Dunsmuir Avenue. Turn west (left) onto Scarlett Way. Follow Scarlett Way down to Cave Avenue. Cave Avenue turns into Simpson Avenue when you cross the river.
Railroad Milepost: UPRR 323.77 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR track crossing #748858N is located on the west side of the bridge.

Best river access is at the river-left shoreline on the upstream side of the bridge. This is primarily a manual shoreline cleanup site.

The area is subject to swift water, especially during late winter and spring flows.

The Shasta Retreat community has very narrow streets with no parking. The City of Dunsmuir will ticket vehicles parked near the UPRR tracks.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Black Swift, Oregon fireweed

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 24 meters (80 feet)

Gradient: Medium to high

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SK-A-030

Private homes line the river-left shoreline. UPRR tracks follow the river-right shoreline. The rail tracks are a popular access point for Mossbrae Falls. However, hiking to the falls along the railroad tracks is trespassing subject to enforcement.

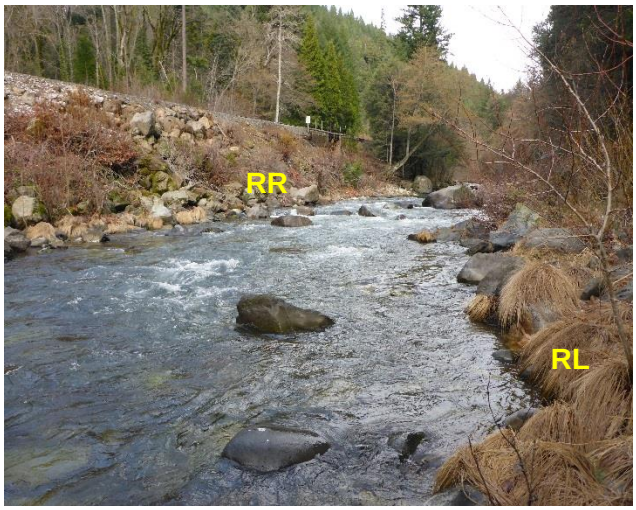
Vehicular Access: Most vehicle types can access this location. Nothing larger than a 70-bbl vacuum truck though.

Recreational Use: Fishing, rafting/kayaking, water contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

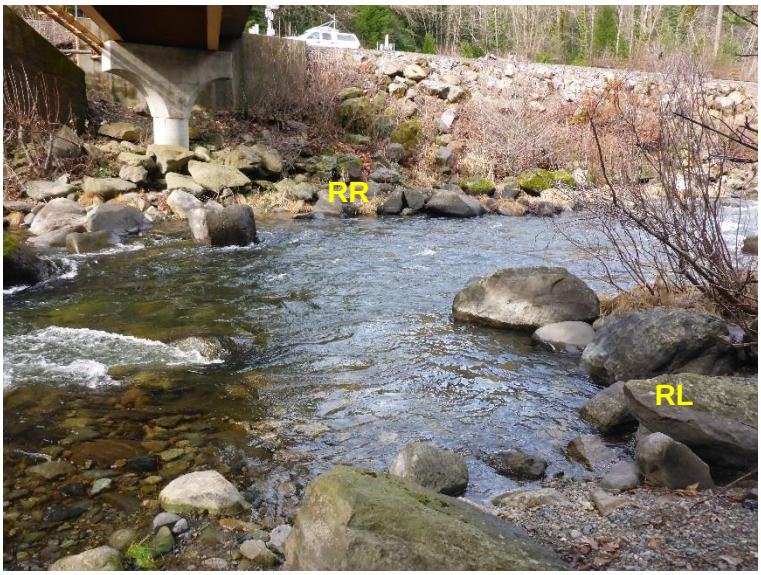
ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structure (1B); Vegetated steeply sloping bluffs (8F).

Site Images



Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 01/29/2018

Location Name: Cave Avenue/Simpson Avenue Bridge (SAC – 040)

Site Objectives: Manual shoreline cleanup site.

Implementation: Deploy sorbent boom to collect product in slow water eddies along either shoreline above and below the bridge. River-left shoreline is easier to access on the upstream side of the bridge. Manually clean impacted shoreline with additional sorbent pads.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at Dunsmuir City Park, Tauhindauli Park, or UPRR Dunsmuir Rail Yard.

Response Strategy Map (overview)

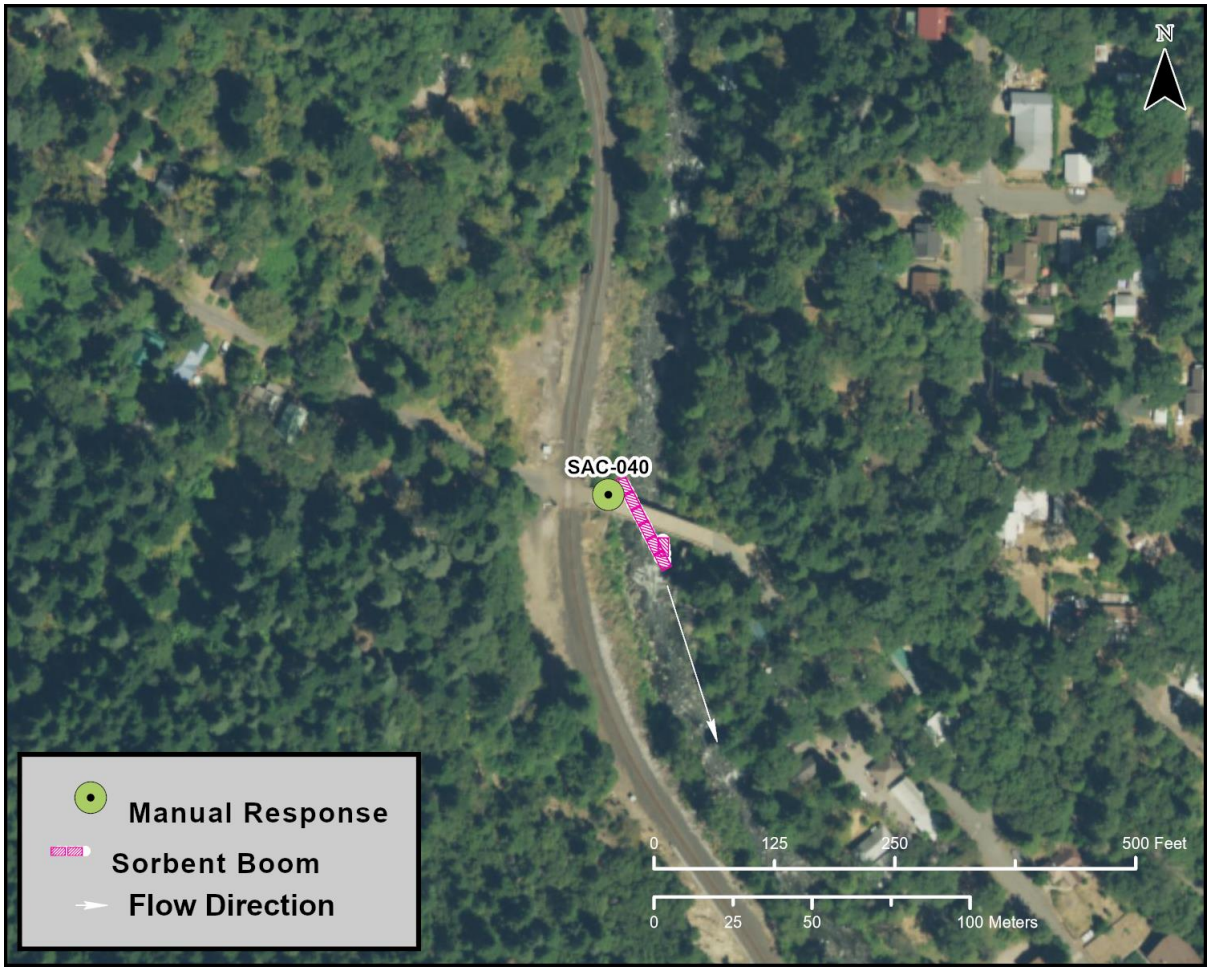


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	500 feet	
Pads and Sweep	Sorbent		bale	60	
Personnel				4 to 6 crew	
Waste Storage Bin		20	yard	1	Stage at rail siding on west side of bridge.

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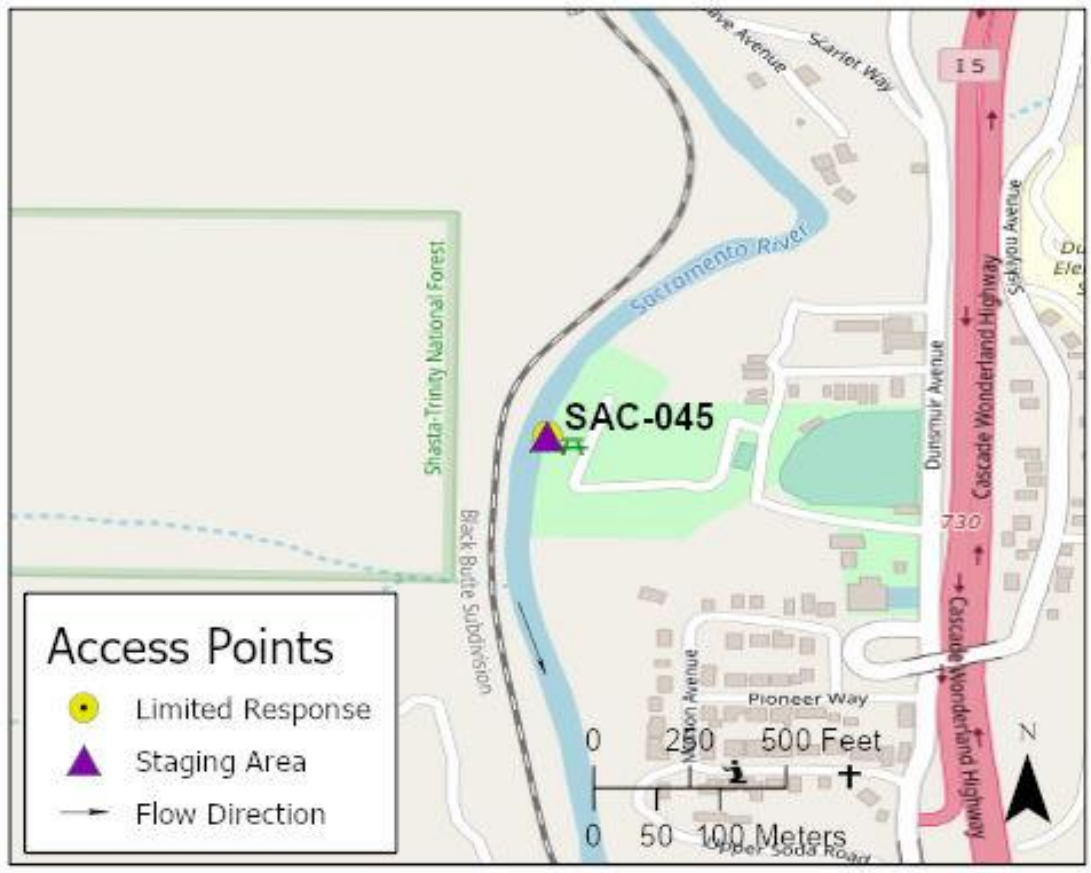
Location Name: Dunsmuir City Park (SAC – 045)

Latitude: N 41.22553 **Longitude:** W -122.27927	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730. Head north on Dunsmuir Avenue. Turn left (west) into Dunsmuir City Park and follow signs back toward the botanical gardens.
Railroad Milepost: UPRR 323.45 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Access gate to city park is open 0700 to dusk. Park has restroom facilities.

Hiking trails leading upstream and downstream of the parking area are found on the river-left shoreline.

UPRR tracks are located above the river-right shoreline. Best access to the river-right shore is via the UPRR tracks. Coordinate with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Elevation at river is 2,395 feet above MSL.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Oregon fireweed

Economic: Fishing guide services, City Botanical Gardens

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Dunsmuir City Park (SAC – 045)

Site Description and Field Notes

River Width: 24 meters (80 feet)	**Site Location/Segment: SAC-SK-A-035**
Gradient: Medium to swift	Response site is a city park and botanical gardens.
Site Contact/s: Dunsmuir Recreation & Parks District (530) 926-2494 UPRR RMCC (888) 877-7267	**Vehicular Access?** Park is accessible to all types of vehicles. **Recreational Use?** Fishing, rafting/kayaking, water-contact **Boat Launches:** Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A). **ESI Shoreline Type:** Exposed rocky banks (1A); Rocky shoals and bedrock ledges (2A); Vegetated steeply sloping bluffs (8F)

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Location Name: Dunsmuir City Park (SAC – 045) Page 3 of 3

Site Objectives: Deflection boom and product collection.

Implementation: Best boom deployment area is at the north end of the parking lot. Deploy 400 feet of swiftwater boom from upstream river-right shoreline to eddies found downstream along river-left shore. Protect shoreline at collection area with excess boom. Use skimmer to collect floating product inside boom and pump directly up to vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Good staging at the park with more space available outside the park gate. Additional staging areas located at Tauhindauli River Park and UPRR Dunsmuir Rail Yard. Response site is accessible by a 70-bbl vacuum truck.

Response Strategy Map (overview)

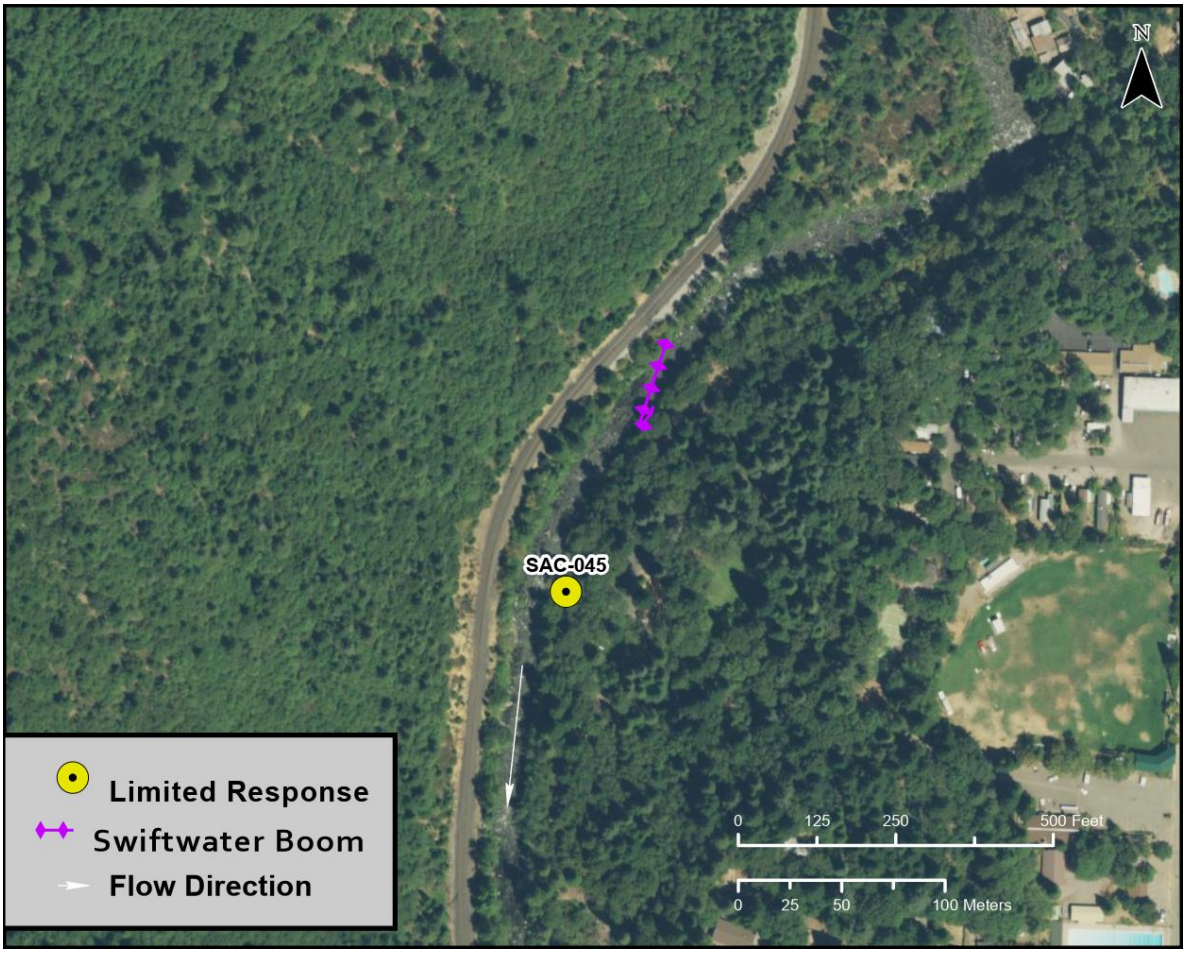


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	400 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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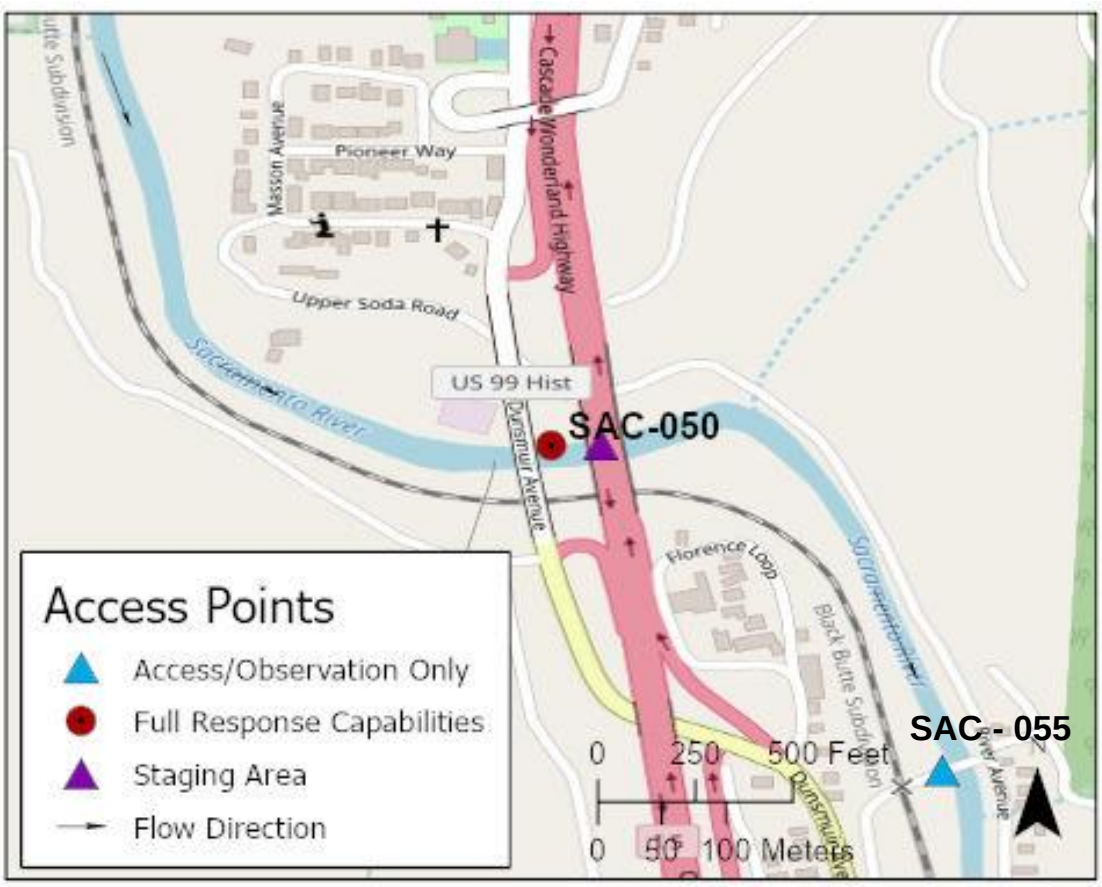
Location Name: Tauhindauli Park (SAC – 050) 

Latitude: N 41.22024 **Longitude:** W -122.27548	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730. Head north on Dunsmuir Avenue. Turn left (west) onto Stagecoach Road and follow back to Upper Soda Road. Follow Upper Soda Road down to Tauhindauli Park.
Railroad Milepost: UPRR 322.87 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Best boom deployment site is below the I-5 overpass.

UPRR track crossing #748857G is located on the south side of the river, immediately west of the I-5 overpass, at track milepost 322.87.

Elevation at river level is 2,342 feet above MSL.

Resources-At-Risk

Ecological: western mastiff bat, Bald Eagle, Osprey, Oregon fireweed

Economic: Fishing guide services; local tourism

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 17 meters (55 feet)

Gradient: Medium to low

Site Contact/s:

Dunsmuir Recreation & Parks District

(530) 926-2494

Site Location/Segment: SAC-SK-A-040

Portable toilets are located in the park parking lot. Interpretive nature trails follow the river-left shoreline upstream of the I-5 overpass and provide additional water access points.

Vehicular Access: The park is accessible to all types of vehicles.

Recreational Use: Fishing, rafting/kayaking, water-contact, hiking, picnic area.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed, solid man-made structure (1B); Rocky shoals & bedrock ledges (2A); Gravel bars and gently sloping banks (6A); Vegetated low banks (9B)

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Site Objectives: Deflection boom and product collection.

Implementation: Good boom deployment location exists under I-5 overpass. Set 250 feet of swiftwater boom from river-right shore on west side of I-5 overpass to just below eddy under overpass on river-left shore. Use excess boom to protect shoreline at collection point. Best collection point is under I-5 overpass on river-left shore. Vacuum truck can access this site.

Staging Area Location and Capabilities/Amenities/Waste Management: Good staging at Tauhindauli Park. Additional staging areas are located at Dunsmuir City Park and UPRR Dunsmuir Rail Yard. There are portable toilets on-site.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	400 feet	
Boom	Swiftwater	8 to 12	inch	250 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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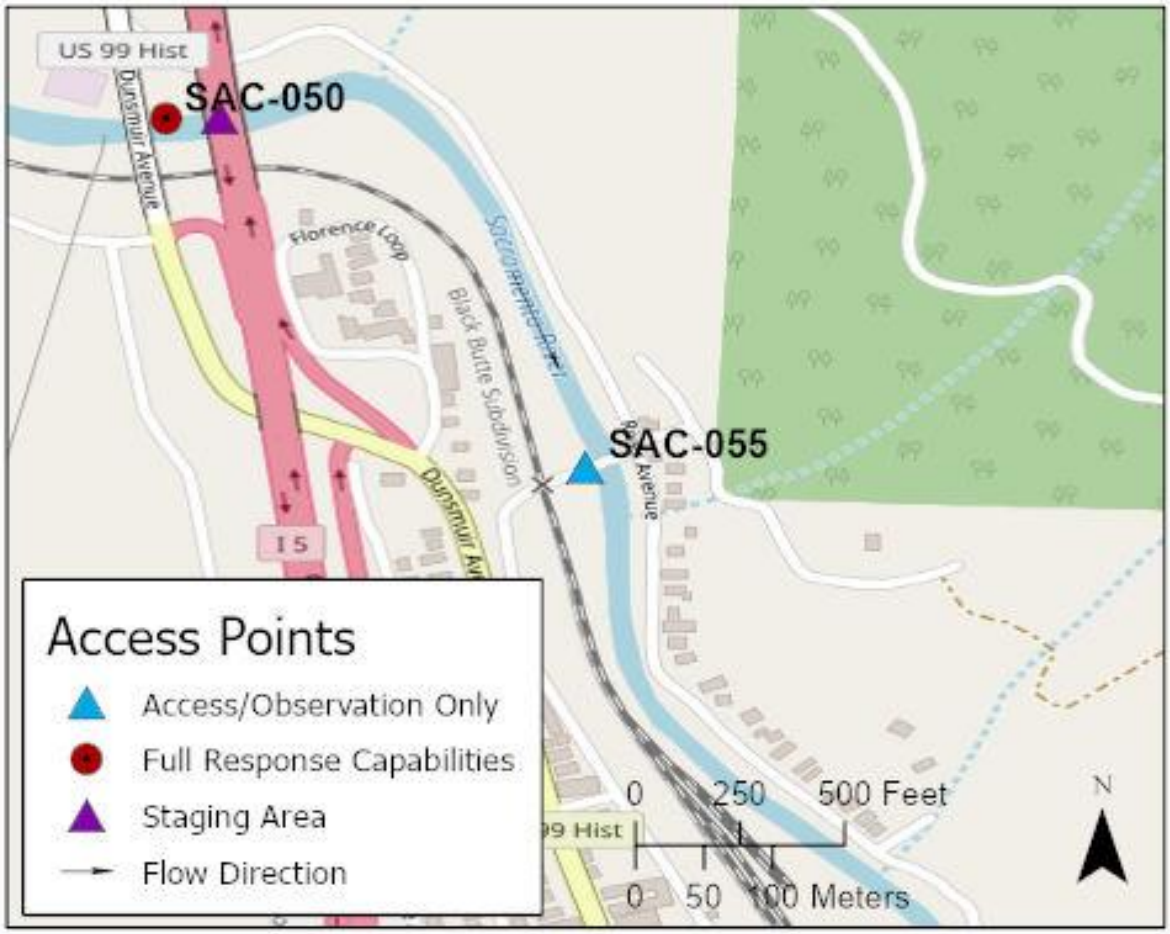
Access/Observation Site: Sacramento Avenue Bridge (SAC - 055)

Latitude: N 41.21748 **Longitude:** W -122.27174	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730, and head south on Dunsmuir Avenue. Turn east (left) onto Spring Street. Immediately turn north (left) onto Sacramento Avenue. Continue downhill to river.
Railroad Milepost: UPRR 322.56 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR track crossing #748855T is located on the west side of the bridge.

Access to river is under the bridge on the river-right shoreline.

Swift water flow in this location limits response capabilities.

Access/Observation Site: Sacramento Avenue Bridge (SAC - 055)

Site Description and Field Notes

Site Location/Segment: SAC-SK-A-045

Park in small turnout on west side of bridge.

River is approximately 70 feet wide at this location. Elevation is 2,317 feet above MSL.

Site Contact/s:

For track access or issues, contact UPRR RMCC at (888) 877-7267.

Site Images

Upstream

Downstream

Straight Across

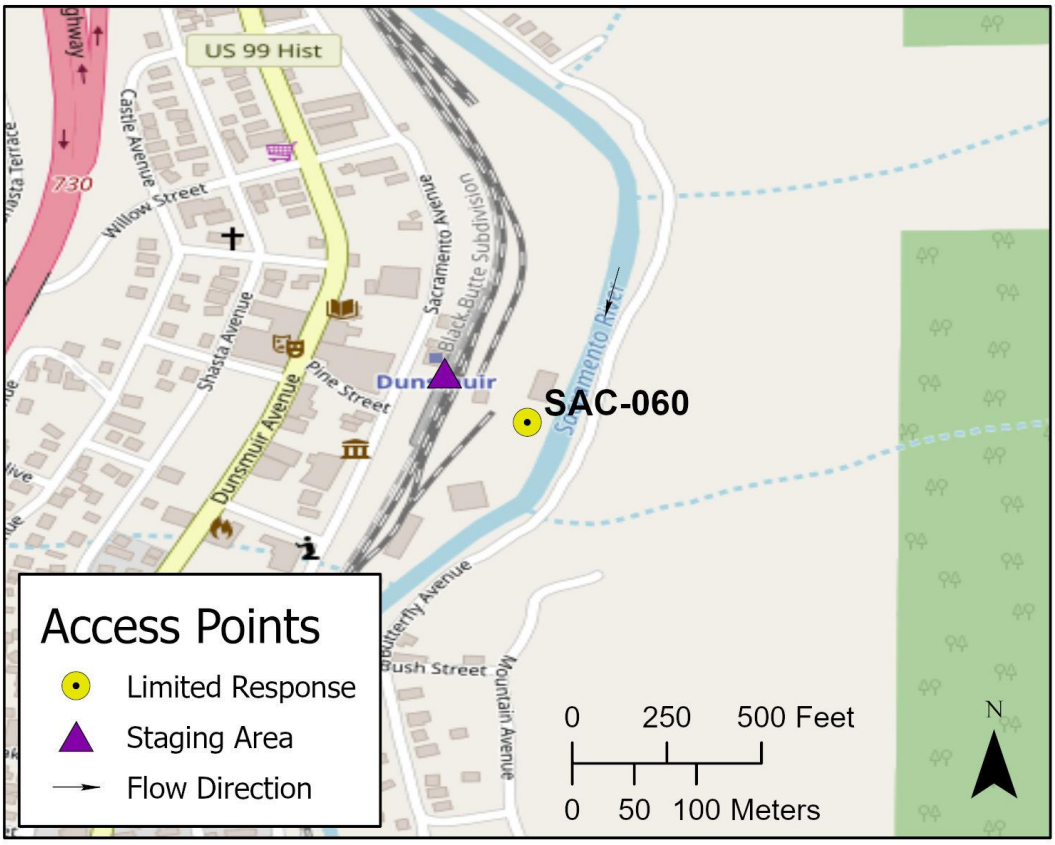
RR = River-Right RL = River-Left

Photo Date: 05/10/2017

Location Name: UPRR Dunsmuir Rail Yard (SAC – 060)

Latitude: N 41.210781 **Longitude:** W -122.269486	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit off I-5, Exit #730. Head south on Dunsmuir Avenue and turn east (left) onto Cedar Street. Go downhill and turn south (right) onto Sacramento Avenue. Continue south on Sacramento Avenue to Bush Street. Access UPRR Dunsmuir Rail Yard from the Bush Street bridge on the east side of the rail tracks.
Railroad Milepost: UPRR 321.90 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes –Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Be aware of rail traffic throughout the yard. Coordinate with on-site UPRR personnel for traffic controls.

Access the concrete walkway along the river-right shoreline at the north (upstream) end of the concrete retaining wall. Access to a slow water pool below the City of Dunsmuir Public Works building at the south end of the rail yard via a steep rocky trail. Slip, trip, and fall hazards exist, especially during icy or wet conditions. River can be very swift along the retaining wall.

UPRR has two response trailers on-site with hard boom, sorbents, and additional response equipment. UPRR track crossing #748854L is located on the west side of the Bush Street bridge at UPRR milepost 321.90.

Resources-At-Risk

Ecological: western mastiff bat, Bald Eagle, Osprey, Northern Goshawk, Oregon fireweed

Economic: Fishing guide services, UPRR infrastructure, local tourism

Tribal: Contact the Native American Heritage Commission at (916)-373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 14 meters (45 feet)

Gradient: Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SK-A-055

This is UPRR's main rail yard north of Roseville.

Siskiyou County Public Works Department has an office in one of the buildings south of the response site.

Vehicular Access: All vehicle types can access this location.

Recreational Use: Fishing, rafting/kayaking, water-contact

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed, solid man-made structures (1B); Vegetated, steeply-sloping bluffs (8F); Vegetated low banks (9B)

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 09/21/2017

Location Name: UPRR Dunsmuir Rail Yard (SAC – 060)

Site Objectives: Deflection boom and product collection.

Implementation: Best boom deployment and product collection area is at the slow water pool and eddy on the river-right shoreline below the City of Dunsmuir Public Works Building at the south end of the rail yard. Collect product inside boom angle and pump up to storage tanks on bank above river.

Staging Area Location and Capabilities/Amenities/Waste Management: Lots of space available for staging and waste management.

Response Strategy Map (overview)

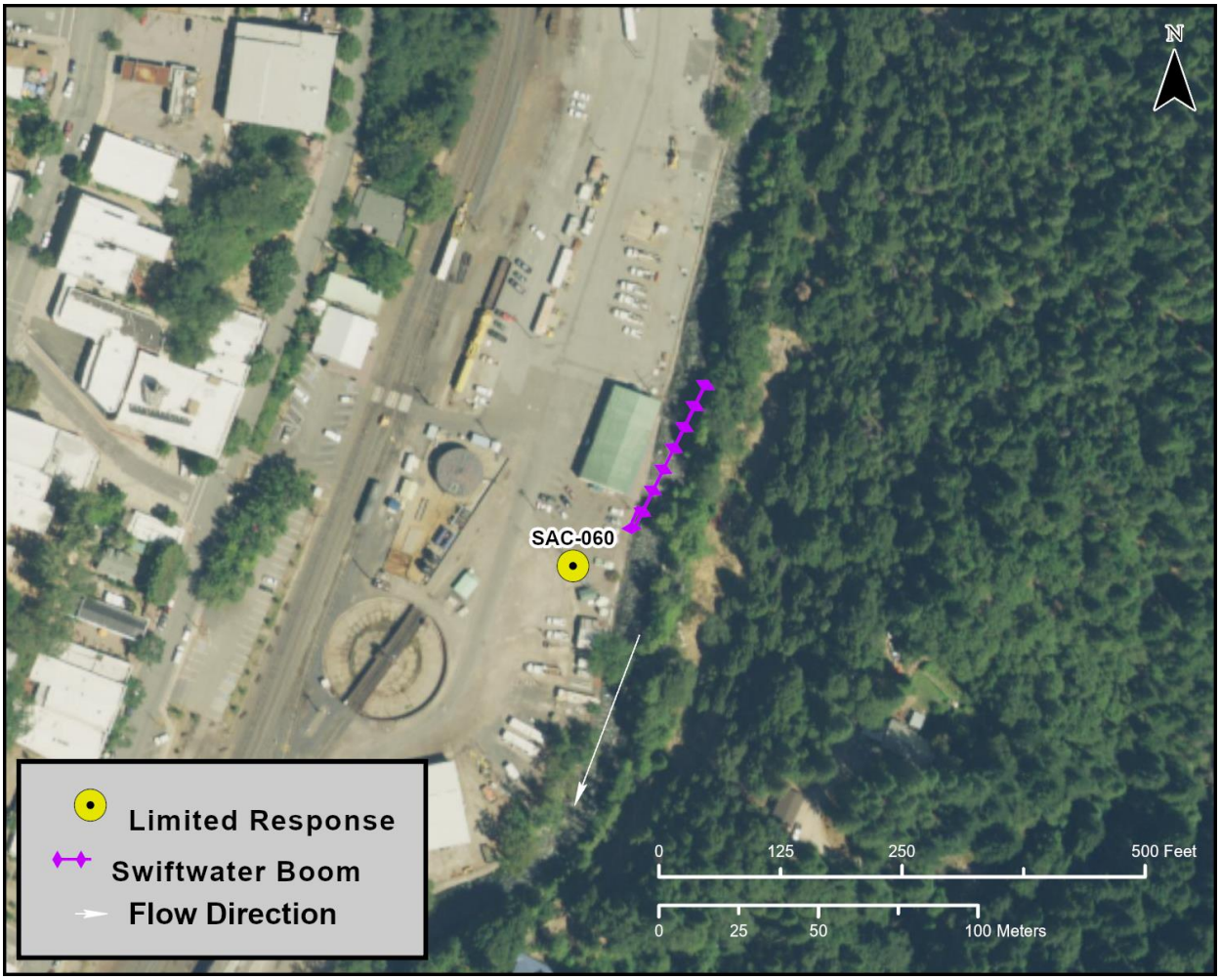


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	400 feet	
Boom	Swiftwater	8 to 12	inch	300 feet	Need 600 feet of boom if deploying a secondary boom line.
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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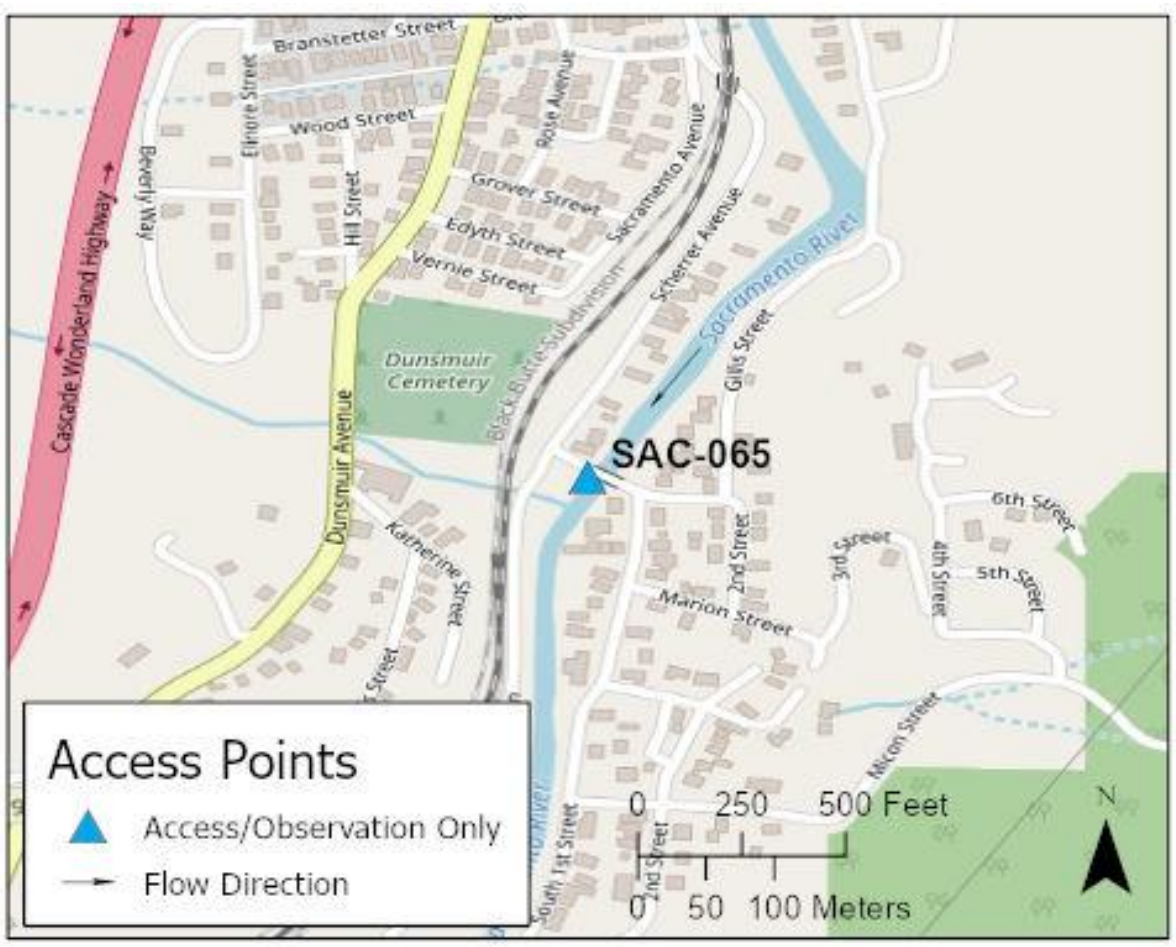
Access/Observation Site: Bridge Street Bridge (SAC - 065) Page 1 of 2

Latitude: N 41.202256 **Longitude:** W -122.272803	**Driving Directions**
Highway Post Mile: N/A	Take the Central Dunsmuir exit, Exit #730, off I-5 and turn south onto Dunsmuir Avenue. Turn east (left) onto Branstetter Street. Follow Branstetter Street down and turn south onto Sacramento Avenue. Take the first left onto Scherrer Avenue and continue south to Bridge Street.
Railroad Milepost: UPRR 321.70 – Black Butte Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR track crossing #748853E is located on the west side of the bridge.

UPRR right-of-way on west side of the bridge provides good access along the river-right shoreline heading south.

Difficult site for accessing the river due to steep banks, thick vegetation, and residential properties.

Site Description and Field Notes

Site Location/Segment: SAC-SK-A-055

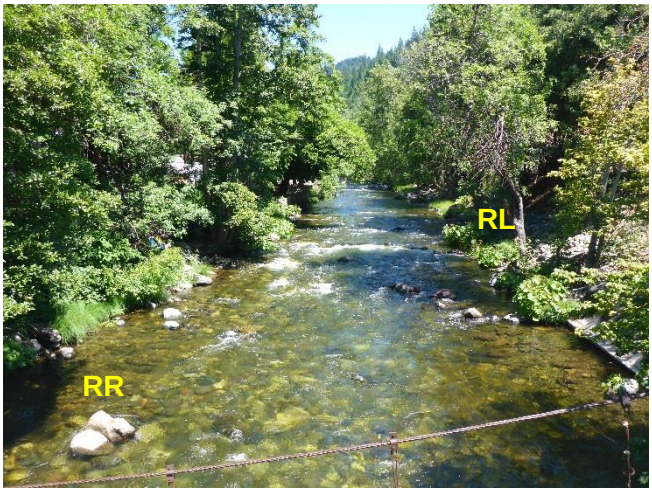
River is approximately 60 feet wide at this location. Residential properties line both shorelines.

Elevation at this site is 2,253 feet above MSL.

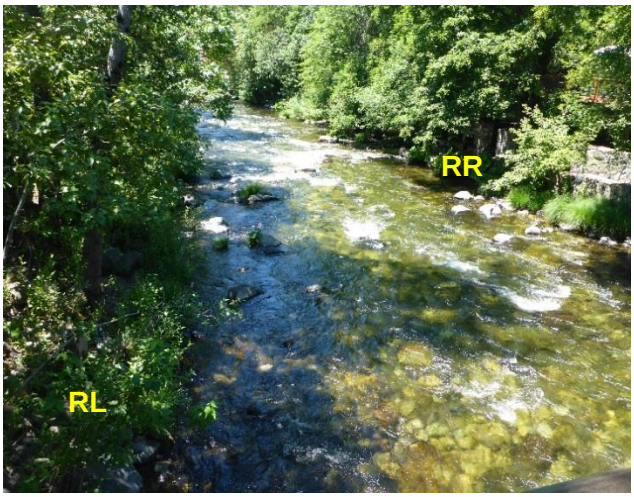
Site Contact/s:

For track access or issues, contact UPRR RMCC at (888) 877-7267.

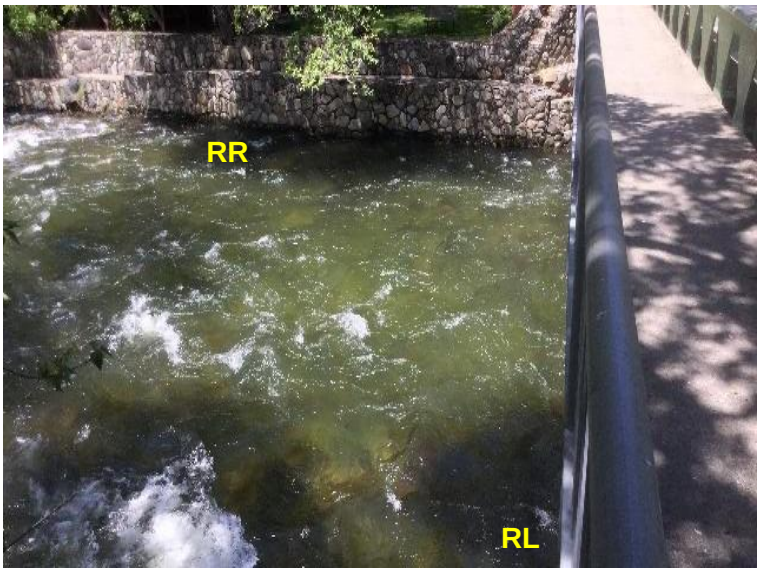
Site Images



Upstream
Photo Date: 06/22/2016



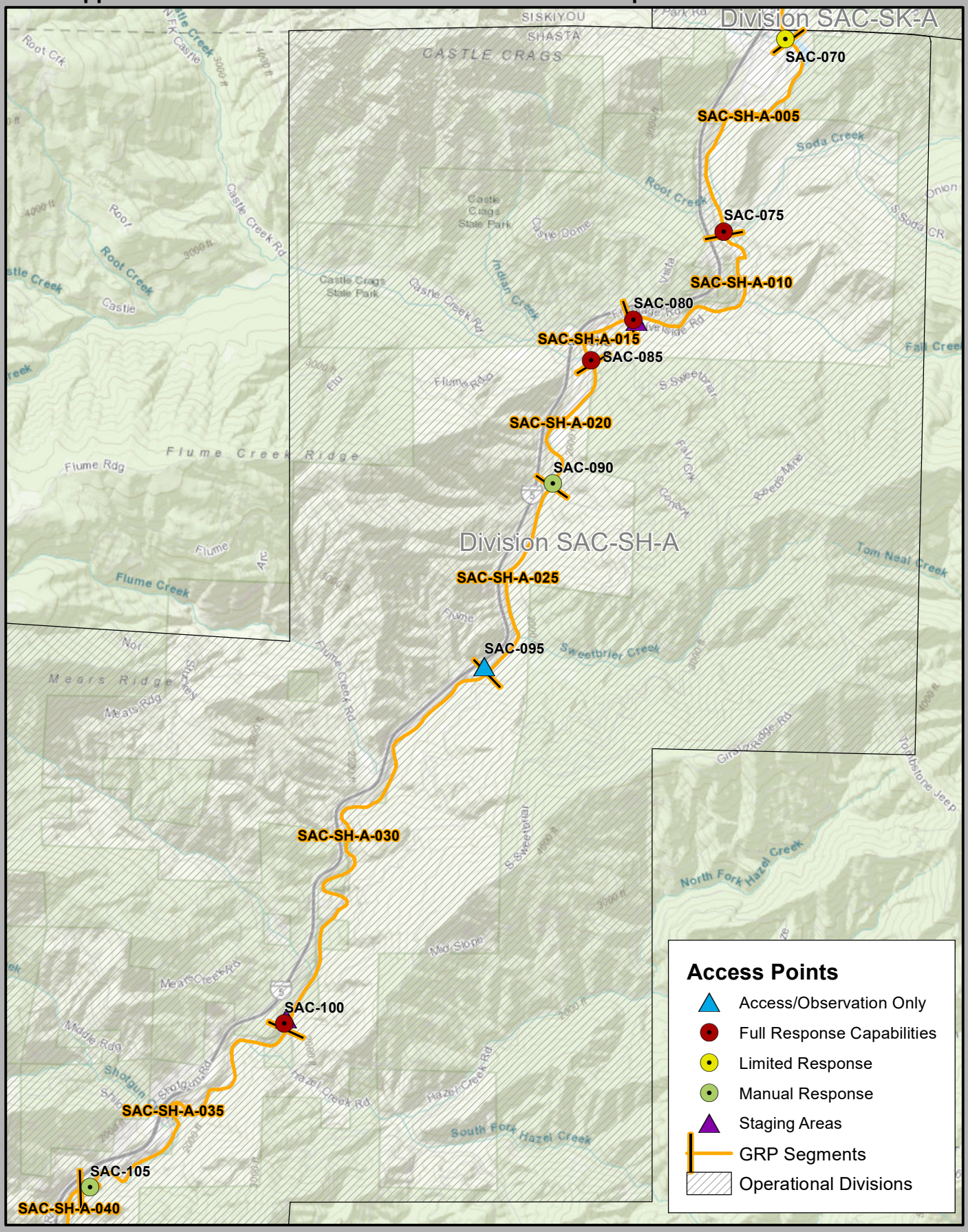
Downstream
Photo Date: 01/05/2018



Straight Across
Photo Date: 06/22/2016

RR = River-Right RL = River-Left

Figure 3-3: Upper Sacramento River GRP Division SAC-SH-A1 Map



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

Author: spaine, CDFW
Date Created: 4/2/2019
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Div-SAC-SH-A1.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Division SAC-SH-A (1 of 2)

0 1 2 Miles
0 1 2 Kilometers

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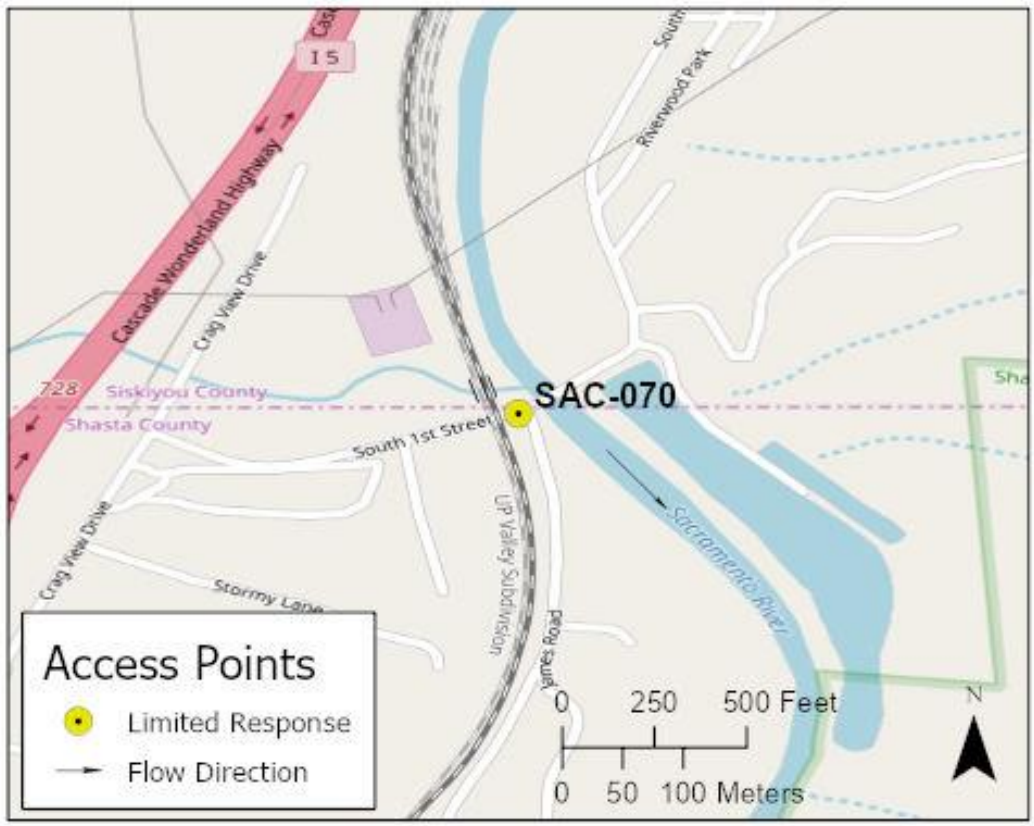
Location Name: South 1st Street Bridge SAC – 070 Page 1 of 3

Latitude: N 41.18410 **Longitude:** W -122.28433	**Driving Directions**
Highway Post Mile: N/A	Take the Railroad Park Road exit, Exit #728, off I-5. Head east at the bottom of the off ramp. Turn north onto Crag View Drive. Turn east onto South 1st Street and follow road to the river and bridge.
Railroad Milepost: UPRR 319.91 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Contact Siskiyou County Public Works Department at (530) 842-8250 regarding loads weighing more than 70,000 lbs before crossing the South 1st Street bridge. Consider attaching vacuum hose lines to the bridge to reach the east side instead of crossing the bridge with vacuum trucks.

This is the last site in Division SAC-SK-A. The Shasta County/Siskiyou County line is located on the west side of the South 1st Street bridge.

The confluence of Little Castle Creek and the Sacramento River is located about 75 feet north of the bridge.

UPRR track subdivision changes from Black Butte Subdivision to the Valley Subdivision at milepost 320, just upstream of the bridge.

Site elevation is 2,179 feet above MSL.

Resources-At-Risk

Ecological: Northern Goshawk, Osprey, Bald Eagle, Foothill Yellow-legged Frog, Oregon fireweed

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: South 1st Street Bridge (SAC – 070) Page 2 of 3

Site Description and Field Notes

River Width: 37 meters (120 feet)

Gradient: Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SK-A-060

The City of Dunsmuir Wastewater Treatment Plant is located on the east side of the Sacramento River, on the south side of South 1st Street.

Vehicular Access: All vehicle types can access this site.

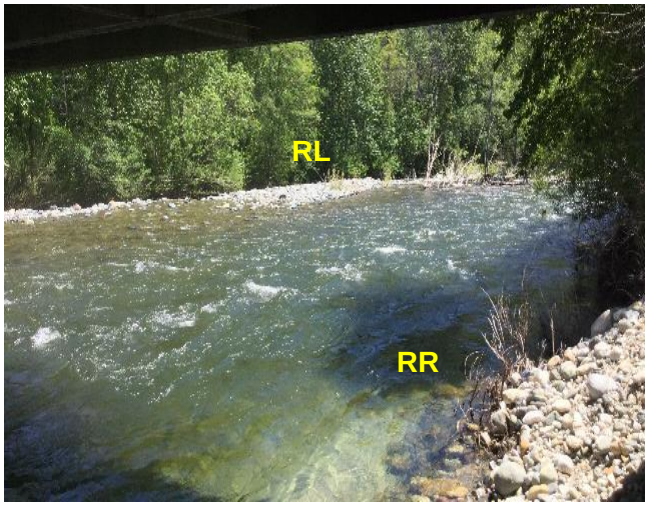
Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed, solid man-made structures (1B); Vegetated low banks (9B)

Site Images

Upstream



Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 05/10/2017

Location Name: South 1st Street Bridge (SAC – 070) Page 3 of 3

Site Objectives: Deflection boom and product collection. At low river velocity, underflow dams can be constructed along the river-left shoreline.

Implementation: Set 500 feet of swiftwater boom high above bridge on river-right shore and deflect product toward slower water near bridge on river-left shore. Use excess boom to protect shoreline at collection area. At low river velocity, underflow dams can be constructed along the gravel bar on the river-left shoreline. Collect product in slower water along river-left shore upstream of the bridge.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the City of Dunsmuir Wastewater Treatment Plant on southeast side of the bridge.

Response Strategy Map (overview)

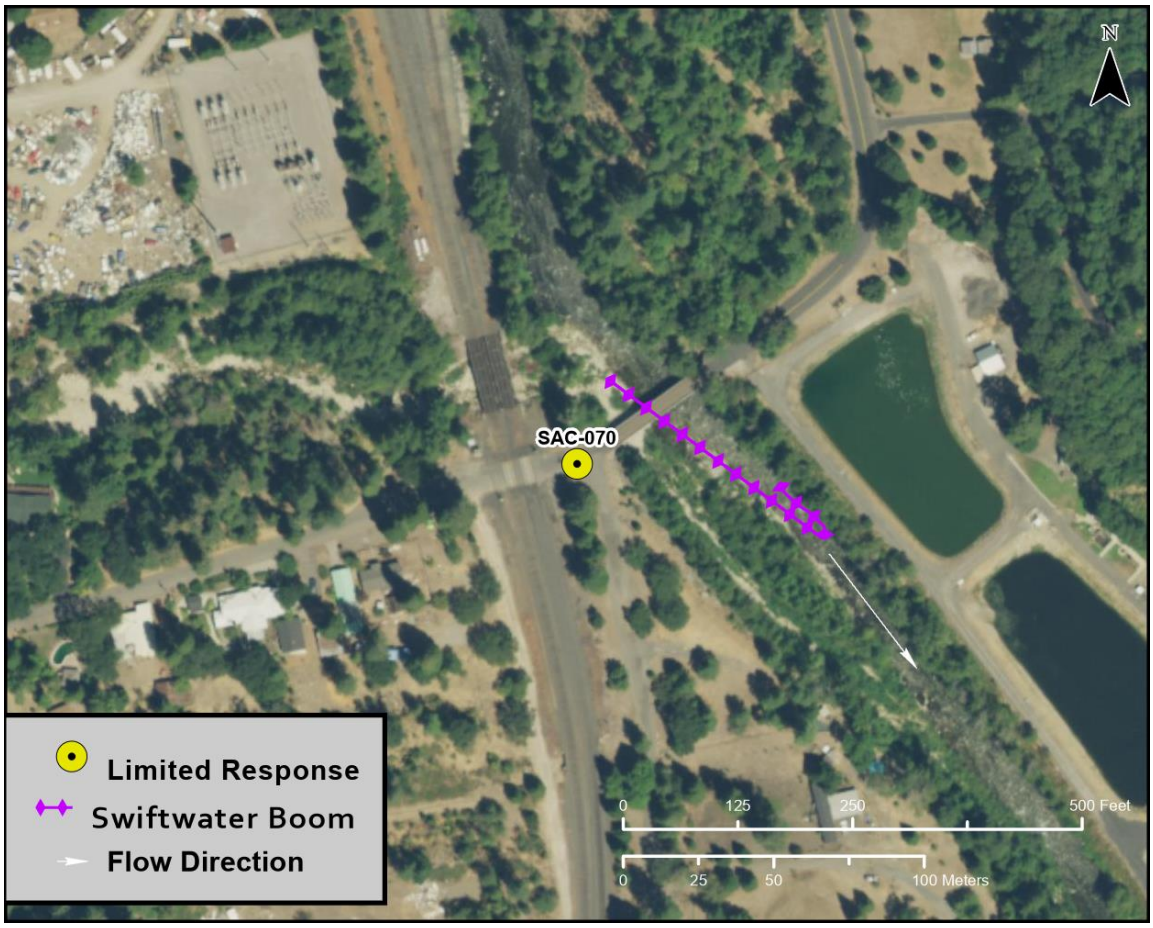


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	800 feet	
Boom	Swiftwater	8 to 12	inch	500 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20-000	gallon	5	
Vacuum Truck		70	bbl		
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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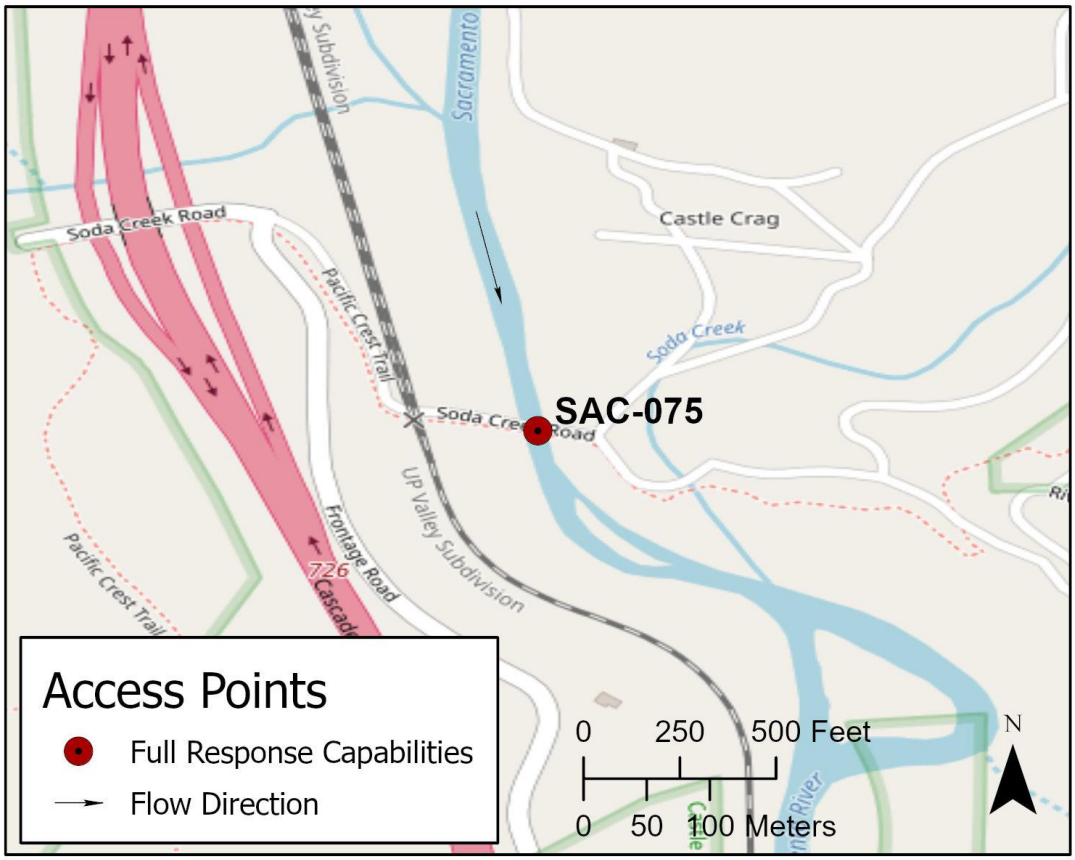
Location Name: Soda Creek Road Bridge (SAC – 075)

Latitude: N 41.16047 **Longitude:** W -122.29416	**Driving Directions**
Highway Post Mile: N/A	Take the Soda Creek Road exit, Exit #726, off I-5. Head east on Soda Creek Road until you reach the Sacramento River, on the east side of the UPRR tracks.
Railroad Milepost: UPRR 318.06 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Spotty – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR track crossing #750544S is located on the west side of the bridge at milepost 318.06.

There is a private, gated property located on the east side of the bridge. Google Maps shows a road heading north above the river-left shoreline from this private, gated property.

Elevation at this site is 2,101 feet above MSL.

Best product collection point is a deep hole in the river with slower water on the east side of the bridge.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, Cascade frog

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Soda Creek Road Bridge (SAC – 075)

Site Description and Field Notes

River Width: 27 meters (90 feet)

Gradient: Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-005

The Pacific Crest Trail crosses this bridge and heads west-northwest into Castle Crags State Park on the west side of I-5.

Vehicular Access: All vehicle types can access this site.

Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed, solid man-made structures (1B); Rocky shoals and bedrock ledges (2A); Vegetated low banks (9B).

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 01/29/2018

Site Objectives: Deflection boom and product collection.

Implementation: The eddy on the river-left shoreline above and below the bridge is a good product collection location. At low water flow, set 400 feet of swiftwater boom from river-right shoreline upstream of bridge and deflect to the eddy on river-left shore just below the bridge. Use excess boom to protect shoreline at collection area. Deploy secondary 250 feet of boom from the river-right shoreline at the bridge to the island below the eddy on the river-left shoreline to capture oil that may entrain under the primary boom set. Recover floating product with skimmer and pump up to vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: There is open space for staging equipment and managing wastes on the west side of the bridge.

Response Strategy Map (overview)

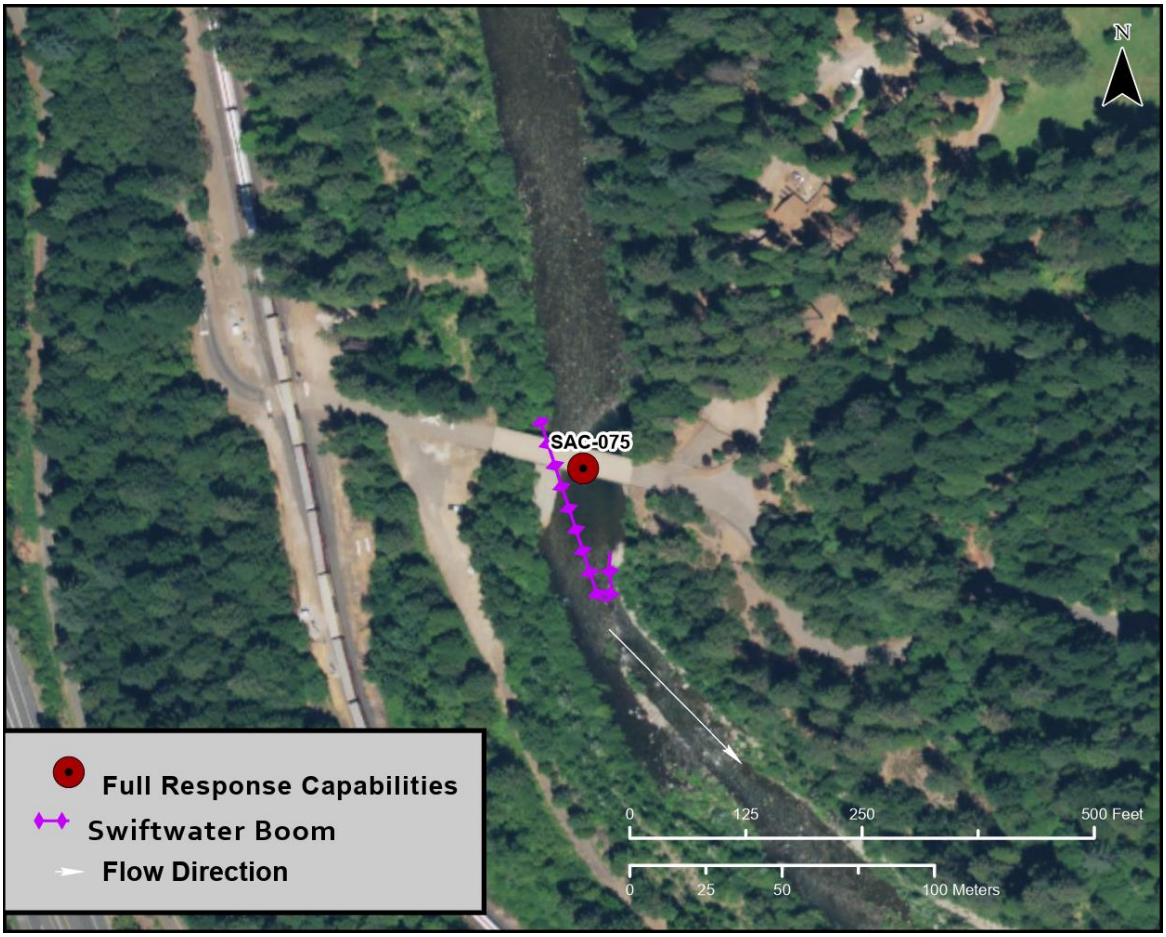


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	800 feet	
Boom	Swiftwater	8 to 12	inch	650 feet	This length of boom is sufficient to deploy a primary boom set and a secondary boom set.
Skimmer	Disc, Drum, or Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	Check bridge weight loading restrictions.
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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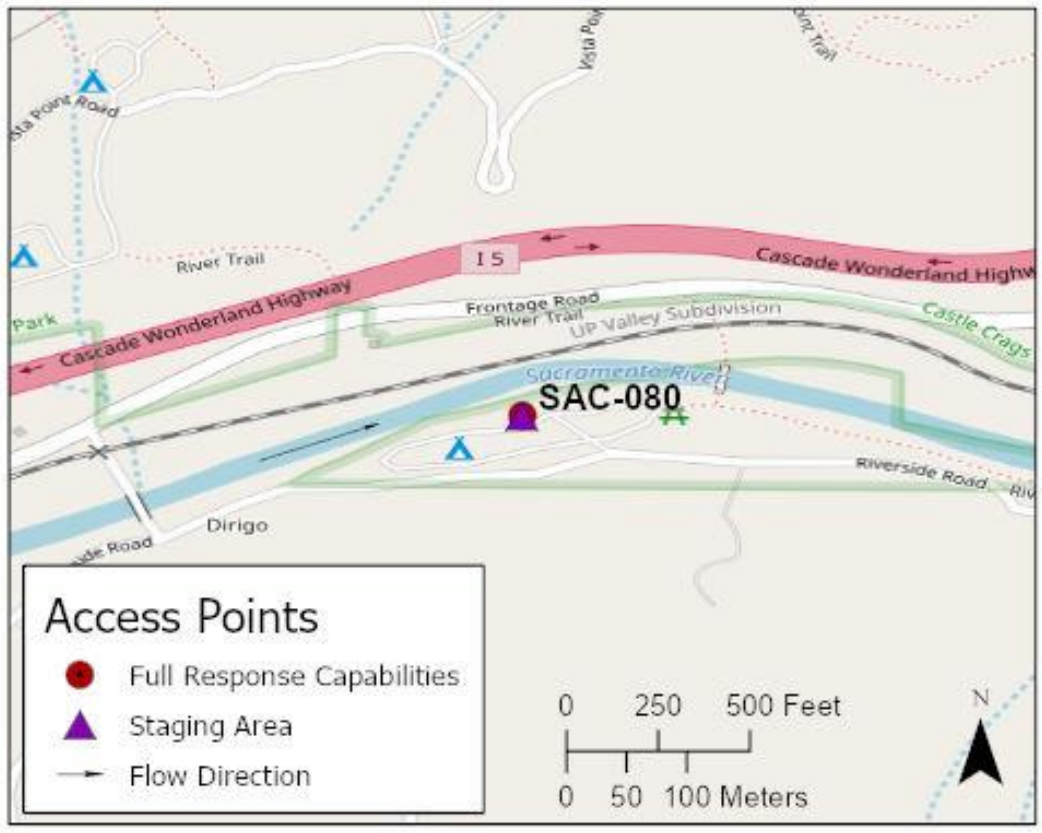
Location Name: Castle Crags State Park Picnic Area & Campground (SAC – 080)

Latitude: N 41.14938 **Longitude:** W -122.30805	**Driving Directions**
Highway Post Mile: N/A	Take the Castella exit, Exit #724, off I-5 and head east on Castle Creek Road. Turn north onto Main Street/Frontage Road on east side of I-5. Turn east onto Riverside Drive and cross the UPRR tracks and the Sacramento River. Continue north on Riverside Drive and enter the Castle Crags State Park Picnic Area and Campground. Campsite #5 at the south end of the campground is a good boom deployment location.
Railroad Milepost: UPRR 316.42 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Park entrance is locked during winter months.

Campsite #5 at the south end of the park is a good boom deployment location at lower river velocities. During higher flows, areas below campsite #11 may be best for deploying boom.

UPRR tracks run above the river-right shoreline. Coordinate with UPRR RMCC at (888) 877-7267 if trying to access the river-right shoreline from the tracks. UPRR track crossing #750543K is located on the west side of the Riverside Drive bridge.

There is also a footbridge approximately 100 yards upstream of the picnic area/campground parking lot that provides access to the river-right shoreline. Elevation at this site is 2,056 feet above MSL.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey, Foothill Yellow-legged Frog, Cascade Frog, Coastal-tailed Frog, Castle Crags harebell

Economic: Local tourism, fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 24 Meters (80 feet)

Gradient: Medium to low

Site Contact/s:

Castle Crags State Park Entrance: (530) 235-2684 (Open April 1 – October 31)

NORCOM Dispatch (916) 358-1310

Site Location/Segment: SAC-SH-A-010

Riverside Drive on the east side of the Sacramento River is a narrow winding road, but there is additional river-left shoreline access from this road. Turnouts for parking are very limited along this road.

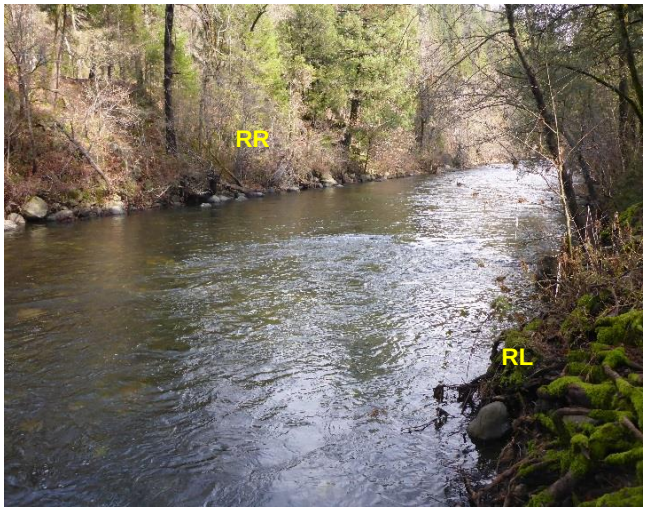
Vehicular Access: All vehicle types can access this location.

Recreational Use: Camping, fishing, rafting/kayaking, water-contact.

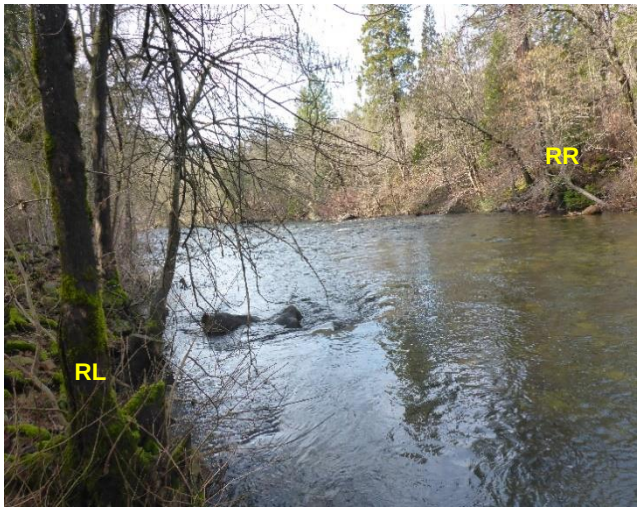
Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Rocky shoals and bedrock ledges (2A); Vegetated steeply sloping banks (8F); Vegetated low banks (9B).

Site Images



Upstream



Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 01/29/2018

Site Objectives: Deflection boom and product collection.

Implementation: Set 350 feet of swift water boom from river-right shoreline and deflect floating product toward eddy at campsite #5 at the south end of the campground. Use excess boom to protect shoreline at collection area. Consider deploying a secondary boom set if oil entrains under primary boom set. Recover product using skimmer and transfer to a vacuum truck. At higher river velocities, areas below campsite #11 may be better suited for deploying boom.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes from the State Park campground and picnic area. Additional staging area is located at the Castle Crags State Park facilities on the west side of Sacramento River and I-5.

Response Strategy Map (overview)

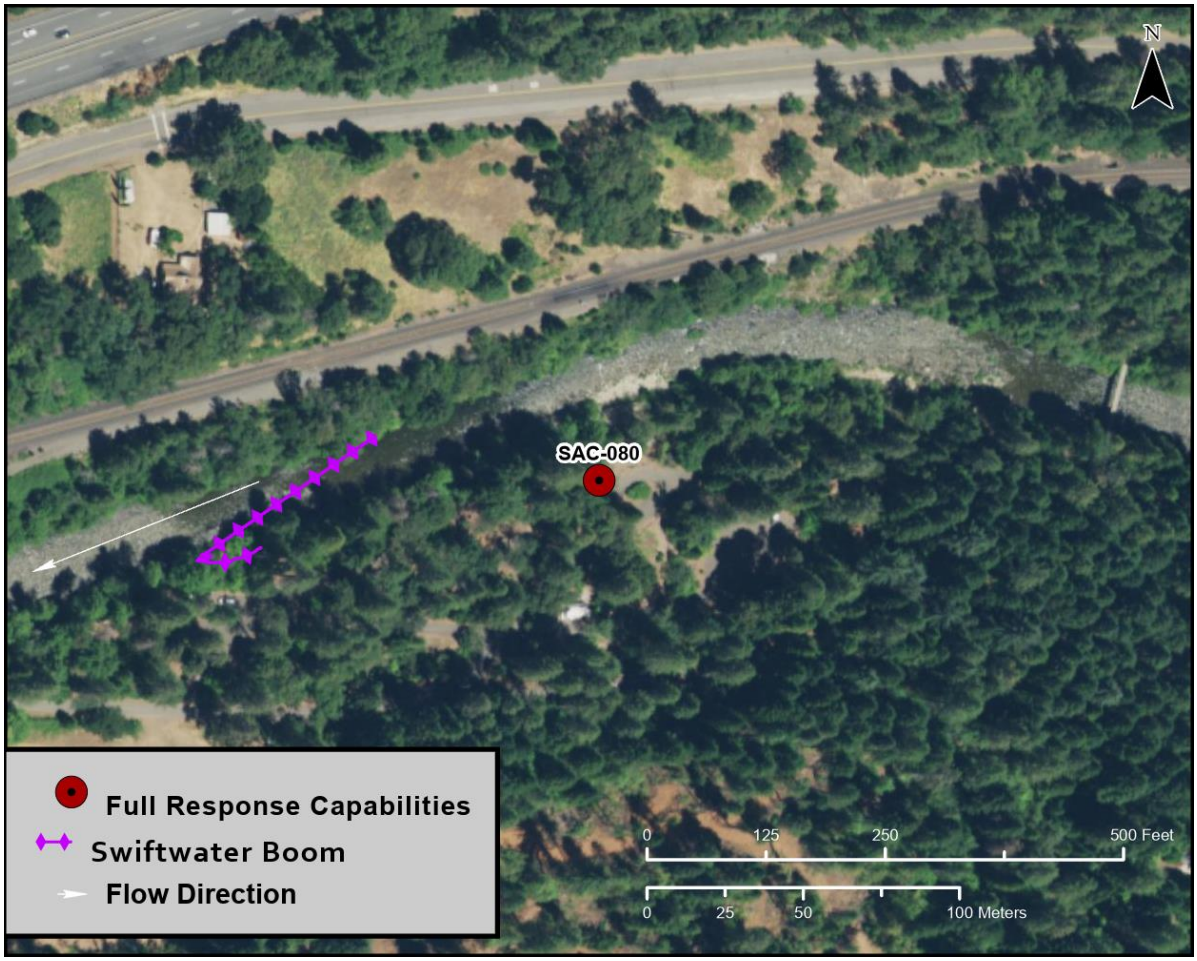


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	600 feet	
Boom	Swift Water Boom	8 to 12	inch	350 feet	Need 700 feet of boom if deploying a primary and secondary boom set.
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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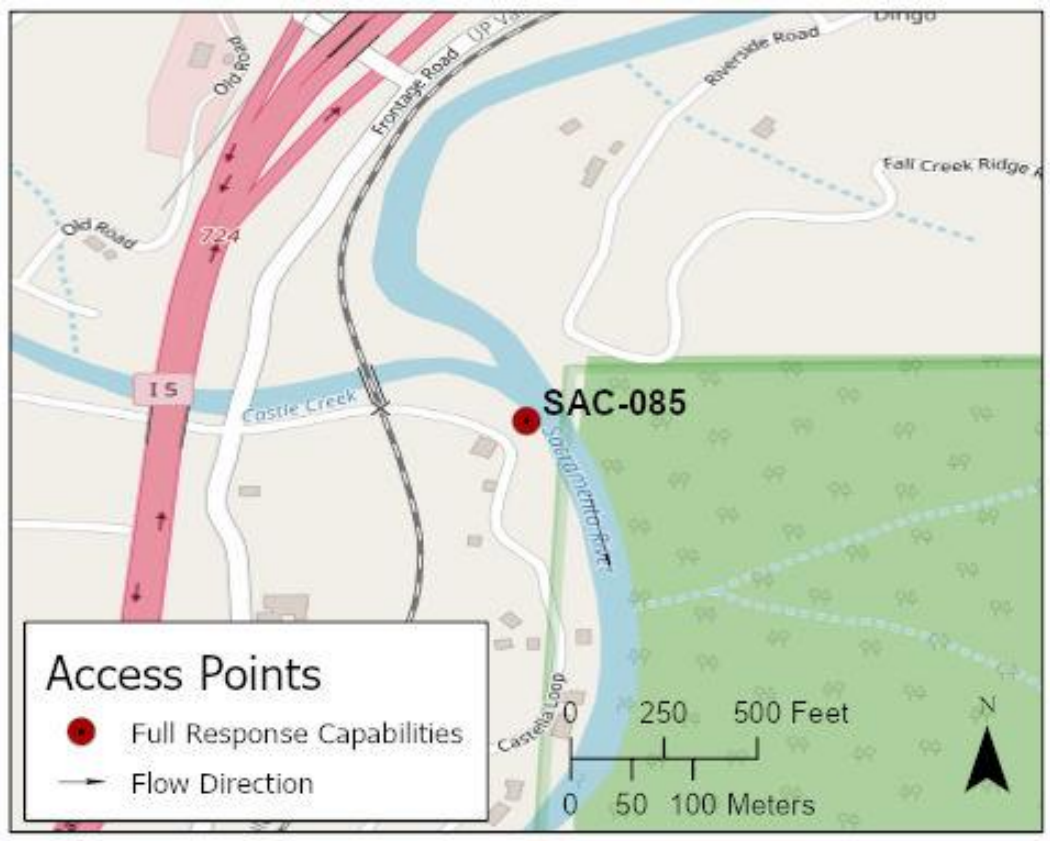
Location Name: Castle Creek Response Site (SAC – 085)

Latitude: N 41.144633 **Longitude:** W -122.31438	**Driving Directions**
Highway Post Mile: N/A	Take the Castella exit off I-5, Exit #724, and head east of the interstate. Turn south onto Main Street/Frontage Road. Immediately after crossing Castle Creek, turn east onto Castella Loop. The response site is at the point where Castella Loop turns south adjacent to the Sacramento River. Parking is available on the UPRR right-of-way on the west side of the track crossing.
Railroad Milepost: UPRR 315.82 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR track crossing #750542D is located between Main Street/Frontage Road and the Sacramento River.

Responders need a raft or kayak to access the river-left shoreline.

Elevation at the response site is 2,020 feet above MSL.

Private residences line the river-right shoreline south of the point where Castella Loop turns south.

Resources-At-Risk

Ecological: fisher – west coast DPS, Bald Eagle, Osprey, Foothill Yellow-legged Frog, Cascades Frog, Coastal-tailed Frog

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 23 meters (75 feet)

Gradient: Medium

Site Contact/s:

Response site property is privately owned.

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-015

Castella Loop is a very narrow road with limited parking. Work with Shasta County Public Works Department regarding equipment access. There is some parking available in the UPRR right-of-way on the west side of the track crossing. The confluence of Castle Creek and the Sacramento River is located about 75 yards upstream of the response site.

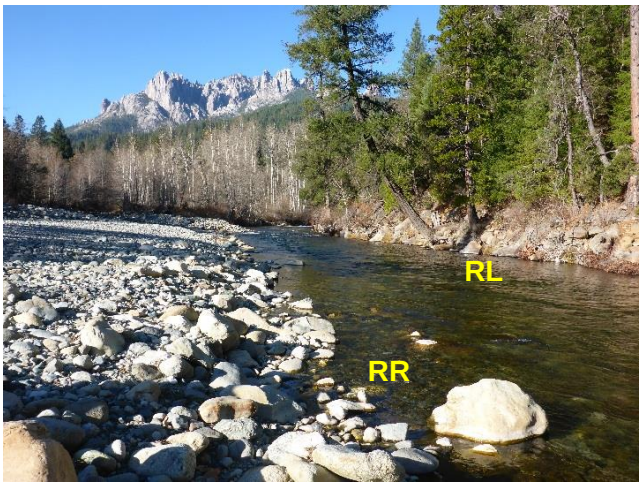
Vehicular Access: All vehicle types can access this location.

Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Gravel bars and gently sloping banks (6A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images



Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 12/09/2017

Site Objectives: Deflection boom and product collection.

Implementation: Deploy 350 feet of swift water boom from upstream river-left shoreline to slower water along gravel bar on river-right shoreline south of Castle Creek. Use excess boom to protect shoreline at collection area. Collect product using skimmer and transfer to a vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Equipment staging and waste management is available on the west side of the UPRR track crossing.

Response Strategy Map (overview)

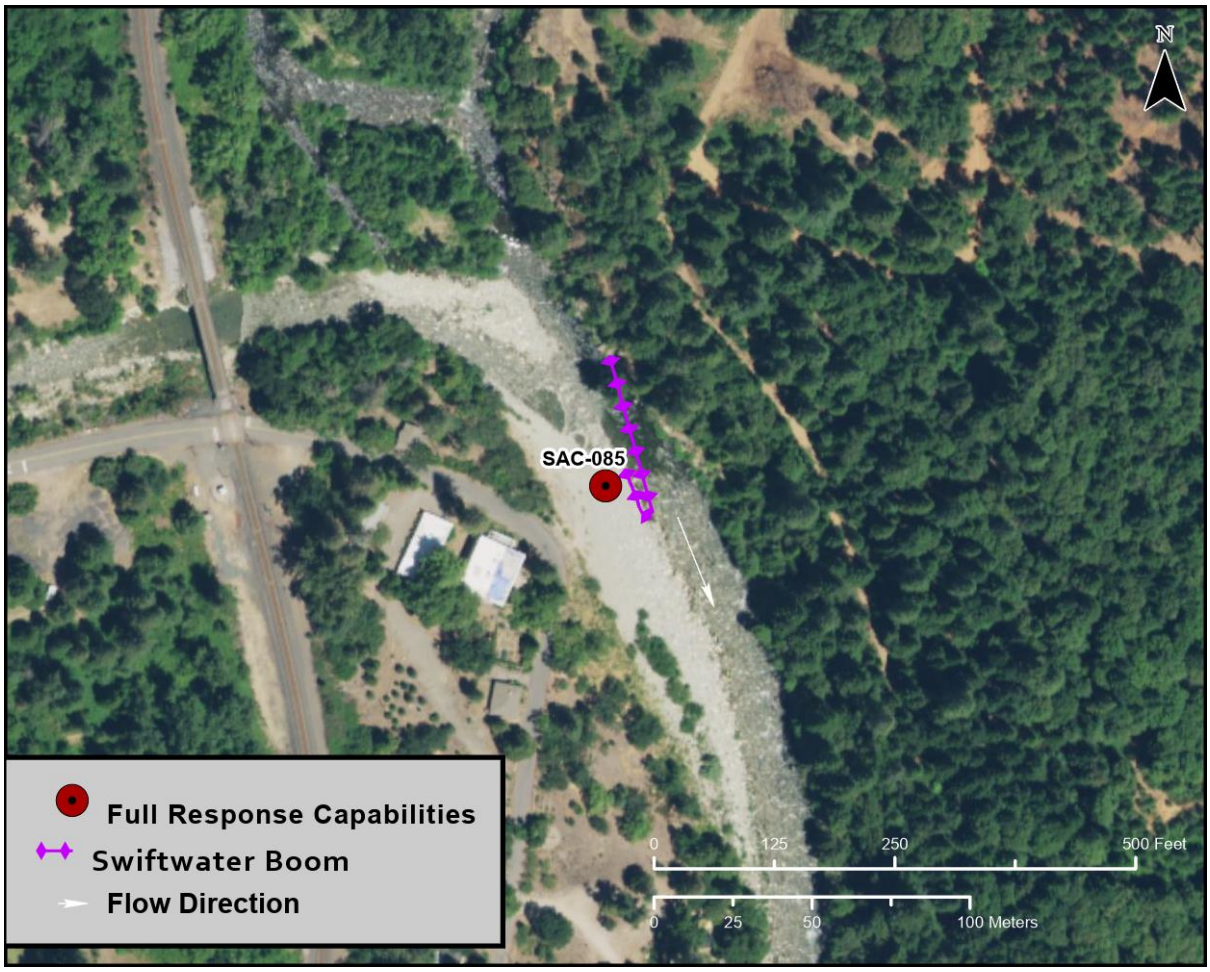


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	600 feet	
Boom	Swift Water Boom	8 to 12	inch	350 feet	
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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Location Name: Falls Avenue/Sweetbriar Bridge (SAC – 090)

Latitude: N 41.129944 **Longitude:** W -122.319658	**Driving Directions**
Highway Post Mile: N/A	Take the Sweetbriar Avenue exit off I-5, Exit #723. Head east on Sweetbriar Avenue and then follow the road north. Sweetbriar Avenue turns into Falls Avenue where the road turns east toward the Sacramento River. Park on the east side of the UPRR tracks in the railroad right-of-way. River-right shoreline access starts under the bridge over the Sacramento River.
Railroad Milepost: UPRR 314.72 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map

Hazards, Restrictions and Advice for Responders

UPRR track crossing is located on the west side of the river.

This is a shoreline cleanup site that would be difficult to recover product at.

Private residences line both shorelines above the bridge over the Sacramento River, and the river-right shoreline below the bridge. There is additional water access at a small beach located upstream of the bridge on the river-left shoreline that is accessible by foot.

NOTE: There is a dirt road on the east side of the NB I-5 Sweetbriar Avenue off ramp that leads to the UPRR tracks and additional water access points.

Resources-At-Risk

Ecological: fisher- West Coast DPS, Bald Eagle, Osprey, Foothill Yellow-legged Frog, Coastal-tailed Frog

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 30 meters (100 feet) under the bridge

Gradient: Low to Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-020

Sweetbriar is a small community with vacation homes and some year-round residents. Roads are very narrow.

Vehicular Access: Most vehicle types can access the UPRR track crossing on the west side of the river. Travel beyond this point will be primarily by foot.

Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structure (1B); Vegetated steeply sloping banks (8F).

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 07/21/2017

Location Name: Falls Avenue/Sweetbriar Bridge (SAC - 090)

Site Objectives: Manual shoreline cleanup site.

Implementation: Responders can access the river-right shoreline beneath the bridge to begin shoreline cleanup with sorbents. Contact local residents for work below the houses lining the shorelines.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment along UPRR right-of-way. Contact UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Response Strategy Map (overview)

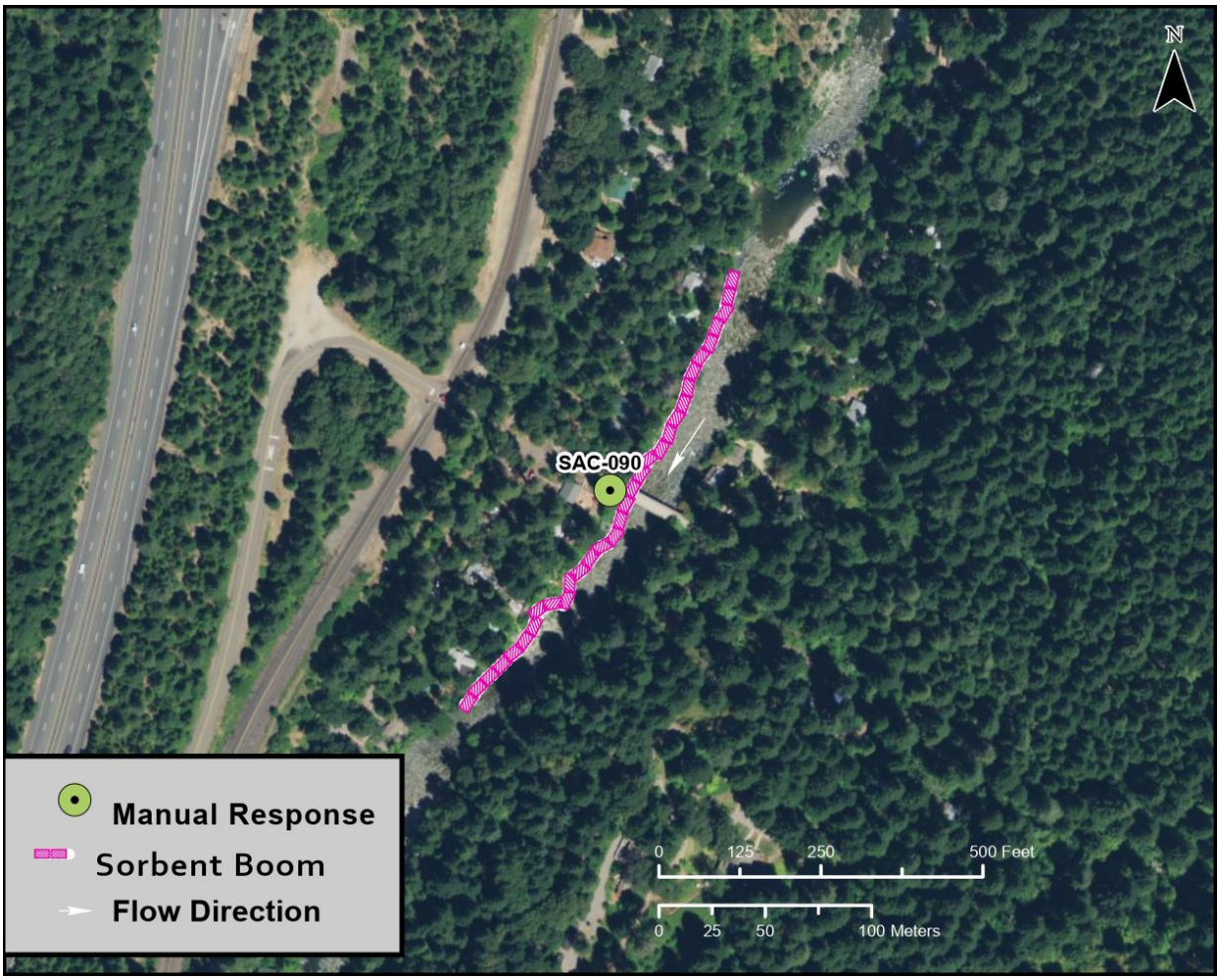

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	800 feet	
Pads and Sweep	Sorbent		bale	60	
Personnel				4 to 6 crew	
Waste Storage Bin		20	yard	1	

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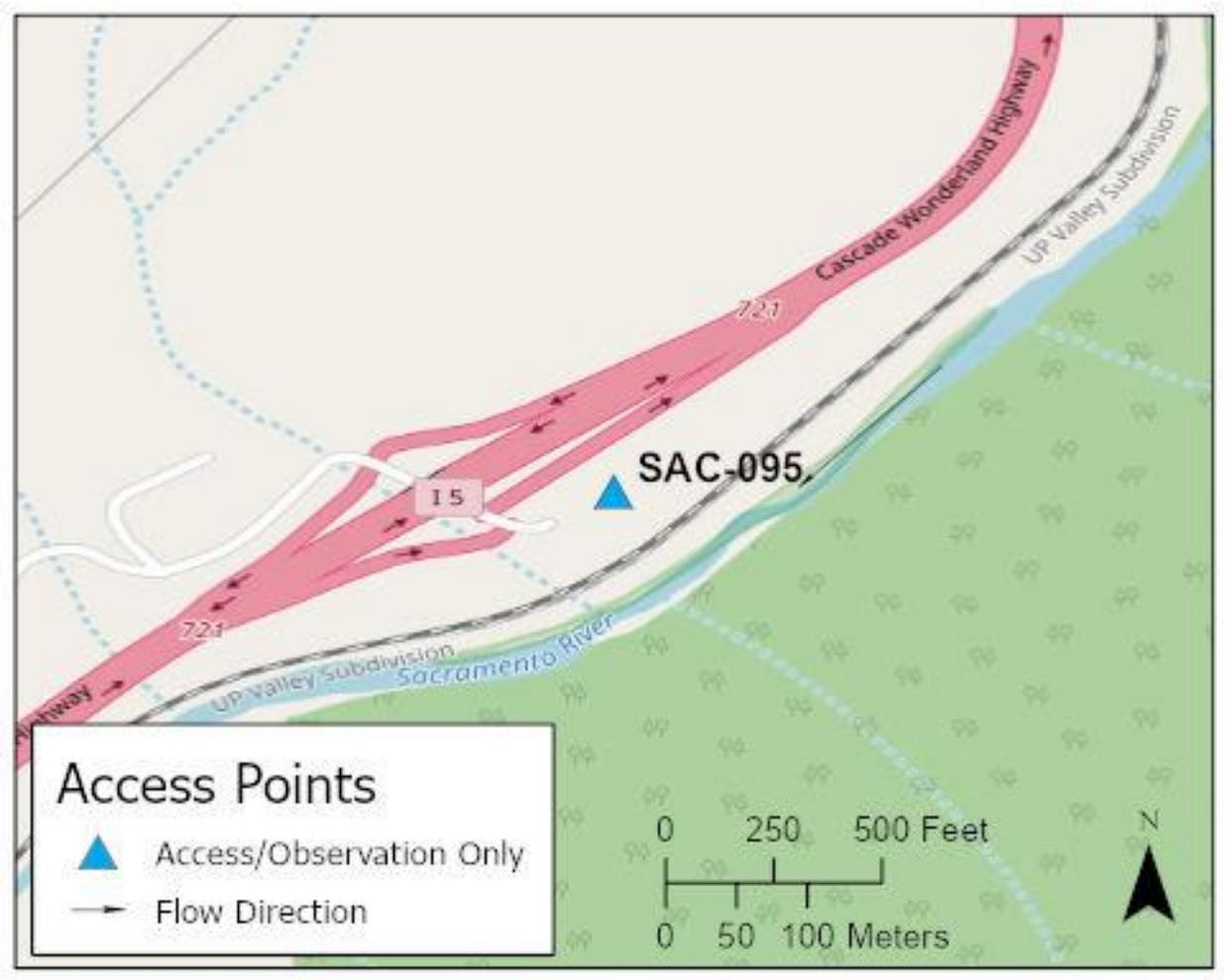
Access/Observation Site: Conant Road Observation Site (SAC - 095)

Latitude: N 41.10780 **Longitude:** W -122.32994	**Driving Directions**
Highway Post Mile: N/A	Take the Conant Road exit off I-5, Exit #721, and head north along the frontage road on the east side of I-5. A dirt road leads to a parking area adjacent to the UPRR tracks. Park here. A hiking trail on the east side of the UPRR tracks immediately north of the 313 milepost marker leads to the river observation site.
Railroad Milepost: UPRR 313.00 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Responders have to cross the UPRR tracks to access the short hiking trail to the Sacramento River. Coordinate access with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Responders must stay aware of rail traffic through this area.

Site Description and Field Notes

Site Location/Segment: SAC-SH-A-025

A short hiking trail just north of the 313 track milepost marker leads to a small observation site on the river-right shoreline. The area is characterized by thick vegetation along the river bank. Elevation at this site is 1,753 feet above MSL.

Site Contact/s:

UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Site Images

Upstream

Downstream

Straight Across

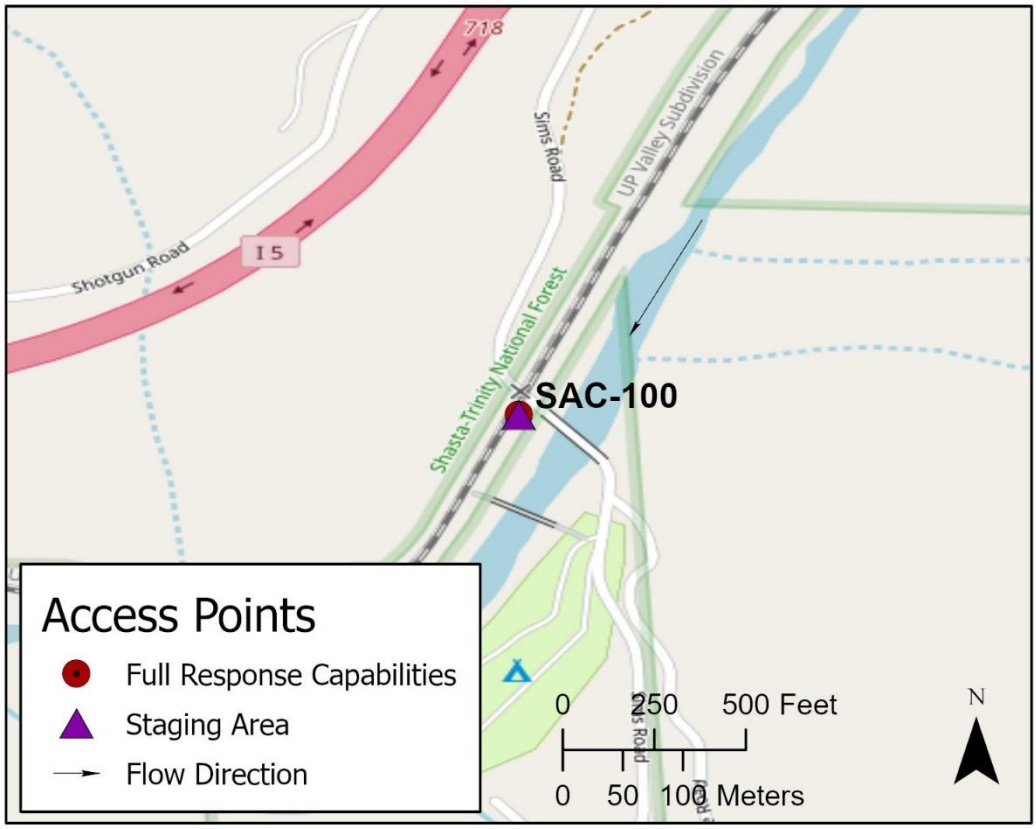
RR = River-Right RL = River-Left

Photo Date: 02/23/2018

Location Name: Sims Road Bridge (SAC – 100)

Latitude: N 41.06432 **Longitude:** W -122.36011	**Driving Directions**
Highway Post Mile: N/A	Take the Sims Road exit, Exit #718, off I-5. On the east side of I-5, follow Sims Road southeast to the Sacramento River. Response site is at the Sims Road bridge.
Railroad Milepost: UPRR 309.16 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

UPRR rail crossing #750539V is located on the west side of the river at milepost 309.16 of the Valley Subdivision.

The primary response site is under the Sims Road bridge. There is also a USFS footbridge located about 100 yards downstream of the Sims Road bridge that can be used as a secondary response site. Product collection will be challenging due to river flow velocity.

There are additional river access points via hiking trails along the river-right shoreline at the UPRR rail siding yard upstream of the Sims Road bridge. This siding can be accessed via a road leading north off Sims Road about 200 yards NW of the bridge. Consider additional boom deployment upstream of Sims Road bridge to slow product migration downstream.

Elevation at the site is 1,549 feet above MSL.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, Western Pond Turtle

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 44 meters (145 feet)

Gradient: Medium

Site Contact/s:

USDA Forest Service
Shasta-Trinity National Forest, 24-Hour Dispatch
(530) 226-2400
(530) 226-2499

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-030

NOTE: There are additional river access points from dirt roads off NB I-5 between Gibson Road and Sims Road.

USFS Sims Road Campground is located on the river-left shore starting at the footbridge.

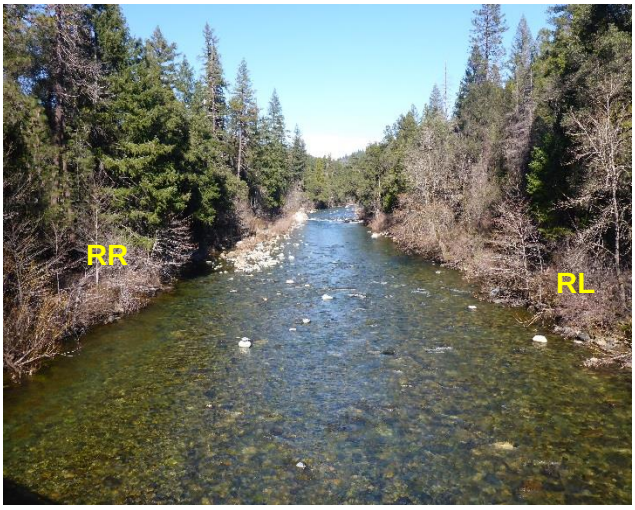
Vehicular Access: All vehicle types can access this location.

Recreational Use: Fishing, rafting/kayaking, water-contact.

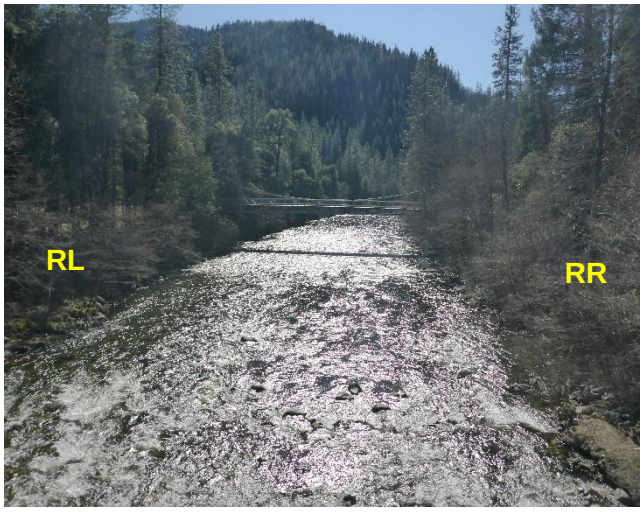
Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed, solid man-made structure (1B); Vegetated low banks (9B).

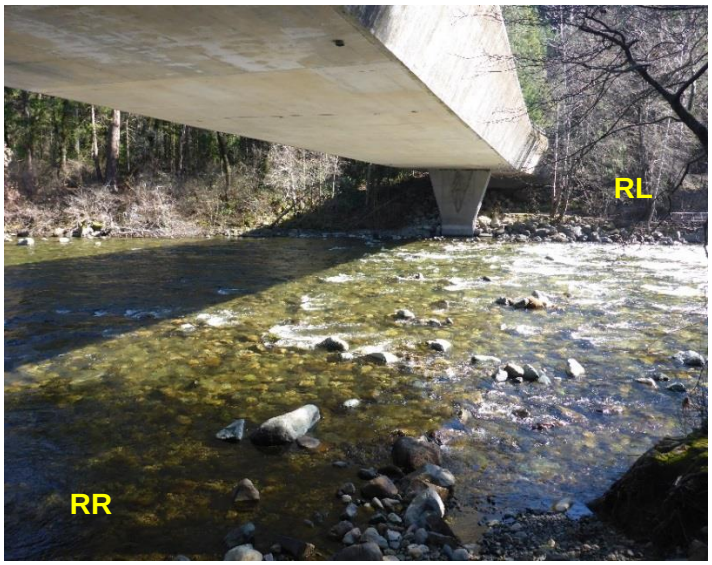
Site Images



Upstream



Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 02/23/2018

Site Objectives: Deflection boom and product collection.

Implementation: This strategy has been tested: At low river flows, deploy 500 feet of swift water boom from river-left shoreline above Sims Road Bridge to eddy on river-right shoreline under Sims Road Bridge. There will probably be some entrainment of product under this first boom set. For second more effective boom set, anchor boom at concrete structure on river-left shoreline below Sims Road Bridge and deploy 500 feet of swift water boom to small eddy on river-right shoreline downstream of the footbridge. Responders will have to cut a small access trail starting next to the UPRR tracks down through thick vegetation to the river to set up product collection area. Cut trail through blackberry bushes and attempt to avoid damage to native riparian vegetation. This second boom set should prove more effective at capturing floating product but it will take longer to set up than the first 500-foot boom set. The Response Strategy Map photo below shows the second more effective boom set.

Staging Area Location and Capabilities/Amenities/Waste Management: There is a large staging area on the west side of the Sacramento River. This area will support a 120-bbl vacuum truck.

Response Strategy Map (overview)

Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	2,000 feet	For deployment to collection points at both bridges.
Boom	Swift Water Boom	8 to 12	inch	1,000 feet	Additional swift water boom necessary if planning to deploy above Sims Road bridge.
Skimmer	Disc or Drum			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				8 to 10 crew	

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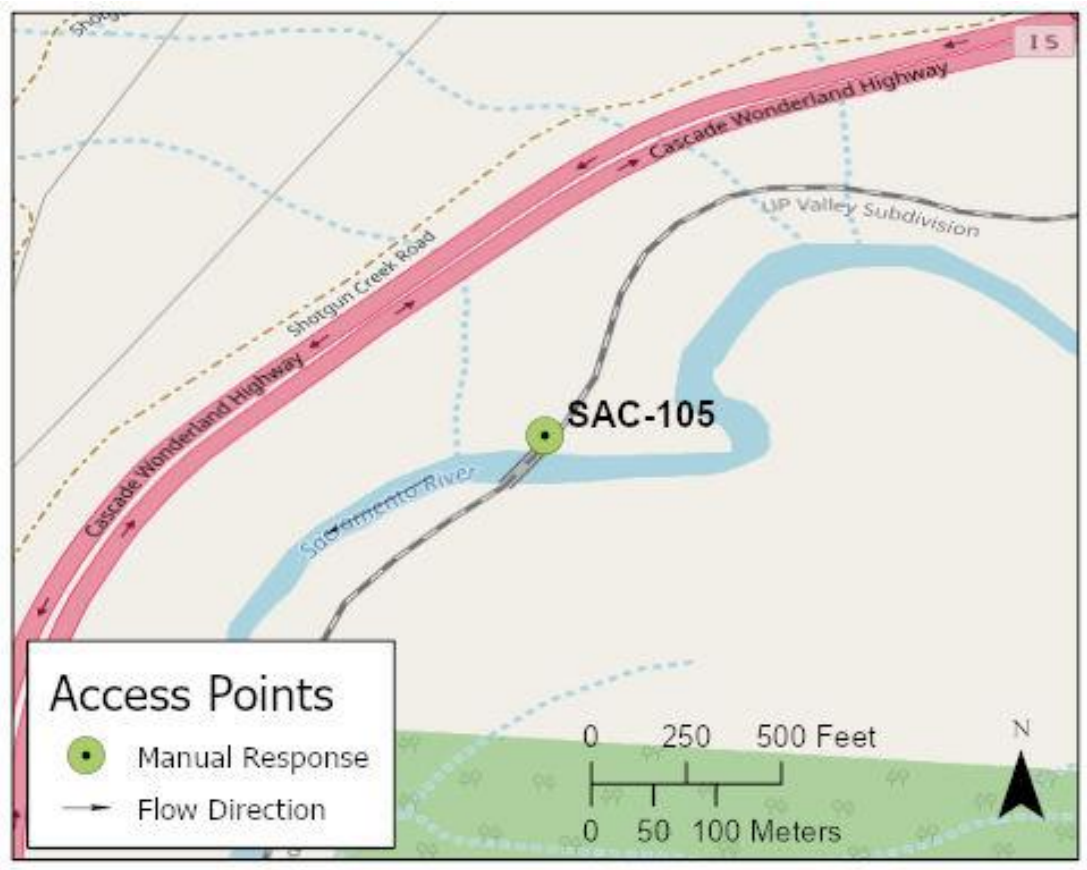
Location Name: UPRR Bridge at Milepost 306.72 (SAC – 105)

Latitude: N 41.044272 **Longitude:** W -122.390134	**Driving Directions**
Highway Post Mile: N/A	This site is only accessible by vehicle from NB I-5. Take unmarked dirt road 1.25 miles north of Gibson Road (Exit #714) on east side of NB I-5. Follow rough dirt road down to UPRR tracks. Park uphill of tracks. Best way to bring equipment and personnel into this site is through coordination with UPRR utilizing their tracks.
Railroad Milepost: UPRR 306.72 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Best way to access this site is via the UPRR tracks. Coordinate with UPRR to bring equipment and personnel to the site using rail cars or high rail vehicles. Contact UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Response site is on east side of UPRR tracks, upstream of UPRR bridge. Follow hiking trail to gravel bar on river-right shoreline. Response site extends upstream around bend in river.

Responders need a raft or kayak to reach the river-left shoreline. At very low river flows, it may be possible to cross the river using waders.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Western Pond Turtle, thread-leaved beardtongue

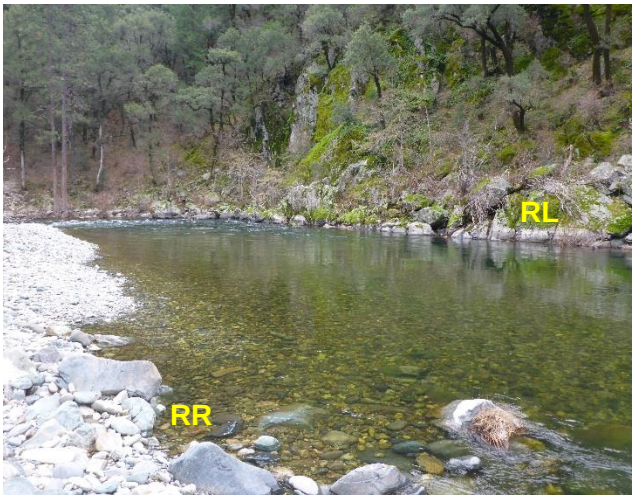
Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

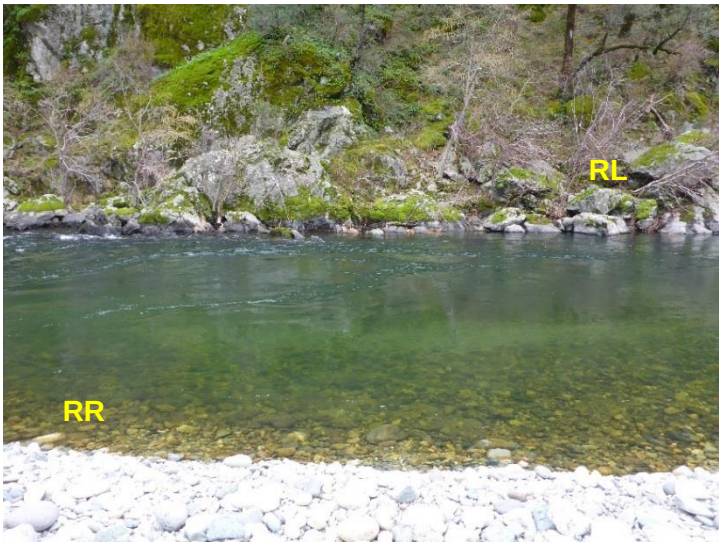
River Width: 27 meters (90 feet)	**Site Location/Segment: SAC-SH-A-035**
Gradient: Low to medium	Elevation at site is 1,530 feet above MSL.
Site Contact/s: UPRR RMCC (888) 877-7267	**Vehicular Access?** Need 4wd vehicle to access this site via the unmarked dirt road off NB I-5. **Recreational Use?** Fishing, rafting/kayaking, water-contact. **Boat Launches:** Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).
	ESI Shoreline Type: Exposed rocky banks (1A); Gravel bars and gently sloping banks (6A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images



Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 01/29/2018

Site Objectives: Manual shoreline cleanup site.

Implementation: Response crews need to carry boom and equipment down to the river from UPRR tracks. Deploy sorbent boom to collect product in slow water eddies along river-right shoreline. Manually clean impacted shoreline with additional sorbent pads.

Staging Area Location and Capabilities/Amenities/Waste Management: Best location to stage equipment and personnel is at the Sims Road bridge, about 2.5 miles upstream of this location.

Response Strategy Map (overview)

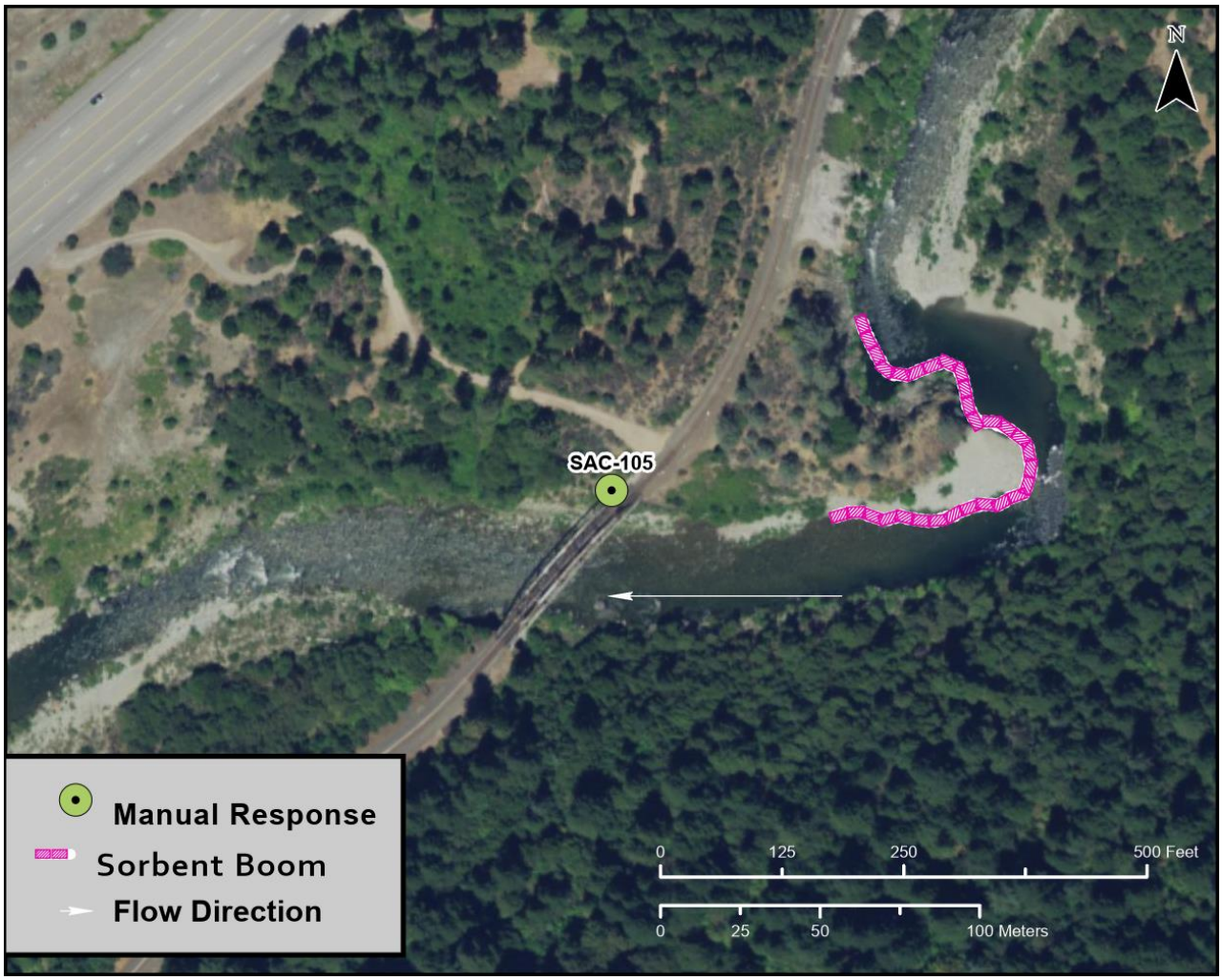


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	500 feet	
Pads and Sweep	Sorbent		bale	60	
Personnel				4 to 6 crew	
Waste Storage Bin		20	yard	1	Bring in on rail flat car

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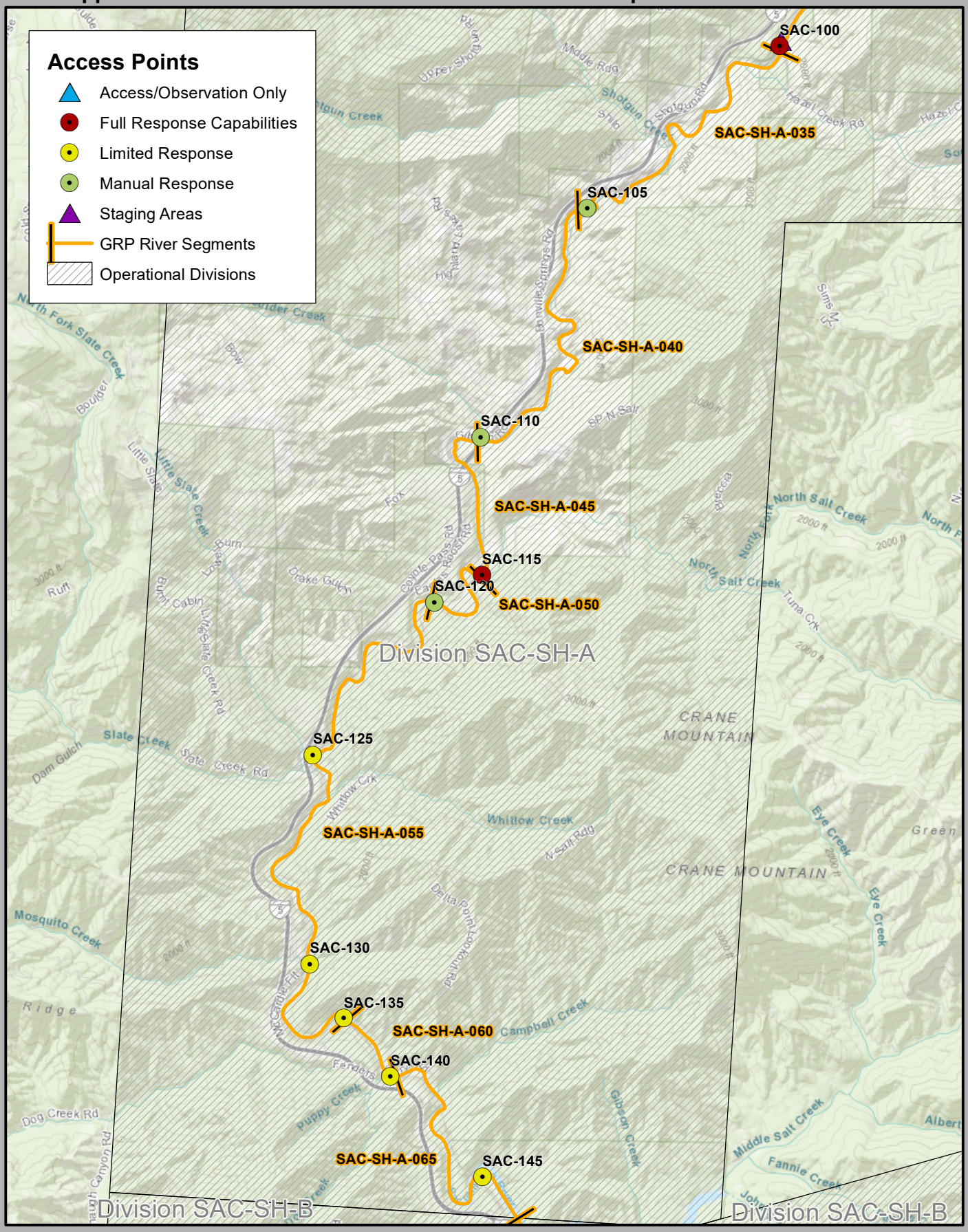
Figure 3-4: Upper Sacramento River GRP Division SAC-SH-A2 Map



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

Author: LGustafson, CDFW
Date Created: 1/10/2020
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Div-SAC-SH-A2.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Division SAC-SH-A (2 of 2)

0 1 2 Miles
0 1 2 Kilometers

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Location Name: Gibson Road I-5 Undercrossing (SAC – 110)

Latitude: N 41.01603 **Longitude:** W -122.40635	**Driving Directions**
Highway Post Mile: N/A	Take the Gibson Road exit, Exit #714, off I-5. Gibson Road is on the west side of I-5. Follow Gibson Road south to the second (of two) I-5 undercrossing. Response site is located directly south of Boulder Creek. Park in the turnout on the west side of Gibson Road. NOTE: Gibson Road also shows up on maps as Highlands Lakes Road. If you continue heading south on Gibson Road/Highland Lakes Road, the road turns into Eagles Roost Road as you get closer to Pollard Flat. There is additional river access at a UPRR track siding 0.22 miles south (downstream) of the I-5 undercrossing.
Railroad Milepost: UPRR 304.22 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map

Hazards, Restrictions and Advice for Responders

This is a manual sorbent shoreline cleanup site. Response crews need rafts/kayaks to reach the river-left shoreline.

There is additional river access beyond a locked gate at a UPRR track siding 0.22 miles downstream, at UPRR track milepost 304.00.

There are additional river observation points along Gibson Road/Highlands Lakes Road downstream of the I-5 undercrossing.

Elevation at this site is 1,400 feet above MSL.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey, Foothill Yellow-legged Frog, thread-leaved beardtongue, Indian Valley brodiaea

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 14 meters (45 feet) below I-5 undercrossing

Gradient: Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-040

Vehicular Access: All vehicle types can access this location.

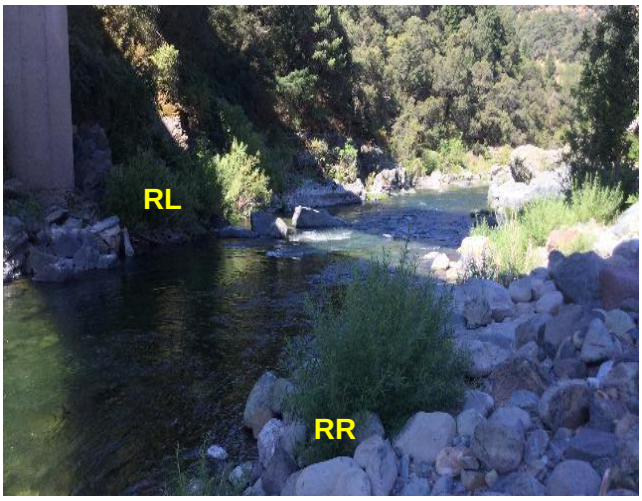
Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream



Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 07/28/2017

Location Name: Gibson Road I-5 Undercrossing (SAC – 110)

Site Objectives: Manual shoreline cleanup site.

Implementation: Collect and remove oiled debris and clean shoreline with sorbents and/or use other methods approved by the Unified Command. Crews should be able to reach much of the river-right shoreline in this area. Rafts or kayaks will be needed to reach the river-left shoreline.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at turnout on west side of Gibson Road immediately south of Boulder Creek. Additional staging area available at the UPRR track siding located approximately 0.22 miles downstream of the I-5 undercrossing, at track milepost 304.00.

Response Strategy Map (overview)

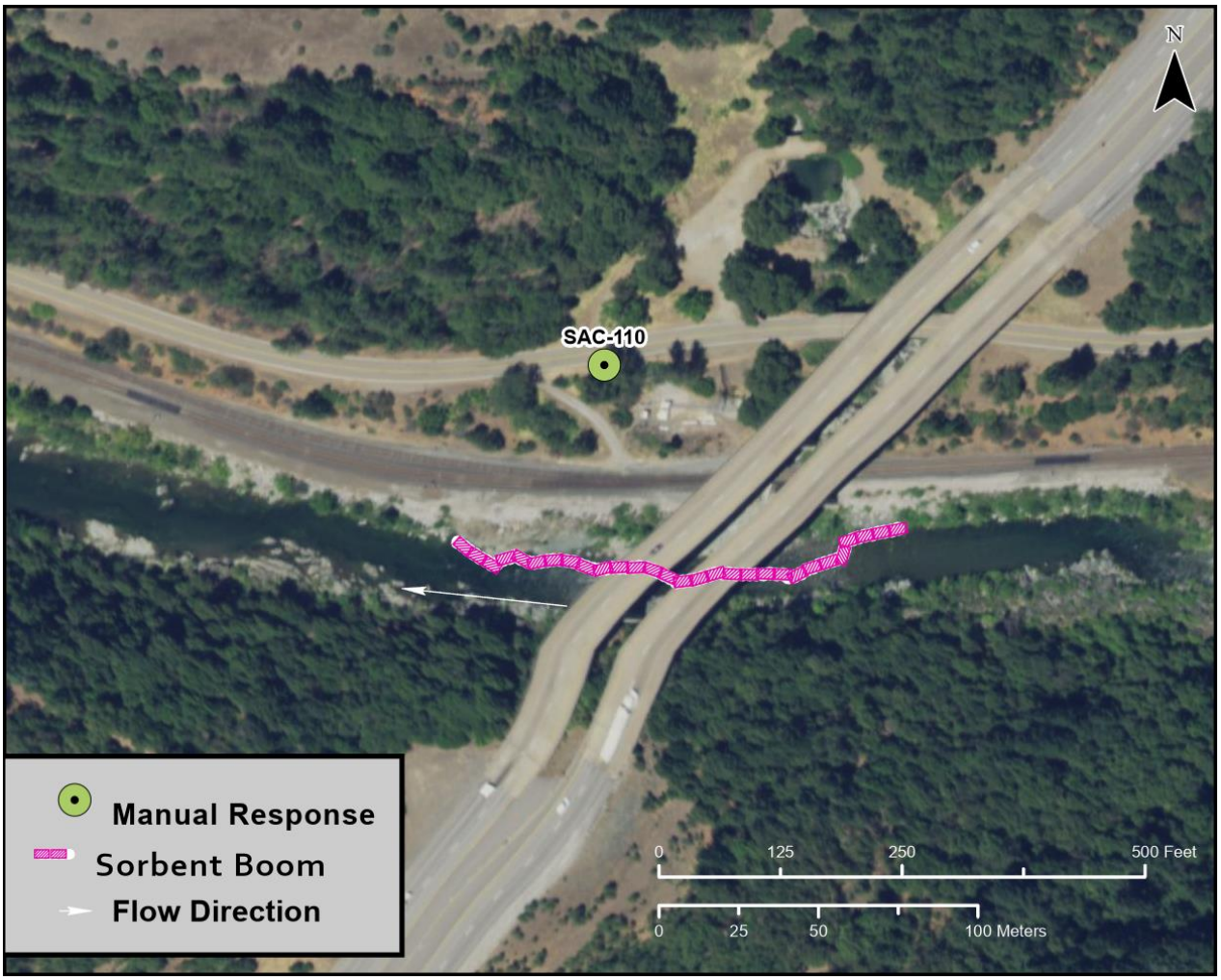


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	400 feet	
Pads and Sweep	Sorbent		bale	60	
Personnel				4 to 6 crew	
Waste Storage Bin		20	yard	1	

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Location Name: SPI North Salt Creek Road Bridge (SAC – 115)

Latitude: N 40.99933
Longitude: W -122.40556

Highway Post Mile: N/A

Railroad Milepost: UPRR 302.80 – Valley Subdivision

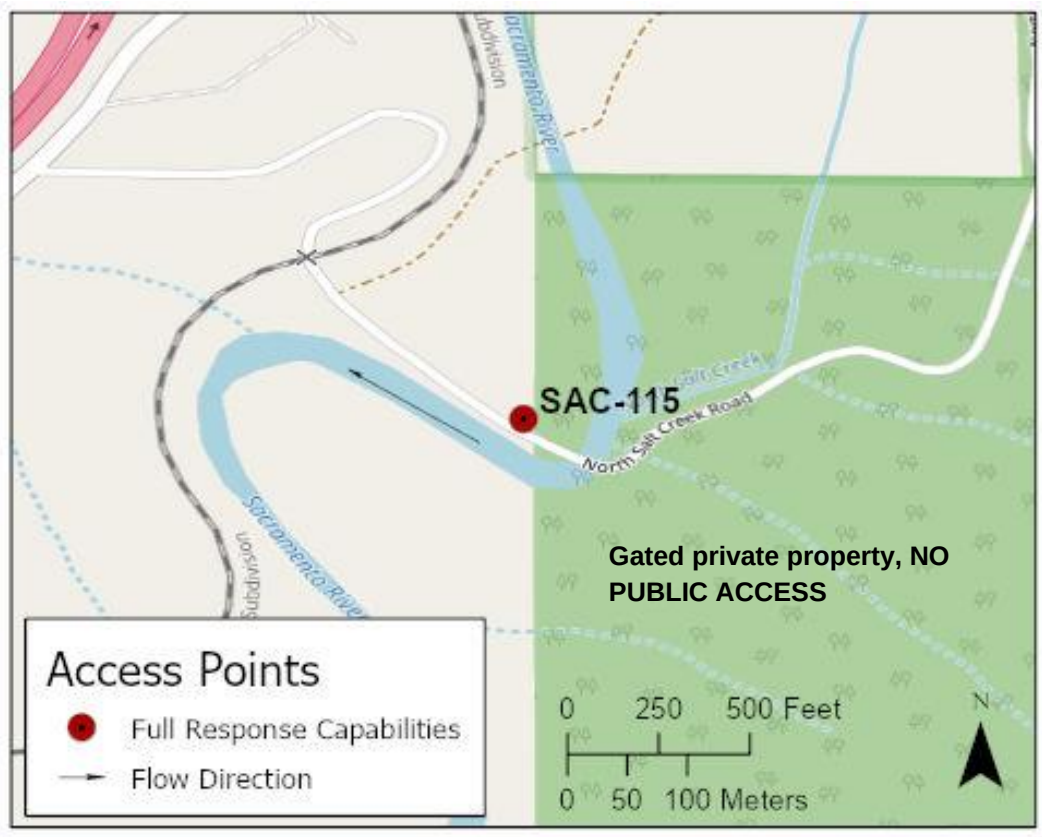
Nearest Address and Thomas Guide #: N/A

Cell Service: Yes –Verizon tested

Driving Directions

Take the Pollard Flat exit, Exit #712, off I-5. Head east to Eagles Roost Road. Turn north onto Eagles Roost Road and travel about 1/3 mile to a yellow pipe gate and an unmarked paved road on the east side of Eagles Roost Road. This road shows up on maps as North Salt Creek Road. Follow road down and continue over the UPRR track crossing to the bridge over the Sacramento River. Response site is located beneath the bridge.

Overview Street Map



Hazards, Restrictions and Advice for Responders

This site is gated private property. Access is controlled by Sierra Pacific Industries (SPI). There is a second gate on the west side of the bridge over the Sacramento River that is also controlled by SPI. **There is no public access to this site.** A permit is required from SPI for any non-emergency access.

UPRR also has access to this site. UPRR track crossing #411932G is located on the west side of the river.

Logging trucks use this bridge during timber harvest operations. Traffic control procedures may need to be coordinated with timber harvest companies.

Elevation at this site is 1,320 feet above MSL.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey, thread-leaved beardtongue

Economic: Timber harvest operations, fishing guide services.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 18 meters (60 feet)

Gradient: Medium to low

Site Contact/s:

Sierra Pacific Industries
Nick Kroencke (530) 356-1292

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-045

There is a slow deep pool in the Sacramento River under and immediately downstream of the bridge. North Salt Creek enters the Sacramento River on the river-left shoreline about 150 feet upstream of the bridge.

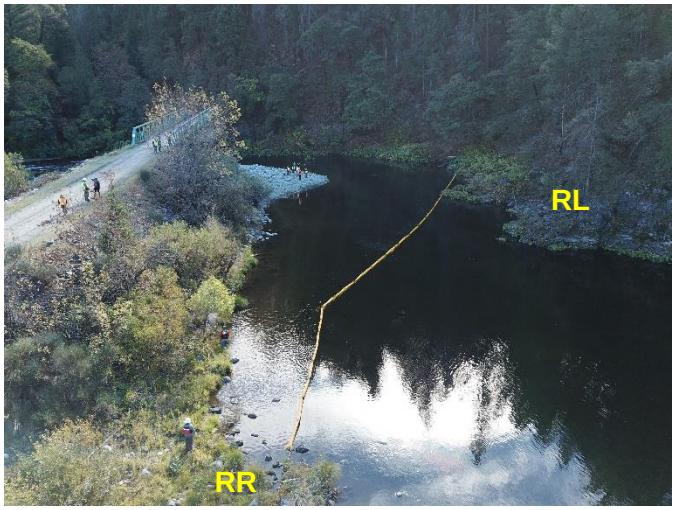
Vehicular Access: All vehicle types can access this site. However, a 4wd high clearance vehicle is needed to drive to the upper area of the gravel bar beneath the bridge.

Recreational Use: Fishing, rafting/kayaking, water contact.

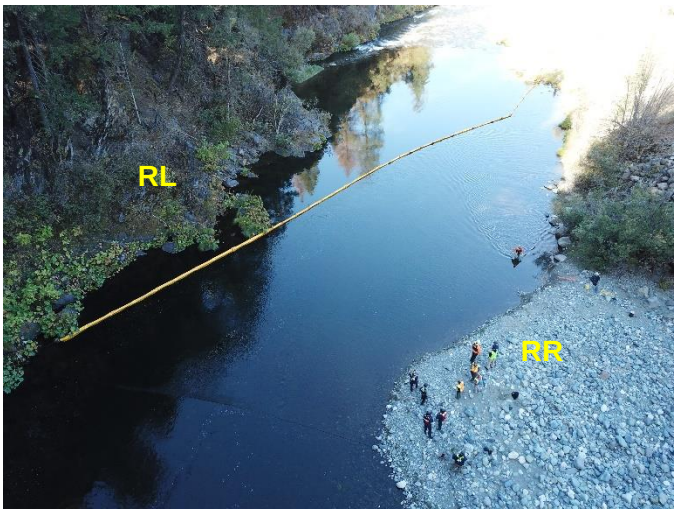
Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Exposed, solid man-made structures (1B); Rocky shoals and bedrock ledges (2A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B).

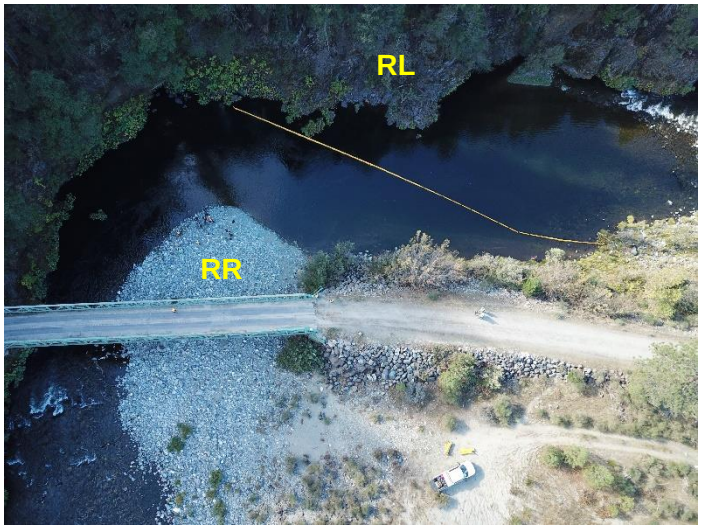
Site Images



Upstream



Downstream



Straight Across/Overhead

RR = River-Right RL = River-Left

Photo Date: 10/10/2018

Site Objectives: Deflection boom and product collection.

Implementation: This strategy has been tested: At low river flows, deflect floating product to eddy on river-right shoreline downstream of North Salt Creek Road bridge. Deploy 400 feet of swift water boom below bridge at bend in river from river-left shoreline to bottom of eddy on the river-right shoreline below the bridge. Use excess boom to protect shoreline at collection area. Collect product using skimmer and pump recovered oil to vacuum truck on the road above the river.

Staging Area Location and Capabilities/Amenities/Waste Management: Large equipment staging area is located adjacent to UPRR tracks on the west side of river. This area is also sufficient for managing waste recovery operations.

Response Strategy Map (overview)

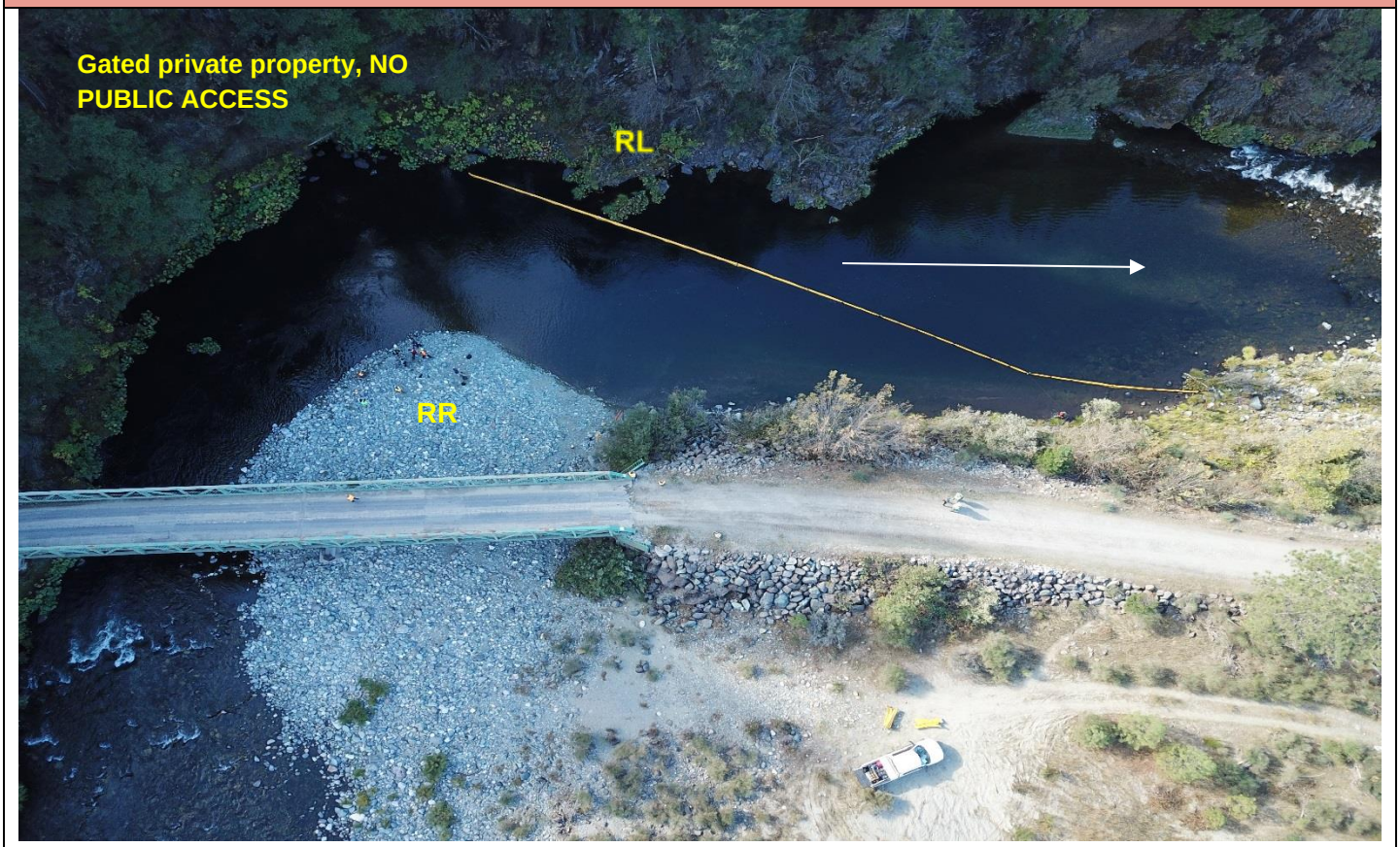


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent Boom	5 to 8	inch	800-1000 feet	
Boom	Swift Water Boom	8 to 12	inch	400 feet	
Skimmer	Disc, Drum, or Weir			1	
Pump	High Speed			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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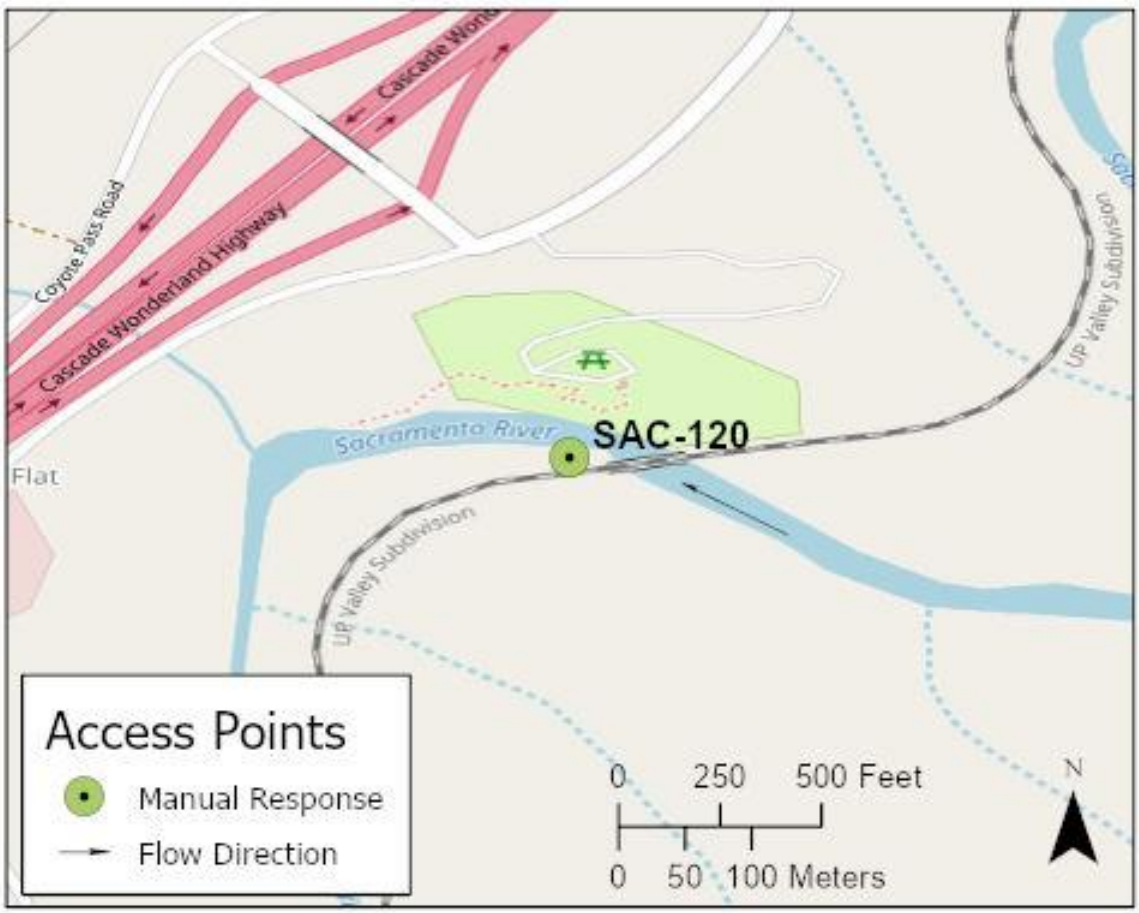
Location Name: Pollard Gulch Fishing Access (SAC – 120)

Latitude: N 40.99599 **Longitude:** W -122.41316	**Driving Directions**
Highway Post Mile: N/A	Take the Pollard Flat exit off I-5, Exit #712, and head east to Eagles Roost Road. The signed access point to the Pollard Gulch Fishing Access is located immediately northeast of the intersection at Eagles Roost Road. Follow paved road down to a parking area at the fishing access.
Railroad Milepost: UPRR 302.24 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

There is a UPRR bridge over the Sacramento River immediately upstream of the main fishing access point (down the stairs to the river). Responders wanting to access the river-left shoreline may need to cross this bridge. Coordinate any activities around the tracks with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

The velocity of the river is medium at the observation site and probably too swift for deploying boom. There is a small eddy on the river-right shoreline at the observation site. Shoreline cleanup is possible at various areas up and downstream of the fishing access.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey, thread-leaved beardtongue, northern clarkia, Indian Valley brodiaea

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 26 meters (85 feet)

Gradient: Medium

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-050

There are restrooms located in the parking area.

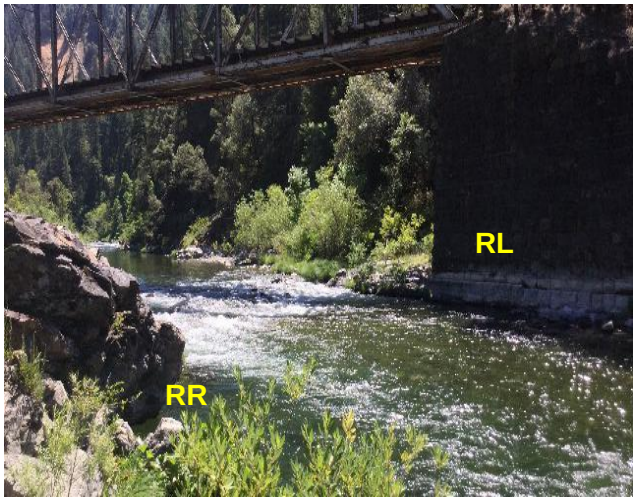
Vehicular Access: Passenger vehicles and work trucks can access this site.

Recreational Use: Fishing, rafting/kayaking, water-contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

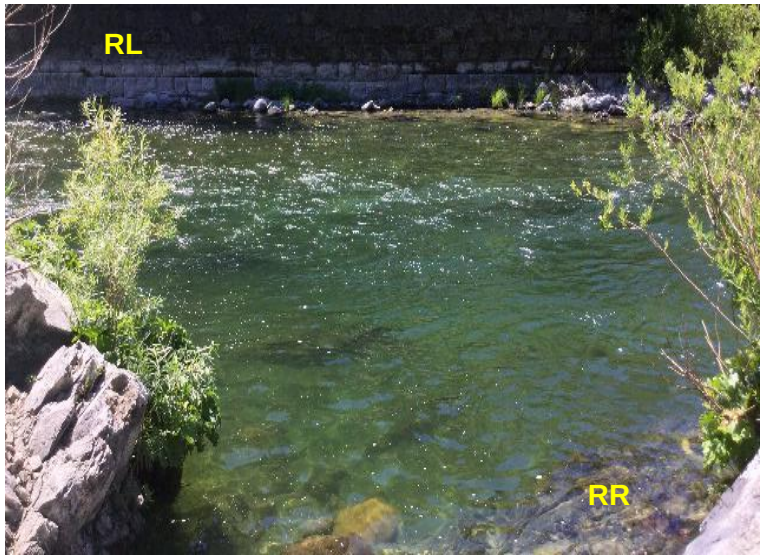
ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Vegetated steeply sloping bluffs (8F).

Site Images



Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 07/20/2017

Location Name: Pollard Gulch Fishing Access (SAC – 120)

Site Objectives: Manual shoreline cleanup site.

Implementation: Response crews can access various areas of shoreline upstream and downstream of the main fishing access point. Remove oiled debris and clean shoreline with sorbents or other methods approved by the Unified Command.

Staging Area Location and Capabilities/Amenities/Waste Management: The fishing access parking area is large enough for several work trucks to park and also store 1 or 2 waste storage bins.

Response Strategy Map (overview)

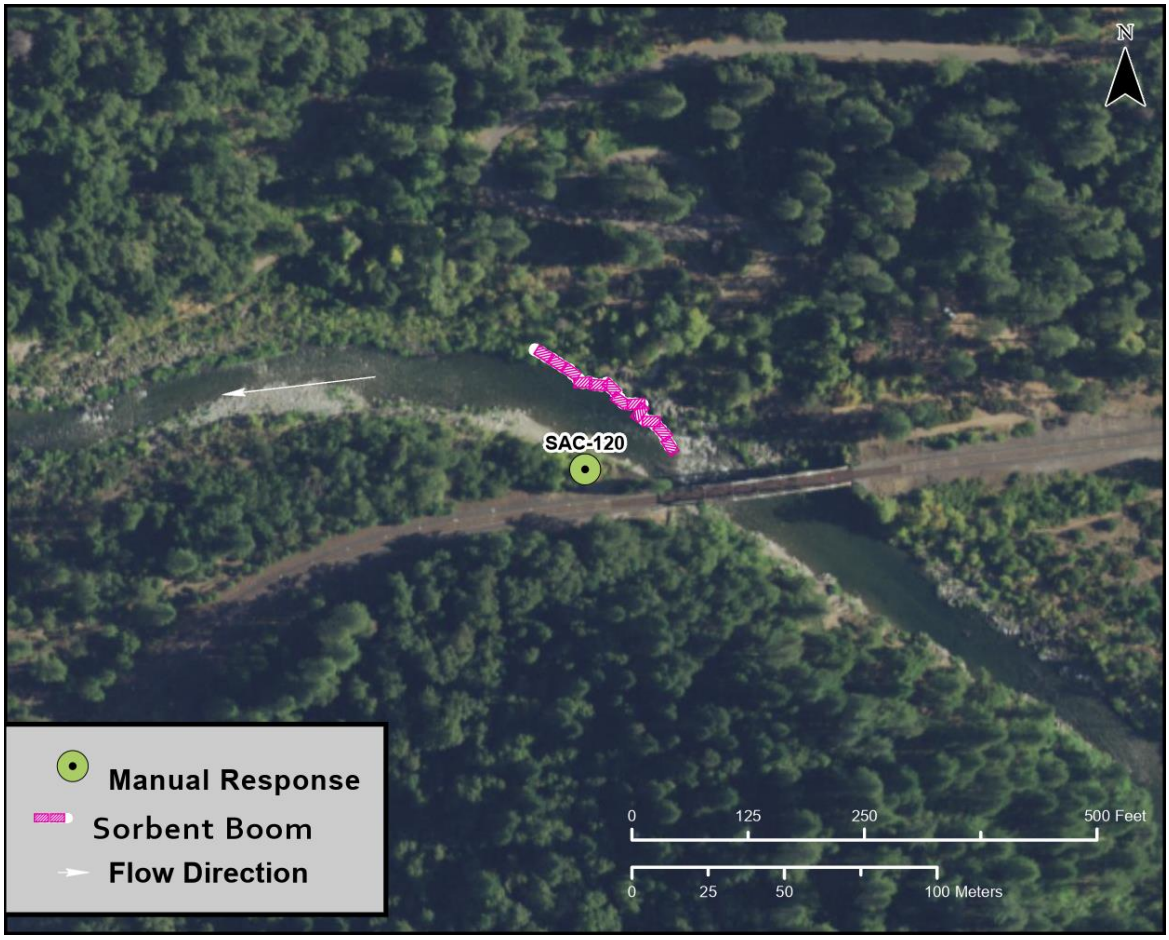


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	400 feet	
Pads and Sweep	Sorbent		bale	60	
Personnel				4 to 6 crew	
Waste Storage Bins		20	yard	1	

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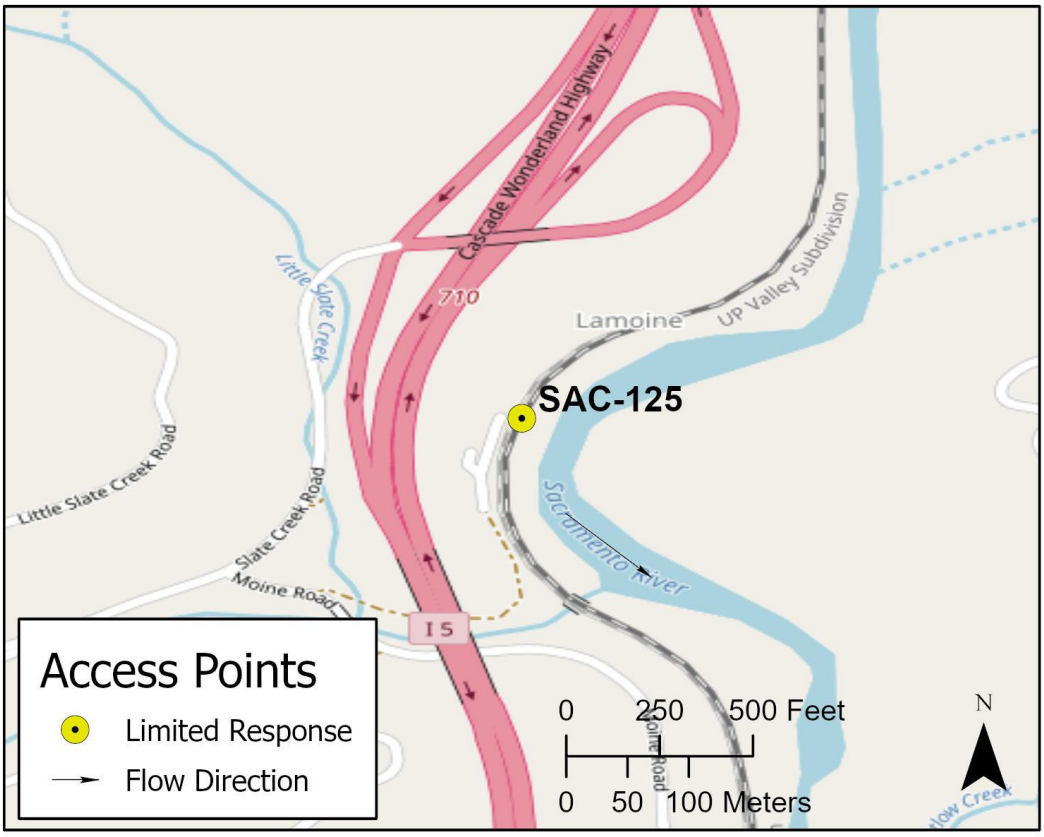
Location Name: Slate Creek Response Site (SAC – 125)

Latitude: N 40.977023 **Longitude:** W -122.431892	**Driving Directions**
Highway Post Mile: N/A	Take the Slate Creek Road exit, Exit #710, off I-5. Head west over I-5 and turn southeast onto Moine Road (first dirt road on the left on west side of I-5). There is a locked gate controlled by UPRR on a dirt road that leads east under the I-5 overpass. Slate Creek flows under the I-5 overpass where it joins the Sacramento River. UPRR tracks are located on the east side of the I-5 overpass. The response site is located approximately 200 yards north (upstream) of Slate Creek and adjacent to the UPRR tracks.
Railroad Milepost: UPRR 300.17 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Follow the UPRR right-of-way upstream of Slate Creek to a UPRR generator station above the tracks. There is a small drainage on the north side of the generator station that funnels storm water to the Sacramento River. The response site is located on the upstream side of this small drainage. The culvert in this drainage could be used to run product recovery lines down to the river so crews would not have to run lies under the UPRR tracks. There is a hiking trail that leads down to the river.

Responders can drive to the generator station. Coordinate response access with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Responders need a raft or kayak to reach the river-left shoreline.

Resources-At-Risk

Ecological: fisher – Western DPS, Bald Eagle, Osprey, Foothill Yellow-legged Frog, thread-leaved beardtongue, northern clarkia

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 27 meters (90 feet)

Gradient: Medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-055

Elevation at the site is 1,218 feet above MSL.

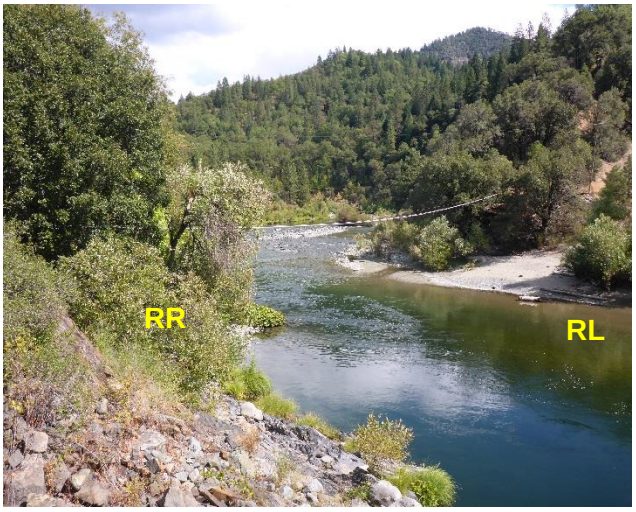
Vehicular Access: All vehicle types can access this location.

Recreational Use: Fishing, rafting/kayaking, water-contact.

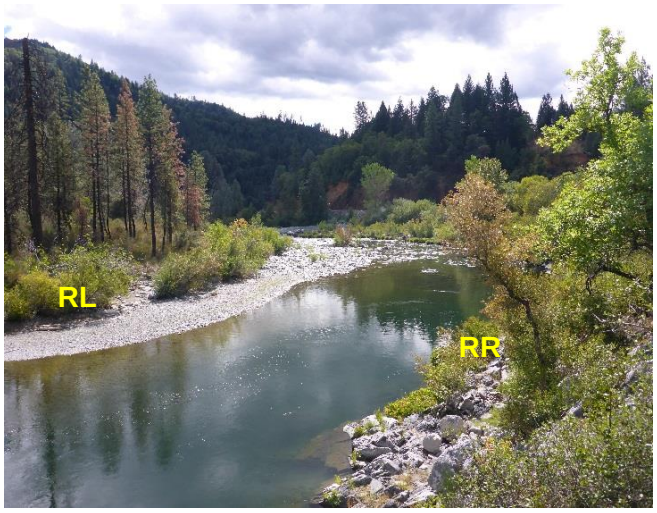
Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Rocky shoals, bedrock ledges (2A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images



Upstream



Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 09/19/2017

Location Name: Slate Creek Response Site (SAC – 125)

Site Objectives: Deflection boom and product collection.

Implementation: Set 350 feet of swiftwater boom starting upstream of the response site on the river-left shore and deflect floating product to an eddy on the river-right shore at the response site. Use excess boom to protect shoreline at collection area. Collect product using skimmer and pump uphill to holding tank(s). Consider setting up high-line boom formation.

Staging Area Location and Capabilities/Amenities/Waste Management: There is sufficient space available along the UPRR right-of-way and under the I-5 overpass out to Moine Road for staging response assets.

Response Strategy Map (overview)

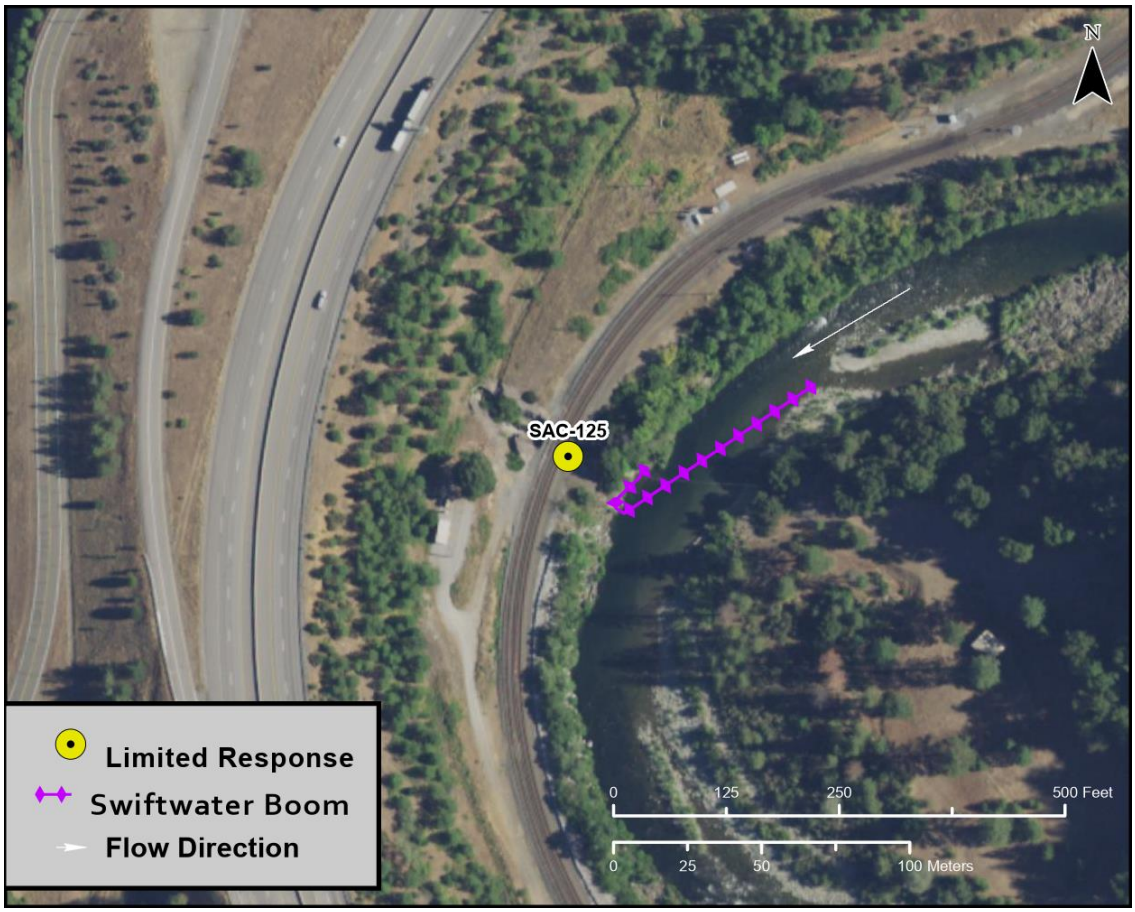


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	350 feet	
Skimmer	Disc, Drum, or Weir			1	
Pumps	High Speed			2	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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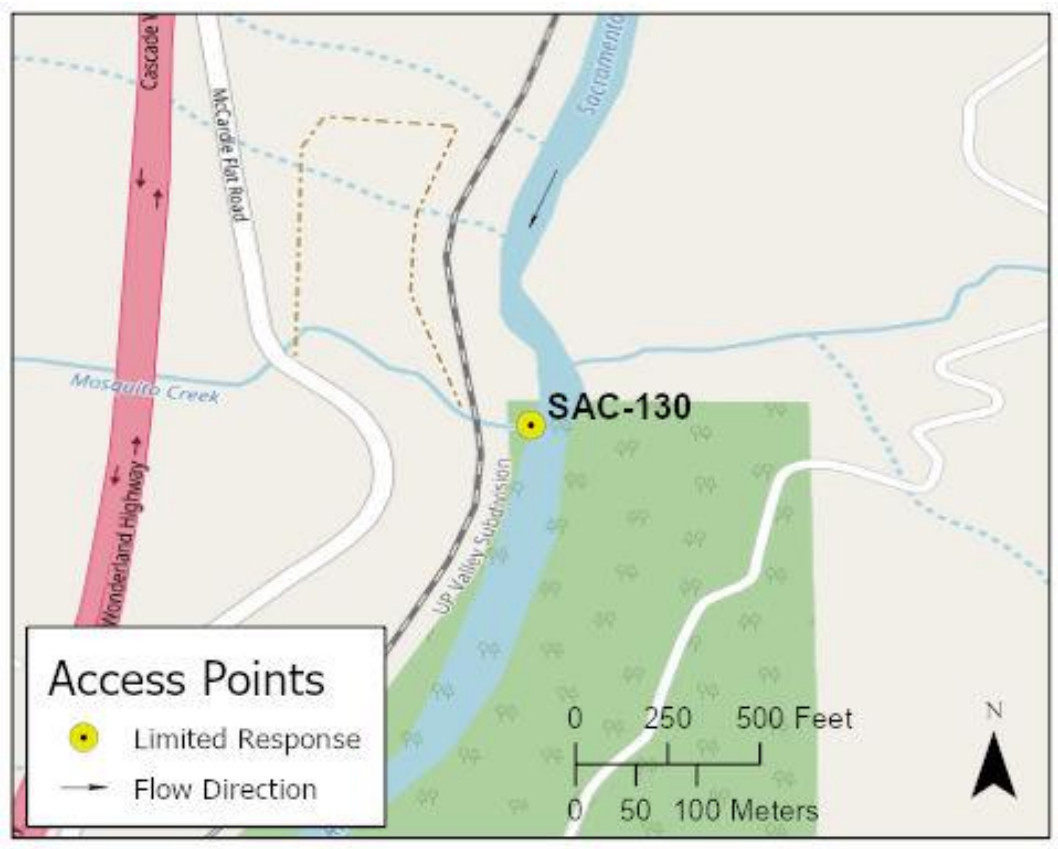
Location Name: McCardle Flat Response Site (SAC – 130)

Latitude: N 40.951563 **Longitude:** W -122.431664	**Driving Directions**
Highway Post Mile: N/A	From I-5, take the Dog Creek Road/Delta Road off ramp, Exit #707. This leads to the communities of Vollmers and Delta. On the east side of I-5, head north toward Delta Road/McCardle Flat Road and stay left onto McCardle Flat Road. Continue north on McCardle Flat Road and take the dirt road on the right about 1 mile north of Delta Road. Follow this dirt road down to another dirt road that parallels the UPRR tracks and the Sacramento River. Head south on the dirt road paralleling the tracks for 0.2 miles to a small turnout on the west side of the tracks. Park in this turnout. Response site is on the east side of the UPRR tracks at the confluence of Mosquito Creek and the Sacramento River.
Railroad Milepost: UPRR 297.94 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

For work around UPRR tracks, contact UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Responders will need a raft or kayak to reach the river-left shoreline.

It's possible for responders to use the large concrete culvert of Mosquito Creek to run suction hoses through to the response site at the Sacramento River.

Site elevation is 1,155 feet above MSL.

Resources-At-Risk

Ecological: Osprey, Bald Eagle, Foothill Yellow-legged Frog

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: McCardle Flat Response Site (SAC – 130)

Site Description and Field Notes

River Width: 14 meters (45 feet)

Gradient: Low to medium

Site Contact/s:

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-A-055

The dirt access road paralleling the UPRR tracks and the Sacramento River may need some minor grading at a point about 150 yards upstream of the response site in order to get large vehicles into the site.

Vehicular Access: High-clearance vehicles are recommended.

Recreational Use: Fishing, rafting/kayaking, water-contact.

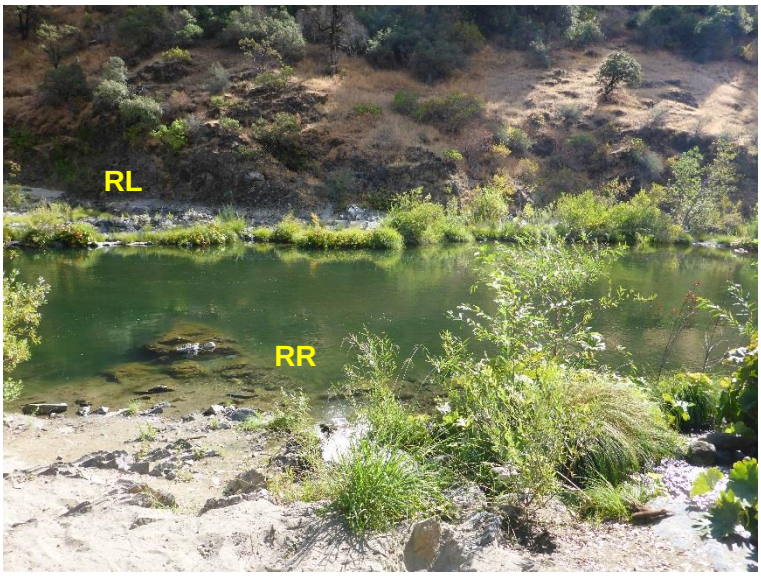
Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

ESI Shoreline Type: Exposed rocky banks (1A); Rocky shoals and bedrock ledges (2A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images

Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 09/19/2017

Location Name: McCardle Flat Response Site (SAC – 130)

Site Objectives: Deflection boom and product collection.

Implementation: Deploy 300 feet of swiftwater boom from upstream on river-left shoreline to eddy along the river-right shoreline at the confluence of Mosquito Creek and the Sacramento River. Use excess boom to protect shoreline at collection area. Collect product with skimmer and transfer to vacuum truck. At lower flows in Mosquito Creek, it may be possible to run transfer hoses through the large concrete culvert that runs under the dirt access road instead of running hoses under the UPRR tracks.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage response resources and manage wastes in open space at McCardle Flat upstream and west of the response site.

Response Strategy Map (overview)

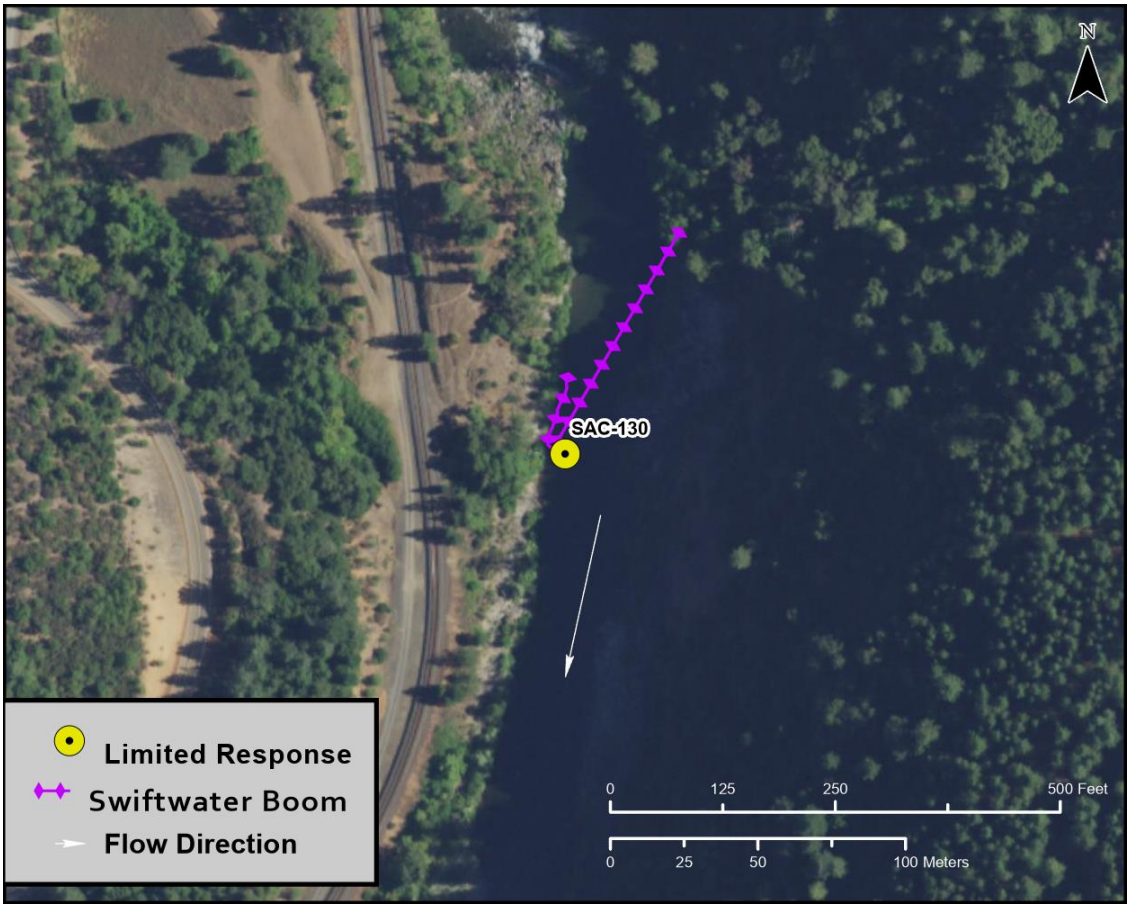


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	400 feet	
Boom	Swiftwater	8 to 12	inch	300 feet	
Skimmer	Disc or Drum			1	
Pumps	High Speed			2	To pump recovered product up to storage tanks.
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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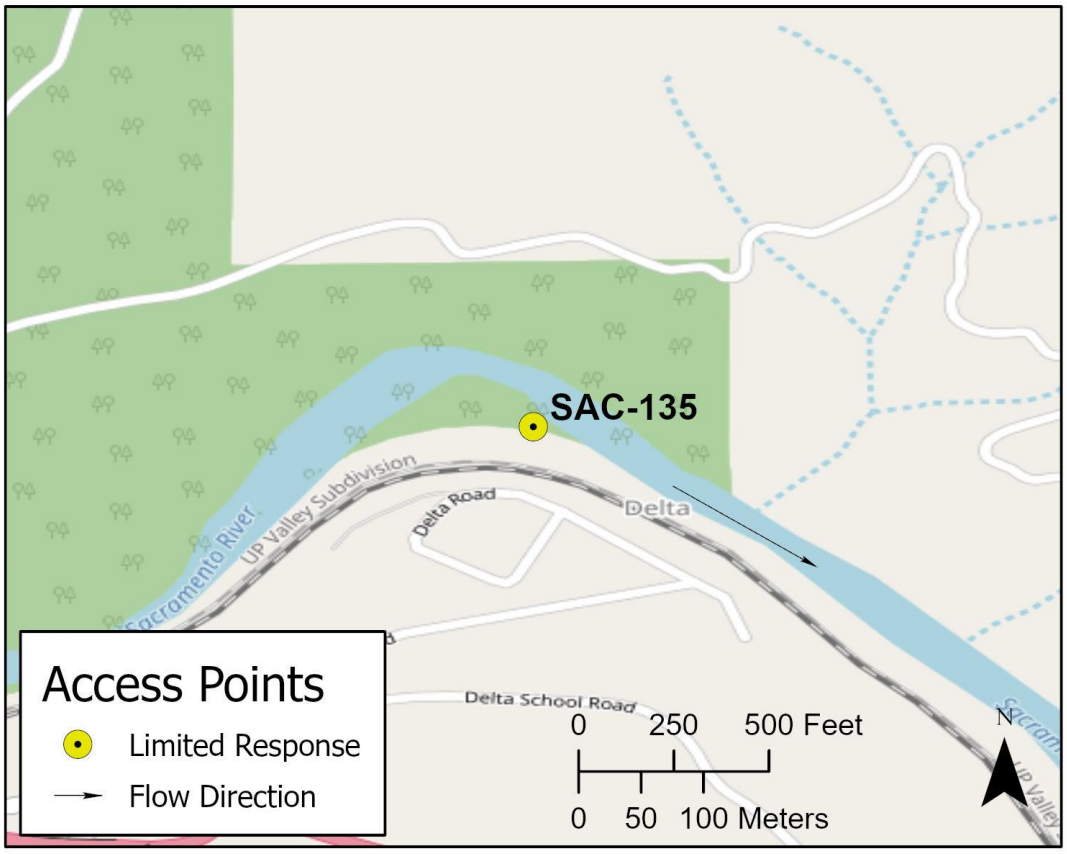
Location Name: Delta Road Response Site (SAC – 135)

Latitude: N 40.944541 **Longitude:** W -122.425751	**Driving Directions**
Highway Post Mile: N/A	Take the Dog Creek Road/Delta Road exit off I-5, Exit #707. This leads to communities of Vollmers and Delta. On the east side of I-5, turn north toward McCardle Flat Road/Delta Road. Bear right (east) onto Delta Road and follow road downhill to the community of Delta along the Sacramento River. Park in the dirt UPRR right-of-way off Delta Road. Response site is accessed via a hiking trail on the east side of the tracks slightly upriver from the parking area.
Railroad Milepost: UPRR 296.73 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Responders have to cross the UPRR tracks to access the Sacramento River. Coordinate response access with UPRR Response Management Communications Center (RMCC) at (888) 877-7267.

Response personnel will need to carry boom, skimmer, storage tanks, and other equipment down to response site at the beach. Responders need a raft or kayak to reach the river-left shoreline.

Responders may be able to use a rail car on the track siding to collect recovered product, otherwise crews will need to run vacuum lines under the tracks. If necessary, setting up a series of pumps may be needed to pump product up from the river.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, northern clarkia

Economic: Fishing guide services

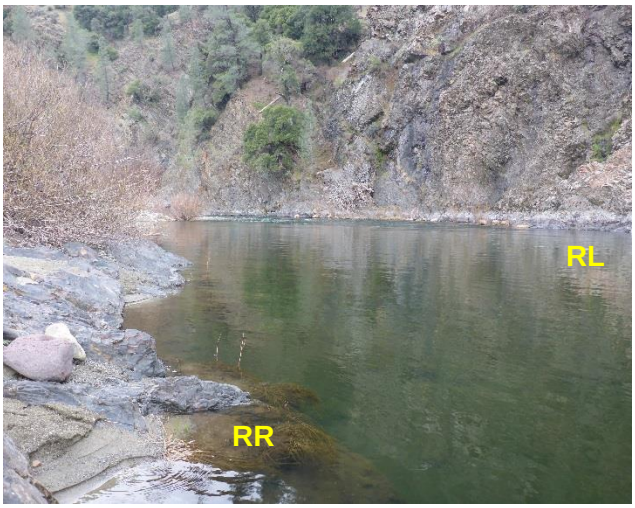
Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Delta Road Response Site (SAC – 135)

Site Description and Field Notes

River Width: 27 meters (90 feet)	**Site Location/Segment: SAC-SH-A-055**
Gradient: Low	Response site is located at a beach at a bend in the river. Site elevation is 1,094 feet above MSL.
Site Contact/s: UPRR RMCC (888) 877-7267	**Vehicular Access:** All vehicle types should be able to access the parking area along the UPRR track right-of-way. Narrow road may be challenging for a vacuum truck to access. **Recreational Use:** Fishing, rafting/kayaking, water contact. **Boat Launches:** Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).
	ESI Shoreline Type: Exposed rocky banks (1A); Exposed rocky cliffs with boulder talus base (1C); Rocky shoals and bedrock ledges (2A); Mixed sand and gravel bars and gently sloping banks (5); Vegetated steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images



Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 03/12/2018

Location Name: Delta Road Response Site (SAC – 135)

Site Objectives: Deflection boom and product collection.

Implementation: Anchor upstream boom at river bend on river-left shoreline above slower water downstream. Deploy 400 feet of swiftwater boom to direct product to eddy at beach on river-right shoreline. Use excess boom to protect shoreline at collection area. Best product recovery site is located in the eddy at the upper portion of the pool on the river-right shoreline. Pump recovered product uphill to storage tanks or vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Equipment staging and waste management activities can occur along the UPRR track siding and at the north end of Delta Road upstream of the track siding area.

Response Strategy Map (overview)

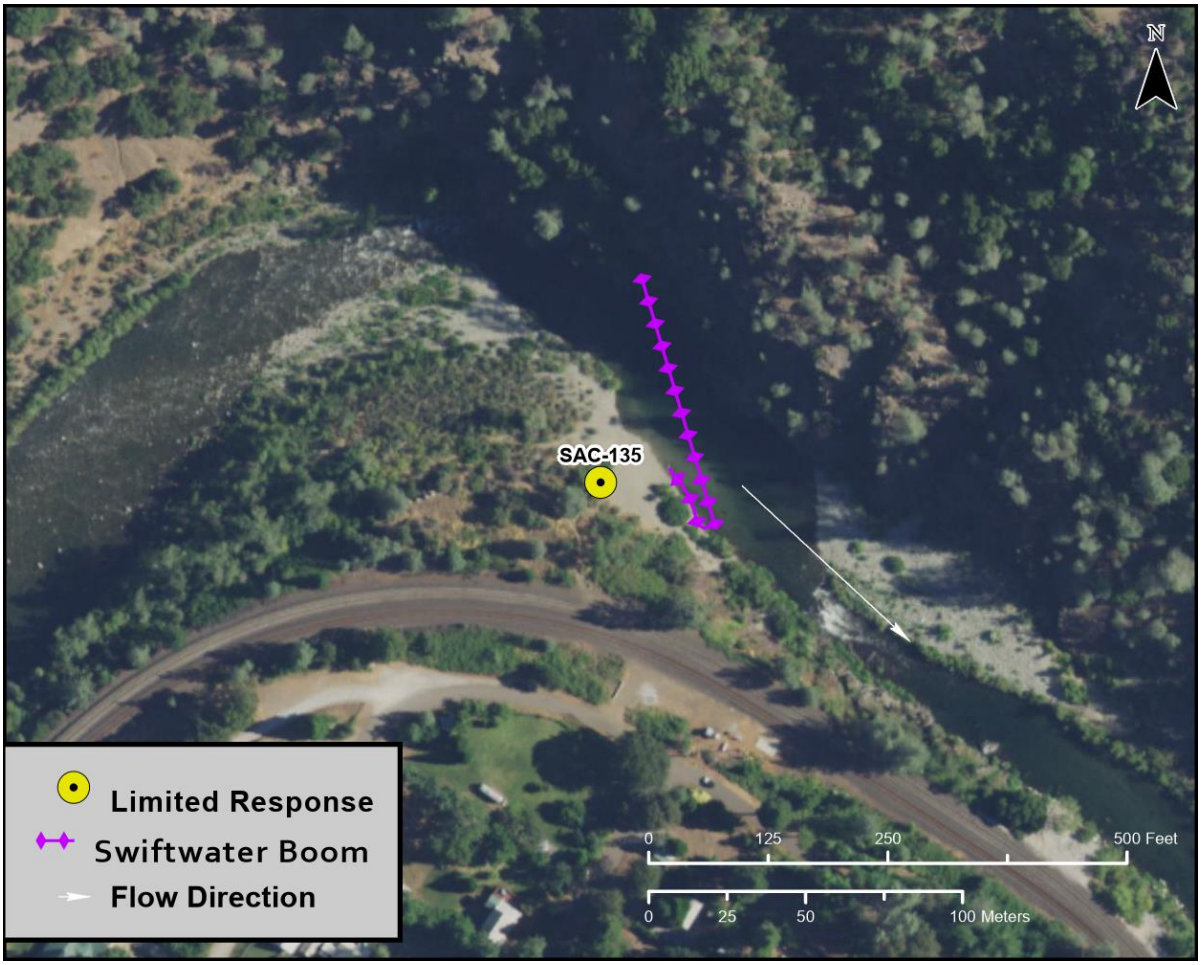


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	600 feet	
Boom	Swiftwater	8 to 12	inch	400 feet	
Skimmer	Disc, Drum, or Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pumps	High Speed			3	To pump recovered product to vacuum truck on west side of rail tracks.
Personnel				6 to 8 crew	

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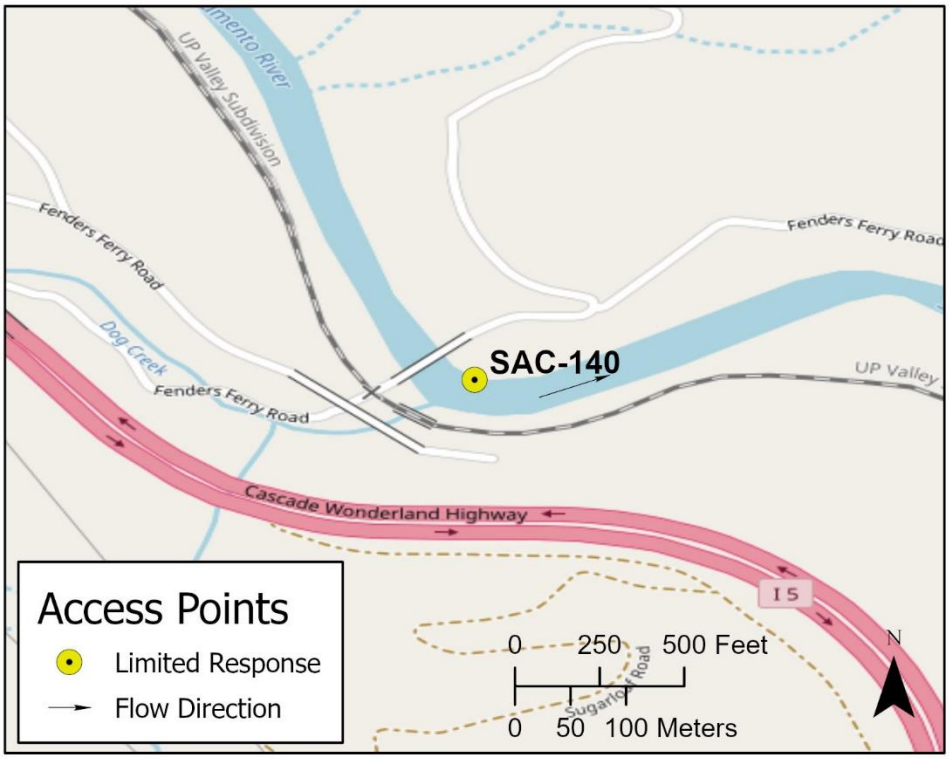
Location Name: Fenders Ferry Road Response Site (SAC – 140)

Latitude: N 40.93826 **Longitude:** W -122.41789	**Driving Directions**
Highway Post Mile: N/A	Take the Dog Creek Road/Delta Road exit, Exit #707, off I-5. This leads to the communities of Vollmers and Delta. Head west on Dog Creek Road. On the west side of I-5, turn left (SE) onto Fenders Ferry Road. NOTE: THE BRIDGES ON FENDERS FERRY ROAD HAVE SPECIFIC LOAD LIMITS THAT MUST BE CONSIDERED BEFORE CROSSING. Follow dirt road down and east along Dog Creek, under the I-5 bridge. Cross the UPRR tracks and continue over the bridge over the Sacramento River. Response site is at the downstream gravel bar on the east side of the bridge.
Railroad Milepost: UPRR 296.24 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Poor reception – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Fenders Ferry Road has two bridges over Dog Creek and one bridge over the Sacramento River. These bridges have specific load limits, depending on how many axles a vehicle has. Vehicles with gross weights in excess of 20 tons should consult the USFS about safety and the need for an excess load permit.

Fenders Ferry Road is a narrow dirt road that leads to the response site. The dirt road leading to the response site (gravel bar on the east side of the bridge over the Sacramento River) is in poor condition but may be passable with 4WD vehicle. This short access road would need grading improvements in order to drive equipment down to the response site. Otherwise, response crews will need to carry equipment down to the water.

UPRR crossing #750537G is located on the west side of the Sacramento River.

Site elevation is 1,080 feet above MSL.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, northern clarkia

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Fenders Ferry Road Response Site (SAC – 140)

Site Description and Field Notes

River Width: 38 meters (125 feet)

Gradient: Low to medium

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-A-060

Vehicular Access: All vehicle types can access this site but recommend high-clearance vehicle. 4WD vehicle is needed to drive down to the gravel bar at the response site.

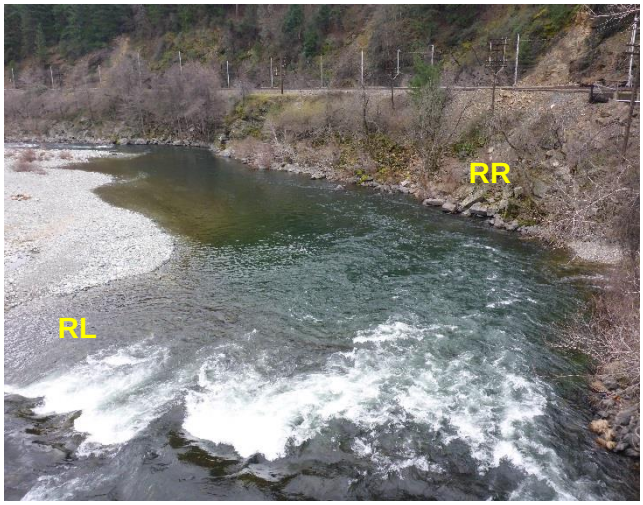
Recreational Use: Fishing, rafting/kayaking, water contact.

Boat Launches: Use shoreline for launching rafts or kayaks. There are no boat ramps along the upper Sacramento River between Box Canyon Dam and Lake Shasta (Divisions SAC-SK-A and SAC-SH-A).

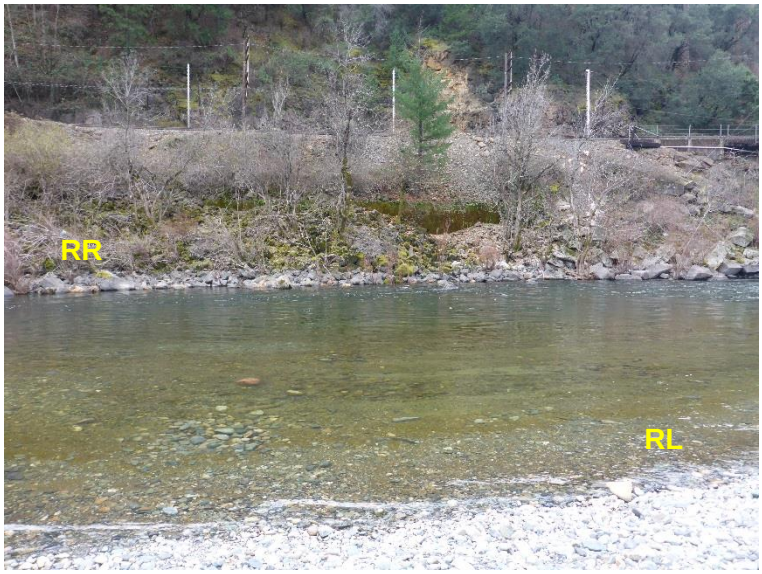
ESI Shoreline Type: Exposed rocky banks (1A); Rocky shoals and bedrock ledges (2A); Gravel bars and gently sloping banks (6A); Vegetated steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images

Upstream



Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 03/12/2018

Location Name: Fenders Ferry Road Response Site (SAC – 140)

Site Objectives: Deflection boom and product collection.

Implementation: Anchor boom upstream of bridge on river-right shoreline and attempt to deflect product toward slower water along the gravel bar downstream of the bridge on the river-left shoreline. Deploy 450 feet of swiftwater boom. Use excess boom to protect shoreline at collection area. Crews may need to set up a series of pumps to pump recovered product up to a vacuum truck on Fenders Ferry Road.

Staging Area Location and Capabilities/Amenities/Waste Management: There is not a lot of space for staging equipment or managing wastes at this site. There is some space available along the UPRR track siding on the north side of Fenders Ferry Road. Additional staging may be possible near the intersection of Dog Creek Road and Fenders Ferry Road.

Response Strategy Map (overview)

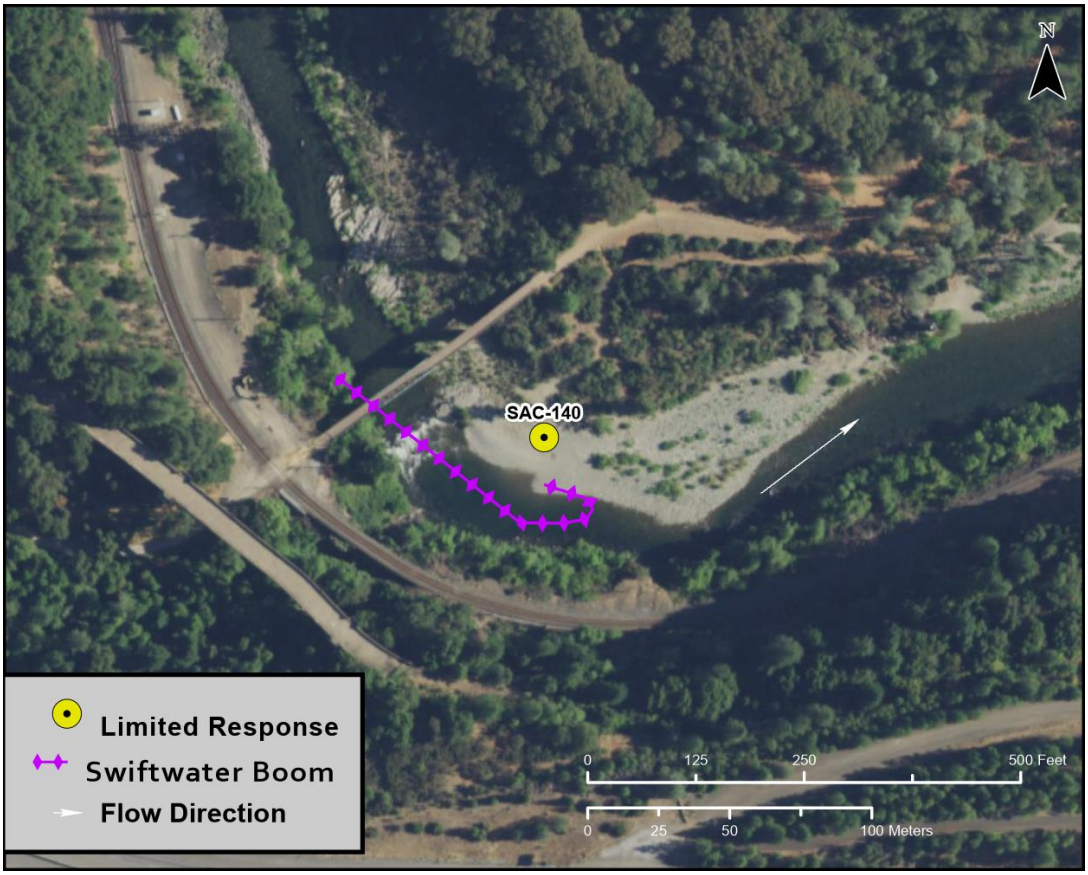


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	800 feet	
Boom	Swiftwater	8 to 12	inch	450 feet	
Skimmer	Disc or Drum			1	
Pumps	High Speed			3	To pump recovered product up to vacuum truck or storage tanks on road above water.
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Pads and Sweep	Sorbent		bale	40	
Personnel				6 to 8 crew	

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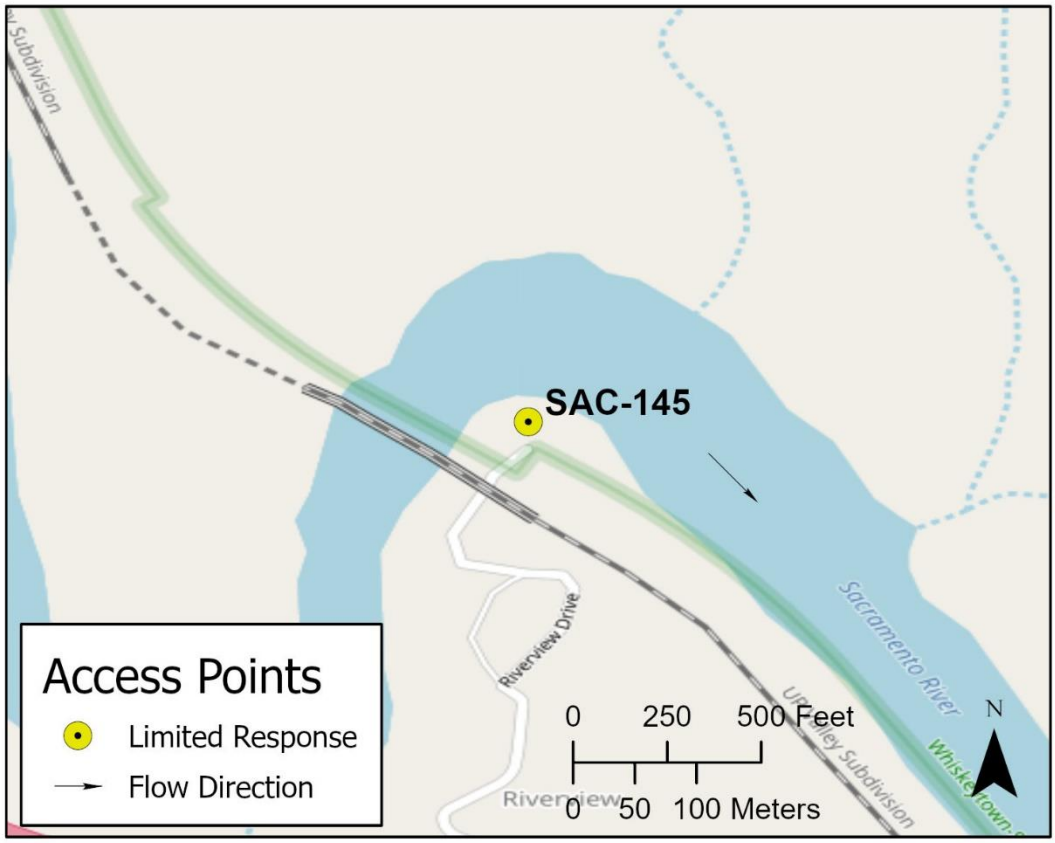
Location Name: Riverview Drive Response Site (SAC – 145)

Latitude: N 40.926723 **Longitude:** W -122.402642	**Driving Directions**
Highway Post Mile: N/A	Take the Riverview Drive exit, Exit #704, off I-5 in Lakehead. Head east on Riverview Drive past the YIELD sign. Turn left (N) at the next junction (still Riverview Drive). Follow road north till it ends at a turnaround. Take the dirt road on the left at the road circle and drive past the house on the left. Follow dirt road down to the Sacramento River and response site. ALTERNATE: Response site is also accessible via boat (when Lake Shasta water levels are high) launched from the USFS's Antlers Boat Launch facility on Lake Shasta, located off Antlers Road, Lakehead.
Railroad Milepost: UPRR 287.89 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

The response site is located at a sandy beach on a sharp bend in the river immediately above Lake Shasta. Responders should use caution when driving on the beach to avoid getting vehicles stuck in the sand and mud near the water.

It's possible to access the response site using a boat launched at the USFS's Antlers Boat Launch facility on Lake Shasta. This may be the best approach for bringing on-water response assets to this location. Support equipment could still be brought to the site via the Riverview Drive access.

This response site is the southern end of Division SAC-SH-A. Division SAC-SH-B starts at Lake Shasta.

Elevation at the site is 1,063 feet above MSL.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog

Economic: Fishing guide services, Lake Shasta marinas, local recreation/tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Riverview Drive Response Site (SAC – 145)

Site Description and Field Notes

River Width: 37 meters (120 feet)

Gradient: Medium to low

Site Contact/s:

USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-A-065

Vehicular Access: The dirt access road for this site is in poor condition. High clearance 4wd vehicles can access the site without improvements, but the access road would need to be graded to get other vehicle types into the response site.

Recreational Use: Fishing, boating, water-contact.

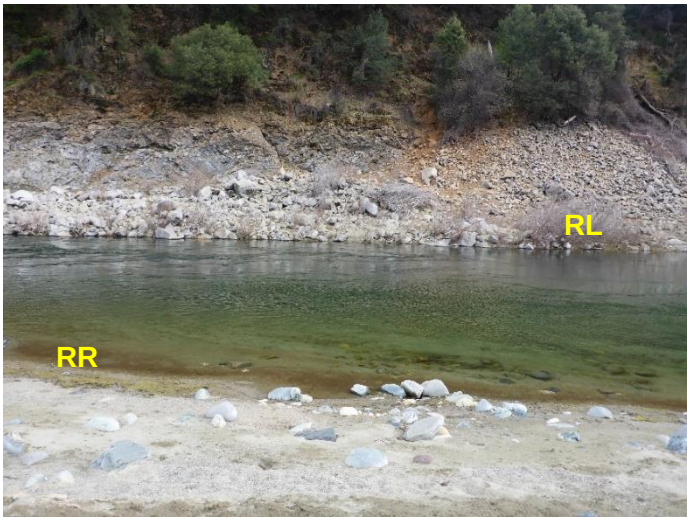
Boat Launches: Use shoreline for launching rafts or kayaks. It may be possible to launch a small skiff from the shoreline at this site. Nearest public boat launch is located at the USFS's Antlers Boat Launch facility on Lake Shasta, located off Antlers Road, Lakehead.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed rocky cliffs with boulder talus base (1C); Rocky shoals and bedrock ledges (2A); Mixed sand and gravel bars and gently sloping banks (5); Vegetated steeply sloping bluffs (8F); Vegetated low banks (9B).

Site Images

Upstream

Downstream



Straight Across

RR = River-Right RL = River-Left

Photo Date: 03/12/2018

Location Name: Riverview Drive Response Site (SAC – 145)

Site Objectives: Deflection boom and product collection.

Implementation: Set upstream anchor on river-left shore at the top of the pool and deploy 500 feet of swiftwater boom. Deflect product to the eddy on the river-right shore at the lower part of the pool. Use excess boom to protect shoreline at collection area. Pump recovered product to storage tanks on the shoreline or use on-water recovery operations and pump product to storage tanks on a barge.

Staging Area Location and Capabilities/Amenities/Waste Management: With access road improvements, response assets can be staged and waste products managed above the shoreline at the bottom of Riverview Drive. Additional staging locations may be considered where the road circles at the end of the paved portion of Riverview Drive or at the USFS's Antlers Boat Launch facility.

Response Strategy Map (overview)

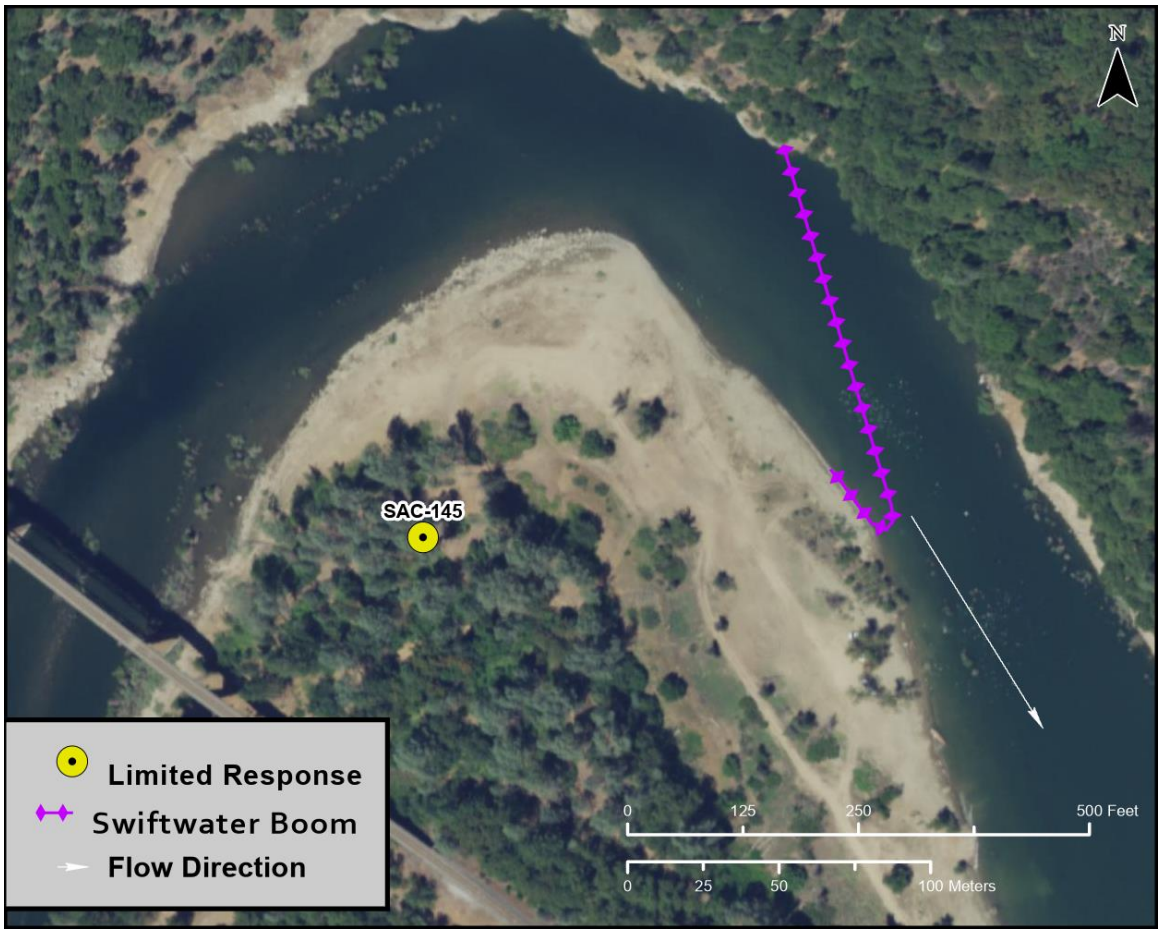


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Sorbent	5 to 8	inch	800 feet	
Boom	Swiftwater	8 to 12	inch	500 feet	
Skimmer	Disc, Drum, or Weir			1	
Pumps	High Speed			3	To pump recovered product up shoreline into storage tanks on vehicles if not collecting product on-water using vessels.
Storage Tank		20,000	gallon	5	Set up remotely, not on shoreline. Consider setting tanks up at end of Riverview Drive.
Vacuum Truck		120	bbl	1	For off-loading at Antlers Boat Launch or end of Riverview Drive.
Personnel				6 to 8 crew	

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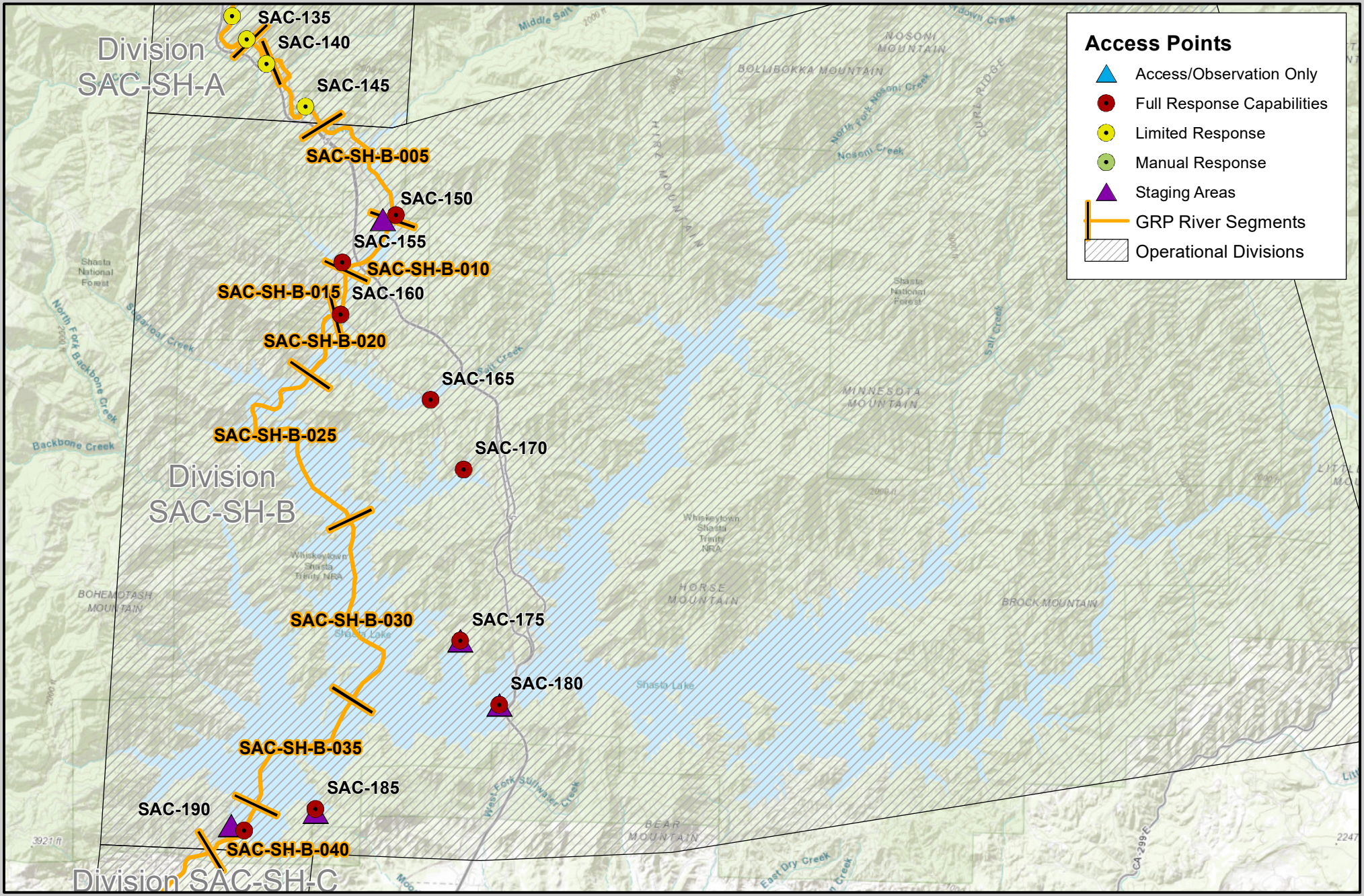
Figure 3-5: Upper Sacramento River GRP Division SAC-SH-B Map



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

Author: spaine, CDFW
Date Created: 2/26/2020
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Div-SAC-SH-B.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Division SAC-SH-B

0 3 6 Miles
0 4 8 Kilometers

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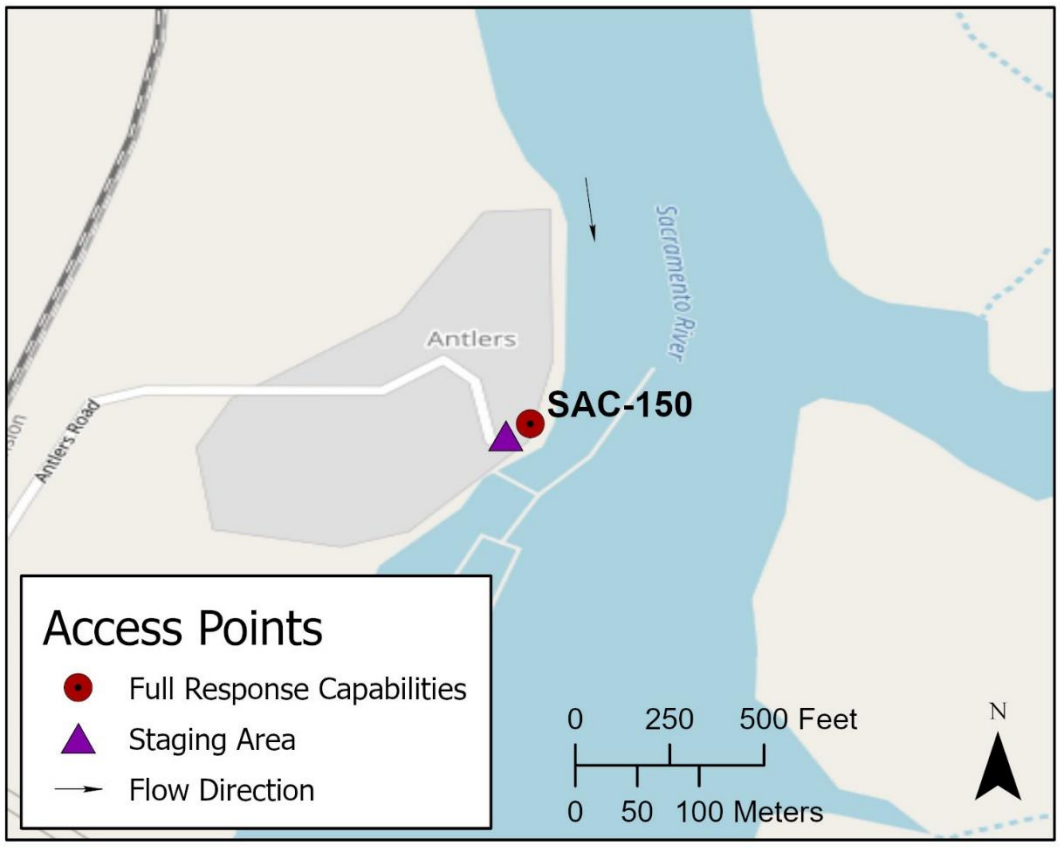
Location Name: Lake Shasta Headwaters (SAC – 150)

Latitude: N 40.896012 **Longitude:** W -122.369031	**Driving Directions**
Highway Post Mile: N/A	THIS IS AN ON-WATER RESPONSE SITE. Launch boat at the USFS Antlers Public Boat Launch. To get to this boat launch, take the Antlers Road exit, Exit #702, off I-5. On the east side of I-5, head south on Antlers Road. Antlers Public Boat Launch is located approximately 0.6 miles from the Antlers Road exit. TO REACH RESPONSE SITE: Launch vessel at Antlers Public Boat Launch and head upstream (NE) approximately 1.4 miles past Antlers Marina.
Railroad Milepost: UPRR 285.12 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

Load all response equipment (boom, skimmer, storage, etc.) onto vessels for transport to the response site.

Responders may be able to access the river-right shoreline above Antlers Resort and Marina. Contact Antlers Resort and Marina during business hours at (530) 238-2553 or after hours at (800) 238-3924.

This is the northern most response site of Division SAC-SH-B.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog

Economic: Antlers Resort and Marina, fishing guide services, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

Lake Width: 223 meters (750 feet) when lake is full.

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-005

The response site is located above Antlers Marina. Water velocity can be swift during winter and spring runoff. Indian Creek enters Lake Shasta at the small inlet on the east side of the lake just below the response site.

Vehicular Access: Boat access only.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: Use the USFS Antlers Public Boat Launch. See driving directions for location.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Site Objectives: Containment and on-water product collection.

Implementation: Place containment boom across lake above the Indian Creek inlet. The length of boom necessary for containment will depend on the lake elevation. Above the containment boom, use vessels towing additional boom to corral floating product. Recover product with skimmer and off-load to storage tanks on a support barge. Transport full storage tanks back to Antlers Public Boat Launch for off-loading to a vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Antlers Public Boat Launch.

Response Strategy Map (overview)

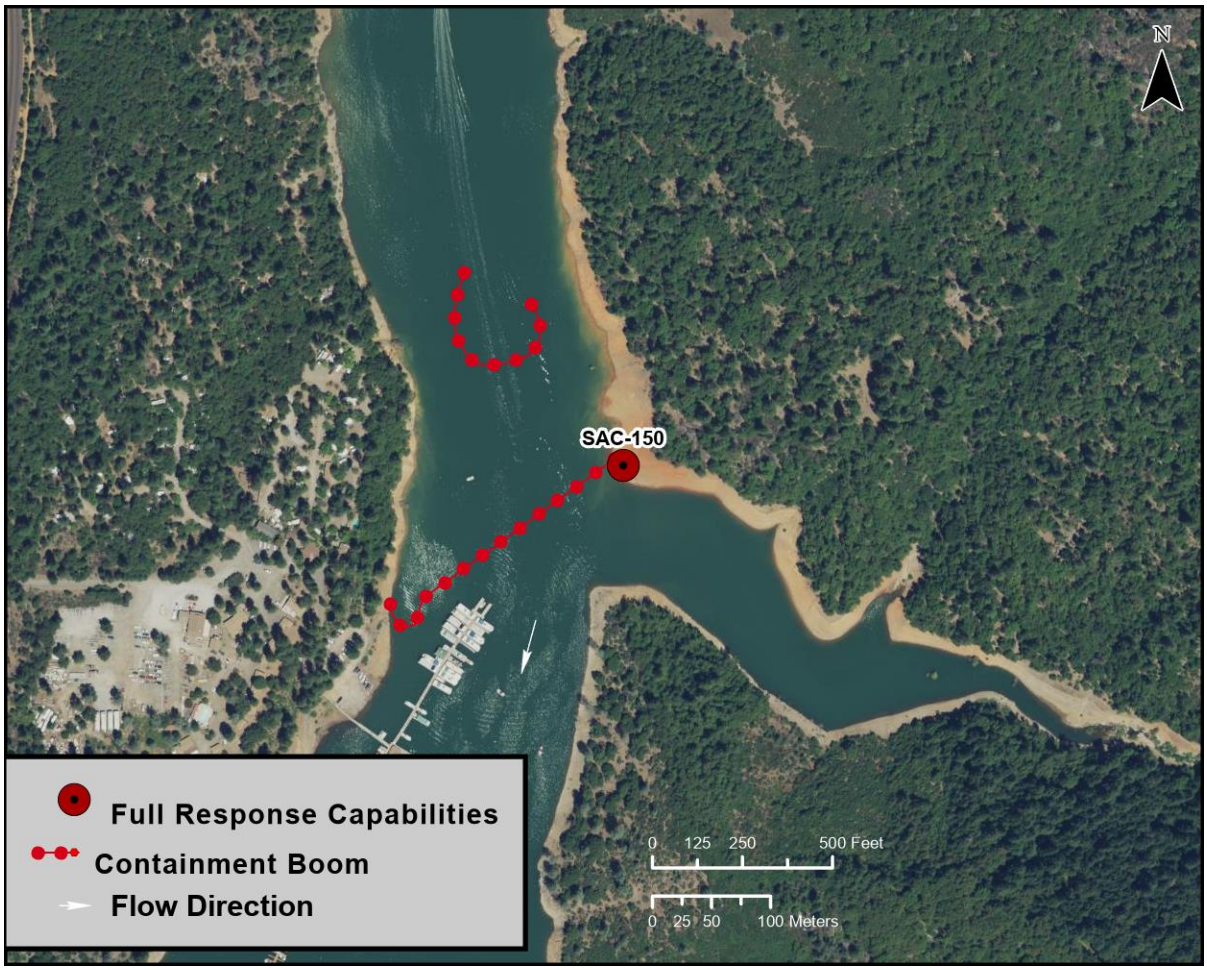


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment Boom	21-inch minimum	inch	1,500 feet	Minimum length necessary to boom across lake and for collecting product on-water.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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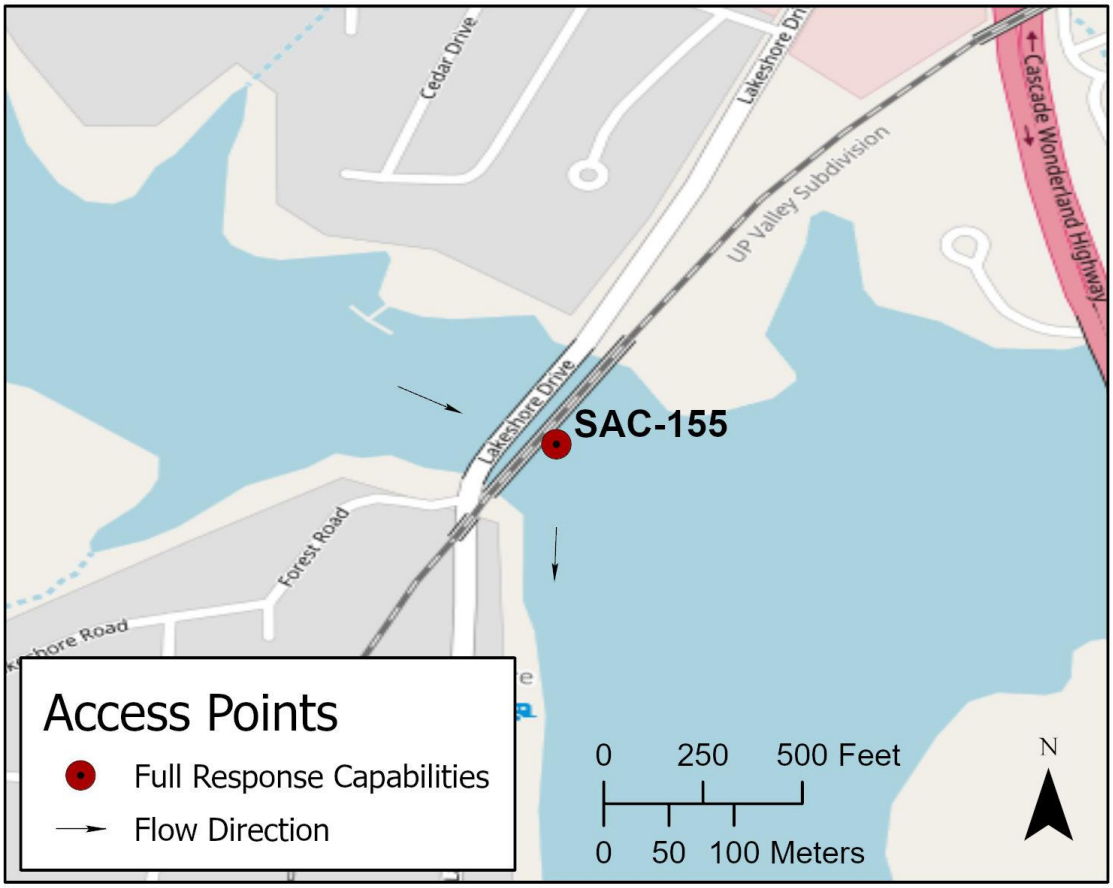
Location Name: Doney Creek Inlet (SAC – 155)

Latitude: N 40.881882 **Longitude:** W -122.387429	**Driving Directions**
Highway Post Mile: N/A	THIS IS AN ON-WATER RESPONSE SITE. Launch boat at the USFS Antlers Public Boat Launch. To get to this boat launch, take the Antlers Road exit, Exit #702, off I-5. On the east side of I-5, head south on Antlers Road. Antlers Public Boat Launch is located approximately 0.6 miles from the Antlers Road exit. TO REACH RESPONSE SITE: Launch vessel and head 0.45 miles SW to the mouth of Doney Creek Inlet.
Railroad Milepost: UPPR 283.82 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes - Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

Load all response equipment (boom, skimmer, storage, etc.) onto vessels for transport to the response site.

A UPRR bridge crosses Doney Creek Inlet immediately west of the mouth of the inlet and I-5 crosses Lake Shasta about 1,500 feet east of the inlet.

Resources-At-Risk

Ecological: Foothill Yellow-legged Frog

Economic: Tsadi Resort boat docks, Sugarloaf Marina, fishing guide service, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

Lake Width: 152 meters (500 feet) at the mouth of Doney Creek Inlet when lake is full.

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-010

Vehicular Access: Responders can access the north and south shorelines from either end of the Lakeshore Drive bridge over Doney Creek Inlet. Shoreline banks are steep and rocky so most containment and product recovery will occur through on-water operations.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: Use the USFS Antlers Public Boat Launch. See driving directions for location.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Straight Across/Response Site

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: Doney Creek Inlet (SAC – 155)

Site Objectives: Containment and on-water product collection.

Implementation: Place containment boom across the Doney Creek inlet. The length of boom necessary for containment will depend on the lake elevation and whether product has moved downstream of the inlet. If product has moved downstream, attempt to set the boom in a location that will assist with on-water product collection. Above the containment boom, use vessels towing additional boom to corral floating product. Recover product with skimmer and off-load to storage tanks on a support barge. Transport full storage tanks back to Antlers Public Boat Launch for off-loading to a vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Antlers Public Boat Launch.

Response Strategy Map (overview)

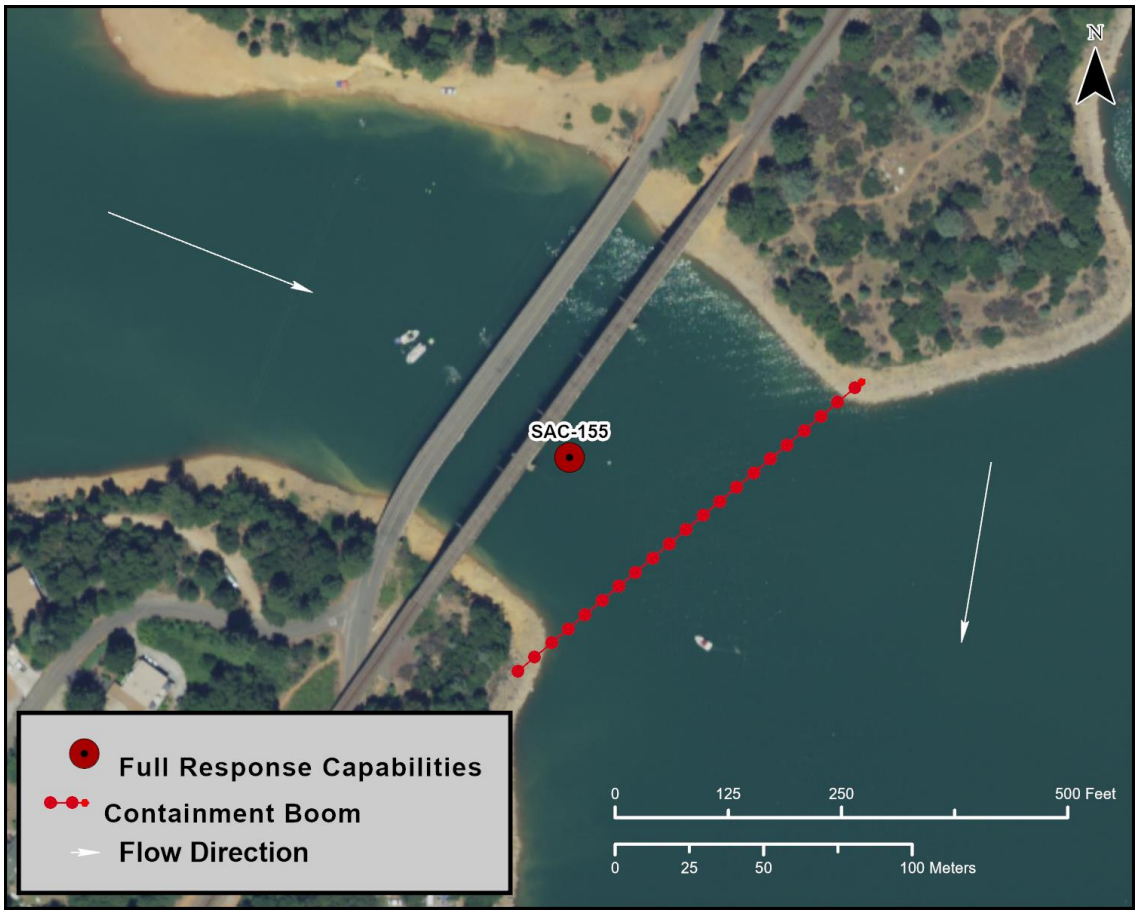


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment Boom	21-inch minimum	inch	1,250 feet	Minimum amount necessary for containment at mouth of Doney Creek Inlet and for on-water collection.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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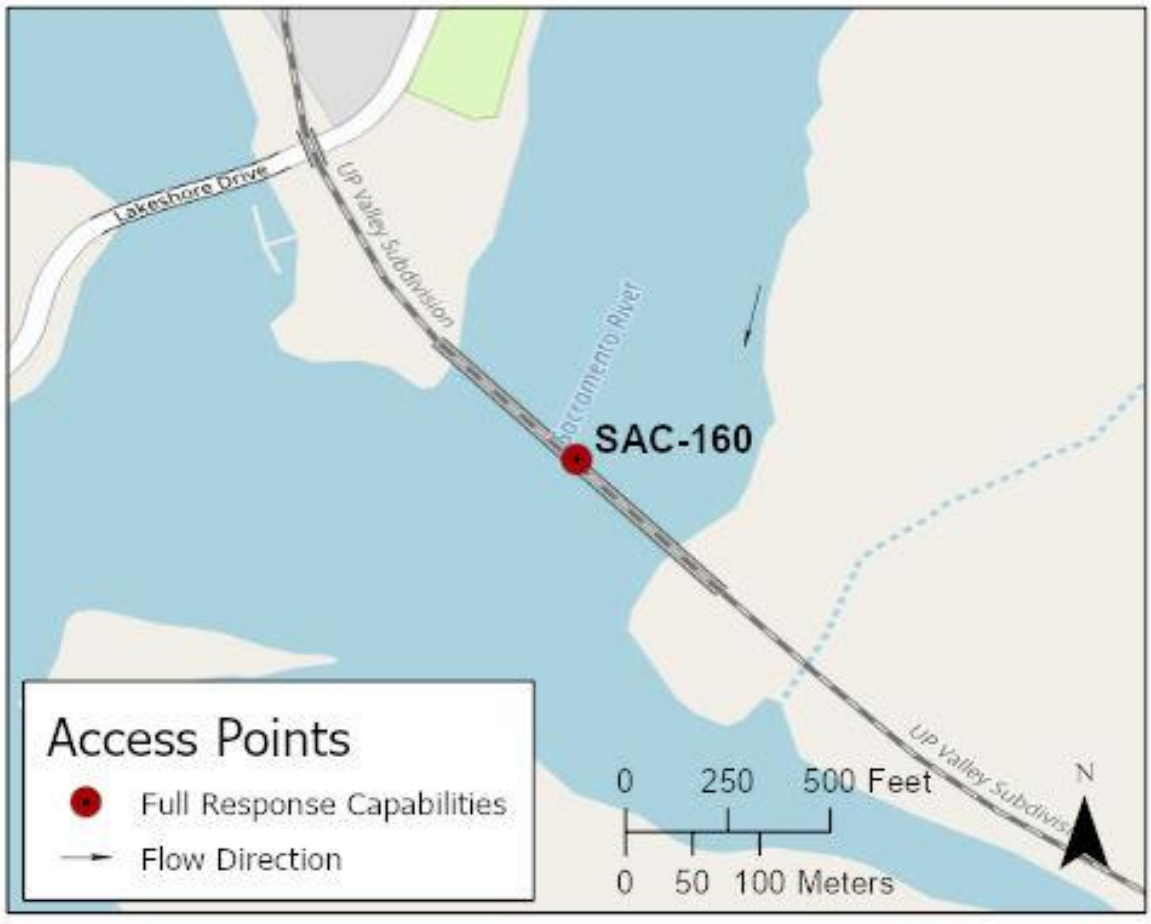
Location Name: UPRR Bridge Over Sacramento River Arm (SAC – 160)

Latitude: N 40.866465 **Longitude:** W -122.388498	**Driving Directions**
Highway Post Mile: N/A	THIS IS AN ON-WATER RESPONSE SITE. Launch boat at the USFS Antlers Public Boat Launch. To get to this boat launch, take the Antlers Road exit, Exit #702, off I-5. On the east side of I-5, head south on Antlers Road. Antlers Public Boat Launch is located approximately 0.6 miles from the Antlers Road exit. TO REACH RESPONSE SITE: Launch vessel at Antlers Public Boat Launch and head 1.25 miles south to the UPRR bridge over the Sacramento River Arm of Lake Shasta.
Railroad Milepost: UPRR 282.71 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Spotty - Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

Load all response equipment (boom, skimmer, storage, etc.) onto vessels for transport to the response site.

There is shoreline access on the west (river-right) side of the UPRR bridge. Access to this location is off Lakeshore Drive in Lakehead.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Western Pond Turtle, Foothill Yellow-legged Frog, northern clarkia

Economic: Tsadi Resort boat docks, Sugarloaf Marina, fishing guide service, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: From west shore under UPRR bridge – 335 meters (1,100 feet) south to river-left shore below small inlet.

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-015

At low lake elevations, responders may be able to drive to the shoreline on the west side of the UPRR bridge. From this point, responders may be able to provide logistical support to on-water personnel.

Vehicular Access: High clearance vehicles for west shore access. Product recovery operations will occur on-water.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: Use the USFS Antlers Public Boat Launch. See driving directions for location.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream
Photo Date: 10/17/2017

Downstream
Photo Date: 04/18/2018

Straight Across
Photo Date: 04/18/2018

RR = River-Right RL = River-Left

Location Name: UPRR Bridge Over Sacramento River Arm (SAC – 160)

Site Objectives: Containment and on-water product collection.

Implementation: Set 1,100 feet of containment boom on river right, near UPRR bridge, and deploy across lake south to the river-left bank. The length of boom necessary for containment will depend on the lake elevation and whether product has moved downstream of the bridge. If product has moved downstream, attempt to set the boom in a location that will assist with on-water product collection. Above the containment boom, use vessels towing additional boom to corral floating product. Recover product with skimmer and off-load to storage tanks on a support barge. Depending on site conditions, transport full storage tanks back to west shoreline (river right) under UPRR bridge or back to Antlers Public Boat Launch for off-loading to a vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Antlers Public Boat Launch. Depending on lake elevation, responders may be able to stage equipment on the west shoreline near the UPRR bridge.

Response Strategy Map (overview)

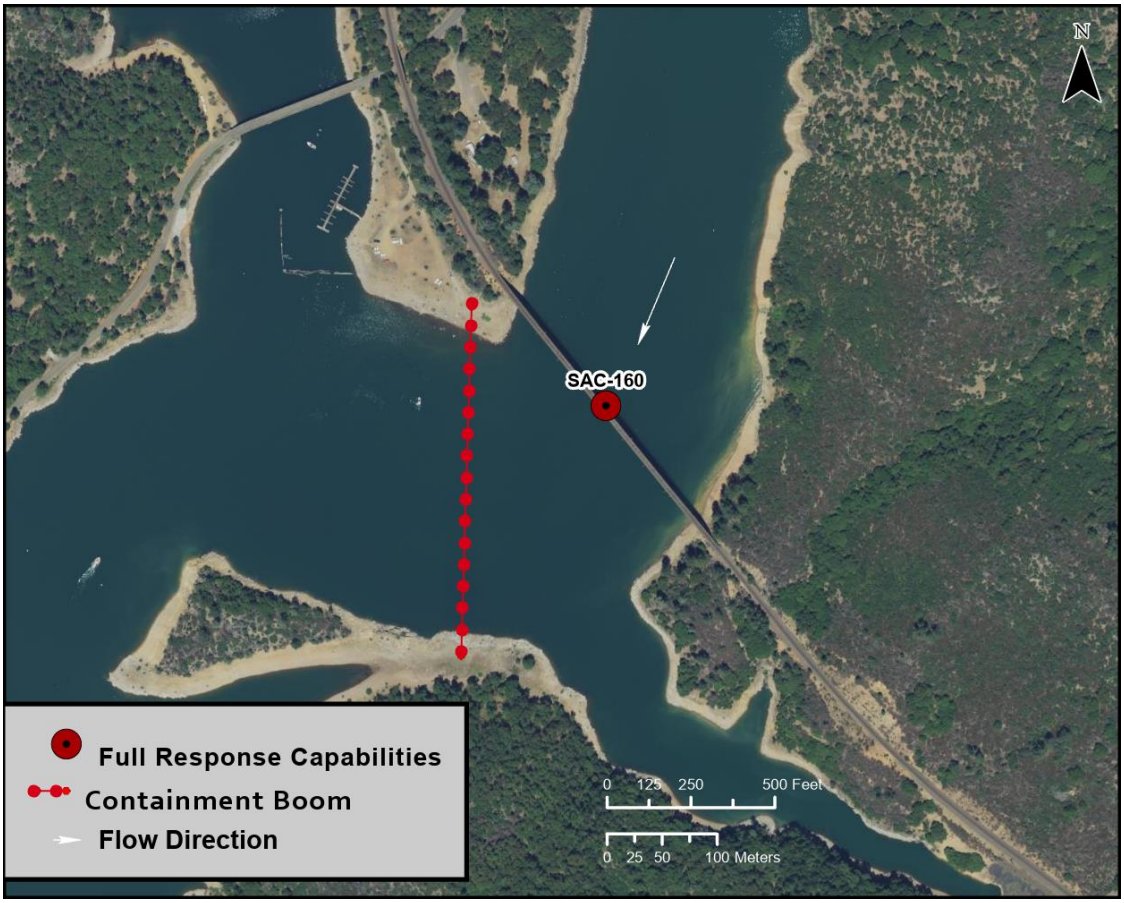


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment Boom	21-inch minimum	inch	1,900 feet	Minimum length necessary to boom across lake and recover product on-water.
Barge	Shallow Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco or Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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Location Name: Salt Creek Inlet (SAC – 165)

Latitude: N 40.844172
Longitude: W -122.353258

Highway Post Mile: N/A

Railroad Milepost: UPRR 280.24 – Valley Subdivision

Nearest Address and Thomas Guide #: N/A

Cell Service: Spotty - Verizon tested

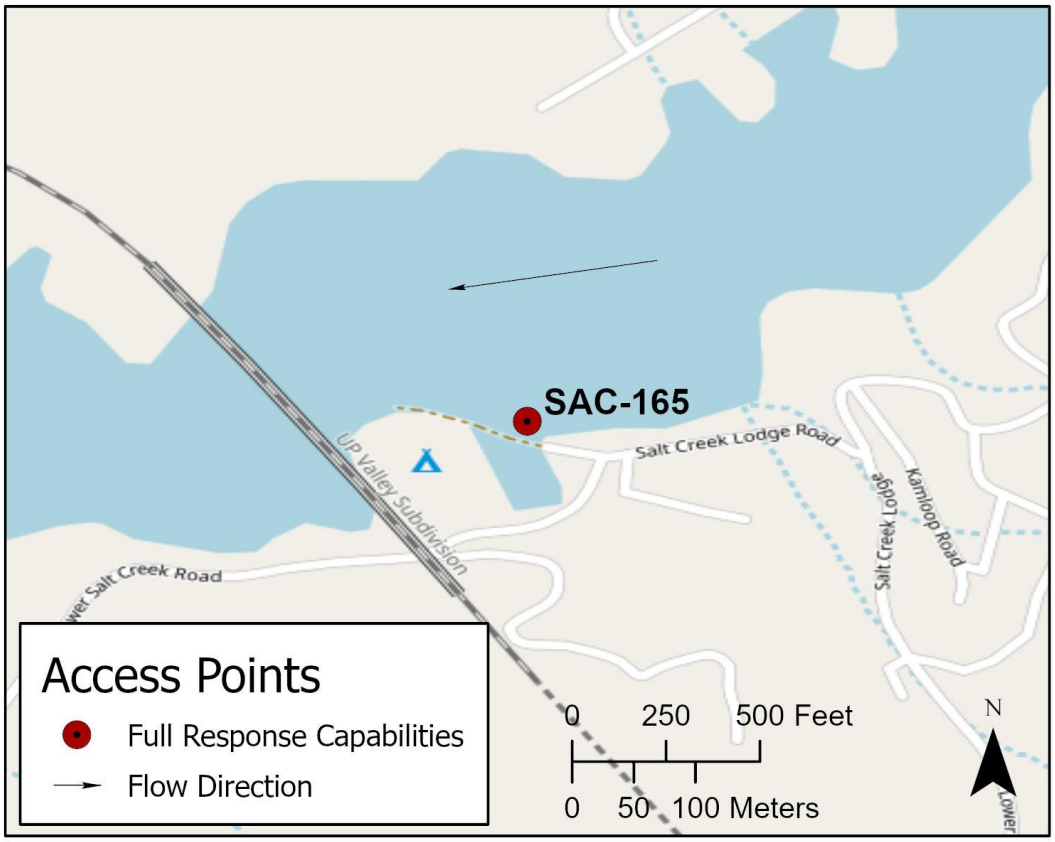
Driving Directions

THIS IS AN ON-WATER RESPONSE SITE. There is a boat ramp at the bottom end of Salt Creek Lodge Road beneath the UPRR bridge. To access this location, take the Gilman Road/Salt Creek Road exit off I-5, Exit #698. On the west side of I-5, turn west onto Salt Creek Lodge Road on the south side of Salt Creek. Follow narrow road down to UPRR bridge and boat ramp.

If the Salt Creek Lodge Road boat ramp is not operational due to low lake elevation, then launch boat at the USFS Antlers Public Boat Launch. To get to this boat launch, take the Antlers Road exit, Exit #702, off I-5. On the east side of I-5, head south on Antlers Road. Antlers Public Boat Launch is located approximately 0.6 miles from the Antlers Road exit.

From Antlers Public Boat Launch, launch boat and head 2.55 miles south to the Salt Creek Arm Inlet. Enter the inlet and proceed 2 miles east to the UPRR bridge.

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

Response operations at this location will be dependent on what elevation Lake Shasta is at. At low lake elevations, the boat ramp at the bottom of Salt Creek Lodge Road is not operational. Shoreline response personnel may be able to assist on-water personnel with off-loading recovered product and waste management. If shoreline personnel cannot assist at this location, then recovered product will need to be transported to the Antlers Public Boat Launch for off-loading.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Western Pond Turtle.

Economic: Fishing guide services, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: At higher lake elevations, 160 meters (525 feet) between north and south shore on west side or UPRR bridge.

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-020

Vehicular Access: The narrow, winding Salt Creek Lodge Road may be difficult for large vehicles, such as vacuum trucks to navigate.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: At high lake elevations, use the boat launch at the bottom of Salt Creek Lodge Road. If lake elevations are low, then use the Antlers Public Boat Launch.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Boat Ramp

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: Salt Creek Inlet (SAC – 165)

Site Objectives: Prevent floating product from entering main body of Lake Shasta. Contain product in Salt Creek Inlet. Recover product using on-water collection strategies.

Implementation: Deploy containment boom between north and south shores of inlet. The length of boom necessary to contain product inside the inlet will depend on the lake elevation and how far product has migrated west due to natural currents inside the inlet. Use response vessels to corral floating product for on-water collection with skimmers. Recover product into storage tanks on barges. Transport recovered product to appropriate off-loading location, depending on lake elevation.

Staging Area Location and Capabilities/Amenities/Waste Management: Depending on lake elevation, stage equipment along dirt shoreline on east side of UPRR bridge or use staging area at the Antlers Public Boat Launch. Manage wastes at appropriate staging location.

Response Strategy Map (overview)

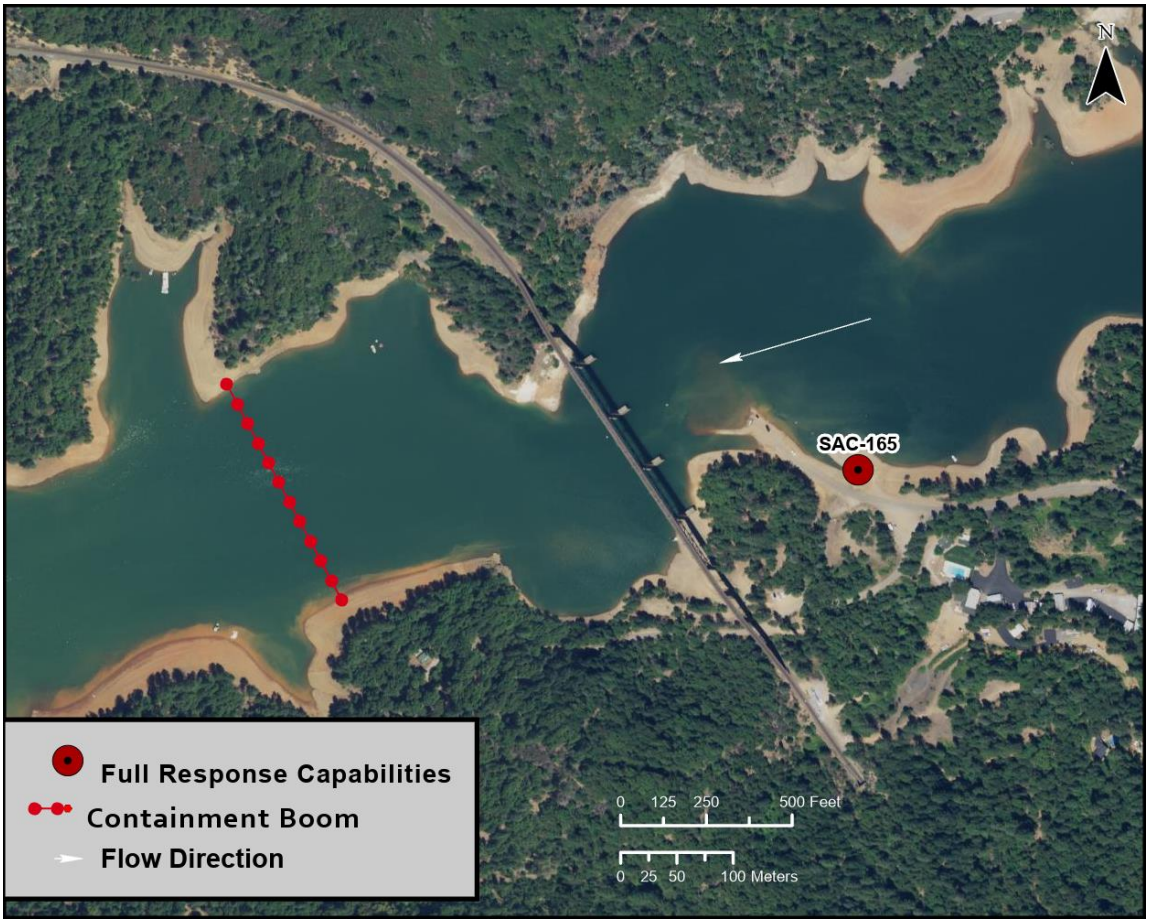


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment Boom	21-inch minimum	inch	1,300 feet	Minimum length necessary to boom across inlet and recover product on-water.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70 or 120	bbl	1	70-bbl vacuum truck for use at bottom of Salt Creek Lodge Road and 120-bbl truck for use at Antlers Public Boat Launch.
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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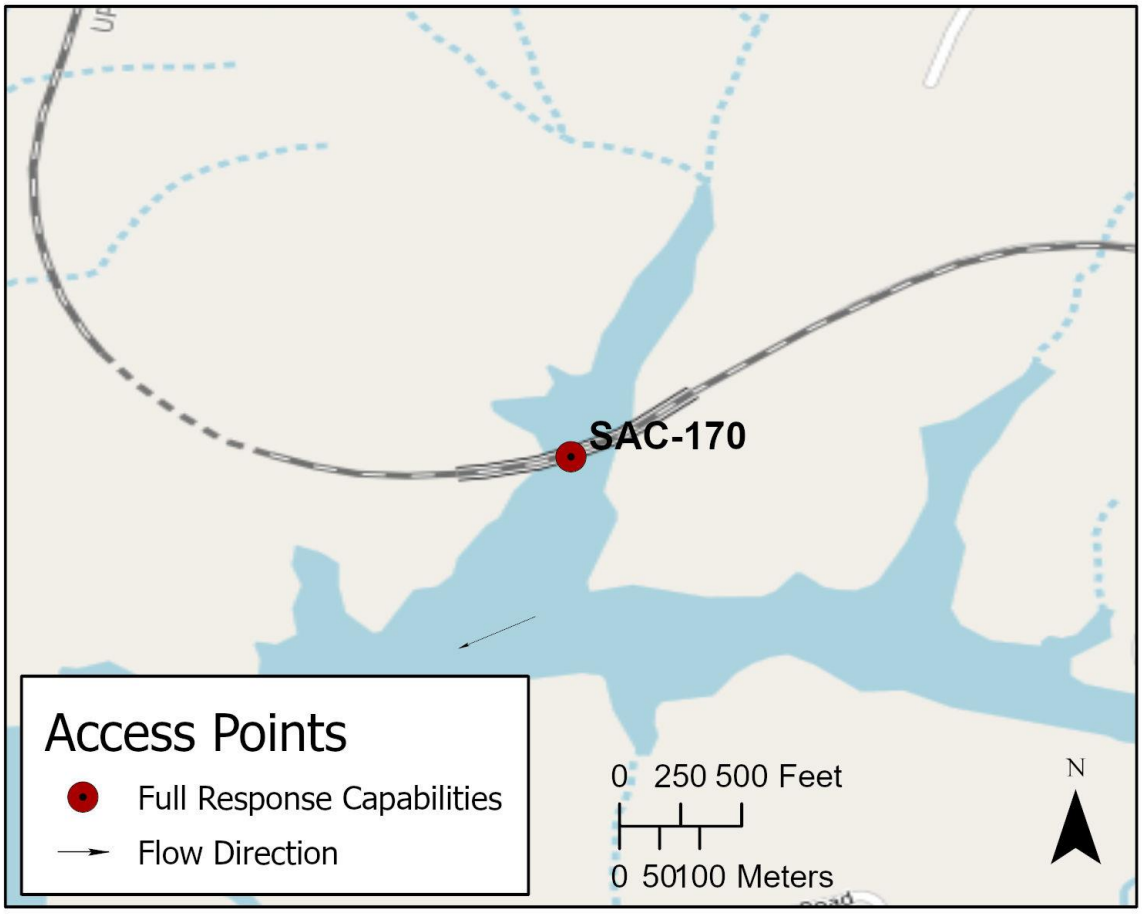
Location Name: UPRR Bridge at O'Brien Inlet (SAC 170)

Latitude: N 40.823597 **Longitude:** W -122.340081	**Driving Directions**
Highway Post Mile: N/A	This is a boat-in only on-water response site. Launch vessels from Packers Bay Public Boat Launch. Take the Packers Bay Road exit, Exit #693, off of SB I-5. If heading north on I-5, take the Shasta Caverns Road exit, Exit #695 and head west over I-5. Get back on SB I-5 and proceed to the Packers Bay Road exit. Head west on Packers Bay Road to the Packers Bay Public Boat launch and Shasta Marina at Packers Bay. After launching vessel, head west toward the Sacramento River Arm of Lake Shasta and then north to the O'Brien Inlet. Travel east in the inlet until reaching the UPRR bridge. The rail bridge is located approximately 8.15 miles from Packers Bay Public Boat Launch.
Railroad Milepost: UPRR 278.47 – Valley Subdivision	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Spotty – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

As the lake elevation drops over the course of the summer, the small cove beneath the UPRR bridge will dry up.

Load all response equipment (boom, skimmer, storage, etc.) onto vessels for transport to the response site.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Western Pond Turtle

Economic: Fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 210 meters (690 feet) at small cove near rail bridge

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

UPRR RMCC
(888) 877-7267

Site Location/Segment: SAC-SH-B-025

Vehicular Access: There is no vehicle access to this site. Boat-in access only.

Recreational Use: Boating, fishing, water-contact.

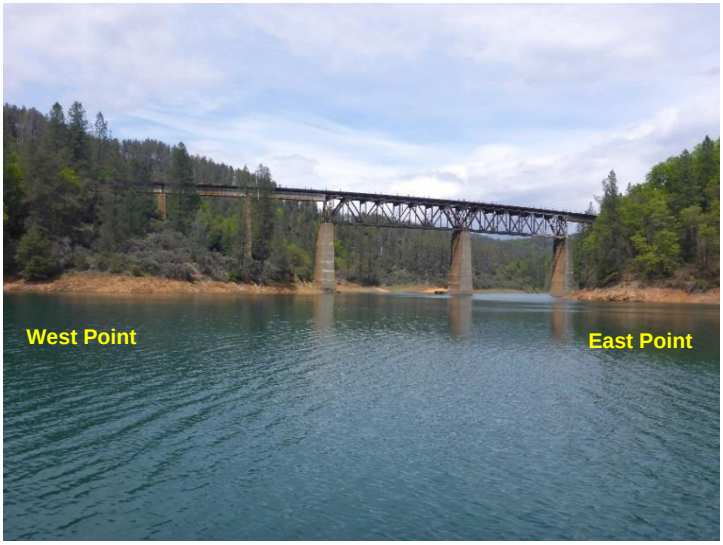
Boat Launches: Launch vessels at the Packers Bay Public Boat Launch or at Bridge Bay Marina. Driving directions to Packers Bay Public Boat Launch are listed on page 1 of this response strategy.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

East Point

West Point



Response Site

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: UPRR Bridge at O'Brien Inlet (SAC – 170)

Site Objectives: Containment and on-water product collection.

Implementation: Set 700 feet of containment boom between the east and west shoreline at the mouth of the cove on the south side of the UPRR bridge to contain floating product in the cove. The length of boom necessary for containment will depend on the lake elevation and whether product has moved downstream of the bridge. If product has moved downstream, attempt to set the boom in a location that will assist with on-water product collection and keep product out of the main body of Lake Shasta. Above the containment boom, use vessels towing additional boom to corral floating product. Recover product with skimmer and off-load to storage tanks on a support barge. Transport full storage tanks back to Packers Bay Public Boat Launch for off-loading to a vacuum truck.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Packers Bay Public Boat Launch.

Response Strategy Map (overview)

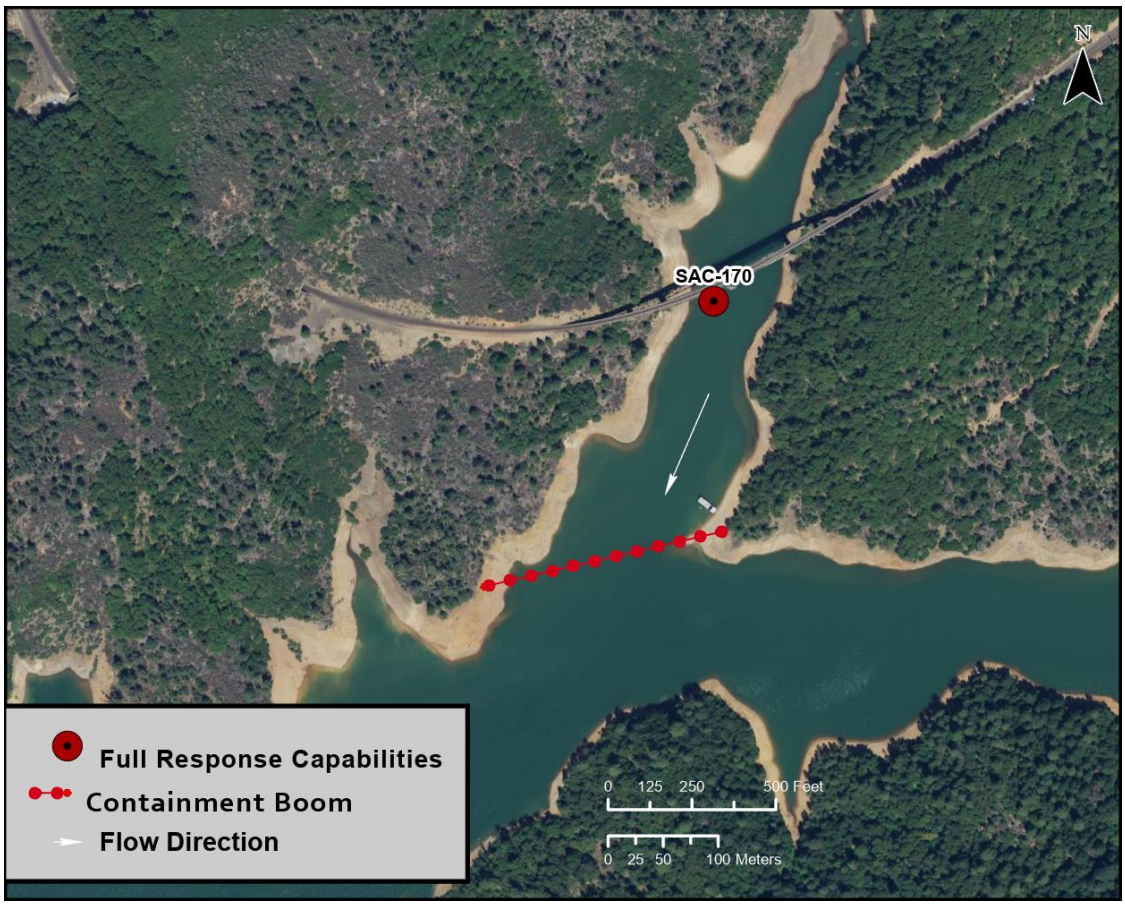


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	1,400 feet	Minimum length necessary to boom across cove near the UPRR bridge and to recover product on-water.
Barge	Shallow Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco or Weir			1	
Storage Tank		20,000	gallon	5	Stage storage tanks at Packers Bay Public Boat Launch.
Vacuum Truck		120	bbl	1	Stage vacuum truck at Packers Bay Public Boat Launch.
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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Location Name: Packers Bay Inlet (SAC – 175)

Latitude: N 40.76412
Longitude: W -122.341185

Highway Post Mile: N/A

Railroad Milepost: N/A

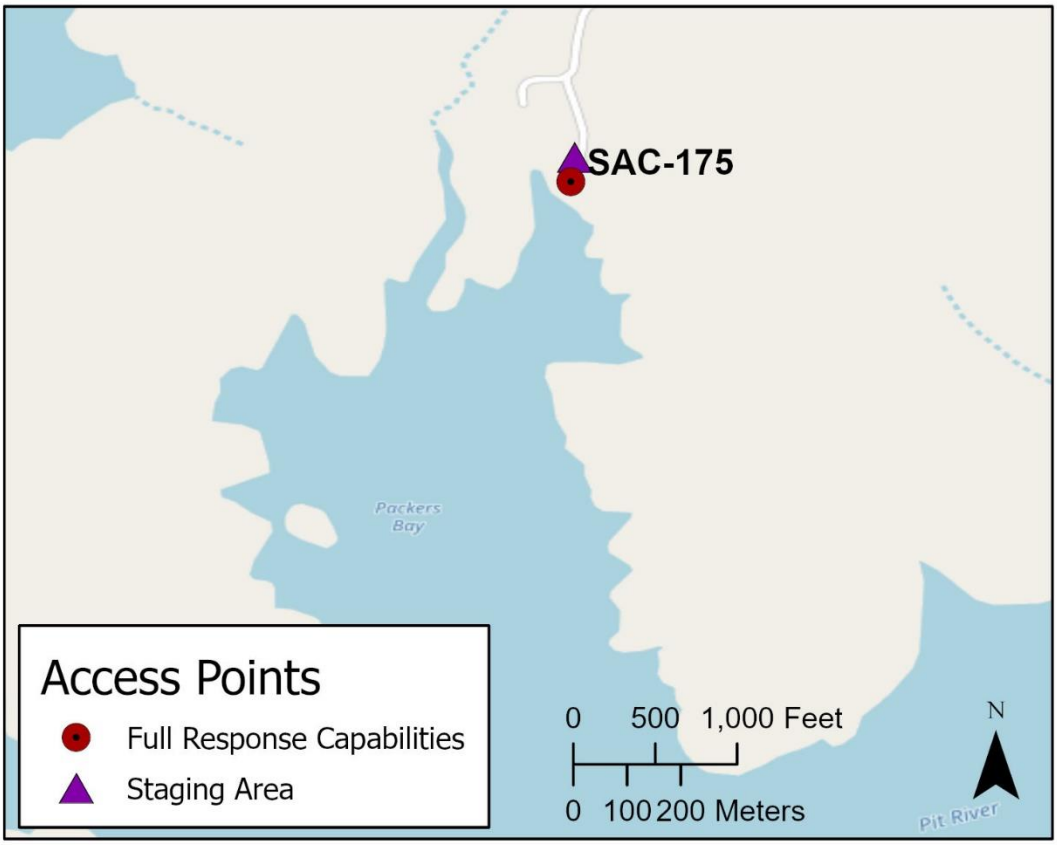
Nearest Address: 16814 Packers Bay Road, Lakehead, CA 96051

Cell Service: Spotty – Verizon tested

Driving Directions

Take the Packers Bay Road exit, Exit #693, off of SB I-5. If heading north on I-5, take the Shasta Caverns Road exit, Exit #695 and head west over I-5. Get back on SB I-5 and proceed to the Packers Bay Road exit. Head west on Packers Bay Road to the Packers Bay Public Boat launch and Shasta Marina at Packers Bay.

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

The main hazardous materials spill risk at this location is from fuel stored on barges at the Shasta Marina at Packers Bay. They have two 3,000-gallon gasoline double-walled aboveground tanks on barges for fueling their houseboats. They also have a 1,271-gallon diesel aboveground storage tank on a barge for operating the marina's generators.

Additional site contact for this location is Shasta Marina at Packers Bay, (530) 238-2284. After-hours contact numbers are available for this marina. Contact information is available from the CDFW OSPR environmental scientist in Redding.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Western Pond Turtle**,** Shasta Salamander

Economic: Shasta Marina at Packers Bay, fishing guide services, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 488 meters (1,600 feet) across the inlet south of the marina docks.

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-030

There is a large well-maintained public boat launch at this location. Public restrooms are located in the parking lot.

Vehicular Access: All vehicle types can access this location.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: Use the Packers Bay Public Boat Launch at this location.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: Packers Bay Inlet (SAC – 175)

Site Objectives: Contain floating product inside Packers Bay Inlet as close as possible to the marina docks. Prevent product from entering main body of Lake Shasta. For significant spills, collect product on-water. For lesser spills, recover product with sorbents and let dissipate naturally.

Implementation: At full lake elevation, deploy 1,600 feet of containment boom across the inlet. Shorter boom lengths can be used at lower lake elevations. It may be possible to use the existing marina buoy line for Shasta Marina at Packer Bay's docks.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the parking lot above Packers Bay Public Boat Launch.

Response Strategy Map (overview)

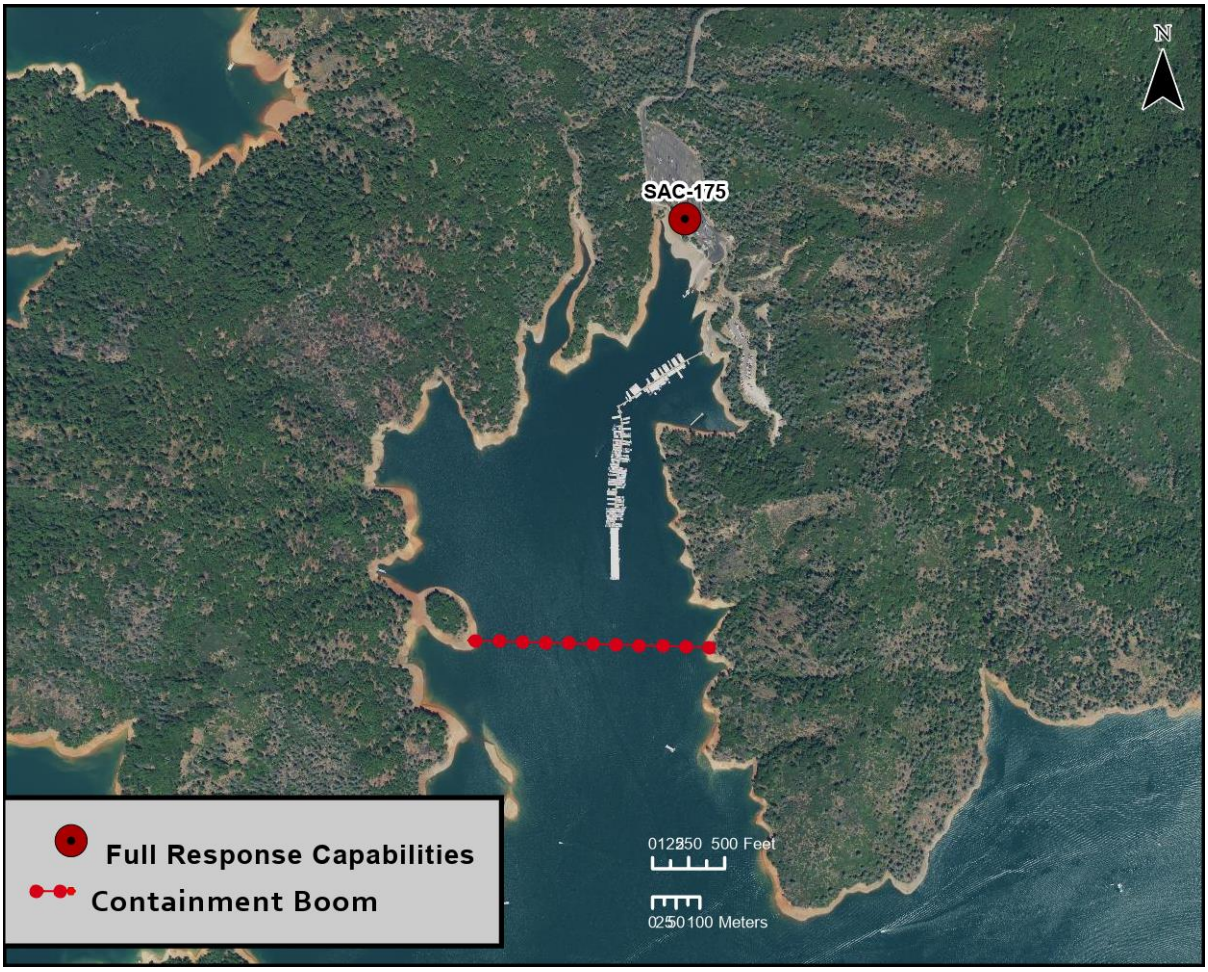


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	2,400 feet	Amount of boom necessary to stretch across the inlet at full lake elevation and additional boom for on-water collection.
Barge	Shallow-Water Barge			1	Included Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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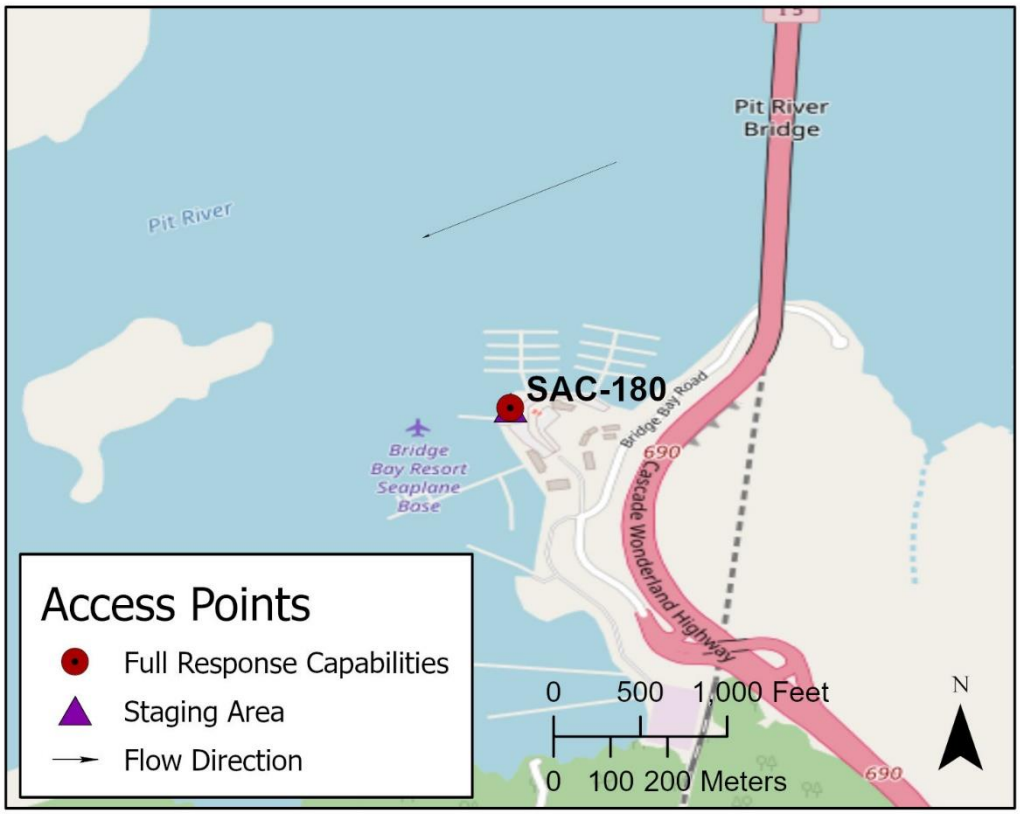
Location Name: Bridge Bay (SAC – 180)

Latitude: N 40.756318 **Longitude:** W -122.324448	**Driving Directions**
Highway Post Mile: N/A	Take the Bridge Bay Road exit off I-5, Exit #690. On the west side of I-5, follow Bridge Bay Road down to the Bridge Bay at Shasta Lake Marina.
Railroad Milepost: UPRR 273.00 - Valley Subdivision	
Nearest Address: 10300 Bridge Bay Road, Redding, CA 96003	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

Bridge Bay at Shasta Lake is the largest marina on Lake Shasta. In addition to various vessel types available for renting, these facilities have lodging, a restaurant, store supplies, and public restrooms.

Contact Bridge Bay at Shasta Lake at (800) 752-9669. For after hours, contact General Manager Shane Spinner at (530) 515-7689 or Marina Manager Kris Gordon at (530) 355-1992.

Bridge Bay at Shasta Lake stores 15,000 gallons of gasoline in a double-walled aboveground storage tank located at the south end of the marina parking lot. Fuel pipes run downhill from this location to the fuel docks on the water.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey, Western Pond Turtle, Foothill Yellow-legged Frog, Shasta Salamander, northern clarkia, Shasta snow-wreath

Economic: Bridge Bay at Shasta Lake Marina, fishing guide services, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 823 meters (2,700 feet) (at full lake) from point under south end of I-5/UPRR bridge to Beaver Island

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-030

THERE IS A PUBLIC DRINKING WATER INTAKE IN THE VICINITY OF THIS RESPONSE SITE. Immediately contact the Mountain Gate Community Services District at (530) 275-3002 during business hours for additional information and response strategies. For after hours, contact (530) 275-4506.

Vehicular Access: All vehicle types can access this location.

Recreational Use: Boating, fishing, water contact.

Boat Launches: There is a public boat launch ramp on the north side of the marina offices and store.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Exposed eroding banks (3B); Riprap (6B); Vegetated steeply sloping bluffs (8F).

Site Images

Upstream

Downstream

Straight Across/Response Site

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Site Objectives: Deflection, protection, and containment boom strategies with on-water product collection.

Implementation: To keep product out of the marina area, deploy 2,700 feet (at full lake level) of containment boom along the existing buoy line on the north side of the docks between the point under the south end of the I-5/UPRR bridge out to Beaver Island. From Beaver Island, set 1,000 feet of containment boom to deflect product into the main channel. When lake elevation drops, significantly less boom is necessary to protect this area. If the spill source is from the marina fuel station, contain product in immediate area using 850 feet of containment boom between docks and shoreline.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Bridge Bay at Shasta Lake parking area. Work with marina manager to establish staging area.

Response Strategy Map (overview)

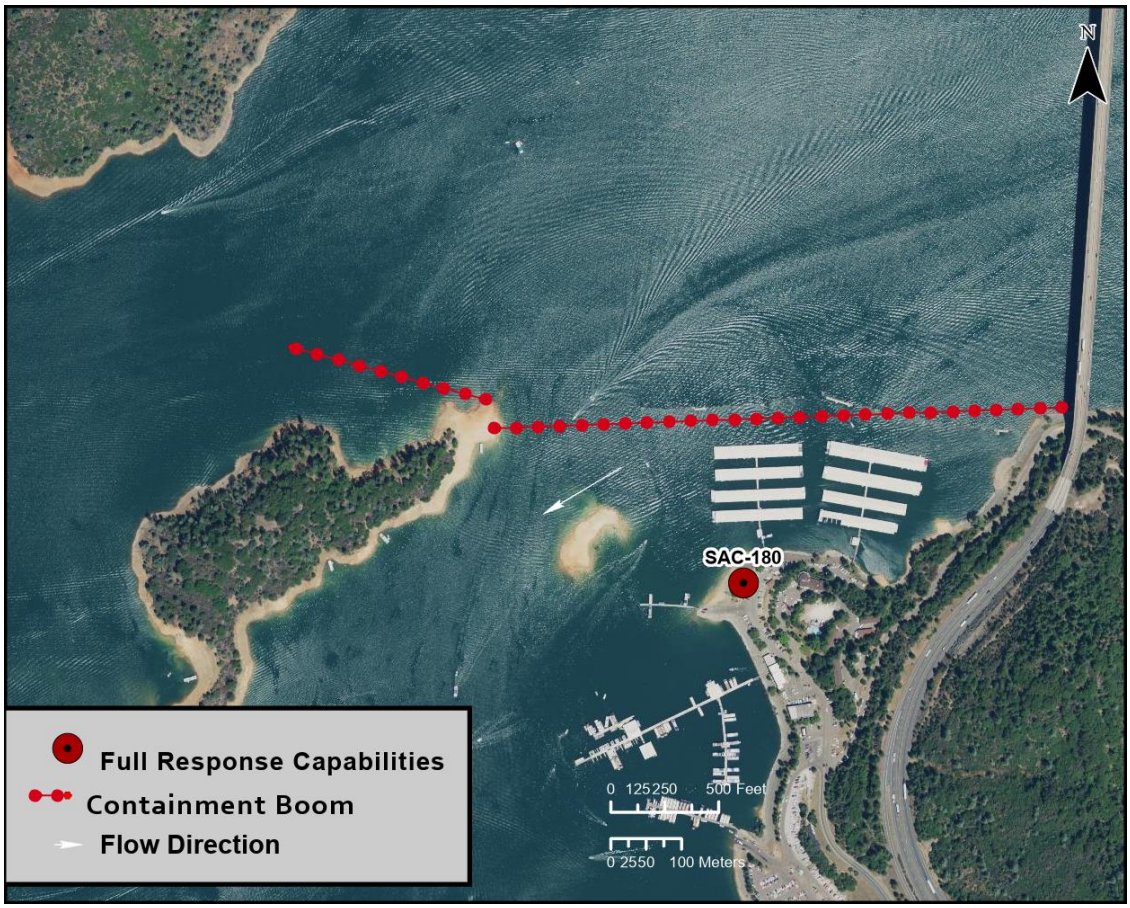


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	3,700 feet	Minimum length necessary to boom across north buoy line and deflect away from Beaver Island when lake is full.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer
Response Vessel	Response and Boom Vessel			2	1 each, minimum
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum

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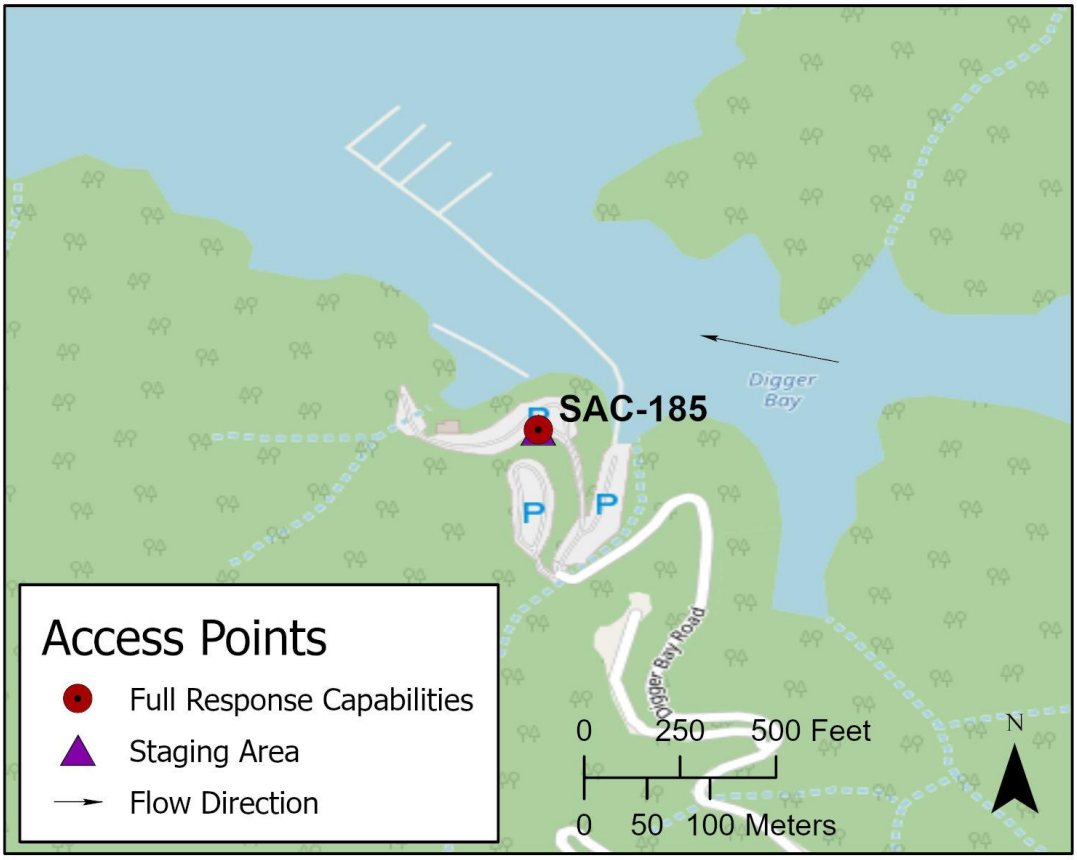
Location Name: Digger Bay Inlet (SAC – 185)

Latitude: N 40.730357 **Longitude:** W -122.399473	**Driving Directions**
Highway Post Mile: N/A	Take the Shasta Dam Boulevard (SR 151) exit, Exit #685, off I-5. Head west on Shasta Dam Boulevard for 2.25 miles. Turn north onto Shasta Park Drive. Continue north on Shasta Park Drive approximately 0.6 miles until the road turns into Digger Bay Road. Continue north on Digger Bay Road until it terminates at Digger Bay Marina. FOR CENTIMUDI BOAT LAUNCH: Continue heading west on Shasta Dam Boulevard until reaching Lake Boulevard at the 4-way stop sign. Head north on Lake Boulevard for 1.5 miles and turn NE onto Kennett Road. Follow road down to boat ramp and parking lot.
Railroad Milepost: N/A	
Nearest Address: 15090 Digger Bay Road, Shasta Lake, CA 96019	
Cell Service: Yes - Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

Use appropriate on-water safety procedures.

The main hazardous materials spill risk at this site is from fuel stored at Digger Bay Marina. There is a 6,000-gallon gasoline storage tank on a fuel barge at this marina.

Additional site contact for this location is Digger Bay Marina, (530) 275-3072. For after hours, contact General Manager Shane Spinner at (530) 515-7689 or Marina Manager Kris Gordon at (530) 355-1992.

Resources-At-Risk

Ecological: fisher – West Coast DPS, Bald Eagle, Osprey

Economic: Digger Bay Marina, fishing guide services, local tourism.

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

River Width: 488 meters (1,600 feet) at full lake elevation beyond docks near mouth of inlet

Gradient: Low

Site Contact/s:
USDA Forest Service
Shasta-Trinity National Forest

24-Hour Dispatch
(530) 226-2400
(530) 226-2499

Site Location/Segment: SAC-SH-B-035

Digger Bay Road is a narrow winding road that may be difficult for large trucks, such as vacuum trucks, to navigate. Consider bringing response assets to this site loaded on boats launched from Centimudi Boat Launch.

Vehicular Access: Narrow winding road will be challenging for large truck to travel on. Consider use of pilot vehicles to escort large trucks to marina.

Recreational Use: Boating, fishing, water-contact.

Boat Launches: Digger Bay Marina has a boat launch facility that is usually open year-round. The USFS also maintains the Centimudi Boat Launch located near Shasta Dam (see Driving Directions). The launch ramp at Centimudi is probably easier to bring large equipment into and is located less than 1.5 miles from Digger Bay Inlet. Both ramps should be useful for response operations.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Exposed eroding banks (3B); Vegetated steeply sloping bluffs (8F).

Site Images

View North

View South

Straight Across/Response Site

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: Digger Bay Inlet (SAC – 185)

Site Objectives: Contain floating product inside Digger Bay Inlet as close as possible to the marina docks. Prevent product from entering main body of Lake Shasta. For significant spills, collect product on-water. For lesser spills, recover product with sorbents and let dissipate naturally.

Implementation: Deploy 1,600 feet of containment boom across the inlet channel to keep floating product from reaching the main body of the lake. Consider using the existing buoy line beyond the docks for deploying boom. Collect product inside the boom line using skimmer and transfer to storage tanks on assist vessels. Transport recovered product to vacuum truck staged at Digger Bay Marina or Centimudi Boat Launch.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at Digger Bay Marina or Centimudi Boat Launch.

Response Strategy Map (overview)

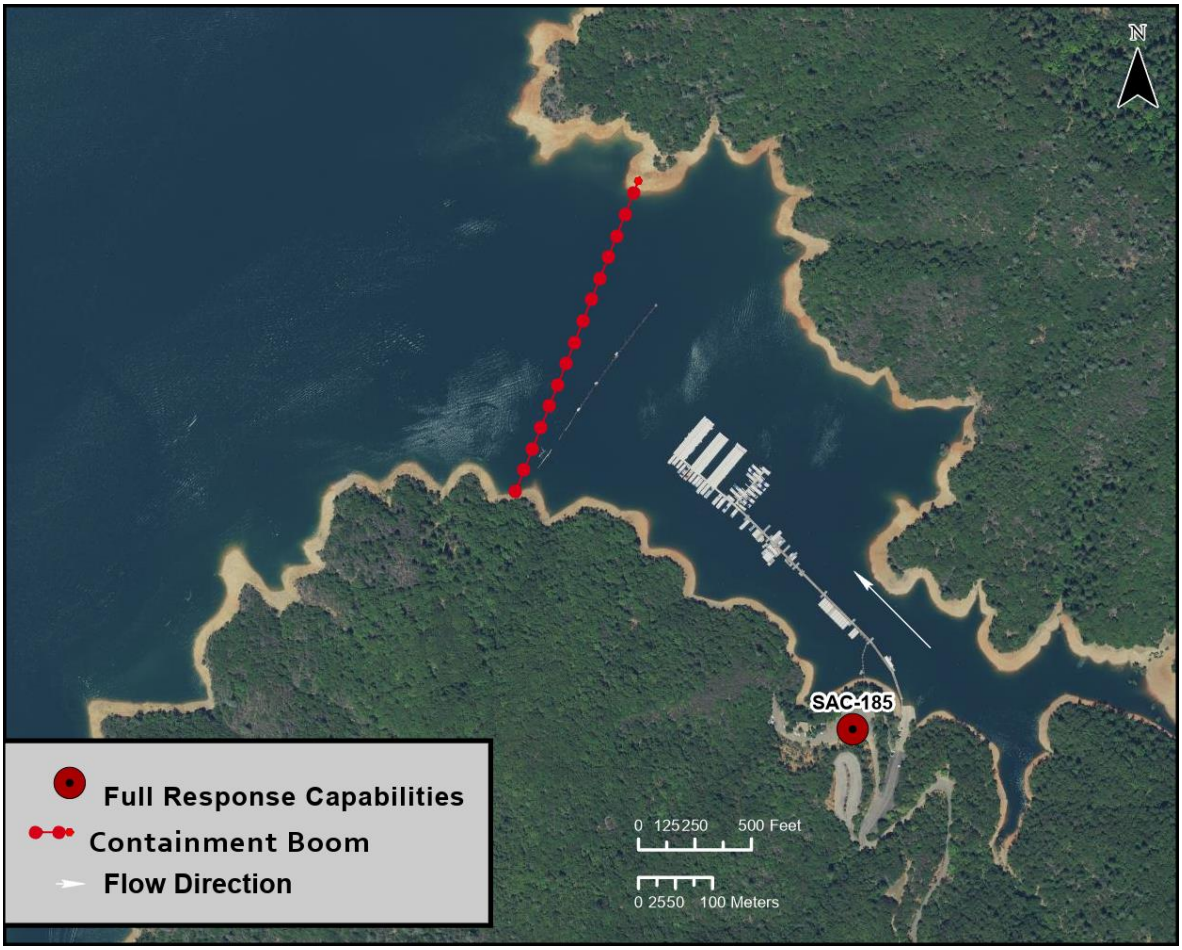


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	1,600 feet	Minimum length to boom across inlet.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Boom and Response Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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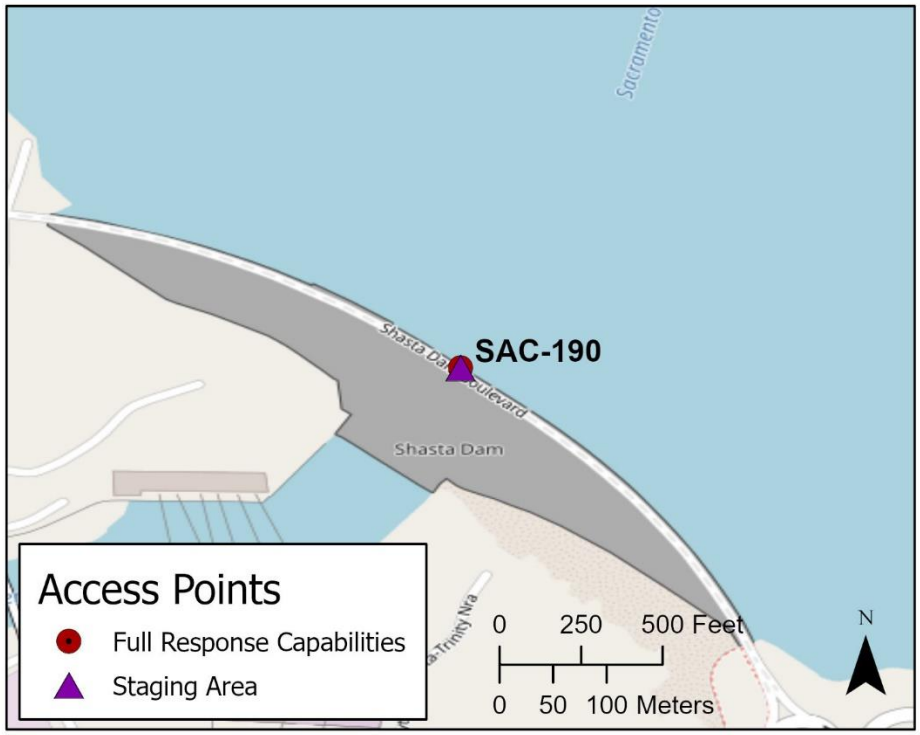
Location Name: Shasta Dam (SAC – 190)

Latitude: N 40.718685 **Longitude:** W -122.418765	**Driving Directions**
Highway Post Mile: N/A	Take the Shasta Dam Boulevard (SR 151) exit, Exit #685, off I-5. Head west on Shasta Dam Boulevard for approximately 7.1 miles until you reach the Shasta Dam offices. For on water operations, launch vessels from Centimudi Boat Launch.
Railroad Milepost: N/A	
Nearest Address: 16349 Shasta Dam Blvd., Shasta Lake, CA 96019	FOR CENTIMUDI BOAT LAUNCH: Head west on Shasta Dam Boulevard until reaching Lake Boulevard at the 4-way stop sign. Head north on Lake Boulevard for 1.5 miles and turn NE onto Kennett Road. Follow road down to boat ramp and parking lot.
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

ANY RESPONSE OPERATION IN THE VICINITY OF SHASTA DAM REQUIRES NOTIFICATION AND COORDINATION WITH THE U.S. BUREAU OF RECLAMATION (BOR). See site contact info on page 2 of this response strategy form.

The BOR maintains storage capacity for petroleum products at various locations in and around Shasta Dam. The power plant has a maximum storage capacity of 58,069 gallons of lube, transformer, and hydraulic oils, the dam itself has 9,620 gallons of mostly hydraulic oil, and there is 1,000 gallons of gasoline stored on-site.

The BOR uses an I-beam attached to the upstream side of Shasta Dam that runs vertically from top to bottom of the dam to anchor buoy lines. The western anchor is located 728 feet from the west shore and the eastern anchor is located 1,080 feet from the east shore. These lines and anchors may be useful for response personnel. This allows for deployment of boom in various configurations depending on the location of a spill, the product that was released, and current site conditions such as wind and wave action.

The BOR maintains response equipment assets including boats, boat operators, hard boom, generators, forklifts, cranes, and bucket loaders that may be useful in a large response. The BOR has trained personnel available to utilize the response assets listed above.

The Livingston Stone National Fish Hatchery is located at the downstream base of Shasta Dam. The hatchery draws water at depth through the dam infrastructure. Contact hatchery staff at (530) 275-0549 for any release.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog, Shasta huckleberry, Livingston Stone National Fish Hatchery (below Shasta Dam)

Economic: Shasta Dam infrastructure, hydro-electric power generation, fishing guide services

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Site Description and Field Notes

Dam Length: 1055 meters (3,460 feet)

Gradient: Low

Site Contact/s:
U. S. Bureau of Reclamation
Business Hours:
(530) 275-1554
After Hours:
(530) 247-8588
(530) 247-8537

Livingston Stone National Fish Hatchery
(530) 275-0549

Site Location/Segment: SAC-SH-B-040

THERE IS A PUBLIC DRINKING WATER INTAKE IN THE VICINITY OF THIS RESPONSE SITE. Immediately contact the City of Shasta Lake at (530) 275-7488 during business hours for additional information and response strategies. For after hours, contact (530) 227-0022.

Shasta Dam is 602 feet high standing 522.5 feet above the Sacramento River. The dam is 3,460 feet long. Shasta Lake extends 15.3 miles up the Sacramento River. This location is the southern end of Division SAC-SH-B.

Vehicular Access: All vehicle types can access this location.

Recreational Use: Boating, fishing, water-contact

Boat Launches: The nearest boat launch is the USFS Centimudi Boat Launch located on the NE side of the dam. Driving directions to Centimudi Boat Launch are found on page 1 of this response strategy form.

ESI Shoreline Type: Exposed rocky banks (1A); Exposed solid man-made structures (1B); Riprap (6B).

Site Images

View East

View West

Response Site

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Site Objectives: Deflection, protection, and containment boom strategies with shoreline and/or on-water product collection.

Implementation: Various boom configurations can be deployed using existing I-beam anchors attached to the upstream side of Shasta Dam. Existing buoy lines maintained by the BOR may be useful for the initial boom deployment location(s). Depending on spill location, boom may be used to deflect floating product toward either shoreline for easier product collection. Protection boom strategies may be used to isolate the dam's water intakes. Additional boom can be used to corral floating product for on-water collection.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage equipment and manage wastes at the Shasta Dam office parking lot or at Centimudi Boat Launch.

Response Strategy Map (overview)

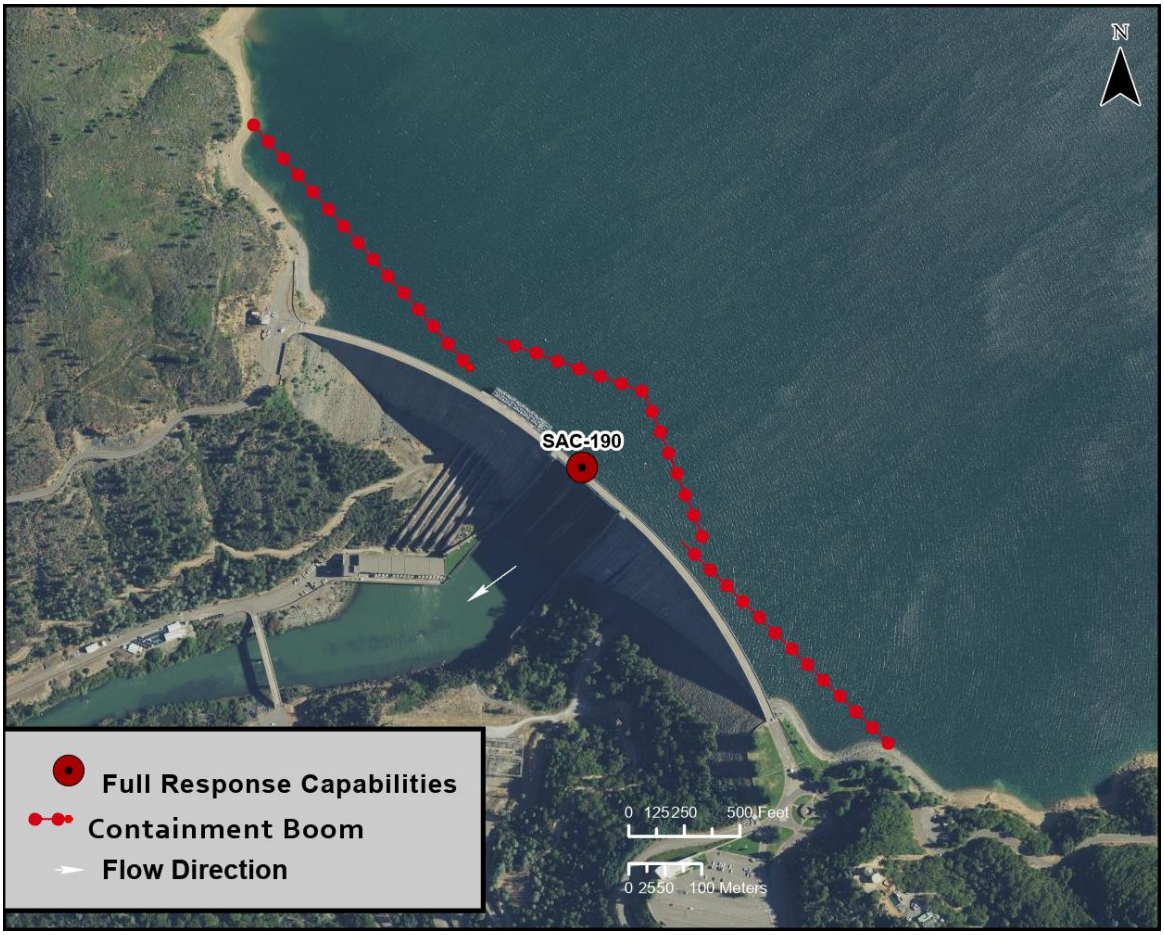


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	4,000 feet	Minimum length necessary to set protection boom across entire north side of dam face.
Barge	Shallow-Water Barge Set			1	Include Disc, Drum, or Weir skimmer.
Response Vessel	Response and Boom Vessel			2	1 each, minimum.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		120	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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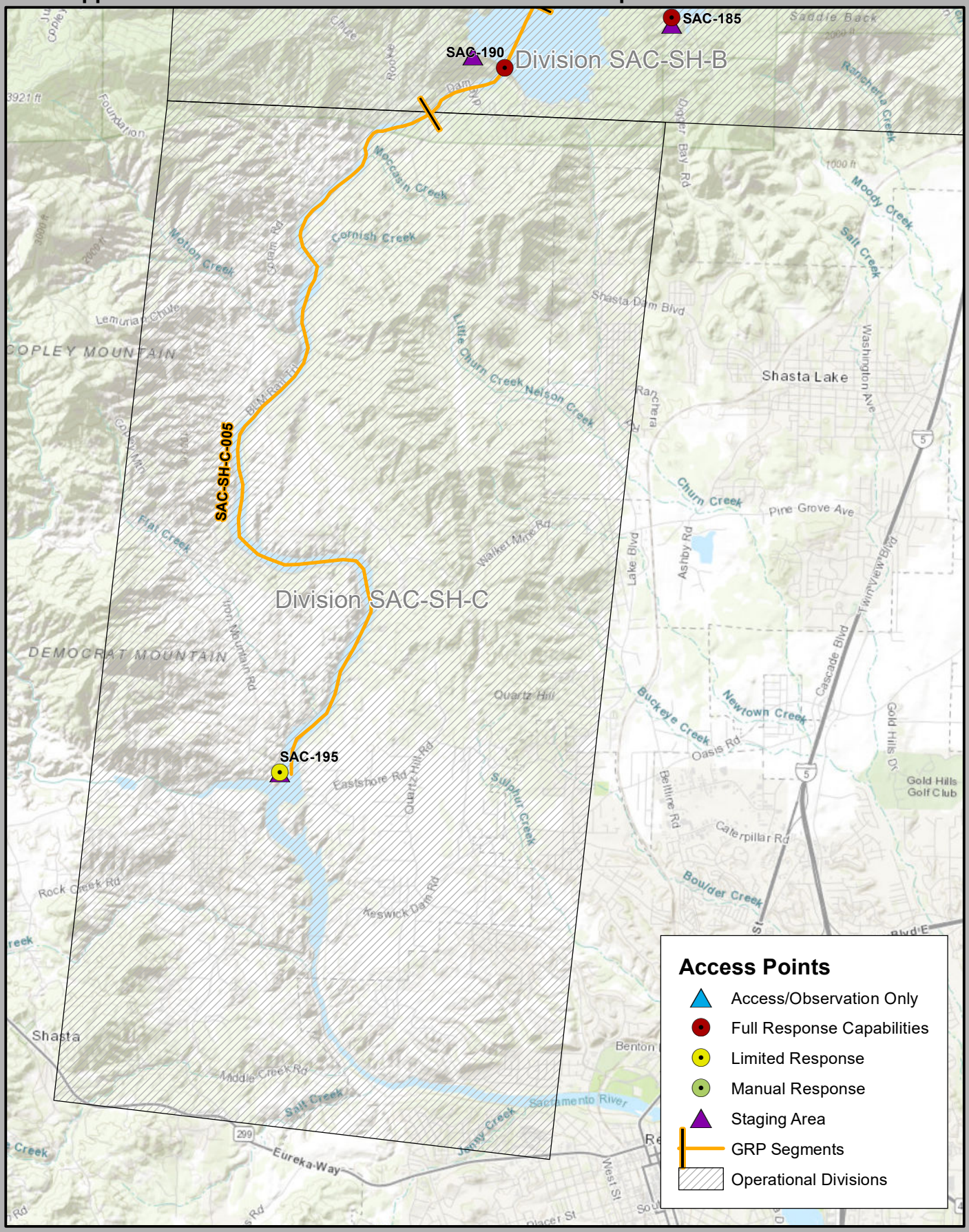
Figure 3-6: Upper Sacramento River GRP Division SAC-SH-C Map



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

Author: spaine, CDFW
Date Created: 4/2/2019
Data Source: CDFW-OSPR

T:\Projects\Work_in_Progress\GRP_maps\UpperSacramento\UpperSacramento_Div-SAC-SH-C.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Upper Sacramento River Geographic Response Plan Division SAC-SH-C

0 1 2 Mi.
0 1 2 Kilometers

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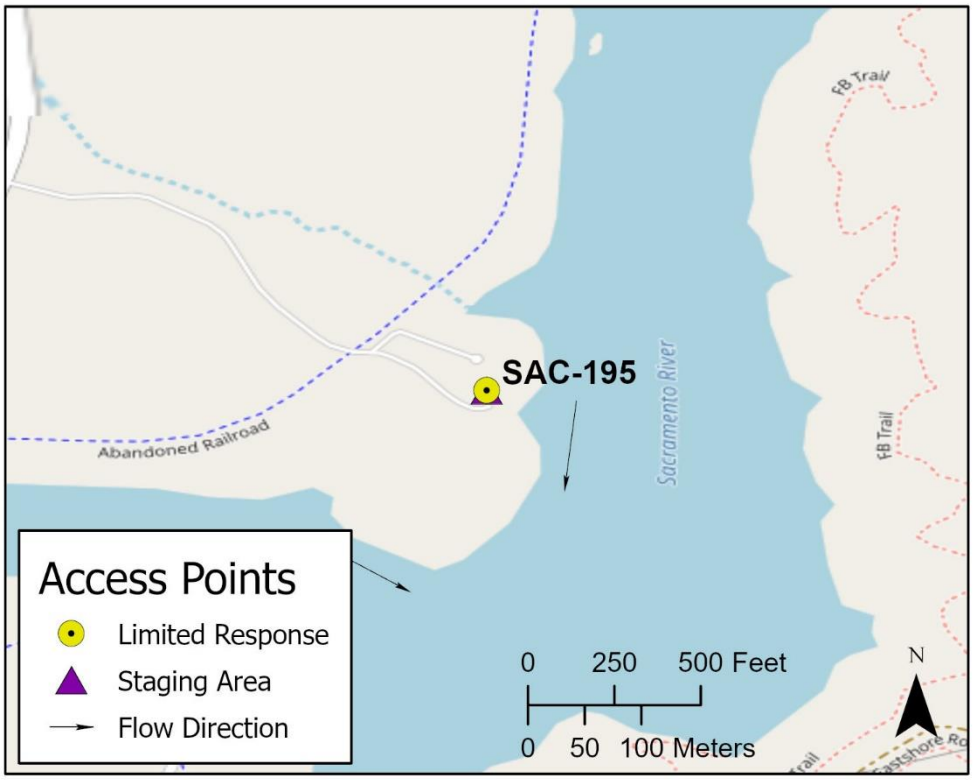
Location Name: Keswick Reservoir Boat Launch (SAC – 195)

Latitude: N 40.631877 **Longitude:** W -122.452114	**Driving Directions**
Highway Post Mile: N/A	From I-5, merge onto Highway 44 and head west over the Sacramento River toward downtown Redding. Westbound Highway 44 turns into Shasta Street in downtown Redding. Turn right (north) onto Pine Street and proceed one block and turn left (west) onto Eureka Way. Eureka Way is also Highway 299 West. Head west on Eureka Way/Highway 299 West for 3.9 miles and turn right (north) onto Iron Mountain Road. Head north on Iron Mountain Road for 3.8 miles and turn right (east) at the access road leading to Keswick Boat Launch.
Railroad Milepost: N/A	
Nearest Address and Thomas Guide #: N/A	
Cell Service: Yes – Verizon tested	

Overview Street Map



Hazards, Restrictions and Advice for Responders

The primary risk of hazardous materials spills into Keswick Reservoir is from storage of petroleum at Bureau of Reclamation (BOR) facilities at Shasta Dam. The BOR maintains storage capacity for 58,069 gallons of lube, transformer, and hydraulic oils at the Shasta Dam power plant, 9,620 gallons of mostly hydraulic oils at the dam itself, and 1,000 gallons of gasoline for BOR vehicles.

The only facilities around Keswick Reservoir between Shasta Dam and Keswick Dam are the Chappie-Shasta Off-Highway Vehicle Area and Campground on the river-right shoreline below Shasta Dam, the Keswick Boat Launch, and the Spring Creek Power Plant.

Response strategies for Keswick Reservoir will depend on the product released, the location of the spill, and the volume discharged. Due to the reservoir water access and area available for staging response assets, the area around the Keswick Boat Launch is probably the best location to deploy initial response strategies.

Water levels on Keswick Reservoir can fluctuate rapidly. Responders need to consider water level fluctuation when deploying response strategies. BOR can provide information regarding anticipated water levels.

Resources-At-Risk

Ecological: Bald Eagle, Osprey, Foothill Yellow-legged Frog

Economic: Fishing guide services, Keswick Reservoir hydro-electric facilities

Tribal: Contact the Native American Heritage Commission at (916) 373-3710.
Cultural and Historic: Contact the Northeast Information Center at (530) 898-6256.

Location Name: Keswick Reservoir Boat Launch (SAC – 195)

Site Description and Field Notes

River Width: 238 meters (780) feet at boat launch facility

Gradient: Low

Site Contact/s:
Bureau of Land Management
(530) 224-2100 M-F 8 to 5

U. S. Bureau of Reclamation
(530) 247-8588
(530) 247-8537

SHASCOM (Emergency)
(530) 245-6540

Site Location/Segment: SAC-SH-C-005

The Bureau of Land Management (BLM) maintains a paved bike trail that runs along the river-right shoreline from Keswick Boat Launch north to Shasta Dam.

Vehicular Access: All vehicle types can access Keswick Boat Launch. The bike trail running along the river-right shoreline has locked gates preventing vehicle access. However, BLM can provide access to the bike trail for passenger vehicles or ATVs.

Recreational Use: Fishing, boating

Boat Launches: Use Keswick Boat Launch. The Bureau of Reclamation has an additional private boat launch facility below Shasta Dam on the river-left shoreline that may be useful to responders.

ESI Shoreline Type: Exposed rocky banks (1A); Vegetated, steeply sloping bluffs (8F); Vegetated low banks (9B)

Site Images

Upstream

Downstream

Straight Across

RR = River-Right RL = River-Left

Photo Date: 04/18/2018

Location Name: Keswick Reservoir Boat Launch (SAC – 195)

Site Objectives: Deflection boom to shoreline at boat launch for product collection and/or on-water product collection. A secondary strategy is booming across the Spring Creek Inlet of the reservoir to prevent impacts to Spring Creek Power Plant.

Implementation: Deploy approximately 1,400 feet of containment boom from the river-left shoreline to small eddy at the boat launch dock. Collect product with skimmer. For secondary strategy, deploy approximately 500 feet of containment boom across the mouth of Spring Creek Inlet. If collecting floating product on water, an additional 700 feet of containment boom is necessary.

Staging Area Location and Capabilities/Amenities/Waste Management: Stage response assets and manage wastes at the Keswick Boat Launch parking lot.

Response Strategy Map (overview)

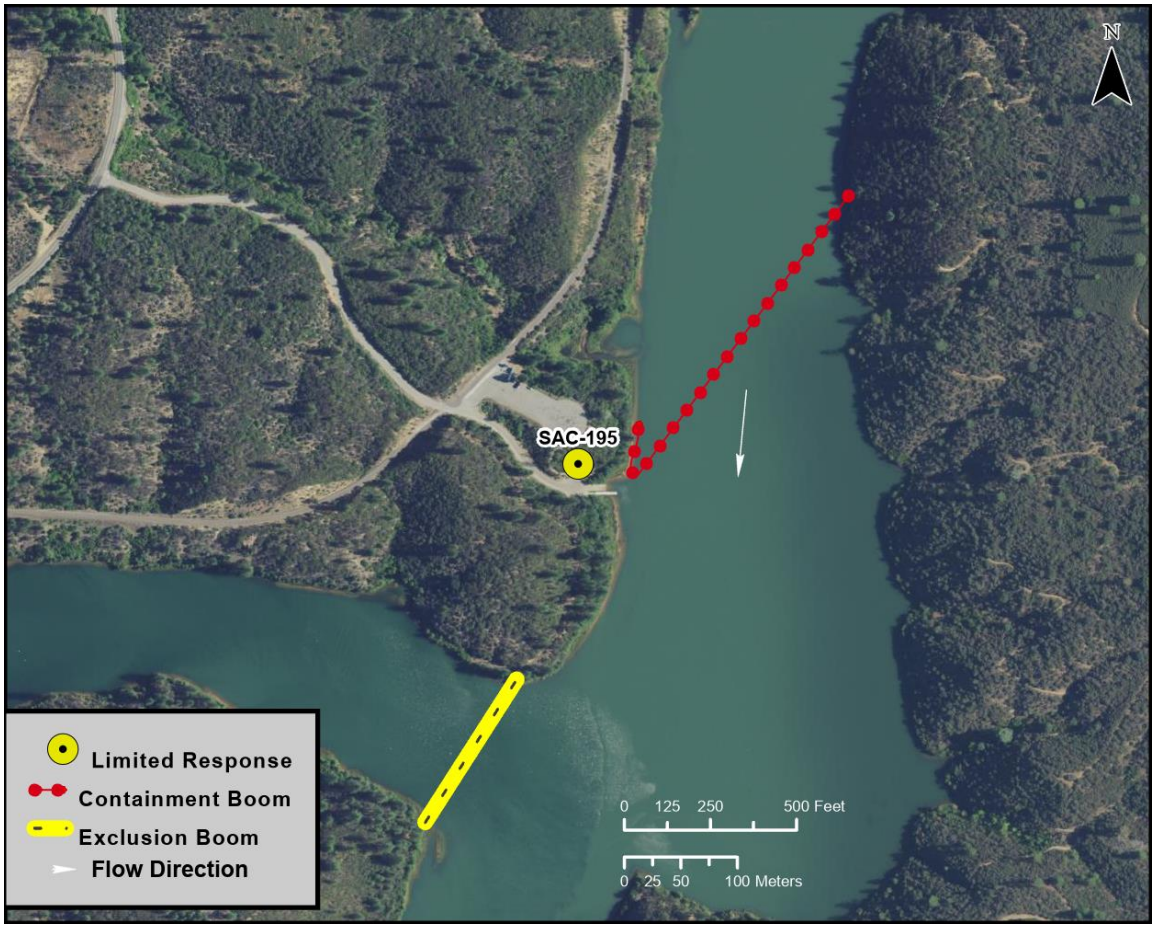


Table of Response Resources

Type	Sub-Type	Size	Unit	QTY - Unit	Special Equipment or Comments
Boom	Containment	21-inch minimum	inch	1,900 feet	Minimum length necessary to set deflection boom at boat launch and protection boom at Spring Creek Inlet. Additional boom necessary for on-water product collection.
Barge	Shallow-Water Barge Set			1	For on-water collection. Include Disc, Drum, or Weir skimmer.
Response Vessel	Response Vessel and Boom Vessel			2	1 each, for on-water collection.
Skimmer	Class 1 Marco and Weir			1	
Storage Tank		20,000	gallon	5	
Vacuum Truck		70	bbl	1	
Personnel				8 to 12 crew	3 vessel operators and 3 deck hands, minimum.

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Upper Sacramento River
Geographic Response Plan

Chapter 4 - Resources at Risk

4.0 Chapter Overview

This chapter provides information on the environmental, economic, and tribal, cultural and historic resources-at-risk in the Upper Sacramento 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 Upper Sacramento 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^	CWHR (General Habitat Description) and USFWS (Critical Habitat Designated) *	Micro Habitat Description	Seasonal and Special Considerations, Notes~
Birds					
Bald Eagle	*Haliaeetus leucocephalus*	State: E Fed: Delisted	CWHR: Streams, rivers, lakes, dead trees, nesting platforms, live vegetative cover USFWS: N/A	Found near large bodies of open water with an abundant food supply and old growth trees for nesting.	Yearlong resident. May make only local winter movements for food.
Bank Swallow	*Riparia riparia*	State: T Fed: -	CWHR: Banks, burrows, riparian areas USFWS: N/A	Found near water. Typically seen feeding in flight over water. Nests in colonies in vertical banks of dirt or sand, usually along rivers or ponds, seldom away from water.	Present during summer months. Arrives in early March and numbers peak by May. Migrants may be observed through mid-September.
Black Swift	*Cypseloides niger*	State: SSC Fed: -	CWHR: Streams, live vegetative cover, cliffs, waterfalls USFWS: N/A	Birds nest on high cliff faces near waterfalls. Nests are made of twigs, ferns, and moss glued together with mud. Feeds exclusively on flying insects.	Summer resident. Does not winter in California. Mostly absent from October through April.
Northern Goshawk	*Accipiter gentilis*	State: SSC Fed: -	CWHR: Dead trees, live vegetative cover, fir trees, steep slopes USFWS: N/A	Prefer mature or old-growth conifer, mixed hardwood-conifer, birch or aspen forests for nesting.	Yearlong resident. Breeding begins by mid-June. Young are often independent by 70 days after hatching.

Osprey	*Pandion haliaetus*	State: CDF Sensitive Fed: -	CWHR: Lakes, slow water, dead trees, nesting platforms, live vegetative cover USFWS: N/A	Generally, nest in any location near water with an adequate food supply. Diet consists almost exclusively of fish.	Yearlong resident.
Tri-colored Blackbird	*Agelaius tricolor*	State: T Fed: -	CWHR: Frequents fresh emergent wetlands. USFWS: N/A	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.	Breeding range. Breeding extends from mid-March to early August. Colonial nesting with a preference for tule marshes. Rare in winter in the Sacramento Valley north of Sacramento County.
Mammals					
fisher (West Coast DPS)	*Pekania pennanti*	State: SSC Fed: C	CWHR: Live vegetative cover, dead trees, Montane hardwood forest USFWS: N/A	Prefer areas of dense mature coniferous or mixed forest with canopy closure.	Yearlong resident. Den in a variety of protected cavities, especially hollow logs, trees, and snags.
western mastiff bat	*Eumops perotis californicus*	State: SSC Fed: -	CWHR: Water, riparian areas, live vegetative cover, caves, mines USFWS: N/A	Roosts in crevices and shallow caves on the sides of cliffs and rock walls. Feeds on insects.	Yearlong resident.
Fish					
hardhead	*Mylopharodon conocephalus*	State: SSC Fed: -	CWHR: N/A USFWS: N/A	Low to mid-elevations in relatively undisturbed habitats of larger streams with high water quality.	Spawning in April and May.

riffle sculpin	*Cottus gulosus*	State: SSC Fed: -	CWHR: N/A USFWS: N/A	Live in permanent, cool, headwater streams where riffles and rocky substrates predominate. Such streams are clear and shaded, with moderate gradients.	Mature at the end of their second year, and spawn in February, March, and April.
Amphibians					
Cascades Frog	*Rana cascadae*	State: SSC Fed: Status under review; candidate endangered	CWHR: Water, riverine, wet meadows USFWS: N/A	Found around volcanic areas at elevations between 2,000 and 8,000 feet above MSL. Natural habitat includes temperate forests, grasslands, rivers, lakes, open meadows, and freshwater marshes.	Yearlong resident. Hibernates during colder months. Vulnerable to extirpation.
Foothill Yellow-legged Frog	*Rana boylii*	State: SSC Fed: Status under review; candidate endangered	CWHR: Water, live vegetative cover, rocky substrates USFWS: N/A	Prefers partially shaded, rocky streams with sunny banks. Found along the western slope of the Sierra/Cascade mountain ranges from sea level to 6,000 feet above MSL.	Yearlong resident. Hibernates during colder months. Breeds between mid-March and early June. May become inactive or hibernate in colder locations.
Coastal-tailed Frog	*Ascaphus truei*	State: SSC Fed: -	CWHR: Water, riverine, logs and brush piles, coniferous habitats USFWS: N/A	Found in permanent streams. Occurs in montane hardwood-conifer habitats. Adults seek cover under submerged rocks and logs, or similar cover near streams.	Yearlong resident. Hibernates during colder months. Tadpoles always spend at least one winter in the stream. Vulnerable - Apparently secure.

Shasta Salamander	*Hydromantes shastae*	State: T Fed: Status under review	CWHR: Live vegetation, caves, limestone formations USFWS: N/A	Primarily found in limestone fissures, cliff faces, and caverns in valley-foothill hardwood-conifer habitats around Lake Shasta. Surface activity is correlated to wetter months in fall, winter, and spring. Primarily subterranean during summer months.	Yearlong resident. Endemic to Shasta County, California.
Reptiles					
Western Pond Turtle	*Actinemys marmorata*	State: SSC Fed: Status under review	CWHR: Water, dead vegetative cover, riparian areas USFWS: N/A	Habitat includes permanent and intermittent waters of rivers, creeks, lakes, and ponds. Often basks on logs, vegetation mats, or rocks.	Yearlong resident. In spring or early summer, females move overland to find sites for egg-laying.
Plants**					
Castle Crags harebell	*Campanula shetleri*	State: - Fed: - Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Occurs in lower montane coniferous forests. Small, clumpy perennial herb with white/light blue flowers. Occurs in rock crevices of Shasta and Siskiyou Counties.	Perennial rhizomatous herb that blooms between June and September.
Indian Valley brodiaea	*Brodiaea rosea*	State: E Fed: - Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Occurs in serpentine soils with coniferous forests, chaparral, cismontane woodland, and valley and foothill grassland habitats.	Perennial bulbiferous herb that blooms from May to June.

Oregon fireweed	*Epilobium oreganum*	State: - Fed: - Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Historically known to occur in the Klamath Mountains. Grows in boggy areas on serpentine soils.	Perennial herb that blooms from June to September.
northern clarkia	*Clarkia borealis ssp. borealis*	State: - Fed: - Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Often occurs around road cuts in chaparral, cismontane woodland, and lower montane coniferous forest habitats.	Annual herb that blooms from June to September.
Shasta chaenactis	*Chaenactis suffrutescens*	State: - Fed: - Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Grows in coniferous forests in the Klammath Mountains and southern most Cascade Range mountains, sometimes on serpentine soils.	Perennial herb that blooms from May to September.
Shasta huckleberry	*Vaccinium shastense*	State: - Fed: - Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Prefers acidic soils, often along streambanks and sometimes near seeps, rocky outcrops, and disturbed areas in chaparral, cismontane woodland, lower montane coniferous forest, riparian forest, and subalpine coniferous forest habitats.	Perennial deciduous shrub that blooms from December to May.
Shasta snow-wreath	*Neviusia cliftonii*	State: - Fed: - Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Often found along streambanks, sometimes in carbonate, volcanic, or metavolcanic soils. Occurs in cismontane woodland, lower montane coniferous forest, and riparian woodland habitats.	Perennial deciduous shrub that blooms from April to June.

threadleaf beardtongue	*Penstemon filiformis*	State: - Fed: - Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Prefers rocky, often serpentine soils in cismontane woodland and lower montane coniferous forest habitats.	Perennial herb that blooms from May to September.

^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, CDF = California Department of Forestry and Fire Protection

*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**
Freshwater Emergent Wetland	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 0.5ppt. It also includes wetlands lacking such vegetation, but with all of the following characteristics: (1) area less than 8ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5m (8.2ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5ppt.	In this wetland Class, emergent plants - i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens - are the tallest life form with at least 30% areal coverage.	Vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
Freshwater Forested Wetland	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 0.5ppt. It also includes wetlands lacking such vegetation, but with all of the following characteristics: (1) area less than 8ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5m (8.2ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5ppt.	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 6m in height.	Water in this system may occur seasonally or permanently.

Freshwater Scrub-Shrub Wetland	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 0.5ppt. It also includes wetlands lacking such vegetation, but with all of the following characteristics: (1) area less than 8ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5m (8.2ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5ppt.	Woody plants less than 6m tall are the dominant life form - i.e., the tallest life form with at least 30% areal coverage. May represent a successional stage leading to Forested Wetland, or they may be relatively stable communities.	All water regimes except Subtidal and Regularly Flooded-Tidal Fresh are included.
Freshwater Pond (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 0.5ppt. It also includes wetlands lacking such vegetation, but with all of the following characteristics: (1) area less than 8ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5m (8.2ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5ppt.	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7cm), and vegetative cover less than 30%.	Water in this system may occur seasonally or permanently.

Freshwater Pond (aquatic bed)	Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5ppt. It also includes wetlands lacking such vegetation, but with all of the following characteristics: (1) area less than 8ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5m (8.2ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5ppt.	Includes wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years.	Best developed in relatively permanent water or under conditions of repeated flooding.
Lake (unconsolidated bottom)	Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8ha. Similar wetlands and deepwater habitats totaling less than 8ha are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin equals or exceeds 2.5m at low water. Lacustrine waters may be tidal or nontidal, but ocean-derived salinity is always less than 0.5 ppt.	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7cm), and a vegetative cover less than 30%.	Includes all deepwater habitats (i.e., areas > 2.5 m deep below low water) in the Lacustrine System. Many small Lacustrine Systems have no Limnetic Subsystem.

Lake (unconsolidated shore)	Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8ha. Similar wetlands and deepwater habitats totaling less than 8ha are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin equals or exceeds 2.5m at low water. Lacustrine waters may be tidal or nontidal, but ocean-derived salinity is always less than 0.5 ppt.	Includes all wetland habitats having two characteristics: (1) unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock and; (2) less than 30 percent areal cover of vegetation. Landforms such as beaches, bars, and flats are included in the Unconsolidated Shore class.	Includes all wetland habitats in the Lacustrine System. It extends from the shoreward boundary of the System to a depth of 2.5 m (8.2 ft) below low water, or to the maximum extent of nonpersistent emergents if these grow at depths greater than 2.5 m.

Source: Classification of Wetlands and Deepwater Habitats of the US

Source: https://www.fws.gov/wetlands/data/mapper.html

Designated or Protected Lands			
Area Name	**Designation**	**Contact Information**	**Seasonal and Special Considerations, Notes**
Castle Crags State Park	State Park	(530) 235-2684 (front entrance)	Campground and picnic areas are generally closed during winter, between November 1 and March 31. Law enforcement staff are available year-round.
Cantara-Ney Springs Wildlife Area	State Wildlife Area	California Department of Fish and Wildlife - Region 1 (530) 225-2300	Open year round. Area provides mixed conifer, hardwood, and riparian habitat for Kingfisher, Osprey, Herons, and many species of songbirds. Area also provides excellent fishing access to the upper Sacramento River.
Livingston Stone National Fish Hatchery (at base of downstream side of Shasta Dam)	National Fish Hatchery	U. S. Fish and Wildlife Service (530) 275-0549	The programs at Livingston Stone National Fish Hatchery contribute to the recovery of the endangered Sacramento River winter-run chinook salmon evolutionarily significant unit.

Commercial and Recreational Fisheries (Public Health, Fisheries Closure)			
Common Name	**Scientific Name**	**Contact Information**	**Seasonal and Special Considerations, Notes**
rainbow trout	*Oncorhynchus mykiss*	CDFW Regulations***	See http://www.eregulations.com/wp-content/uploads/2018/03/18CAFW_LR.pdf
brown trout	*Salmo trutta*		See http://www.eregulations.com/wp-content/uploads/2018/03/18CAFW_LR.pdf
Chinook salmon	*Oncorhynchus tshawytscha*		See http://www.eregulations.com/wp-content/uploads/2018/03/18CAFW_LR.pdf
largemouth and smallmouth bass	*Micropterus spp.*		Open all year. Minimum size limit of 12-inches; daily bag limit is 5.
panfish (crappie, bluegill)	*Centrarchidae ssp.*		Open all year. No size limit; combined daily bag limit is 25.
white catfish	*Ameiurus catus*		Open all year. No size limit, no daily bag limit.
white sturgeon	*Acipenser transmontanus*		Open all year. One fish per day, three fish per year statewide. No fish less than 40 inches fork length or greater than 60 inches fork length may be taken or possessed.

***https://www.wildlife.ca.gov/Fishing/Inland

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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 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 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 exclusion zones or placing limits on:

ingress/egress routes, unnecessary disturbance of sensitive areas, low altitude flights, night operations, and other activities.

4.3 Oiled Wildlife Care Network

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

4.4 Economic Resources-At-Risk

Economic resources listed in this chapter are facilities, businesses, infrastructure or locations that could be severely impacted if an oil spill were to occur. Economically sensitive resources are separated into six categories: water intakes, infrastructure, recreational, waterfront businesses, commercial fisheries, and any additional economic resources not already captured. Table 4-2 below lists the known economic resources that exist within the boundaries of the Upper Sacramento River GRP as well as contact information for each resource.

Table 4-2: Resources-At-Risk Matrix – Economic Resources

Name	Agency/ Company	Contact Info.	Phone
Drinking, Industrial, and Agricultural Intakes			
City of Shasta Lake		Tony Thomasy	(530) 275-7488 (530) 227-0022*
Mountain Gate Community Services District		Tim Heck	(530) 524-8060 (530) 275-4506*
Dams and Hydroelectric Facilities			
Box Canyon Dam	Siskiyou County Power Authority	2623 W A Barr Road, Mount Shasta, CA 96067	(530) 842-8220
Shasta Dam	USBR	16349 Shasta Dam Blvd, Shasta Lake, CA 96019	(530) 247-8588* (530) 247-8537*

Dams and Hydroelectric Facilities (continued)			
Keswick Dam	USBR	1615 Keswick Dam Blvd, Redding, CA 96001	(530) 247-8588* (530) 247-8537*
Recreational- Parks, Marinas, Boat Ramps, Fishing Guide Service, Campgrounds			
Castle Crags State Park	California Department of Parks and Recreation	20022 Castle Creek Road, Castella, CA 96017	(530) 235-2684 (Apr 1 - Oct 31) NORCOM (916) 358-1310*
Antlers Resort and Marina		20679 Antlers Road, Lakehead, CA 96051	(530) 238-2553 (800) 238-3924*
Sugarloaf Marina and Public Boat Ramp		19667 Lakeshore Drive, Lakehead, CA 96051	(530) 275-7950 (530) 275-1571
Tsasdi Resort		19990 Lakeshore Drive, Lakehead, CA 96051	(530) 238-2575
Shasta Marina at Packers Bay		16814 Packers Bay Road, Lakehead, CA 96051	(530) 238-2284
Bridge Bay at Shasta Lake		10300 Bridge Bay Road Redding, CA 96003	(800) 752-9669
Digger Bay Marina		15090 Digger Bay Road, Shasta Lake, CA 96019	(530) 275-3072
Additional Economic Resources			
Livingston Stone National Fish Hatchery	US Fish and Wildlife Service	16349 Shasta Dam Blvd, Shasta Lake, CA 96019	(530) 275-0549

* After Hours or 24-Hour Phone

4.5 Tribal and Cultural Resources and Historic Properties at Risk

Cultural and historic sensitive sites are present within this GRP area. Due to the 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 Northeast Information Center **(**Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity Counties) under the California Historical Resources Information System (CHRIS), who can access this sensitive information, should be consulted before disturbing any soil or sediment during a response action. The USCG or USEPA may hire an Historic Properties Specialist to help identify the location of these sensitive resources and/or assign resources to monitor cleanup operations or provide a list of professional archeologists that can be contracted to monitor response activities. 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 and invited to participate in the response for the purpose of cultural resource protection. A notification call will also be placed 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.

After the UC is established, an Historic Properties Specialist will coordinate with the 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

Agency/ Company	Contact Info.	Phone
Historical and Cultural Resources		
Northeast Information Center: Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity		
Amy Huberland, Coordinator Dr. Carly Whelan, Faculty Coordinator	neinfocntr@csuchico.edu	(530) 898-6256
Website	http://www.csuchico.edu/neic	

Tribal Resources (State Agency)		
Native American Heritage Commission	1550 Harbor Blvd., Suite 100, West Sacramento, Ca	(916) 373-3710
Katy Sanchez	Katy.Sanchez@nahc.ca.gov	(916) 373-3710
Steven Quinn	Steven.Quinn@nahc.ca.gov	(916) 373-3710
CDFW Tribal Liaison		
Nathan Voegeli	Nathan.Voegeli@wildlife.ca.gov	(916) 651-7653

Local Tribal Contact Information		
Mickey Gemmill, Jr., Chairperson, Pit River Tribe	36970 Park Ave. Burney, Ca 96013	(530) 335-5421
Kyle Self, Chairperson, Maidu Tribe kself@greenvillerancheria.com	P.O. Box 279 Greenville, Ca 95947	(530) 284-7990
Russell Atteberry, Chairperson, Karuk Tribe	P.O. Box 1016 Happy Camp, Ca 96039	(530) 493-1600
Frieda Bennett, Chairwoman, Quartz Valley Indian Community frieda.bennett@qvir-nsn.gov	13601 Quartz Valley Road Fort Jones, Ca 96032	(530) 468-5907
Kelli Hayward, Wintu Tribe of Northern California	P.O. Box 995 Shasta Lake, Ca 96019	
John Hayward, Chairperson, Nor-Rel-Muk Nation norermuk@com-pair.net	P.O. Box 1967 Weaverville, Ca 96093	(530) 410-1125
Gary Frost, Klamath Tribe	P.O. Box 436 Chiloquin, Or 97624	(541) 783-2219
Brandon Harrison, Cultural Resource Representative, Pit River Tribe of California- Madesi Band	36968 Park Avenue #R Burney, Ca 96013	(209) 597-7469
Morning Star Gali, Pit River Tribe of California Historical Preservation THPO@pitrivertribe.org	36970 Park Ave Burney, Ca 96013	(530) 335-5421, Ext.1205
Caleen Sisk, Chief, Winnemem Wintu Tribe winnememwintutribe@gmail.com	14840 Bear Mountain Road Redding, Ca 96003	
Jack Potter Jr., Tribal Chairman, Redding Rancheria	2000 Redding Rancheria Road Redding, Ca 96001	(530) 225-8979
Blake Follis, Environmental Director, Modoc Tribe of Oklahoma Modoctribe@cableone.net	22 North Eight Tribes Trail Miama, Ok 74354	(918) 542-1190
Bill George, Pit River Tribe of California, Atsugewi Band	P.O. Box 216 Burney, Ca 96013	(530) 410-4786

Local Tribal Contact Information (continued)		
Mary Preston, Pit River Tribe of California- Atwamsini Band	P.O. Box 1315 Alturas, Ca 96101	(530) 233-4345
Herb Quinn Sr., Pit River Tribe of California-Atwamsini Band herbquinn@gmail.com	P.O. Box 513, McArthur, Ca 96056	(530) 276-4258
Mary Mike, Cultural Resources Representative, Pit River Tribe of California-Ajumawi Band	P.O. Box 3, Fall River Mills, Ca 96028	(530) 917-9687
Everado Dela Torre, Pit River Tribe of California- Aporige Band	P.O. Box 125, Nubieber, Ca 96068	(530) 249-6678
James Hayward Sr., Cultural Resources Program, Redding Rancheria jamesh@redding-rancheria.com	2000 Redding Rancheria Road, Redding, Ca 96001	(530) 242-4543 cell: (530) 410-2873
Roy V. Hall Jr., Chairperson, Shasta Nation	P.O. Box 1054, Yreka, Ca 96097	(530) 468-2314

Appendix A
Upper Sacramento River Geographic Response Plan – Original Contributors

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

Federal Representatives
U.S. Environmental Protection Agency, Region 9 and 10
U.S.D.A. Forest Service, Shasta-Trinity National Forest
U.S. Department of the Interior
U.S. Bureau of Reclamation
U.S. Bureau of Land Management, Redding Field Office

State Representatives
California Environmental Protection Agency
California Office of Emergency Services
CALFIRE State Fire Marshal's Office, Pipeline Safety Division
CALFIRE Shasta-Trinity Unit and Siskiyou Unit
Castle Crags State Park
California Highway Patrol, Northern Division
Native American Heritage Commission
Central Valley Regional Water Quality Control Board, Redding Office

Local Representatives
Shasta County Environmental Health Division
Shasta County Sheriff's Office
Shasta Cascade Hazardous Materials Response Team
Siskiyou County Sheriff's Office
Siskiyou County Environmental Health Division
Siskiyou County Office of Emergency Services
Dunsmuir Fire Department
Mt. Shasta, Weed, and Dunsmuir Recreation and Parks District
City of Shasta Lake
Mountain Gate Community Services District
Local Emergency Planning Committee (LEPC) III
Santa Barbara County Public Health

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
National Response Corporation

Clean Harbors
Union Pacific Railroad
Burlington Northern Santa Fe Railway
Kinder Morgan Pipeline
Crimson Pipeline
Shell Pipeline Company
Shell Oil Company
Sierra Pacific Industries

Environmental Non-Governmental Organizations
Trout Unlimited

Appendix B
Site Description

1.0 Overview

This section provides a description of the physical features, hydrology, and climate, found along the Sacramento River and includes an overview of the oil spill risks in the region. The Sacramento River is the largest river in California, originating near Mt. Eddy in the Klamath Mountains of northern California and flowing 400 miles south before reaching the Sacramento-San Joaquin River Delta and San Francisco Bay. The Sacramento River watershed drains approximately 26,500+ square miles of land in 19 California counties (North State Resources, Page 2-27). The river provides critical habitat for numerous plant and animal species, including large runs of Chinook salmon. This Upper Sacramento River GRP encompasses the Box Canyon Dam in southern Siskiyou County, through northern Shasta County down to Shasta Lake and Keswick Reservoir, terminating at Keswick Dam in Redding, California.

1.1 Physical Features

The Sacramento River watershed began to form as magma pushed up by the Pacific Plate collided with the North American Plate, which caused the formation of the Sierra Nevada. The northern part of the Sacramento River watershed was formed by intense volcanic activity over 25 million years ago, resulting in lava flows that covered and created the Modoc Plateau. Mount Shasta and Lassen Peak are among the numerous Cascade Range volcanoes that still stand in the area (Michaelsen; Resendes). About 3 million years ago, plate tectonics resulted in the uplift of the California Coast Ranges and enclosed the Sacramento Valley, forcing the streams within to flow south instead of west, forming the ancestral Sacramento River (Covington, 2004; Sanctuary Integrated Monitoring Network).

The Sacramento River watershed has been intensely developed for drinking water and agricultural water supplies in addition to hydroelectric power generation. Numerous types of water infrastructure (e.g., wells, diversions, etc.) have been constructed and altered its physical features. The two largest, Shasta Dam and Box Canyon Dam, have had the greatest impact on the landscape, water supply, water quality, power supply, agricultural economy, and recreation opportunities for the State (North State Resources, Page 2-28). Shasta Dam, completed in 1945, is the eighth-largest dam in the United States, measuring 602 feet in height and is 3,460 feet across. Feeding the Shasta power plant, the dam's spillway is the largest man-made waterfall in the world (North State Resources, 2-28). The dams have significantly affected processes controlling channel morphology and water quality. While the Sacramento River above Lake Siskiyou remains unregulated and subject to seasonal fluctuations, the reservoirs and dams have completely cut off the supply of sediments and bedload (i.e., the sand, gravel, boulders, or other debris transported by rolling or sliding along the bottom of a stream) to the Sacramento River immediately below them (North State Resources, Page 2-29).

Hydrology

Upstream of the Box Canyon Dam, flows are unregulated and are driven by precipitation and runoff from rainfall and snowmelt. The reservoir is fed by the high elevation snowpack that often persists into the early summer months and by subsurface flows of water from Mount Shasta, which maintain perennial flows in the watershed's significant drainages (North State Resources Page 3-21). These springs provide consistent cold-water flow year-round to the upper Sacramento River.

The Bureau of Reclamation's Central Valley Project (CVP) controls the hydrology of the Sacramento River in the Shasta County area. In addition to altering flood flows, the Shasta Dam has changed the seasonal hydrology of the river by storing water during the wet season and releasing water later in the year. Flow releases are scheduled on an annual basis to meet flood control requirements and scheduled agricultural deliveries (North State Resources, Page 3-21). Agricultural production in the Central Valley heavily relies on water supplied by this watershed system.

Land use activities have reduced floodplains and created less-permeable ground surfaces, like urban development and road construction, which alters the rainfall-runoff balance. Cumulatively, land management activities measurably change the magnitude, frequency, duration, and timing of storm runoff (North State Resources, Page 3-133). Storm water runs quickly off the steep mountains flanking the Sacramento Valley, but with few exceptions, the alluvial valley floor is strikingly flat, slowing down the runoff and causing it to overflow the riverbanks. Before flood control works were built, the winter floods frequently transformed the valley into an inland sea (SAFCA, 2008). Due to the reduction of the floodplain area, the speed of flood flow in the Sacramento River has increased, creating a significant hazard for the urban and agricultural developments along its course. By the early 20th century, engineers had realized not all the floodplains could be safely reclaimed, leading to the intentional creation of flood bypasses where development is limited to annual crops and recreational uses (SAFCA, 2008; U.S. Geologic Survey, 2000).

Climate and Winds

California's Mediterranean climate is typified by long, dry summers and cool, wet winters. The eastern Klamath Mountains are the first major mountain range encountered by southwesterly flowing winds moving northeast across the Sacramento Valley. Orographic uplift (the upward lift of an air mass over mountainous terrain) of moist air masses over the eastern Klamath Mountains produces high levels of precipitation, falling mostly as snow in the higher elevations. Steep elevation gradients have a further effect on temperature and the spatial pattern of precipitation, with most precipitation falling between October and April (North State Resources, Page 3-33)**.** A west-to-east precipitation and temperature gradient creates wetter and warmer conditions on the west side of the southern Cascades Range south of Mount Shasta (North State Resource, Page 3-33).

Tides and Currents

The Upper Sacramento River is not tidally influenced, unlike the lower portion that forms the Delta.

Surface flow in the river has been monitored near the community of Delta above Lake Shasta. It averages approximately 1,000 cfs, with peak flows recorded near 70,000 cfs (1974) and a historic low flow of 117 cfs (1977) (Sacramento River Watershed Program). The Sacramento River accounts for an average annual discharge of 21.6 million acre-feet of water into the Sacramento/San Joaquin River Delta (North State Resources, Page 2-27).

1.2 Risk Assessment

The Upper Sacramento River is a critical hydrological resource in northern California with natural, cultural, and historical resources, all at risk of injury from oil spills. The natural and beneficial uses of the river, adjacent remaining floodplains, and flood bypasses include municipal and domestic water supply, agricultural irrigation and stock watering, industrial service supply and hydroelectric power generation, recreation, cold freshwater habitat, spawning, reproduction, and/or early development habitat, wildlife habitat, and groundwater recharge (Central Valley Regional Water Quality Control Board's Water Quality Control Plan [Basin Plan] for the Sacramento River Basin and San Joaquin River Basin, Fourth Edition, Revised July 2016). The potential risks to these resources include rail transportation, oil storage, vehicles and roads, recreational vessels, and other factors. Prevention of and preparation for oil spills impacting this river is paramount.

Oil Production, Refinement, and Storage

There are no production or refinement industries in this area. There is significant storage of lube, transformer, and hydraulic oils (over 65,000 gallons) at Shasta Dam and over 1,000 gallons of mineral oil and fuel at Box Canyon Dam.

Rail Transportation

The first railway was built between Redding and Mount Shasta via the Sacramento River canyon in 1887 (North State Resources, Page 2-21). Today, Union Pacific Railroad traverses the entire length of Shasta and Siskiyou counties, paralleling both Interstate 5 and the Sacramento River (NorthState Resources, Page 2-36). The Pit River Bridge, which carries Interstate 5 and the Union Pacific Railroad over Shasta Lake, is structurally the highest double-decked bridge in the United States (U.S. D.A. Forest Service, 2014).

In July 1991, a train derailed at the Cantara Loop over the Sacramento River near Dunsmuir, California. A tank car was punctured, spilling about 19,500 gallons of the herbicide metam sodium into the river. The chemical moved 45 miles (72 km) down river, resulting in significant environmental impacts along the way, and eventually concluding its downstream progression at Shasta Lake (Cantara Trustee Council, 2007; Warren, 1991).

Road Systems

The Sacramento River and Shasta Lake are vulnerable to hazardous materials spills from vehicle accidents along Interstate 5, which runs parallel to much of the Upper Sacramento River and crosses Shasta Lake twice. Interstate 5 is a primary north-south route for both intra- and interstate travel.

Recreational Boating

Accidents involving recreational watercrafts and/or fuel docks have the potential to result in spills on Shasta Lake and Keswick Reservoir. Examples of such accidents include collisions, vessel groundings, and mechanical failures. Recreational boating is allowed on Lake Shasta and Keswick Reservoir and there are fueling docks at Antlers Resort and Marina, Sugarloaf Marina, Shasta Marina, Bridge Bay Marina, and Digger Bay Marina (all on Lake Shasta). Each of these marinas store gasoline and releases from these facilities are an additional risk to the lake and reservoir. Storage capacities range from 6,000 gallons to 15,000 gallons. Additionally, Shasta Marina at Packers Bay has a 1,271-gallon diesel aboveground storage tank on a barge for operating the marina's generators.

Other Spill Risks

Other potential spill risks in the area include road run-off during rain events, construction activities where heavy equipment is being operated, and hydro-electric facilities and power lines.

Appendix C
Comments, Corrections, or Suggestions

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

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

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

GRP Comment Form

Today's Date:_____

Your Name:_____

Title:_____

Company/Agency:_____

Address:_____

City:_____State/Province:_____Zip:_____

Email: _____Ph:_____

GRP Page Number:_____ Section or Paragraph:_____

Comment(s)_____

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Appendix D
Record of Changes

Date	Change Number	Summary of Changes	Name of Person Making Changes

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Appendix E
Other Relevant Emergency Response Plans

Shasta County Emergency Operations Plan

The Shasta County Emergency Operations Plan (EOP) is an all-hazard plan that describes how Shasta County will organize and respond to emergencies and disasters in the community. The EOP is compatible with federal, state, and other applicable laws, regulations, plans and policies, including Presidential Directive 8, the National Response Framework, and California Governor's Office of Emergency Services plans.

California Government Code Section 8607(a) requires the use of the Standardized Emergency Management System (SEMS) for managing emergencies involving multiple jurisdictions and agencies as outlined in California Code of Regulations Section 2400-2450. The EOP is based on the functions and principles of SEMS and identifies how the County fits into the overall SEMS structure. SEMS served as the model for the National Incident Management System (NIMS) and National Response Framework, and these systems are designed to be compatible through their use of the Incident Command System. SEMS has since been updated to fully integrate NIMS components into its structure. Therefore, the EOP formally adopts the principles of the NIMS.

Consisting of a Basic Plan, Emergency Function Annexes, and Incident Annexes, this EOP provides a framework for coordinated response and recovery activities during a large-scale emergency. The plan describes how various agencies and organizations in the County will coordinate resources and activities with other federal, State, local, tribal, community organizations, faith-based organizations, and private-sector partners. (Shasta County, September 2014)
https://www.co.shasta.ca.us/index/cao/emergencies/emergency-operations-plan

Shasta County Hazardous Materials Area Plan

The Shasta County Hazardous Materials Area Plan (Area Plan) fulfills the Certified Unified Program Agency (CUPA) regulatory program requirements per State law. The Area Plan describes the County's pre-incident planning and preparedness for hazardous materials releases. It clarifies the roles and responsibilities of federal, State, and local agencies during a hazardous materials incident. The Area Plan further describes the County's hazardous materials incident response program, training, communications, and post-incident recovery procedures.

The Area Plan establishes the policies, responsibilities, and procedures required to protect the health and safety of Shasta County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents. The Area Plan establishes the emergency response organization for hazardous materials incidents occurring within Shasta County including the cities of Redding, Anderson and Shasta Lake. This Plan documents the operational and general

response procedures for the Shasta Cascade Hazardous Materials Response Team (SCHMRT), which is the primary hazardous materials response group for Shasta County.

The Area Plan is the principle guide for agencies of Shasta County, some of its incorporated cities, and other local entities in mitigating hazardous materials emergencies. This Area Plan is consistent with the National Incident Management System (NIMS), a unified framework for incident management within which government and private entities at all levels can work together effectively. The NIMS provides a set of standardized organizational structures such as the Incident Command System (ICS) and standardized processes, procedures and systems. These processes and procedures are designed to improve interoperability among jurisdictions and disciplines in various areas -- command and management, resource management, training, and communications. The California version is known as the Standardized Emergency Management System (SEMS).

This Area Plan is an operational plan as well as a reference document; it may be used for pre-emergency planning as well as a resource for emergency response. Agencies having roles and responsibilities established by this Area Plan are encouraged to develop standard operating procedures (SOPs) and emergency response checklists based on the provisions of this Area Plan. This Area Plan should be used in conjunction with the Shasta County EOP and the California Hazardous Materials Incident Contingency Plan. (Shasta County, January 2018) https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/ehd-docs/areaplan.pdf?sfvrsn=579a3c1b_2

Siskiyou County Hazardous Materials Area Plan

The Siskiyou County Hazardous Materials Area Plan (Haz Mat Area Plan) establishes the policies, responsibilities, and procedures required to protect the health and safety of Siskiyou County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents.

The Haz Mat Area Plan establishes the emergency response organization for hazardous materials incidents occurring within Siskiyou County. This Plan documents the operational and general response procedures for the Shasta Cascade Hazardous Materials Response Team (hereafter referred to as the SCHMRT Team), which is the primary hazardous materials response group for Siskiyou County.

The Haz Mat Area Plan is the principal guide for agencies of Siskiyou County, its incorporated cities, and other local entities in mitigating hazardous materials emergencies. This Haz Mat Area Plan is consistent with the National Incident Management System (NIMS); a unified framework for incident management within which government and private entities at all levels can work together effectively. The NIMS provides a set of standardized organizational structures such as the Incident Command System (ICS) and standardized processes, procedures and systems. These processes and procedures are designed to improve interoperability among jurisdictions and disciplines in various areas -- command and management, resource management, training, and communications. The California version, known as SEMS (Standardized Emergency Management System) was updated in 2004 by the federal system.

This Haz Mat Area Plan is an operational plan as well as a reference document; it may be used for pre-emergency planning as well as emergency response. Agencies having roles and responsibilities established by this Area Plan are encouraged to develop standard operating procedures (SOPs) and emergency response checklists based on the provisions of this Haz Mat Area Plan. This Haz Mat Area Plan should be used in conjunction with the Siskiyou County Emergency Operations Plan (EOP) and the California Hazardous Materials Incident Contingency Plan.

Copies of the Haz Mat Area Plan are on file in the Siskiyou County Emergency Operations Center.

California State Oil Spill Contingency Plan

The California State Oil Spill Contingency Plan (Plan) is an independent document generally describing the state's response to discharges of oil to all marine or inland surface waterways of California. This version of the Plan supersedes all previous California state oil spill plans (whether statewide or marine specific). Where an incident may involve oil and a chemical release, an assessment will need to be made whether to prepare for and respond to the incident primarily as an oil spill or primarily as a chemical release.

Oil spill incidents often involve a response from multiple agencies having different jurisdictional authorities, capabilities, and functions. In some circumstances, the jurisdictional mandates of several agencies may overlap. Use of SEMS and NIMS to organize spill response ensures that inter-agency responsibilities are collectively addressed.

Incident management generally includes the development of objectives, strategies and tactics, the ordering and release of resources, and coordination with other appropriate response agencies to ensure that all resources are properly utilized and that this coordinating function is performed in a manner designated to minimize risk to other persons and to the environment. (Calif. Dept. Fish and Wildlife, April 2017)
http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=172767&inline

Federal Region 9 Regional Contingency Plan

The Federal Region 9 Regional Contingency Plan (RCP) is intended for use by Local, Tribal, State, and Federal emergency response personnel as a tool for obtaining resources to respond to an oil or hazardous materials incident. It outlines the response mechanisms that would be activated among the various levels of the response community in the event of an emergency situation. It is not intended to displace Local emergency response plans, but rather it is intended to coordinate with Local plans and build on the mechanisms set forth in State emergency response plans.

The objective of the RCP is to describe response protocols and assist in providing a coordinated response capability in the event of a release or threat of release endangering human health and welfare or the environment. The RCP expands upon the planning and response requirements set forth in the NCP, augments coordination with State and Tribal authorities, and integrates existing

Tribal, State and Federal plans for Federal Region 9. The RCP incorporates both coastal and inland areas. (Region 9 Regional Response Team, October 2005)
https://community.apan.org/wg/rrt9/m/files/300195

Appendix F
Local/Regional Asset Resources

- **Table F-1: Local/Regional Asset Resources Table**
- **Figure F-1: Cal OES NorCal 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 Response Assets

Resource	Home Base/Owner	Contact Information and Comments
Regional Response Trailers		
1,000 feet of 10-inch swift water boom; Sorbent pads, sweep, and boom; anchors; ropes; PPE; etc.	Dunsmuir Fire Department	(530) 235-2551
1,050 feet of 10-inch containment boom; 200 feet of 12-inch containment boom; 100 feet of 8-inch containment boom; 8 bales of sorbent boom; anchors; rope, PPE; etc.	Union Pacific Railroad Dunsmuir Rail Yard	RMCC (888) 877-7267 2 response trailers that are not registered for on-street travel. UPRR has granted permission to utilize the trailers in the event of an emergency. Notify UPRR if trailers are used. Trailer lock combination is 1998.
1,000 feet of containment boom and 100 feet of sorbent boom.	U.S. Bureau of Reclamation Shasta Dam and Keswick Dam	Senior Operator on Duty (530) 247-8588 (24/7) Lead Security on Duty (530) 247-8537 Response assets are for emergencies related to Bureau of Reclamation infrastructure associated with Shasta Dam and Kewsick Dam.
HazMat Teams		
Type 2	Shasta Cascade Hazardous Materials Response Team (SCHMRT)	SCHMRT Program Manager - CalFire (SHU) Battalion Chief Andy Reiling (530) 623-4226
See Figure F-1 below, Cal OES Certified Hazardous Material Teams Map, for Additional Type 1-3 HazMat Teams and Table F-2 for a list of statewide Certified California HazMat Teams by Type.		
Swift Water Rescue Teams		
Shasta County Specialty Teams-Dive Team	Shasta County Sheriff 300 Park Marina Circle Redding, Ca	On-Duty Deputy (530) 245-6540

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

ID - Agency (Unit)
1 - Roseville Fire (HM-1)
2 - Sacramento City Fire (HM-7)
3 - Sacramento City Fire (HM-30)
4 - Sac Metro Fire (HM-109)
8 - Contra Costa JPA (HM-1)
10 - Truckee Fire (HM-1)
11 - Alameda Co. Fire (HM-12)
15 - San Ramon Valley Fire (HM-35)
16 - Marin County JPA (HM-1)
17 - Sonoma County OES (HM-2936)
18 - Santa Clara County Fire (HM-72)
19 - Butte County Interagency Team (HM-5)
20 - Humboldt Bay Fire (HM-8190)
22 - Sunnyvale Dept. Public Safety (HM-2)
24 - Palo Alto Fire (HM-2)
26 - Napa County - Cal FIRE (HM-27)
29 - San Jose City Fire (HM-29)
31 - Fremont City Fire (HM-57)
33 - San Francisco City Fire (HM-1)
34 - Mountain View Fire (HM-55)
36 - Solano County JPA (HM-1)
39 - Shasta-Cascade JPA (HM-24)
40 - Santa Clara City Fire (HM-9)
41 - Santa Rosa City Fire (HM-1)
43 - Livermore-Pleasanton Fire (HM-92)
48 - Oakland City Fire (HM-2599)
50 - Salinas JPA (Monterey Co) (HM-1)
55 - Belmont FPD (San Mateo Co) (HM-14)
57 - Placer County-Central (HM-10)
61 - Presideo of Monterey (HM-H2MT61)

Cal OES Sponsored Teams
ID - Agency (Unit)
HM-21 - Contra Costa County (HM-21)
HM-22 - Seaside Fire (HM-22)
HM-31 - Yuba City Fire (HM-31)
HM-32 - Susanville Fire (HM-32)
HM-41 - Modesto Fire (HM-41)
HM-42 - South County Fire (HM-42)

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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

USDA (Forest Service) United States Department of Agriculture

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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