Upper Sacramento River Geographic Response Plan

Upper Sacramento River Corridor

Siskiyou, Shasta, and Tehama Counties, California

May 2005

Version 1.0

Prepared by:
Upper Sacramento River Area Committee (USRAC)

Acknowledgements

The Upper Sacramento River Geographic Response Plan (USRGRP) was developed through a collaborative effort between the local, state, and federal government agencies listed below.

Local and County Government

- Shasta County Sheriff's Office
- Shasta County Environmental Health
- Siskiyou County Sheriff's Office
- Siskiyou County Environmental Health
- Red Bluff Fire Department
- Redding Fire Department
- Shasta Cascade Hazardous Materials Response Team
- Shasta City Fire Department
- Tehama County Environmental Health
- Tehama County Sheriff's Office

State Government

- California Department of Fish and Game, Office of Spill Prevention and Response
- California Office of Emergency Services
- California Highway Patrol
- Regional Water Quality Control Board – Region 5
- California Department of Forestry

Federal Government

- U.S. Environmental Protection Agency (EPA) Region IX
- EPA's Superfund Technical Assessment and Response Team (START), Ecology & Environment Inc
- U.S. Bureau of Reclamation
- U.S. Forest Service

Private/Public Organizations

- Union Pacific Railroad

If this is an Emergency…

…Involving a release or threatened release of hazardous materials, petroleum products, or other contaminants impacting public health and/or the environment,

Always remember – SAFETY FIRST – protect yourself and others!

Then:

1) Turn to the **Immediate Action Guide** (Yellow Tab) for initial steps taken in a hazardous material emergency (1 - general HAZMAT response; 2 - railroad, roadway, and fixed facility incidents; 3 - abandoned/unknown containers and WMD). Gather information *dispatch* will need for mandatory notifications.

2) Make the initial notification to *dispatch* by dialing 911. *Dispatch* will make the ***Mandatory Notifications***. *Dispatch* will then use the **Notification** (Red Tab) to implement the notification procedures described in the **Immediate Action Guide** (Yellow Tab).

Dispatch* will make the following *Mandatory Notifications	
California State Warning Center (OES)	(800) 852-7550 or (916) 845-8911
National Response Center	(800) 424-8802
Notify Downstream Agencies:	
❒ Siskiyou County Environmental Health	(530) 841-2100 (911 after hours)
❒ Siskiyou County OES	(530) 842-8300
❒ Siskiyou County Health Department	(530) 842-8230
❒ Shasta County Environmental Health	(530) 225-5787
❒ Shasta County OES	(530) 245-6059
❒ Shasta County Health Department	(530) 225-5073
❒ Tehama County Environmental Health	
❒ Tehama County OES	
❒ Tehama County Health Department	

3) Use the **Upper Sacramento River Corridor Maps** (Green Tab) to pin point the location and surrounding geography of the incident site.

4) Use the **River Response Site Strategies** (Blue Tab) to develop a mitigation plan.

5) Refer to **Supporting Documentation** (White Tabs) for additional information needed during the response.

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White Tabs – Supporting Documentation for use in an Emergency

How to Use the Immediate Action Guide

**IF YOU ARE NOT QUALIFED TO ACTIVATE THIS PLAN:
DIAL 911 AND ASK FOR ASSISTANCE**

Complete the following steps to activate the Upper Sacramento River Geographic Response Plan.

**Make Initial Notification to Dispatch/
Dispatch Makes Mandatory Notifications (Red Tab)**

**Review General Information Regarding HazMat Response
(Yellow Tab)**

**Railroad, Roadway, and Fixed Facility Incidents
(Yellow Tab)**

**And/
Or**

**Abandoned/ Unknown Containers & WMD
(Yellow Tab)**

Public Information/Press Release (Yellow Tab)

This is only a guide:
Nothing in this section shall supersede the experience, judgement, initiative, and ingenuity of the responders in overcoming the complexities that existing under actual emergency conditions.

Make Initial Notification

Collect the following information whenever there is a threat or actual discharge of hazardous materials, petroleum products or other contaminants into a waterway*.

* *A **waterway** is defined as any river, stream, tributary, creek, ditch, canal, storm drain or sewer that is part of, connected to or has the ability to discharge into the Upper Sacramento River.*

Collect and provide the following information to ***Dispatch***. ***Dispatch*** will need this information when making ***Mandatory Notifications***:

- Type of Incident (Rail, Motor Transport, Fixed Facility, etc.):
- Date and time of Incident:
- Location of incident:
- Number of Injuries:
- Product Name (if known):
- Type of Release:

  ❑ Solid ❑ Liquid ❑ Gas

- Size of spill:

  ➢ Quantity

- Location where the product entered or will enter the waterway:
- Area threatened:

Stay on the line to answer any additional questions from dispatch.

To make additional notifications, refer to the "Emergency Notification Guide" and "Contact Number List" in the Red Tab.

Review General Information Regarding HazMat Response

First Responder

1. Approach incident location from an upwind, uphill, and/or upstream direction.
2. Position vehicle heading away from the incident location.
3. If available wear full protective clothing (i.e., turnouts-pants, coat, hood, gloves, boots, helmet) and positive-pressure, self-contained breathing apparatus (SCBA).
4. Avoid "rushing" into the area.
5. Avoid entering or approaching vapors or smoke and contact with product.
6. Confine exposed victims for emergency decontamination.
7. Consider all unidentified containers or released products (including smoke) as a hazardous material until it is positively identified as non-hazardous.

Incident Command and Scene Security

1. Establish an Incident Command Post and fully implement ICS.
2. Isolate the scene and deny entry to all unauthorized personnel, vehicles, and equipment (establish a perimeter).
3. Notify appropriate emergency response agencies (**Notification** - Red Tab).
4. Ensure qualified personnel perform the items on the checklist.
5. Review the following checklist:

	Immediate Action Checklist	Date/Time
1.	Establish Incident Command	
2.	Determine Isolation Zones	
3.	Establish Exact Incident Location	
4.	Determine Lead Agency	
5.	Identify Product	
6.	Determine the Size of Exclusion Zone	
7.	Determine Level of Response	
8.	Determine if Additional Resources are Required	
9.	Establish Size of Spill and Spill Potential	
10.	If spill can reach a waterway, begin Downstream Notifications	
11.	Establish Evacuation Routes	
12.	Determine Medical Needs	
13.	Determine Entry Level (PPE)	
14.	Determine Communications Needs	
15.	Make Appropriate Notifications	
16.	Determine exposures	
17.	Develop Incident Action Plan	

Railroad, Roadway, and Fixed Facility Incidents

Responder Actions

1. Notify Local Emergency *Dispatch* – Activate 911.
2. Isolate and deny entry to the area.
3. Shutdown all possible ignitions sources (Stop ALL vehicle traffic).
4. Establish perimeters.
5. Identify the material.

Dispatcher Actions

1. Determine the following information
   - Type of Incident (Rail, Motor Transport, Fixed Facility, etc.):
   - Date and Time of Incident:
   - Incident location
     - ➢ Mile Marker:
     - ➢ Area Accessibility:
     - ➢ Latitude/Longitude:
   - Number of Injuries:
   - Product Name (if known):
   - Type of Release:
     - ❑ Solid ❑ Liquid ❑ Gas
   - Size of spill
     - ➢ Quantity
   - Has the spill ignited? Yes No
   - Any information on rail car or container:
   - Has the spill been contained? Yes No
   - Description of exposures
     - ➢ Occupied buildings:
     - ➢ Important buildings or structures:
     - ➢ Proximity to roadway, bridges, drainage structures, waterways:

2. Request local hazardous materials response team.
3. Make the ***Mandatory Notifications*** (**Notification** – Red Tab).
4. Contact the owner and/or potentially responsible party
   - Union Pacific Railroad
   - Shipper
   - Fixed Facility Emergency Coordinator
5. Provide updates to all Notified Agencies as new information becomes available.

Abandoned/ Unknown Containers and Weapons of Mass Destruction (WMD)

Responder Actions

1. Notify Local Emergency *Dispatch* – Activate 911.
2. Isolate and deny entry to the area.
3. Shutdown all possible ignitions sources (Stop ALL vehicle traffic).
4. Establish perimeters.
5. For a Weapon of Mass Destruction (WMD) or a Nuclear/ Biological/ Radiological (NBR) Device, determine if there are secondary devices.
6. Treat location as a *possible crime scene*!
7. Identify the material. DO NOT MOVE THE CONTAINER OR DETERMINE IF IT IS FULL.

Dispatcher Actions

1. Determine the following information
   - Location of the container(s)/device:
   - Date and Time of discovery:
   - Number of Injuries:
   - Product Name (if known):
   - Has the container been breached? Yes No
   - Type of Release:
     ❑ Solid ❑ Liquid ❑ Gas
   - Size of spill
     - Quantity
   - Has the spill ignited? Yes No
   - Can the spill be contained? Yes No
   - Description of exposures
     - Occupied buildings:
     - Important buildings or structures:
     - Proximity to roadway, bridges, drainage structures, waterways:

2. Request local hazardous materials response team.

3. Make the ***Mandatory Notifications*** (**Notification** – Red Tab).

4. Provide updates to all Notified Agencies as new information becomes available.

Public Information/ Press Release

To release information to the public/media:

1. Establish a Public Information Officer (PIO).

2. Determine the following information for inclusion into a press release and/or press conference.
   - Nature of the incident
   - Precautions for the public and possible symptoms of exposure (High Hazard)
   - Date and time of incident
   - Approximate location where the incident happened (city, county, state)
   - Hotline number for public inquiries
   - Traffic patterns affected by spill
   - Number of injuries and property damage
   - Product name and normal uses
   - Response agencies involved
   - Any mitigation efforts underway
   - Evacuation instructions if incident is considered High Hazard
   - Mass care information if High Hazard

3. The following example statement can be used.

Hazardous Material Incident - Summary Statement for Media

At approximately (time a.m./p.m.) today, a (spill/ release) of a potentially hazardous substance was reported to this office. Emergency services personnel were immediately dispatched to cordon off the area and direct traffic.

The material was later determined to be (substance), a (hazardous/ harmless) (chemical/ substance/ material/ gas) that, upon contact, may product symptoms of (list symptoms). Precautionary evacuation of the (location) area surrounding the spill was (requested/ required). Approximately (number) of persons were evacuated.

Clean up crews from (agency/ company) were dispatched to the scene, and normal traffic was resumed by (time a.m./p.m.), at which time residents were allowed to return to their homes. There were no injuries reported – OR – (number) persons, including (number) of emergency personnel, were treated at area hospitals for (injuries/ symptoms) and (all/ number) were later released. Those remaining in the hospital are in (condition). Response agencies involved were (list agencies).

Upper Sacramento River Geographic Response Plan
Notification Overview

The chart below shows the flow of notifications that must be made in a hazardous material, petroleum product, or other contaminant emergency.

First On-Scene
(Fire, Law, EMS, etc.)

*will notify local **Dispatch** (via radio)*

↓

Dispatch will make the following ***Mandatory Notifications***

California State Warning Center (OES) (request contact with Toxics Emergency Response duty officer)	(800) 852-7550 or (916) 845-8911
CDF/ Shasta County Fire Department ECC (request SCHMRT)	(530) 243-1434
National Response Center	(800) 424-8802
Notify Downstream Agencies:	
❒ Siskiyou County Environmental Health	(530) 841-2100 (911 after hours)
❒ Siskiyou County OES	(530) 842-8300
❒ Siskiyou County Health Department	(530) 842-8230
❒ Shasta County Environmental Health	(530) 225-5787
❒ Shasta County OES	(530) 245-6059
❒ Shasta County Health Department	(530) 225-5073
❒ Tehama County Environmental Health	
❒ Tehama County OES	
❒ Tehama County Health Department	

To ensure that all affected agencies/organizations are notified:

1) First On-Scene will notify Dispatch.
2) Dispatch will make the ***Mandatory Notifications.***
3) Use the **Emergency Notification Guide** (Notification – Red Tab) to contact additional agencies/organizations.
4) Use the **Contact Number Lists** (Notification – Red Tab) to find emergency phone numbers.
   a. Contact Number List Sorted by Agency Purpose - Agencies are sorted by the purposes listed below.
   b. Contact Number List Sorted Alphabetically by Agency Name

Emergency Responders
- Emergency Management
- EMS
- Environment/Health
- Fire
- Law

Infrastructure
- Dams
- Hospital
- Public Works
- Railroad
- Roads
- Utilities
- Water Systems

Other
- Media
- Support
- Volunteer Groups

Emergency Notification Guide

Emergency Notifications are made in accordance with the area plan developed by the appropriate County's Office of Emergency Services.

Use the following checklist as a guide to contact additional agencies/organizations not listed in the table above:

- Document the Time of Contact and Estimated Time of Arrival (ETA) in the space provided.
- The agencies within the outlined areas may be mandatory or may have priority.
- Consider notifying other agencies listed when appropriate.
- Checklist may be used to identify agencies that can provide additional resources.

Local Agencies

Time Contacted	ETA		Time Contacted	ETA	
		Local Fire			Red Cross / Salvation Army
		Local Law			School Superintendent
		Hospital(s)			Public Utilities
		Property Owner(s)			Local Government
		Bordering Jurisdictions			Water Authorities
		Airport			Sewer Districts
		Water Districts			USA Underground
		Homeowner's Associations			Chemtrec or other product info sources
		Pipeline Owners			Dams
		News Media			Other
		Public Works			Other
		Railroad			Other

Continue on next page for further notifications

County Agencies

Time Contacted	ETA		Time Contacted	ETA	
		Sheriff's Office			Air Quality Control Board
		Environmental Health			Water Quality Control Board
		Office Emergency Services			SCHMRT
		Agriculture Commissioner			Other
		Health Officer			Other
		Road Department			Other

State of California Agencies

Time Contacted	ETA		Time Contacted	ETA	
		Highway Patrol			Department of Justice
		State Emergency Warning Center			Central Valley RWQCB
		Fish and Game			Department of Forestry
		CalEPA / DTSC			State Historic Preservation Office
		CalOSHA			Other
		CalTrans			Other

Federal Agencies

Time Contacted	ETA		Time Contacted	ETA	
		National Response Center			Bureau of Reclamation-Dams
		US EPA			Army Corps of Engineers
		USCG			FBI
		USFS			Other

Contact Number List-Alphabetically by Name

Agency	Number	Alt. Number	Agency Purpose	Level	Jurisdiction/Location
Al's Guide Service	(530) 945 8816		River Recreation	Local	Shasta Lake
American Fly Fishing Company	(800) 410 1222		River Recreation	Local	Sacramento
American Medical Response	(530) 246 9111		EMS	Local	Redding
American Red Cross Shasta Area Chapter	(530) 243 3021		Volunteer Groups	Regional	Redding
Anderson Police Department	(530) 378 6600		Law	Local	Anderson
Anderson Public Works Department	(530) 378 6636		Public Works	Local	Anderson
Antlers Resort & Marina	(530) 238 2553		Marinas	Local	Lakehead
Bob's Guide Service	(530) 222 8058		River Recreation	Local	Redding
Brandy Creek Marina	(530) 275 2733		Marinas	Local	Whiskeytown
Bridge Bay Resort & Marina	(530) 275 3021		Marinas	Local	Redding
Bureau of Alcohol, Tobacco & Firearms	(775) 784 5251		Law	Federal	United States
Burn Center	(916) 739 8525		Hospital	Local	Sacramento County
CalEPA/DTSC	(800) 260 3972		Environment/Health	State	California
California Department of Fish and Game	(916) 445 0045		Emergency Management	State	California
California Department of Fish and Game	(916) 445 0045		Environment/Health	State	California
California Department of Fish and Game	(916) 445 0045		Law	State	California
California Department of Forestry Shasta Trinity Unit	(530) 243 1434		Fire	State	Shasta County
California Department of Forestry Siskiyou Unit	(530) 842 3515		Fire	State	Siskiyou County
California Department of Forestry Tehama Glen Unit	(530) 529 8548		Fire	State	Tehama County
California Department of Parks and Recreation	(916) 358 1310		Environment/Health	State	California
California Highway Patrol	(530) 582 7500		Emergency Management	State	California
California Highway Patrol Mount Shasta	(530) 926 2627		Law	State	California
California Highway Patrol Red Bluff	(530) 527 2034		Law	State	California
California Highway Patrol Redding	(530) 242 3200		Law	State	California
California Highway Patrol Yreka	(530) 841 6000		Law	State	California
California Office of Emergency Services	(916) 845 8911	(800) 852 7550	Emergency Management	State	California
California Public Utilties Commission	(415) 703 2782		Utilities	State	California
California State Historic Preservation Office	(916) 653 6624		Support	State	California
CalOSHA	(916) 263 2800		Environment/Health	State	California
CalTrans District 2	(530) 225 3426		Roads	State	California
Central Valley RWQCB Redding	(530) 224 4845		Environment/Health	State	California
CHEMNET	(800) 424 9300		Support	National	National
Chemtrec	(800) 424 9300		Support	National	National
CHLORREP	(800) 424 9300		Support	National	National
Clearwater Trout Tours	(415) 381 1173		River Recreation	Local	Cassel
Digger Bay Marina	(530) 275 3072		Marinas	Local	Shasta Lake
Dunsmuir City Water and Waste Water	(530) 235 2325		Public Works	Local	Dunsmuir
Dunsmuir Fire Department	(530) 235 2551		Fire	Local	Dunsmuir
Dunsmuir Rod Company	(530) 235 4058		River Recreation	Local	Dunsmuir
Fairchild Medical Center	(530) 842 4121		Hospital	Local	Yreka
Federal Bureau of Investigations	(916) 481 9110		Law	Federal	United States

Contact Number List-Alphabetically by Name

Agency	Number	Alt. Number	Agency Purpose	Level	Jurisdiction/Location
Federal Emergency Management Agency	(510) 627 7100		Emergency Management	Federal	United States
Fly Fishing World of Wayne Eng	(530) 235 4018		River Recreation	Local	Dunsmuir
George Foster's Fly Fishing and Guide Service	(530) 926 3947		River Recreation	Local	Mount Shasta
Harts Guide Service	(530) 926 2431		River Recreation	Local	Mount Shasta
Jack Trout Fly Fishing and Guide Service	(530) 926 4540		River Recreation	Local	Mount Shasta
Jones Valley Resort	(530) 275 7950		Marinas	Local	Redding
Jones Valley Resort	(530) 275 7950		Water Systems	Local	Redding
KMJC 620AM/107.9 FM	(530) 926 2124		Media	Local	Mt. Shasta City
KSYC 1490 AM/FM KYRE FM 98	(530) 842 4158		Media	Local	Yreka
KWHO Radio	(530) 926 5946		Media	Local	Mt. Shasta City
Lakeshore Marina	(530) 238 2301		Marinas	Local	Lakehead
Lakeview Marina	(530) 223 3003		Marinas	Local	Bella Vista
McCloud Fly Fishing Adventures	(530) 964 2533		River Recreation	Local	Mount Shasta
Mercy Medical Center Mount Shasta	(530) 926 6111		Hospital	Local	Mount Shasta
Mercy Medical Center Redding	(530) 225 6000		Hospital	Local	Redding
Mercy Medical Center Ambulance	(530) 243 2121		EMS	Local	Redding
Mount Shasta Police Department	(530) 926 7539		Law	Local	Mount Shasta
Mountain Community Television Channel 15	(530) 938 4106		Media	Local	Weed
Mt. Shasta Ambulance	(530) 926 2665		EMS	Local	Mt. Shasta City
Mt. Shasta City Fire Department	(530) 926 7546		Fire	Local	Mt. Shasta City
Mt. Shasta New	(530)926 5214		Media	Local	Mount Shasta
Mt. Shasta Public Works	(530) 926 7526		Public Works	Local	Mt. Shasta City
NACA Pesticide Safety Team	(800) 424 9300		Support	National	National
National Response Center	(800) 424 8802		Environment/Health	Federal	United States
National Weather Service	(775) 673 8100		Support	Federal	National
Northern Siskiyou Ambulance	(530) 842 3583		EMS	Local	Yreka
Nuclear Regulatory Commission	(301) 951 0550		Environment/Health	Federal	United States
Occupational Health and Safety Agency	(800) 321 6742		Environment/Health	Federal	United States
Packers Bay Marina	(530) 275 5570		Marinas	Local	Lakehead
PG & E	(800) 743 5000		Utilities	State	California
Record Searchlight	(530) 243 2424		Media	Local	Redding
Red Bluff Police Department	(530) 527 8282		Law	Local	Red Bluff
Redding Fire Department	(530) 245 6550		Fire	Local	Redding
Redding Medical Center	(530) 244 5400		Hospital	Local	Redding
Redding Medical Center Ambulance	(530) 243 0498		EMS	Local	Redding
Redding Municipal Utilities	(530) 224 6068		Public Works	Local	Redding
Redding Police Department	(530) 225 4200		Law	Local	Redding
Sacrmento Bee	(916) 321 1000		Media	Local	Sacramento
Salvation Army Del Oro Division	(916) 563 3700		Volunteer Groups	Regional	Sacramento
SBC	(800) 303 3000		Utilities	Local	California
Shasta Cascade Hazardous Materials Response Team (SCHMRT)	(530) 623 4201		HazMat	Local	Multi County Response

Contact Number List-Alphabetically by Name

Agency	Number	Alt. Number	Agency Purpose	Level	Jurisdiction/Location
Shasta County Department of Public Works	(530) 225 5661		Public Works	County	Shasta County
Shasta County Environmental Health Division	(530) 225 5787		Environment/Health	County	Shasta County
Shasta County Office of Emergency Services	(530) 245 6165		Emergency Management	County	Shasta County
Shasta County Roads Maintenance	(530) 225 5661		Roads	County	Shasta County
Shasta County Sheriff's Office	(530) 245 6165		Law	County	Shasta County
Shasta County Volunteer Fire Department	19 Fire districts?		Fire	County	Shasta County
Shasta Lake Protection Fire District	(530) 275 7474		Fire	Local	Shasta Lake
Silverthorn Resort Marina	(530) 275 1571		Marinas	Local	Redding
Silverthorn Resort Marina	(530) 275 1571		Water Systems	Local	Redding
Siskiyou County Department of Environmental Health	(530) 841 2100	911 (after hours)	Environment/Health	County	Siskiyou County
Siskiyou County Office of Emergency Services	(530) 841 2900		Emergency Management	County	Siskiyou County
Siskiyou County Public Works Department	(530) 842 8250		Public Works	County	Siskiyou County
Siskiyou County Road Department	(530) 842 8250		Roads	County	Siskiyou County
Siskiyou County Sheriff's Office	(530) 841 2900		Law	County	Siskiyou County
Siskiyou Daily News	(530) 842 5777		Media	Local	Yreka
St Elizabeth Hospital	530 529 8000		Hospital	Local	Red Bluff
Sugarloaf Marina	(530) 238 2711		Marinas	Local	Lakehead
Tehama County Department of Environmental Health	(530) 527 8020		Environment/Health	County	Tehama County
Tehama County Health Center	530 527 0350		Hospital	Local	Red Bluff
Tehama County Office of Emergency Services	(530) 529 7900		Emergency Management	County	Tehama County
Tehama County Public Works Department	(530) 385 1462		Public Works	County	Tehama County
Tehama County Road Department	(530) 385 1462		Roads	County	Tehama County
Tehama County Sheriff's Office	(530) 529 7900		Law	County	Tehama County
The Fly Shop	(800) 669 3474		River Recreation	Local	Redding
Three River Guide Service	(530) 926 1743		River Recreation	Local	Mount Shasta
U.S. Bureau of Land Management Redding Office	(530) 224 2100		Environment/Health	Federal	United States
U.S. Bureau of Reclamation Water Master (Shasta Lake)	(530) 275 1554		Dams	Federal	United States
U.S. Coast Guard San Francisco MSO	(510) 437 3073		Environment/Health	Federal	United States
U.S. Department of Energy Radiological Assistance	(202) 586 8100		Environment/Health	Federal	United States
U.S. Department of Homeland Security	(202) 282 8000		Emergency Management	Federal	United States
U.S. Department of Homeland Security	(202) 282 8000		Law	Federal	United States
U.S. Environmental Protection Agency Region IX	(800) 300 2193		Environment/Health	Federal	United States
U.S. Fish and Wildlife Service Red Bluff	(530) 527 3043		Environment/Health	Federal	United States
U.S. Forest Service Shasta Trinity National Forest ECC	(530) 226 2400		Environment/Health	Federal	United States
U.S. Geological Service Sacramento	(916) 278 3000		Environment/Health	Federal	United States
UCD Medical Center	(916) 734 2011		Hospital	Local	Sacramento County
Underground Service Alert	(800) 227 2600		Support	National	National
Union Pacific Railroad	(888) 877 7267		Railroad	National	National
Weed Police Department	(530) 938 5000		Law	Local	Weed
Yreka Depatment of Public Works	(530) 841 2386		Public Works	Local	Yreka
Yreka Police Department	(530) 841 2300		Law	Local	Yreka
Yreka Volunteer Fire Department	(530) 841 2383		Fire	Local	Yreka
Z100 FM	(530) 926 1332		Media	Local	Mt. Shasta City

River Response Strategies

The purpose of this section is to provide information that may be useful to the responder in the event that hazardous materials, petroleum products or other contaminants are released into the Upper Sacramento River. Information regarding basic stream flow data, including average monthly stream flow and stream flow velocity is presented. This data can be used to estimate the time it will take for a contaminant to reach any downstream location under different stream flow conditions. In addition, a number of sites along the river are identified which provide easy access to the river for personnel and equipment as well as suitable conditions for boom deployment and recovery of floating products. These site locations can be found in the maps under the **Green Tab**. Whether the spilled product floats, sinks, or mixes, downstream water users and operators for drinking water intakes, industrial and irrigation diversions should be promptly notified of the spill so that appropriate actions may be taken to protect water supplies and structures.

Stream Flow Data

The following stream flow data was obtained from the U.S.G.S. and may be of use to the responder in selecting booming locations based on stream flow discharge and measured travel times. Real-time stream flow data can be obtained from the U.S.G.S. web page at http://ca.water.usgs.gov (click on "NWISweb Realtime Streamflow"). Historic mean monthly stream flows are also available on this web page and are summarized in the table below:

Historic Mean Monthly Stream Flows Upper Sacramento River (cubic feet per second)												
Station Name & ID	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Delta 11342000	1917	2318	2249	2030	1701	822	343	237	233	347	767	1368
Keswick 11370500	11390	13480	11340	8793	10690	11620	12830	11580	8252	6211	7126	9566
Bend Bridge 11377100	16840	19340	11950	10210	10260	9469	10030	10030	7510	6501	6932	11440

Data historic data obtained from "Water Resources Data California Water Year 2003. Volume 4 Northern Central Valley Basins and the Great Basin from Honey Lake Basin to Oregon State Line." U.S. Geological Survey, Water Data Report CA-0301.

Time of Travel

The time of travel for portions of the Upper Sacramento River as delineated by this plan was estimated by the U.S. Environmental Protection Agency, National Exposure Research Laboratory, Las Vegas, Nevada in "Spill Contingency Handbook, Upper Sacramento River Area from Black Butte Summit to Lake Shasta Dam, CA," March 1996, EPA Publication Number TS-CRD-95C0902.

The authors suggest that this data may be useful for predicting the movement of soluble contaminants accidentally spilled into the river. This data should also provide adequate information to assist in decision making regarding the movement of floating products, such as petroleum.

River velocity estimates were computed by the US Army Corps of Engineers for the Spill Contingency Handbook using stream distances and slopes taken from USGS Quadrangle maps. The average velocity was estimated for high bank conditions.

During periods of high flow, times of travel are as follows:

Summit Lake to 1 ½ miles south of Dunsmuir	1 hour
1 ½ miles south of Dunsmuir to Fisher	1 hour
Fisher to south of Delta	1 hour

Description of Site Page Headings

Site Number and Name: The site location corresponds to its number on the attached map(s) for the Upper Sacramento River Spill Response Plan. Site numbers begin at the most upstream location and proceed downstream. Site names are descriptive of that site.

Site Rank: Sites are ranked as A, B, or C. Sites ranked 'A' have a number of good attributes; 'B' sites have at least one disadvantage; 'C' sites have more than one drawback but may be used, depending on the spill circumstances.

'A' sites have the following attributes: good stream morphology for boom placement and collection of oil; good access for deploying the boom, recovery of oil contained by the boom, and boom maintenance; support vehicles and other equipment can be brought reasonably near the site and; the site is a safe work place for response personnel. 'B' sites lack at least one of these; 'C' sites will lack several of these.

Sensitive Site: Sensitive plant or animal species or cultural attributes are noted when these occur at or near spill response sites. Maps provided in this plan identify the general location of the sensitive area, and in the case of plants and animals, the sensitive species is identified.

Directions to Site: How to locate the site; includes highway mileposts and/or notable landmarks.

Stream Width: Width during mid-summer flow.

Boom Required: Minimum boom required to cross stream at an angle of about 30 degrees; a cascade boom strategy and/or a more acute angle of deployment will require additional boom. Line required for each boom set will have to be determined on-site; for example, if six 50 ft lengths of boom are set in cascade fashion and each requires 500 ft to 600 ft of line to cross the river and anchor the boom in place, then about 3600 ft of line will be needed for that location.

Site Strategy: The booming strategy is generally described, including placement of the upstream and downstream boom anchor points (using site landmarks if possible). The described boom deployment strategy is also depicted in the accompanying photograph of the site.

Comments: Important site attributes and disadvantages are identified. Other pertinent information about the site is noted.

USGS 7.5 min Quad.: Name and code number for the USGS topographic map.

Coordinates: Latitude and longitude of the site; for use with GPS navigation instruments.

Site 1: Tauhindauli River Park Dunsmuir

Site 1: Tauhindauli River Park Dunsmuir **Site Rank**: B

Directions to Site: I-5 Northbound Take the Central Dunsmuir exit. Turn left onto Dunsmuir Avenue. Travel ~0 .3 miles and turn left onto Stagecoach Road. Follow Stagecoach Road and park under freeway overpass.

Stream Width: 60 ft **Boom Required**: 250 ft (minimum)

Site Strategy: Flow through the park is fast and turbulent. At the down gradient end of the park is a river wide eddy which pushes the flow up onto bank at river left. Boom should be placed to use the eddy for product capture. Boom should be anchored high on river right above the eddy, in the boulders, using t-posts or trees as anchors, and should lay in a "J" along the lower edge of the eddy. The main river left anchor may require trees and t-posts. A vacuum truck for collection can be staged on the one lane access road on river left. The truck will be approximately 20 feet in elevation almost directly above the water surface.

Comments: Landmarks: Collection point is just down stream of the I-5 bridge. Attributes: Water flow in the eddy is calm and re-circulates. Drawbacks: there is no immediate access across the river at the park. Flow up-gradient is a class 2 rapid which will likely mix product through the water column Staging at the collection point is congested. Up-gradient there is sufficient staging area in the parking lot approximately 500 feet from the collection point.

USGS 7.5 min Quad: Dunsmuir (USGS Code: 41122-B3)

Coordinates: N 41.2206 ° W 122.2763 °

Site 2: Bridge at Dunsmuir Sewage Treatment Plant

Photo to be determined.

Site 2: Bridge at Dunsmuir Sewage Treatment Plant **Site Rank**: C

Directions to Site: From

Stream Width: 50 ft **Boom Required**: 250 ft (minimum)

Site Strategy: To Be Determined

Comments:

USGS 7.5 min Quad: Dunsmuir (USGS Code 41122-B3)

Coordinates: N 41.1842 ° W 122.2843 °

Site 3: Soda Creek

Site 3: Soda Creek **Site Rank**: A

Directions to Site: I-5 Northbound Take Soda Creek Road exit. Turn right on Soda Creek Road, go ~0.25 miles, cross railroad tracks and park on right before crossing the bridge.

Stream Width: 250 ft **Boom Required**: 1000 ft (minimum)

Site Strategy: At all water levels the flow at this site pushes the flow into a rock wall on river left immediately under the bridge. The boom should start at least 500 feet above the bridge and attempt to get as much product as possible into the eddy which naturally forms next to the rock wall. There are trees on both banks for anchors. The vac truck can park at the end of the bridge directly above the eddy where the product will naturally accumulate.

Comments: There is automatic rail-crossing infrastructure at this site, but if any collection is to be done at this site a railroad qualified flag man should be required. Vac trucks will be approximately 25 feet above the water level.

USGS 7.5 min Quad: Dunsmuir (USGS Code 4122-B3)

Coordinates: N 41.1609 ° W 122.2935 °

Site 4: Castle Crags State Park Picnic Area

Site 4: Castle Crags State Park Picnic Area **Site Rank**: B

Directions to Site: I-5 Northbound Take Castella exit. Turn right onto Castle Creek Road, turn left on Frontage Road. Follow Castle Crags State Park Picnic Area sign. Travel ~0.2 miles to Riverside Road, turn right. Take bridge over river, turn left after bridge, go ~0.3 miles and turn left at Castle Crags State Park Picnic Area sign.

Stream Width: 120ft **Boom Required**: 400 ft (minimum)

Site Strategy: This site will require a simple cascade from river right to the collection point in the picnic area at river left.

Comments: This is a narrow straight stretch of river with trees on both banks for anchors. Depending on water level some anchor trees may be several feet above the water. Access to river right is along a dirt frontage road which may not be near the river. The river banks may be steep. At high water the flow rate may be too high for effective recovery of floating product. Staging may be congested in the park due to trees. Bathrooms available. Vac trucks may be able to get within 50' of the collection point.

USGS 7.5 min Quad: Dunsmuir (USGS Code 41122-B3)

Coordinates: N 41.1495 ° W 122.3055 °

Site 5: Sims Flat Campground

Site 5: Sims Flat Campground **Site Rank**: A

Directions to Site: I-5 Northbound Take the Sims Flat exit and turn right on Sims Road and proceed down to the river. Cross rail and bridge, turn to right towards campground.

Stream Width: 200 ft **Boom Required**: 800 ft (minimum)

Site Strategy: A cascade boom strategy will be required. River hydrology and collection access require high anchor to be on river right. Each segment of boom can be adjusted from anchors (trees) on both banks. At low water the flow is slow enough that a "J" format may succeed

Comments: Easy access to both sides of river across vehicle bridge or foot bridge. There are many trees or t-posts can be used as anchors. There is significant space for staging, and available restrooms. Slow flat water with easy stream bank access and collection access. Use of this site will disrupt campers in summer. Site safety may require use of flag-persons when moving equipment and vehicles within the campground.

USGS 7.5 min Quad: Tombstone Mtn. (USGS Code 41122-A3)

Coordinates: N 41.0620 ° W 122.3607 °

Site 6: Pollard Flat Fishing Access

Site 6: Pollard Flat Fishing Access **Site Rank**: C

Directions to Site: I-5 Northbound Take the Pollard Flat exit. Turn right at the stop sign. Turn left on Eagle Roost Road. Take an immediate right at the sign for Pollard Flat Fishing Access, follow the narrow paved access road down to the river.

Stream Width: 60 ft **Boom Required**: 500 ft (minimum)

Site Strategy: Anchors on river left may be difficult and may require anchoring in the rock walls that form the very steep left bank in this area.

Comments: The access road is narrow and will require staging traffic coordination for incoming and outgoing vac trucks or other larger vehicles. Access to river left is across a rail road bridge that can be dangerous without rail safety escort. Water is very fast and collection may be difficult. Vac truck access is within 150 and trucks will be about 30 feet in elevation above the river.

USGS 7.5 min Quad: Lamoine (USGS Code: 40122-H4)

Coordinates: N 40.9961 ° W 122.4124 °

Site 7: Delta

Site 7: Delta **Site Rank**: C

Directions to Site: I-5 Northbound Take the Vollmers exit and go left on Dog Creek Road approximately 150 feet. Turn right onto Delta Road and descend to the river. Cross rail road tracks to river.

Stream Width: 120 to 150 ft **Boom Required**: 450 ft (minimum)

Site Strategy: This is a poor site but there is a large relatively calm pool at the bottom of the riffle along the rock wall. River right anchors are trees or T-posts on the sandy bank. A "J" shaped cascade may be able to bring product to river right where collection can be done.

Comments: River left is a steep rock wall which will be potentially very difficult to anchor to. Also, collection will need to be done as much as 200 feet from any parking for a vac truck, and the hose will need to cross the rail tracks. Electricity is available from the houses at Delta. There is limited staging along the one residential street, but equipment can circulate around the loop formed by the road.

USGS 7.5 min Quad: Lamoine (USGS Code: 40122-H4)

Coordinates: N 40.9440 ° W 122.4241 °

Site 8: Dog Creek Bridge

Site 8: Dog Creek Bridge **Site Rank**: B

Directions to Site: I-5 Northbound Take Vollmers exit. Turn left on Dog Creek Road/Delta Road, go under freeway. Travel ~0.3 miles and turn left on Fender Ferry Road. Travel approximately 1 mile down Fender Ferry Road, cross over rail road tracks to bridge. Check this wood and steel bridge for weight capacity before crossing any equipment.

Stream Width: 120 ft **Boom Required**: 600 ft (minimum)

Site Strategy: The most feasible strategy is to set a cascade from river left to river right. The river bends slightly to the left here. There are trees for anchors on both sides.

Comments: Vac trucks will be as much as 40 feet in elevation above the river. This site is feasible at low to moderate water levels and flow rates.

USGS 7.5 min Quad: Lamoine (USGS Code: 40122-H4)

Coordinates: N 40.9379° W 122.4188°

Site 9: Antlers Marina

Site 9: Antlers Marina **Site Rank**: B

Directions to Site: From

Stream Width: 200 ft **Boom Required**: 1000 ft (minimum)

Site Strategy: To Be Determined

Comments: The photo above was taken at high water, no boom illustrated. At a later date, another photo will be taken and the boom will be illustrated.

USGS 7.5 min Quad: Handland Peak (USGS Code: 40122-H3)

Coordinates: N 40.8941 ° W 122.3710 °

Site 10: Lakehead Exit Boat Ramp

Site 10: Lakehead Exit Boat Ramp **Site Rank**: A

Directions to Site: I-5 Northbound Take the Lakehead exit and turn right and right again to head south parallel to I-5 past the Shell station. Proceed approximately ½ mile to the lakehead boat ramp and parking lot. In winter (low lake level) conditions this is the first access where the river flow stops.

Stream Width: 600 ft **Boom Required**: 1200 to 1800 ft (minimum - at low water levels)

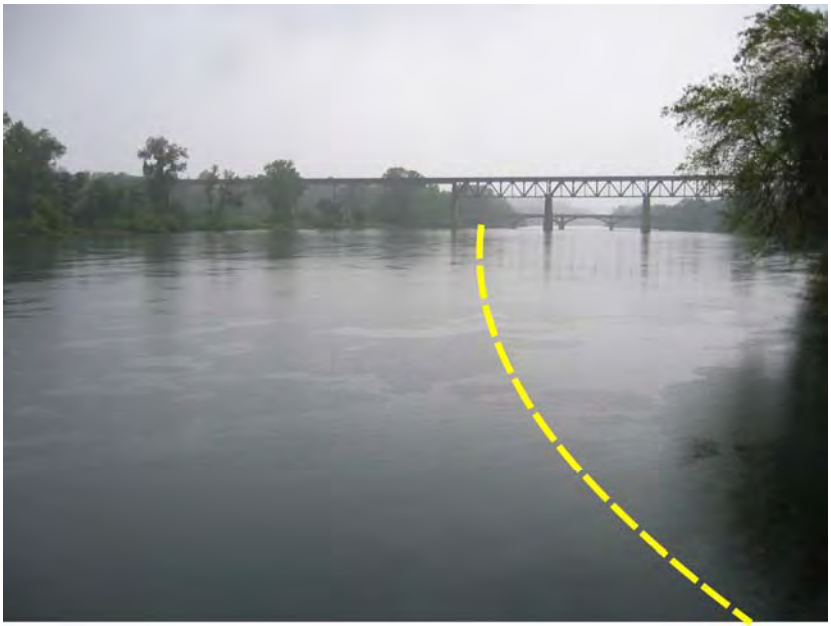
Site Strategy: This site is useful only at very low lake water levels. Water is low to zero flow at this point. A large "U" or "J" can be created and prevent product from moving out onto the lake. Anchors will depend on lake level, but T-posts can be used almost anywhere on the bank. Additionally a second lay of boom could be placed between the bridge columns down gradient of this photo.

Comments: Landmarks; I-5 bridge and boat ramp and parking lot Attributes: T-posts can be used as anchors on both sides. Significant vehicle parking in lot. Disadvantages: can be significant vertical distance between pavement and lake level making vacuum truck access questionable in certain conditions. Access to river left may be by boat only. At high water levels the first slack water will be several miles up gradient. At very low lake water levels the first slack water with road access will be below Antlers Marina. The photo above was taken at high water, no boom illustrated. At a later date, another photo will be taken and the boom will be illustrated.

USGS 7.5 min Quad: Lamoine (USGS Code: 40122-H4)

Coordinates: N 40.8843 ^{o} W 122.3800 ^{o}

Site 11: Redding Diversion Dam



Site 11: Redding Diversion Dam **Site Rank**: A

Directions to Site: I-5 Northbound Take the Cypress exit and go left under the freeway. Cross the river and proceed approximately 2 miles to the "T" intersection at Market Street. Turn right on Market Street and go approximately 0.7 miles to cross the river again. Immediately after crossing the river the second time turn left at Quartz Hill Road. Take the second left into Caldwell Park. The Diversion Dam is immediately next to the fish viewing area.

Stream Width: 500 ft **Boom Required**: 2000 ft (minimum)

Site Strategy: At high water the diversion dam offers no value as a boom site. In high water conditions the flat water area above the diversion dam may work up near the rail road bridge or the Benton Drive bridge immediately above the rail road bridge. Collection can be done at the boat ramp at the upstream part of Caldwell River Park.

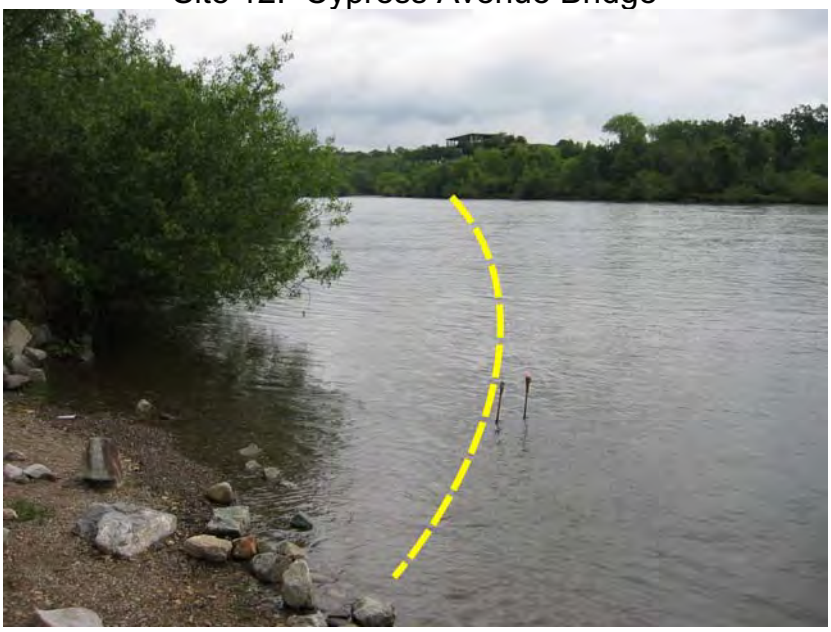
At low water the right bank is a large shallow rock cobble bank. The river is approximately 300 feet wide. The same collection scenario described for high water will work. Alternatively, at low water, as an interim measure, boom could be placed across the diversion dam very quickly. Collection would be inefficient in this situation, but might be possible at the fish ladder. Subsequently the deployment described above, could then be initiated for more efficient collection.

Comments: Electricity and bathrooms are available. The park has plenty of room for equipment staging, and this location has easy access to both sides of the river. Extreme caution should be used for any boats operating up river from the diversion dam. **The diversion dam could be very dangerous to any swimmer of boat without propulsion.**

USGS 7.5 min Quad: XXXXXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.5933 ^{o} W 122.3938 ^{o}

Site 12: Cypress Avenue Bridge



Site 12: Cypress Avenue Bridge **Site Rank**: B

Directions to Site: I-5 Northbound Take the Cypress Avenue exit and go left under the exit. Proceed approximately 0.7 miles to the bridge over the river.

Stream Width: 400 ft **Boom Required**: 1600 ft (minimum)

Site Strategy: Above the bridge collection could be accomplished with a cascade moving product to river right. Collection can be done from a turn out and drainage culvert discharge point immediately above the bridge on river right.

Comments: Access to the river for collection may be difficult. Traffic control will be required on both sides of the river.

USGS 7.5 min Quad: XXXXXXXX (USGS Code XXXXXXX)

Coordinates: N XXXXXX^{o} W XXXXXXX^{o}

Site 13: Bonneyview Boat Ramp

Site 13: Bonneyview Boat Ramp **Site Rank**: A+

Directions to Site: I-5 Northbound Take the Bonneyview exit and go left over the freeway approximately 0.3 miles to the bridge crossing the river. Turn left on Indianwood Road which is the first light after crossing the river.

Stream Width: 300ft **Boom Required**: 900 ft (minimum)

Site Strategy: Place a cascade to move the product to the boat ramp on river right. The surface velocity in this area appears to be low and flat regardless to the actual flow rate or time of year. The boom placement will likely need to start on river left slightly above the bridge. There are sufficient trees on each side for anchors. Vac trucks can easily get to the water level at the boat ramp.

Comments: This is possibly the best response site on the river below Shasta Dam. There is plenty of staging area in the boat ramp parking lot.

USGS 7.5 min Quad: XXXXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.5861 ^{o} W 122.3669 ^{o}

Site 14: Rafters Landing Anderson

Site 14: Rafters Landing **Site Rank**: A

Directions to Site: I-5 Southbound Take the Riverside exit and go left over the freeway. Drive 0.75 miles to the "T" intersection with North Street. Go left on North Street and drive 0.1 miles to the Rafters Landing Restaurant. Turn right into the restaurant parking lot immediately before the bridge.

Stream Width: 400 ft **Boom Required**: 1600 ft (minimum)

Site Strategy: Place boom cascade to move product to river right for collection either slightly above the bridge at the boat ramp. This will not allow for use of the bridge pillars as anchor points for intermediate segments of boom in the cascade. Alternatively, the bridge pillars can serve as anchors and then collection must occur from the right bank down river. T-post locations and trees are readily available for anchors.

Comments: This site provides excellent collection opportunity. Anchor points can be located on both banks and mid-river with use of the bridge pillars. Flow is reasonably slow. For collection below the bridge, access is through a small river front residential neighborhood. Vacuum truck turn around is possible in this area but will not be easy. It appears that river access through several yards is available. There is easy staging and equipment management area in the open field parking lot immediately inland from the rafters landing restaurant. Collection does not appear feasible on river left due to significant over growth and the lack of road access. Bathrooms and electricity are easily available. For collection above the bridge, there is an access ramp immediately up-gradient of the bridge on river right.

USGS 7.5 min Quad: XXXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.4713° W 122.2958°

Site 15: Anderson River Park

Photo to be determined.

Site 15: Anderson River Park **Site Rank**: B

Directions to Site:

Stream Width: 500 ft **Boom Required**: 2000 ft (minimum)

Site Strategy: Presumably a cascade will move product to river right. There is a steep boat ramp down to an eddy on river right which may serve as an adequate collection point. Anchors will need to be trees or t-posts. Water velocity should allow for reasonable boom performance.

Comments: The park affords easy staging, bathrooms and limited access to river right. Access to river left appears to be only by boat. The banks of river right are very steep and high and may also be by boat only in some locations. Down river from the boat ramp there is good river access.

USGS 7.5 min Quad: XXXXXXX (USGS Code XXXXXXX)

Coordinates: N XXXXXX^{o} W XXXXXXX^{o}

Site 16: Balls Ferry Bridge at Ash Creek Road

Site 16: Balls Ferry Bridge at Ash Creek Road **Site Rank**: A

Directions to Site: I-5 Southbound Take the Deschutes Road exit and go left on Deschutes Road. Proceed approximately 2 miles to Balls Ferry Road. Turn right on Balls Ferry Road. Drive 4 miles on Balls Ferry Road to the first left at Ash Creek Road. Turn left on Ash Creek and drive 1.5 miles to the river. Cross the bridge and turn right into the boat ramp/parking lot.

Stream Width: 500 ft **Boom Required**: 2500 ft (minimum)

Site Strategy: Boom cascades should move product to river left for collection. Bridge pillars can be used for anchors for middle sections of boom and the boom will need to start on river right somewhat above the bridge depending on water velocity. The river banks are very steep and high at this point. On river right above the bridge the bank consists of concrete rubble type rip rap and large flat pieces of concrete. T-post may be difficult here. At the top of the banks there are numerous large trees. Other than the steep banks access is good on both sides of the river.

Comments: Excellent staging and collection access on river left at the boat ramp and parking lot. Bathrooms are at the boat ramp and electricity is available at the general store/restaurant across Ash Creek Road from the boat ramp and parking lot. At some river levels there may be a river wide bar approximately 500 feet down river from the boat ramp. At certain water levels this could be potentially very dangerous if someone falls into the water. This feature should be carefully evaluated prior to site operations beginning.

USGS 7.5 min Quad: XXXXXXX (USGS Code XXXXXXX)
Coordinates: N 40.4180 ° W 122.1935 °

Site 17: Bend Bridge

Site 17: Bend Bridge **Site Rank**: A

Directions to Site: I-5 Southbound Take the Jellys Ferry exit. Go left under the freeway and proceed approximately 3.5 miles to Bend ferry road. Turn right on Bend Ferry Road and cross the river. Immediately after crossing the river take the first left into the parking lot for the Bend Bridge Park Boat Ramp.

Stream Width: 400 ft **Boom Required**: 1600 ft (minimum)

Site Strategy: Set boom in a cascade to move product from river right to the collection area at the boat ramp on river left. The river bend very slightly to the right below the bridge. The cement bridge posts can be used as anchors for middle boom segments. Boom on river right will need to start up-river from the bridge. There may be trees at river right for anchors. T-posts can also be used along the river bank in this area.

Comments: Good staging at the boat ramp and parking lot in the park at river left below the bridge. There is a large flat water area adjacent to the boat ramp for collection and vac trucks can easily get to the collection point. Vac trucks will be at the same elevation as the water. Bathrooms and electricity available in the parking lot. Good vehicle access to both side of the river. It appears that the river hydraulics should be fairly consistent at this site during different river flow rates.

USGS 7.5 min Quad: XXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.3178 ^{o} W 122.1894 ^{o}

Site 18: I-5 Bridge just North of Red Bluff

Site 18: I-5 Bridge just North of Red Bluff **Site Rank**: C

Directions to Site: I-5 Southbound Take the Antelope exit, go right towards downtown Red Bluff. Take the second right off Antelope onto East Road. At the end of East Road turn right and drive to the Shari's Restaurant Back parking lot. From this lot take the dirt road along I-5 towards the river.

Stream Width: 300 ft **Boom Required**: 1200 ft (minimum)

Site Strategy: This is a poor site due to the water velocity and the potential lack of easy road access to river right. There are several concrete bridge pillars closely spaced which may allow for some product recovery. Vacuum trucks could potentially collect at the southwest underside of the bridge where there is some vehicle river access. However this is a single lane dirt road which may severely complicated maneuvering equipment. One option may be to used the river pillars as anchors and deploy all boom segments down river from the bridge. This will require some river access for collection down gradient from the bridge.

Comments: The river banks are steep at this point with rip rap along the river edge. Anchors may be available but not easy on the river bank

USGS 7.5 min Quad: XXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.1864 ° W 122.2291 °

Site 19: Red Bluff River Park below Bridge

Site 19: Red Bluff River Park below Bridge **Site Rank**: A

Directions to Site: I-5 Southbound Take the Antelope exit and go right towards downtown Red Bluff. Immediately after crossing the bridge over the river turn left on Rio Road. At the dead end turn left to the river park.

Stream Width: 200 ft **Boom Required**: 600 ft (minimum)

Site Strategy: This site has very slow flat water which should allow for very good product recovery. Excellent staging and access in the river park on river right. Access on river left will be through numerous residential river front private properties. There are some trees, and the most likely anchors will be t-posts set in the sediment and sands along the river bank. The bridge and bridge pillars immediately up river from the park may be useful as anchors also, but this could be inconvenient because the bridge is several hundred feet from the easily accessed river park.

Comments: Bathrooms, staging, easy vehicle access and electricity make this park an ideal collection point. Crowd control could be a significant concern and obstacle to an efficient response.

USGS 7.5 min Quad: XXXXXXX (USGS Code XXXXXXX)
Coordinates: N 40.1745 ^{o} W 122.2287 ^{o}

Site 20: South I-5 Bridge in Red Bluff at the Sewage Treatment Plant

Photo to be determined.

Site 20: South I-5 Bridge in Red Bluff at the Sewage Treatment Plant
Site Rank: A

Directions to Site: I-5 Southbound
Stream Width: 350 ft **Boom Required**: 1500 ft (minimum)

Site Strategy: Depending of water level strategies may vary. At low water levels, boom cascades can move product to river left for collection due to easy river bank access for vacuum trucks. At high water collection trucks on river right will be twenty feet or more in elevation above the water level. The bridge pillars can serve a boom anchors. The river appears to make a gentle bend to the left here which will facilitate product collection on the right bank.

Comments: For high water recovery there is easy river access from the frontage road under the bridge on river right. There is a large field on river right adjacent to the sewage treatment plant for staging.

USGS 7.5 min Quad: XXXXXX (USGS Code XXXXX)
Coordinates: N 40.1669 ^{o} W 122.2215 ^{o}

Site 21: Red Bluff Diversion Dam

Site 21: Red Bluff Diversion Dam **Site Rank**: C

Directions to Site: I-5 Southbound take the Antelope exit and go left over the freeway. Just past the McDonalds take the first right at the light on Sale Lane. Continue approximately 2.7 miles to the Red Bluff Diversion Dam

Stream Width: 500 ft **Boom Required**: 600 ft (minimum)

Site Strategy: Due to the diversion dam itself this is a poor location for collection. There is a fish ladder on river left. While the diversion structure might be a very effective barrier to down flow of product, and collection could be very easy within the diversion canal, decontamination of the diversion structure would be prohibitively expensive. This site is included in the list of boom sites in order to highlight the critical objective of preventing product from reaching this facility. Every effort must be made to collect or divert floating product at any point up river from the Red Bluff Diversion Dam.

Comments: There are several very good collection locations within 0.5 river miles up river from the Diversion Dam. Due to the cost of decontaminating the dam itself it would seem preferable to locate collection above the dam. If there is not sufficient time the dam gates could be located just below the water level to prevent further down river migration of floating product. Collection of product stopped by the dam could be difficult. If product does reach the dam the structure could be decontaminated with pressure washers aboard small power boats.

USGS 7.5 min Quad: XXXXXXX (USGS Code XXXXXXX)

Coordinates: N 40.1532 ^{o} W 122.2024 ^{o}

Plan Overview

Purpose

1. The Upper Sacramento River Geographic Response Plan (USRGRP) establishes the policies, responsibilities, and procedures required to protect the health and safety of the populace, the environment, and public and private property from the effects of hazardous materials incidents.

2. This plan establishes the emergency response organization for hazardous materials incidents occurring within the Upper Sacramento River watershed area from the Box Canyon Dam on Siskiyou Lake to the Red Bluff Diversion.

3. The USRGRP is the principal guide for agencies within the Upper Sacramento River watershed area, its incorporated cities, and other local government entities in mitigating hazardous materials emergencies. This plan is consistent with federal, state and local laws and is intended to facilitate multi-agency and multi-jurisdictional coordination, particularly between local, state, and federal agencies, in hazardous materials emergencies.

4. This plan is an operational plan as well as a reference document. It may be used for pre-emergency planning and emergency response. Agencies having roles and responsibilities established by this plan are encouraged to develop standard operating procedures (SOPs) and emergency response checklists based on the provisions of this plan.

Plan Objectives

1. Describe the overall emergency response organization for hazardous materials incidents occurring within the Upper Sacramento River response area.

2. Delineate the responsibilities of local, state, and federal agencies in the event of a hazardous materials incident within the Upper Sacramento River response area.

3. Establish lines of authority and coordination for hazardous materials incidents.

4. Facilitate mutual aid to supplement local resources.

5. Describe procedures for accessing outside funding (e.g., state and federal funding) for the mitigation of, and recovery from, hazardous materials incidents.

Incident Objectives

For emergency response personnel to evaluate hazardous materials and take appropriate emergency actions in order to save lives, reduce injuries, and prevent or minimize damage to the environment and property, the following actions should be taken:

1. Securing the *affected* area, isolating the hazard, and denying the entry of unauthorized persons into the area.

2. Identification of the hazardous material.

3. Providing rapid and effective warning, information, and instructions to threatened populations.

4. Providing means to access technical resources to stabilize the affected area and return to normal conditions as quickly as possible.

5. Train and equip emergency response personnel (hazmat team members as well as first responders) to efficiently and effectively mitigate hazardous materials incidents.

Upper Sacramento River Basin – General Information

Introduction to the Sacramento River

Taken from National Water-Quality Assessment Program, Sacramento River Basin NAWQA Fact Sheet 94-029 (http://ca.water.usgs.gov/archive/reports/fs94029/)

The Sacramento River Basin covers nearly 27,000 square miles. The basin includes all or parts of five physiographic provinces: the Sacramento Valley, the Sierra Nevada, the Coast Ranges, the Cascade Range, and the Modoc Plateau. The Sacramento River is the largest river in California, with an average annual runoff of 22,000,000 acre-feet. This is approximately one third of the total runoff in the State. The length of the Sacramento River is 327 miles (unknown if this is the correct miles). The river is vital to the State's economy and is a major source of drinking water for residents of northern and southern California. The Sacramento River is a principal source of irrigation water for Sacramento and San Joaquin Valley farmers and freshwater flow to the San Francisco Bay.

Water use in the basin was 11.6 million acre-feet in 1990, and this amount is expected to rise to 12.4 million acre-feet by the year 2020. Water use in 1990 was 58-percent agricultural, 32-percent environmental, 6-percent urban, and 4-percent other. Up to about 6 million acre-feet per year of water also is exported from the basin, principally to areas in southern California, by local, State, and Federal conveyance facilities. The flows of the Sacramento River are controlled mainly by Shasta Dam and, to a lesser extent, by dams on the Feather, Yuba, and American Rivers. Part of the runoff from winter rains and spring snowmelt is stored in reservoirs and released during the normally dry summer months. Most of the water supplies are derived from these reservoirs.

USRGRP
Resource Matrix

	Specialized Personnel													Technical Advice/Information/Duties														Equipment/Cleanup												Modeling						Sampling/Measuring/Analyses								
	Public nformation Officer (P O)	Special nvestigator for Hazmat crimes	Hazmat incident commander	Health officer	Emergency management coordinator	Law enforcement personnel	Toxicologist	Wildlife Biologist	Fisheries Biologist	ndustrial hygienist	Aquatic Toxicologist	Site safety	Public education	Water treatment of drinking water	Technician/specialist response team	Emergency notifications	Declare health emergencies	Directives to responsible parties	Declare area safe	Environmental fate assessment	Technical and regulatory advice	dentify sensitive habitats	PRP oversight	G S/mapping	Response Planning Operations	Other - Decontamination	Provide environmental cleanup	Water treatment	Cleanup technology assessment	Booms and adsorbent materials	SCBAs rescue equipment	Aerial photographs	Vehicles	Air support	Emergency Lighting	Other	Flow modeling	River model to estimate impact	Technical reference library	CAMEO/TOMES	Environmental fate	Toxicological modeling	Laboratory analyses	Water supply sampling	Streamflow measurement	Groundwater measurement	Hazard materials categorization	Water Quality Sampling/Analysis	Sediment Data Collection	Soil sampling	Biota Collection
Federal																																																	
National Weather Bureau																																																	
National Park Service																																																	
U.S. Coast Guard																																																	
U.S. EPA	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U.S. F&WS																																																	
USFS Shasta Trinity National Forest	X					X		X	X				X								X	X		X	X						X	X	X															
USGS																																																	
U.S. BOI Water Master																																																	
State of California																																																	
CDF Shasta/Trinity Unit	X		X			X						X	X		X	X					X			X	X					X	X	X	X	X	X		X		X	X				X				
CDF Siskiyou Unit																																																	
CalEPA/DTSC	X	X	X		X		X			X			X			X		X	X	X	X		X				X		X		X		X				X	X	X	X	X	X		X				
CHP	X		X			X				X		X	X		X	X		X	X		X		X	X	X				X			X	X	X								X		X				
Caltrans District 2	X											X				X						X		X			X			X			X						X				X						
CalTrans D. Johnson	X	X	X									X				X						X		X	X		X					X		X						X				X						
California Deptment of Fish and Game	X		X			X		X	X	X	X	X	X		X	X		X	X		X	X	X	X	X		X		X	X		X	X	X			X		X		X	X		X	X		X	X
California National Guard	X																																X	X	X														
California Office of Emergency Services	X				X	X	X						X			X		X			X			X	X													X	X										
Central Valley RWQCB (Shasta County)																		X			X																								X		X		
North Coast RWQCB (Siskiyou County)																																																	
Shasta County																																																	
County Health																																																	
County OES																																																	
County Sheriff																																																	
County Fire Department	X		X			X						X	X		X	X					X			X	X					X	X	X	X	X	X		X		X	X				X				
Shasta Cascade Hazmat Response Team	X		X			X						X	X		X	X					X			X	X					X	X	X	X	X	X		X		X	X				X				
Siskiyou County	X			X									X	X		X	X		X		X			X														X							X		X	
County Health																																																	
County OES																																																	

USRGRP
Resource Matrix

	Specialized Personnel													Technical Advice/Information/Duties														Equipment/Cleanup											Modeling						Sampling/Measuring/Analyses								
	Public nformation Officer (P O)	Special nvestigator for Hazmat crimes	Hazmat incident commander	Health officer	Emergency management coordinator	Law enforcement personnel	Toxicologist	Wildlife Biologist	Fisheries Biologist	ndustrial hygienist	Aquatic Toxicologist	Site safety		Public education	Water treatment of drinking water	Technician/specialist response team	Emergency notifications	Declare health emergencies	Directives to responsible parties	Declare area safe	Environmental fate assessment	Technical and regulatory advice	dentify sensitive habitats	PRP oversight	G S/mapping	Response Planning Operations	Other - Decontamination		Provide environmental cleanup	Water treatment	Cleanup technology assessment	Booms and adsorbent materials	SCBAs rescue equipment	Aerial photographs	Vehicles	Air support	Emergency Lighting	Other		Flow modeling	River model to estimate impact	Technical reference library	CAMEO/TOMES	Environmental fate	Toxicological modeling		Laboratory analyses	Water supply sampling	Streamflow measurement	Groundwater measurement	Hazard materials categorization	Water Quality Sampling/Analysis	Sediment Data Collection	Soil sampling	Biota Collection
County Sheriff																																																			
Shasta Cascade Hazmat Response Team																																																			
Tehama County																																																			
County Health																																																			
County OES																																																			
County Sheriff																																																			
City of Dunsmuir																																																			
Dunsmuir Fire Department																																																			
Law Enforcement																																																			
Public Works																																																			
City of Red Bluff																																																			
Red Bluff Fire Department																																																			
Law Enforcement																																																			
Public Works																																																			
City of Redding																																																			
Redding Fire Department	X		X		X									X			X								X	X				X				X	X																
Law Enforcement																																																			
Municipal Utilities															X	X					X					X					X		X		X	AH							X	X		X		X		X	
Development Services																								X																											
City of Shasta Lake																																																			
Shasta Lake Fire Protection District																X																X		X	X	X														
Law Enforcement																																																			
Public Works																																																			
City of Mount Shasta																																																			
Mount Shasta Fire Department																																																			
Mount Shasta Police Department																																																			
Public Works																																																			
Utilities																																																			
Shasta Dam PUD																																																			
Shasta County Water Agency																																																			

USRGRP
Resource Matrix

	Specialized Personnel													Technical Advice/Information/Duties														Equipment/Cleanup												Modeling						Sampling/Measuring/Analyses								
	Public nformation Officer (P O)	Special nvestigator for Hazmat crimes	Hazmat incident commander	Health officer	Emergency management coordinator	Law enforcement personnel	Toxicologist	Wildlife Biologist	Fisheries Biologist	ndustrial hygienist	Aquatic Toxicologist	Site safety	Public education	Water treatment of drinking water	Technician/specialist response team	Emergency notifications	Declare health emergencies	Directives to responsible parties	Declare area safe	Environmental fate assessment	Technical and regulatory advice	dentify sensitive habitats	PRP oversight	G S/mapping	Response Planning Operations	Other - Decontamination	Provide environmental cleanup	Water treatment	Cleanup technology assessment	Booms and adsorbent materials	SCBAs rescue equipment	Aerial photographs	Vehicles	Air support	Emergency Lighting	Other	Flow modeling	River model to estimate impact	Technical reference library	CAMEO/TOMES	Environmental fate	Toxicological modeling	Laboratory analyses	Water supply sampling	Streamflow measurement	Groundwater measurement	Hazard materials categorization	Water Quality Sampling/Analysis	Sediment Data Collection	Soil sampling	Biota Collection
Shasta Lake Electric Department																																																	
PG&E																																																	
Volunteer Organizations																																																	
American Red Cross																																																	
Salvation Army																																																	
Private Sector																																																	
Pacificorp: Pacific Power																																																	
Union Pacific Railroad	X		X	X	X	X	X								X	X			X	X	X	X					X	X	X	X			X		H						X	X		X	X				

A=Message Boards, High Pressure Cleaners

H=Heavy Equipment

Roles and Responsibilities

Local Government Agencies

Fire Departments

Local fire departments provide incident support for the incident commander. The fire department works within the incident command system as needed for fire suppression and/or rescue activities. Fire departments also function to provide emergency decontamination, treatment, and transportation of patients injured as a result of a hazardous materials incident.

Local Emergency Planning Committees (LEPC)

The LEPCs provides a regional oversight to hazardous materials response planning. These plans include local oil and hazardous materials response. The LEPCs recommendations are discharged through the Administering Agencies.

Public and Environmental Health Services (EH)

Environmental health is designated as the administering agency in California. Duties include identification of product, approval of cleanup, public notification, and determining when an event is ”clean” and safe for public reentry. EH is responsible to contact CalEPA—Department of Toxic Substance Control to access California superfund monies for clean up operations.

County Sheriff’s Offices / Town Police Department (LE)

Law enforcement is designated by the area plan as the incident commander for off- highway areas including county and private properties. LE is responsible for overall scene management, resource coordination, and resource management.

Office of Emergency Services (OES)

OES assists the incident commander with coordination of resources at incidents that involve multiple agencies, including local, state, and federal. OES also assists the incident Information Officer to ensure timely and accurate information is disseminated to the public.

County / Town Public Works Department (PW)

Public Works is responsible to clean up spills occurring on roadways maintained by their agency when the responsible party is unknown or unable to pay for clean up.

Shasta-Cascade Hazardous Materials Response Team (SCHMRT)

The SCHMRT has been created to provide specialized technical assistance at the scene of hazardous materials incidents within the counties of Lassen, Modoc, Shasta, Siskiyou, Tehama, and Trinity. SCHMRT is a multi-agency, multi-jurisdictional team, consisting of representatives from agencies throughout the six county area and based in Shasta County. Participating agencies include:

- CDF/Shasta County Fire Department
- CDF/Tehama County Fire Department
- Red Bluff Fire Department
- Redding Fire Department
- Anderson Fire Protection District
- Shasta College Fire Department

SCHMRT is a Call-When-Needed resource, subject to personnel availability, for serious and significant hazardous materials emergencies.

Upon determination by qualified personnel with the legal scene management authority that a serious and significant hazardous materials emergency exists and the incident exceeds the capabilities of the initial responders, SCHMRT is available upon request to provide technical
services including:

- Determination of hazard class, product identification, quantity of material released, and possibilities of contamination.
- Determination of the immediate exposure problem and the threat to life safety and environment.
- Establishment of site safety zones and plans.
- Mitigation efforts to contain and control product release.
- Emergency decontamination.
- Advice on product cleanup.

SCHMRT will not be responsible to engage in cleanup, removal, transportation or storage of hazardous materials and will not circumvent the responsibilities of licensed waste haulers or existing state and federal laws regarding cleanup and abatement.

SCHMRT will aggressively pursue all legally recoverable costs associated with responses to hazardous materials incidents from those persons and entities responsible for the incident.

State of California

Governor's Office of Emergency Services (OES)

OES is the designated state agency responsible for coordinating the mitigation, preparedness, response, and recovery activities related to all disasters in California. To facilitate coordination of emergency response resources, OES operates the central notification and reporting system for the State of California, through the OES Warning Center. Once the Warning Center receives a warning or notification of a hazardous materials incident, the on-duty Warning Center coordinator will then make the appropriate notifications (via fax, phone, and/or pager) to local, state, and federal agencies. OES coordinates mutual aid within the state and operates both the regional and state emergency operations centers. OES is delegated substantial emergency duties under the California Emergency Services Act.

When off-highway spills of hazardous substance impact human health and safety as the primary concern OES will assume the role of State On-Scene Coordinator (SOSC), as designated in the California Government Code section (CGC) §8574.17. During these off-highway incidents the California Department of Fish and Game, Office of Spill Prevention and Response (DFG-OSPR) may function in a support capacity for wildlife issues in order to assist the lead agency or SOSC.

California Department of Fish and Game (DFG)

DFG is the law enforcement agency charged to preserve, protect, and enhance the state's fish, wildlife, and their habitat (Fish and Game Code, Sec. 711.7). Because of this responsibility, and because polluting the environment of fish or wildlife or their habitat is a criminal offense (Fish and Game Code, Sec. 5650), DFG has traditionally accepted the role of lead state agency at off-highway spills whenever fish, wildlife, and/or their habitat are threatened or injured by a spill of oil, hazardous substance, or other deleterious material. When a hazardous substance spill is no longer a threat to public safety, but continues to pose a threat to fish or wildlife or the habitat, DFG may assume the lead state role as SOSC for the remainder of the clean up.

California Highway Patrol

CHP is the designated state agency responsible to function as the Incident Commander or part of the Unified Command for all hazardous materials incidents that occur on all state highways and freeways, as designated in California Vehicle Code § 2454. In addition, CHP is also the Incident Commander at all hazardous materials incidents that occur on county roads. In situations where another agency first becomes aware of an incident within CHP jurisdiction, the CHP shall be notified and provided with emergency information to ensure a safe response.

California Environmental Protection Agency (Cal/EPA)

Cal/EPA is the umbrella agency designated to oversee the following Boards, Departments, and Offices:

- *California Air Resources Board (ARB)*
  ARB is the designated state agency responsible to protect and enhance the ambient air quality of the state. The ARB fulfills this responsibility through local and regional air pollution control authorities. Notification to the ARB is required for hazardous materials incidents that threaten to adversely affect air quality.

- *California Department of Pesticide Regulation (DPR)*
  DPR is the designated state agency responsible for regulating the registration, sale, and use of agricultural chemicals (including pesticides, fertilizers, and livestock drugs) prior to entering the waste stream.

- *California Department of Toxic Substance Control (DTSC)*
  DTSC is the designated state agency responsible for providing executive management and control of the State's Substance Toxic Control Program and is the lead for the handling, storage, treatment, and disposal of hazardous wastes. In addition, DTSC coordinates emergency funding for off-highway emergency response incidents, clandestine drug lab cleanups (including abandoned hazardous wastes resulting from these labs), and oversees the cleanup of sites contaminated with hazardous substances.

- *California Integrated Waste Management Board (IWMB)*
  IWMB is the designated state agency responsible for overseeing municipal solid waste landfills, other non-hazardous waste or recycling facilities, used oil and household hazardous waste facilities, and waste tire facilities.

- *Office of Environmental Health Hazard Assessment (OEHHA)*
  OEHHA is the designated state agency responsible to assess health effects and characterize risk to public health and the environment from toxic chemical releases in the environment.

- *State Water Resources Control Board (SWRCB)*
  SWRCB is the designated state agency responsible to protect the state's surface, coastal, and ground water resources. This involves a proactive role in providing technical assistance in evaluating the potential impact of hazardous materials spills to water resources. In addition, SWRCB issues cleanup and abatement or cease and desist orders to responsible parties, assesses fines, and pursues recovery of costs for abatement, mitigation, or contract cleanup.

  There are nine Regional Water Quality Control Boards (RWQCB), one located in each of the nine major watersheds of the state. Regional Water Quality Control

Boards develop basin plans, issue waste discharge requirements, take enforcement action against violators, and monitor water quality. They carry out state and federal law and are guided by policies established by the State Water Resources Control Board. The Central Valley Regional Water Quality Control Board serves the Upper Sacramento River area.

California Department of Forestry and Fire Protection (CDF)

The California Department of Forestry and the State Fire Marshal have consolidated into the California Department of Forestry and Fire Protection (CDF) protects the people of California from fires, responds to emergencies, protects and enhances forest, range, and watershed values, providing social, economic, and environmental benefits to rural and urban citizens. CDF performs fire protection suppression and prevention duties for about 30 million acres of wildland in the state. In addition to their state responsibilities, CDF may provide fire service to some local jurisdictions under contract. In such cases, CDF carries out the responsibilities of local fire suppression agencies as they relate to hazardous materials incidents.

The State Fire Marshal's Office was consolidated into CDF as mentioned above, which includes all the Fire Marshal's resources and responsibilities including oversight responsibilities for pipelines within the state of California.

California Department of Health Services (CDHS)

CDHS is the designated state agency responsible to protect public health from the effects of hazardous and radioactive materials. CDHS has statutory responsibility for the regulation of public water systems to ensure that drinking water is safe, wholesome, and potable. In the event of a hazardous materials spill or threatened release which affects a public water system or source of drinking water such as a lake, river, or aqueduct, the Drinking Water Field Operations Branch within CDHS will work with the water utility to prevent contamination of the system. Notification is required for radioactive material incidents; releases involving a public water system or drinking water source; releases affecting a food, drug, medical device, cosmetic, or bottled water manufacturer or wholesaler; or significant releases affecting a large population or involving deaths, serious injuries, evacuations or in-place sheltering.

California Department of Parks and Recreation (DP&R)

DP&R is the designated state agency responsible for the administration of State Parks, and for the safety and well being of the public and employees using the state parks system.

California Department of Transportation (CalTrans)

CalTrans is the designated state agency responsible for planning, designing, constructing, operating, and maintaining the state highway system. In coordination with

other response agencies they ensure proper cleanup and restoration of the highway within its rights-of-way. CalTrans is responsible to determine the degree and type of maintenance required to restore the flow of traffic while protecting the health, safety, convenience, and welfare of the general public. It should also be noted that CalTrans determines when the roadway is re-opened.

California Department of Water Resources (DWR)

DWR is the designated state agency responsible to protect the operation and water quality of the State Water Project. This includes providing water of a quality that can be used for agricultural, recreational, municipal, and industrial purposes. Activities supporting this responsibility include protection of State Water Project facilities and flood control facilities. Notification to DWR is required when an incident threatens to contaminate or otherwise disrupt the operation of the State Water Project and its man-made and natural conveyance facilities or if a significant release of a hazardous substance occurs into the San Joaquin Delta.

California National Guard (CNG)

CNG is a state military agency that provides support to fire and law enforcement operations, aviation, general transportation, and other support for emergency operations. In the event of a major hazardous materials incident, the CNG can provide many resources and support functions. In addition, the CNG has Weapons of Mass Destruction Civil Support Teams (CST). The CSTs are designed to support local incident commanders and local emergency first responders 24 hours a day, seven days per week for any weapons of mass destruction terrorist event. The team assesses the situation, advises civilian authorities on appropriate actions, and provides assistance to expedite the arrival of additional state and federal resources.

California Occupational Safety and Health Administration (Cal/OSHA)

Cal/OSHA is the designated state agency responsible to prevent and regulate occupational exposures and injuries in the workplace. Cal/OSHA also administers the Process Safety Management Program (which is closely aligned with the CalARP program). Regulations regarding worker health and safety at hazardous materials incidents are contained in 8 CCR 5192. Cal/OSHA has the capability to evaluate the adequacy of health and safety plans designed to protect employees from exposure to hazardous materials during hazardous materials response and recovery operations.

California Public Utilities Commission (CPUC)

The Railroad Operations and Safety Branch of the CPUC have responsibility and authority for investigation of railroad accidents. This includes those incidents involving hazardous materials. It performs railroad safety oversight of daily operations and inspections of new and existing facilities for compliance with the PUC General Orders and with 49 CFR.

California State Lands Commission (SLC)

SLC acting as trustee for the people of California holds and manages all sovereign lands of the state. These lands include the beds of more than 30 navigable rivers, 40 navigable lakes, and submerged land adjacent to the coast and offshore islands of the state from the mean high tide line to three nautical miles offshore. Additionally, SLC manages more than 500,000 acres of "school lands" and exercises general oversight authority on granted lands. SLC has specific statutory jurisdiction over the operation of marine oil terminals located in the state, as well as trustee responsibility at other marine facilities on lands leased from the state.

Emergency Medical Services Authority (EMSA)

EMSA is the designated state agency responsible for planning and coordinating the state's medical response to disasters. At the request of the impacted jurisdiction, EMSA can arrange for emergency procurement and distribution of medical supplies. In conjunction with the affected medical associations, EMSA develops general guidelines for the triage and handling of contaminated/exposed patients. Notification is required when a significant number of human exposures, any evacuation, or when a chemical fire or vapor cloud has occurred or is expected to occur.

Federal Government

U.S. Environmental Protection Agency (USEPA)

The USEPA has ten regional offices throughout the Nation. California and Nevada are within the boundaries of EPA Region IX. The USEPA is the primary federal agency involved in a hazardous materials emergency response.

The USEPA ensures that a timely and effective response is made to control and remove the discharge of oil or hazardous materials in the inland zones. The USEPA will assign the Federal On-Scene Coordinator (FOSC) in the event of a discharge into the inland zone, and can request activation of the USCG Pacific Strike Team.

The FOSCs in the USEPA Region IX Emergency Response Section can be contracted through the 24-hour emergency hazardous materials spill phone line at (800) 300-2193.

Depending on the site location, the FOSC could potentially be on-site in approximately four hours. A support staff consisting of members of the Superfund Technical Assessment and Response Team (START) and the Pacific Strike Team would accompany the FOSC. Additional emergency response resources, manpower, and equipment would be mobilized as necessary. Upon arrival on-site, the USEPA response organization can be integrated into the ICS command structure.

The START contract is designed to provide the FOSC with a broad range of technical support services for oil and chemical releases. The START maintains field offices in San Francisco and Los Angeles that are dedicated to the USEPA emergency response operations. Professional disciplines include chemistry, geology, biology, hydrogeology, soil science, environmental engineering, and industrial hygiene. Team capabilities include full media sampling, air monitoring, field and laboratory analysis, data management, quality assurance, health and safety, and other aspects of emergency response operations.

The USCG Pacific Strike Team (PST) is a very specialized unit within the Coast Guard whose mission is to prepare for, and response to oil and other chemical emergencies. The highly trained members of the PST maintain and deploy specialized equipment in support of the FOSC in response to inland spills. The PST will provide assistance in response planning and logistics, spill response techniques, medical monitoring, cost documentation, and operations oversight.

Actual cleanups are directed by the FOSC and performed by companies contracted through EPA's Emergency Rapid Response Services (ERRS). The ERRS contractor arranges for transfer of waste to the appropriate facilities and/or explores treatment options for hazardous and non-hazardous materials in a response.

U.S. Department of Homeland Security – U.S. Coast Guard (USCG)

The USCG administers the National Oil Pollution Fund. This fund can be accessed by FOSCs to respond to and mitigate oil spills. States may be reimbursed from this fund for reasonable costs incurred during oil spill removals.

U.S. Department of Energy (USDOE)

The USDOE can be contacted for assistance involving radioactive materials through the California Department of Health Services Radiological Health Branch, through the National Response Center (800) 424-8802, or directly contacting the DOE Radiological Assistance Coordinating Officer. The USDOE can provide advice and assistance in identifying sources and extent of radioactive contamination. They can also remove and dispose of radioactive materials.

U.S. Department of Health and Human Services – Agency for Toxic Substances and Disease Registry (ATSDR)

The ATSDR provides leadership and direction to programs and activities designed to protect both the public and workers from exposure and/or the adverse health effects of hazardous substances in storage sites or released in fires, explosions, or transportation accidents.

U.S. Department of Agriculture – Forest Service (USFS)

The USFS has responsibility for protection and management of national forests and grasslands. The USFS has personnel, laboratory, and field capacity to measure, evaluate, monitor, and control as needed, releases of pesticides and hazardous substances on lands under its jurisdiction. The USFS will respond to hazardous materials incidents and oil spills within the boundaries of the National Forest with available equipment and personnel as necessary when notified of such incidents.

U.S. Department of Defense (USDOD)

The USDOD provides the FOSC with information regarding releases of hazardous substances, pollutants, or contaminants from USDOD vehicles or rail cars. The U.S. Army Corps of Engineers and the U.S. Army's Explosives Ordnance Detachments are two USDOD organizations, which under some circumstances may provide the most relevant assistance to the Upper Sacramento River area.

U.S. Department of Interior (USDOI)

The USDOI has stewardship responsibility for most of the nationally owned public lands and natural resources. The Bureaus of the USDOI include:

- *National Parks Service*
- *U.S. Fish and Wildlife Service*
- *Bureau of Indian Affairs*
- *Bureau of Land Management*
- *Minerals Management Service*
- *U.S. Geological Survey*
- *Office of Surface Mining*
- *Bureau of Reclamation*

U.S. Department of Justice – Environment and Natural Resources Division

The Environment and Natural Resources Division is responsible for litigating significant cases ranging from protection of endangered species to cleaning up the Nation's hazardous waste sites.

U.S. Department of Labor – Occupational Safety and Health Administration (OSHA)

OSHA can provide advise, guidance, and assistance regarding hazards to persons involved in removal or control of oil discharges or releases of hazardous substances. OSHA is also responsible for the enforcement of worker health and safety regulations.

U.S. Department of Transportation (USDOT)

The USDOT includes:

- *Federal Aviation Administration*
- *Federal Highway Administration*
- *Federal Railroad Administration (FRA)*
  The FRA promulgates and enforces rail safety regulations, administers railroad assistance programs, and conducts research and development in support of improving railroad safety and national rail transportation policies.
- *National Highway Traffic Safety Administration*
- *Federal Transit Administration*
- *Saint Lawrence Seaway Development Corporation*
- *Maritime Administration*
- *Research and Special Programs Administration (RSPA)*
  The RSPA is responsible for hazardous materials transportation research and development activities, and for collection and dissemination of air carrier economic data. The Office of Hazardous Materials Safety develops and issues regulations for the safe transportation of hazardous materials by all modes, excluding bulk transportation by water.
- *Bureau of Transportation Statistics*

Federal Bureau of Investigation (FBI)

The FBI is the lead agency for sites involving counter-terrorism activities. In addition, the FBI would be responsible for a site involving weapons of mass destruction including nuclear, biological, and chemical weapons.

Federal Emergency Management Agency (FEMA)

FEMA is responsible for administering the Federal Disaster Assistance Program in affected areas after the declaration of an emergency or a major disaster. Such a declaration must be requested by the Governor of the State and declared by the President.

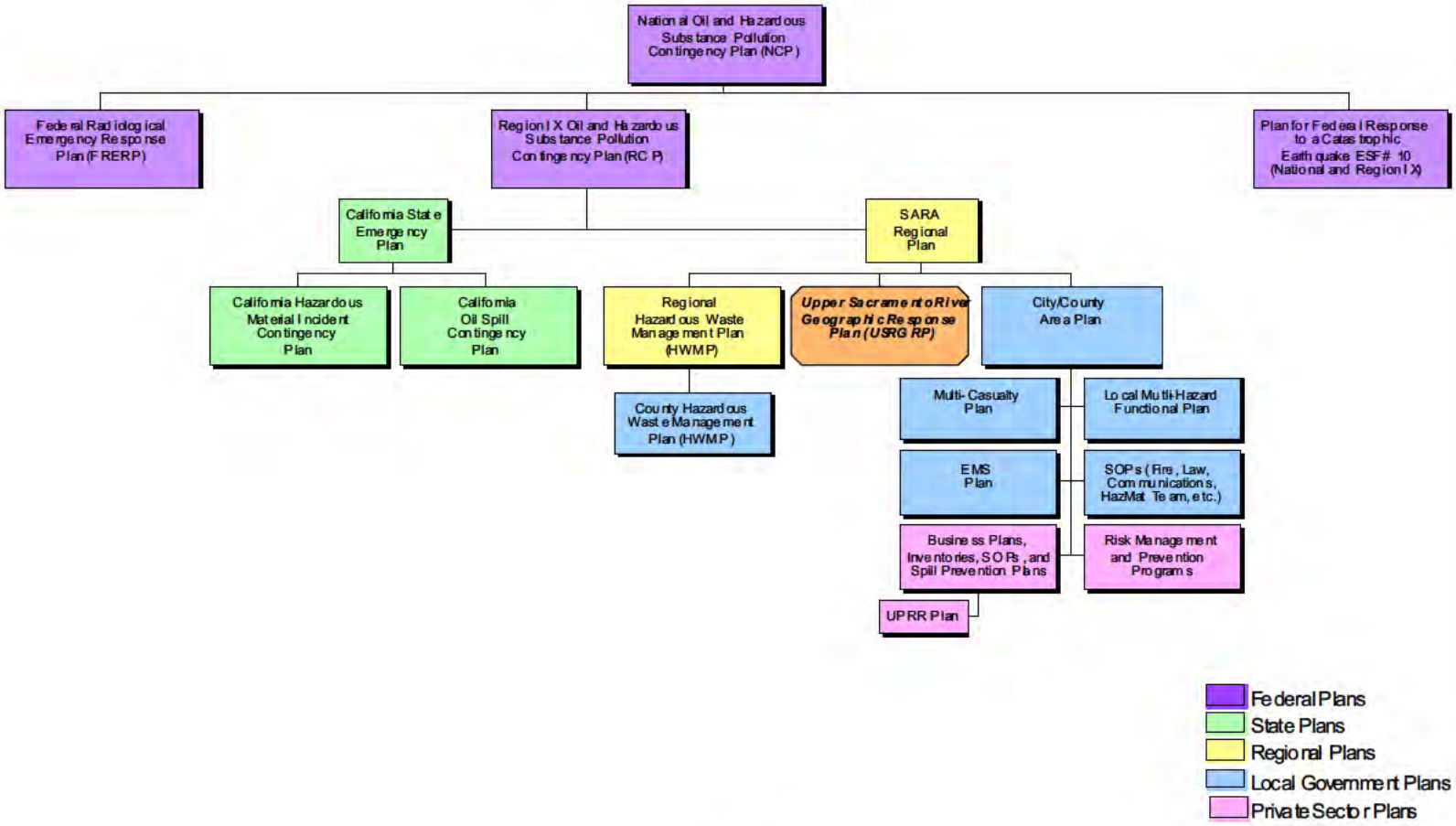
National Oceanic and Atmospheric Administration (NOAA)

NOAA provides scientific support to the FOSC for emergency responses. NOAA also provides contingency planning in coastal and marine areas. When requested by the USEPA, NOAA provides scientific support for emergency responses in inland areas.

Private/Public Organizations

UPRR – To be provided at a later date.

USR GRP's Relationship to Other Plans



Incident Command System Forms

Electronic ICS Forms can be downloaded from the NOAA Office of Response and Restoration website:

http://response.restoration.noaa.gov/oilaids/ICS/intro.html

Acronyms

ARB	Air Resources Board
ATSDR	Agency for Toxic Substances and Disease Registry
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Agency
CalTrans	California Department of Transportation
CDF	California Department of Forestry
CDFG	California Department of Fish and Game
CDHS	California Department of Health Services
CGC	California Government Code
CHP	California Highway Patrol
CNG	California National Guard
CPUC	California Public Utilities Commission
CST	Civil Support Team
DP&R	California Department of Parks and Recreation
DPR	California Department of Pesticide Regulation
DTSC	California Division of Toxic Substance Control
DWR	California Department of Water Resources
EH	Environmental Health
EMS	Emergency Medical Service
EMSA	Emergency Medical Services Authority
ERRS	Emergency Rapid Response Services
FBI	Federal Bureau of Investigations
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FRERP	Federal Radiological Emergency Response Plan
FRA	Federal Railroad Administration
HWMP	Hazardous Waste Management Plan
ICS	Incident Command System
IWMB	California Integrated Waste Management Board
LE	Law Enforcement
LEPC	Local Emergency Planning Committee
NBC	Nuclear, Biological, Chemical
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NOAA	National Oceanic and Atmospheric Administration
OEHHA	California Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Administration
OSPR	California Office of Spill Prevention and Response

PIO	Public Information Officer
PPE	Personal Protective Equipment
PG&E	Pacific Gas and Electric
PST	U.S. Coast Guard, Pacific Strike Team
PUD	Public Utilities District
PW	Public Works
RCP	Region IX Oil and Hazardous Substance Pollution Contingency Plan
RSPA	Research and Special Programs Administration
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SCBA	Self Contained Breathing Apparatus
SCHMRT	Shasta Cascade Hazardous Materials Response Team
SERC	State Emergency Response Commission
SHPO	State Historic Preservation Office
SLC	California State Lands Commission
SOP	Standard Operating Procedure
SOSC	State On-Scene Coordinator
START	Superfund Technical Assessment and Response Team
SWRCB	State Water Resources Control Board
USBIA	U.S. Bureau of Indian Affairs
USBLM	U.S. Bureau of Land Management
USBR	U.S. Bureau of Reclamation
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOD	U.S. Department of Defense
USDOE	U.S. Department of Energy
USDOI	U.S. Department of Interior
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USRAC	Upper Sacramento River Area Committee
USRGRP	Upper Sacramento River Geographic Response Plan
WMD	Weapons of Mass Destruction

Distribution Log

Numbered copies of the Upper Sacramento River Geographic Response Plan have been distributed to the following agencies and/or individuals:

Name	Agency	Address 1	Address 2	City	State	Zip

Name	Agency	Address 1	Address 2	City	State	Zip

Record of Review

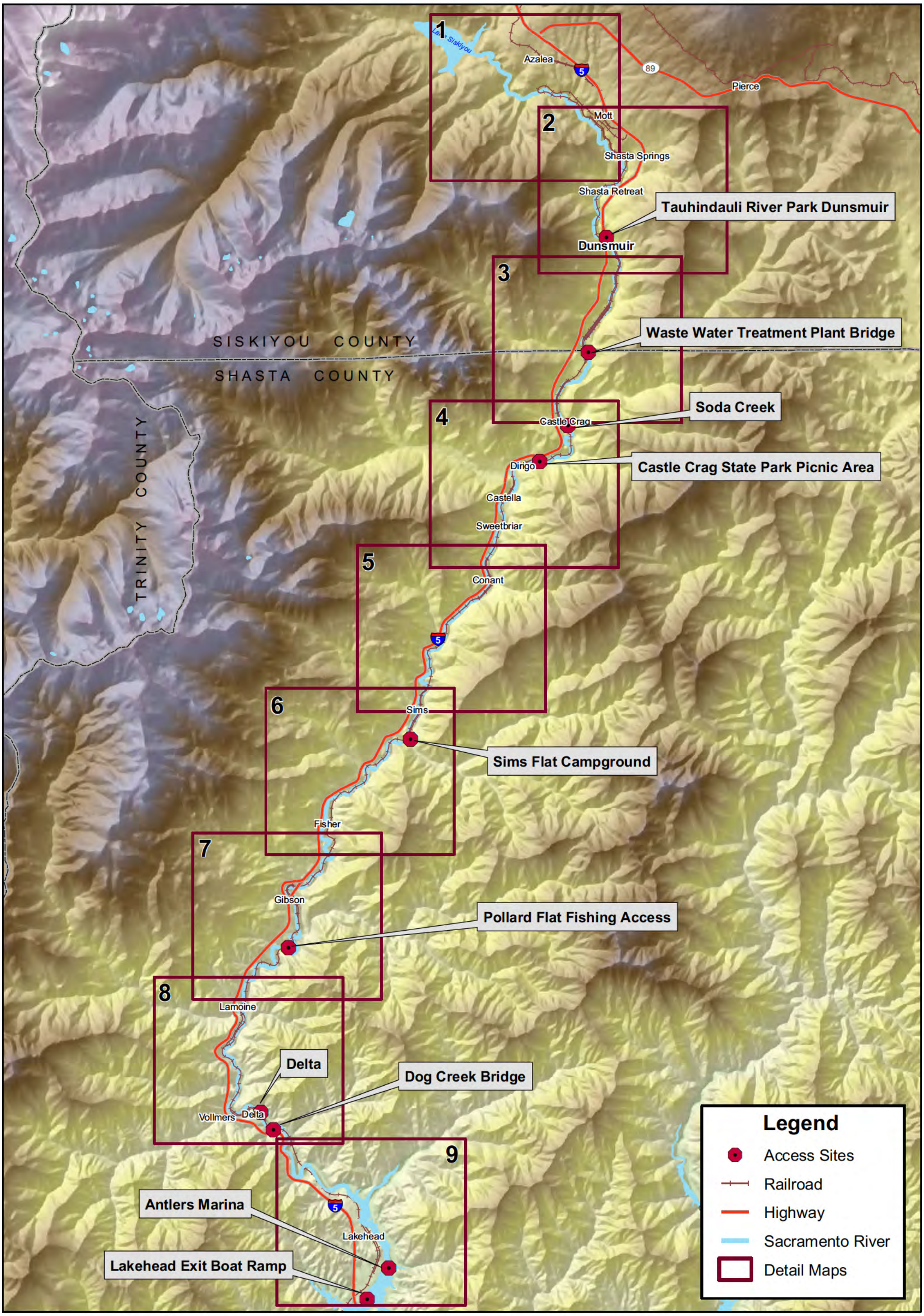
The Upper Sacramento River Geographic Response Plan is to be reviewed at least annually. Document plan reviews in the following table.

Review Date	By (Print)	Signature

Record of Changes

Record changes to the Upper Sacramento River Geographic Response Plan in the following table.

Change No.	Date Posted	Brief Description of Change	By (Print Name)	Signature



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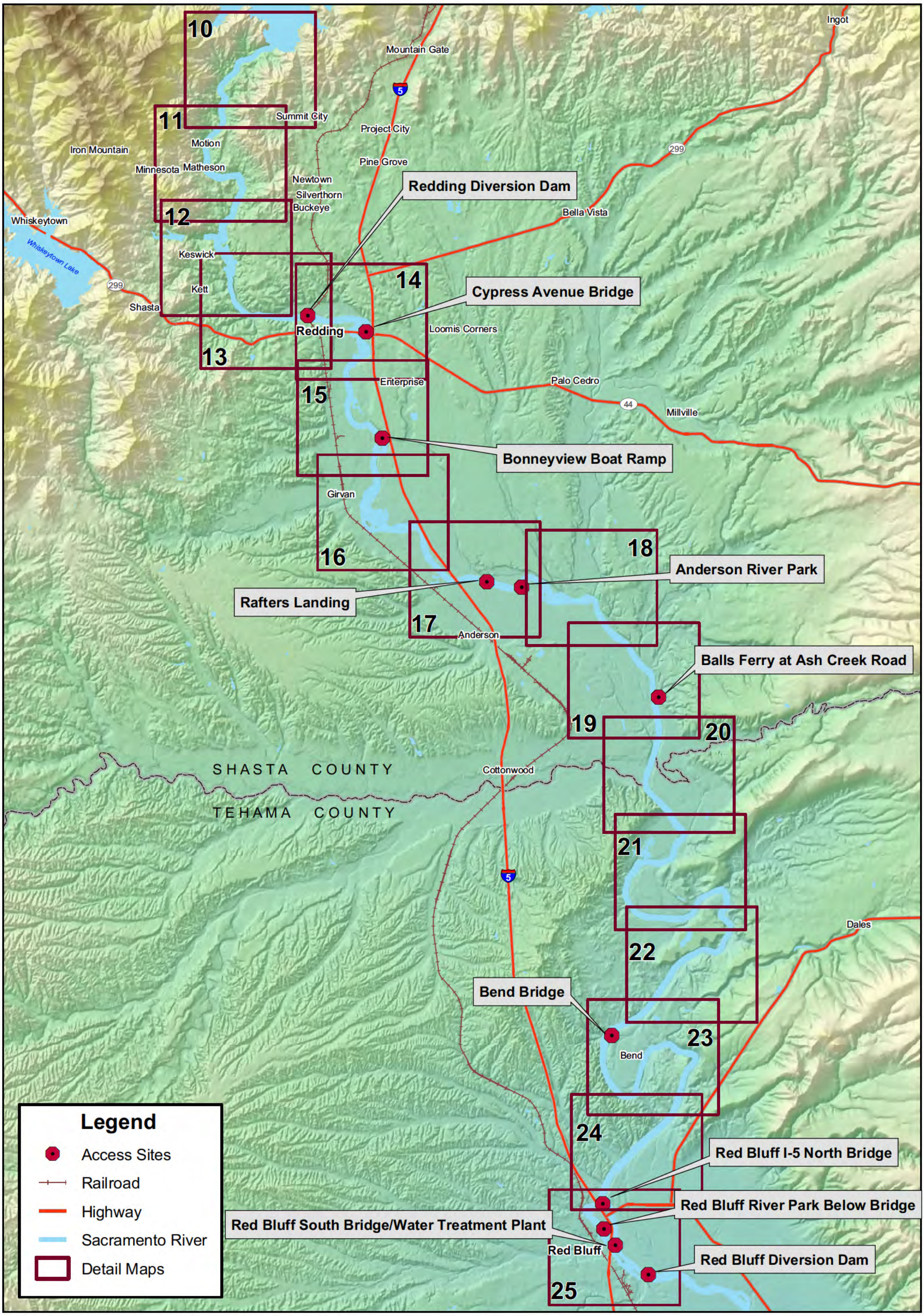
Upper Sacramento River Geographic Response Plan
Maps 1-9

0 0.5 1 2 3 4 5 Miles

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SFD0501108.1 May 2005



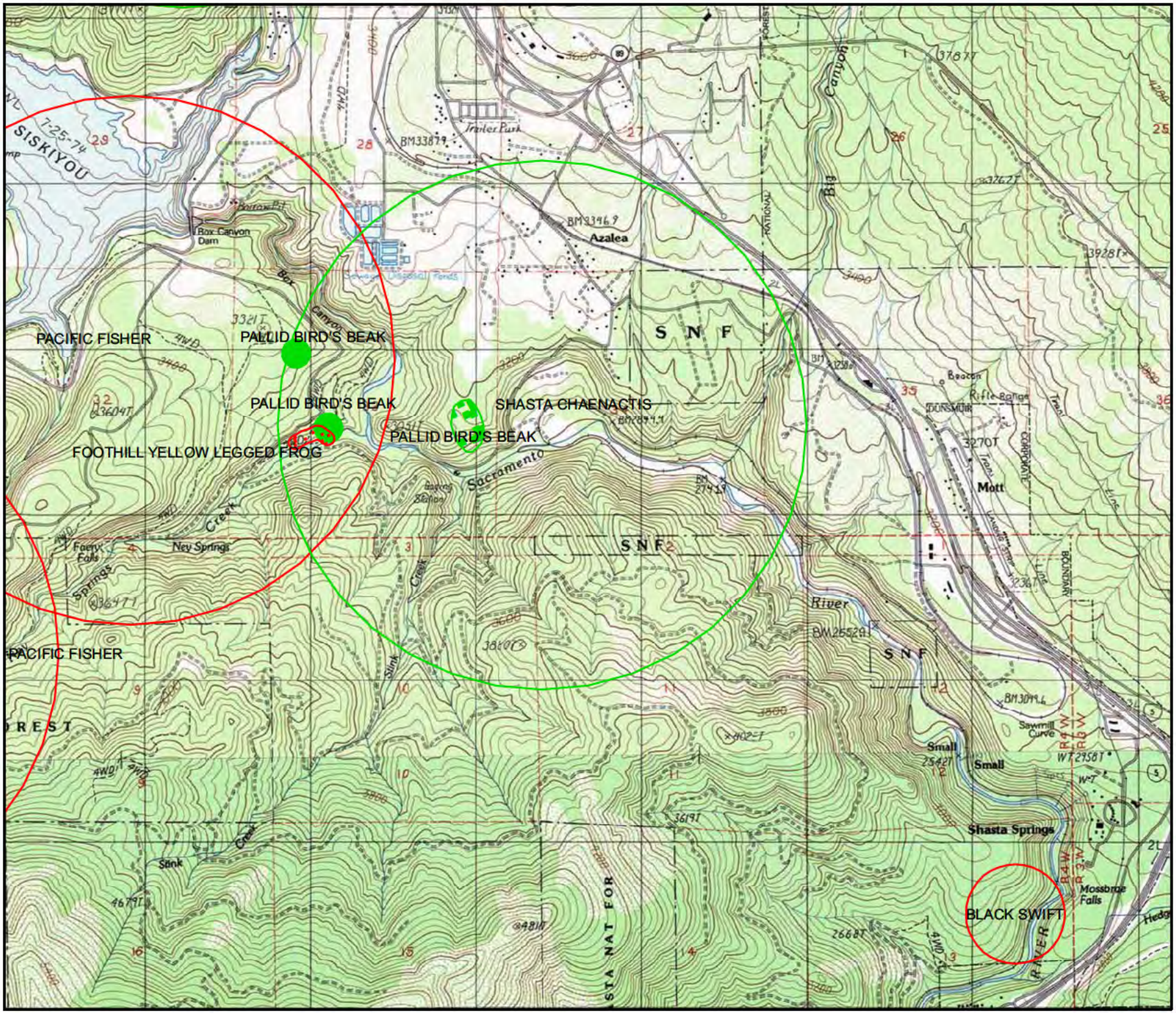
Upper Sacramento River Geographic Response Plan
Maps 10-25

N W E S

0 1 2 4 6 8 10 Miles

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SFD0501108.2 May 2005



1

Upper Sacramento River
Geographic Response Plan

Access Sites

USGS Real time Gauging Stations

Railroad M ile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non specif c)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non specific)
- Animal (circular)
- Terr Comm (80)
- Terr Comm (specific)
- Terr Comm (non specific)
- Terr Comm (circular)
- Aqu Comm (80)
- Aqu Comm (specific)
- Aqu Comm (non specfic)
- Aqu Comm (circular)

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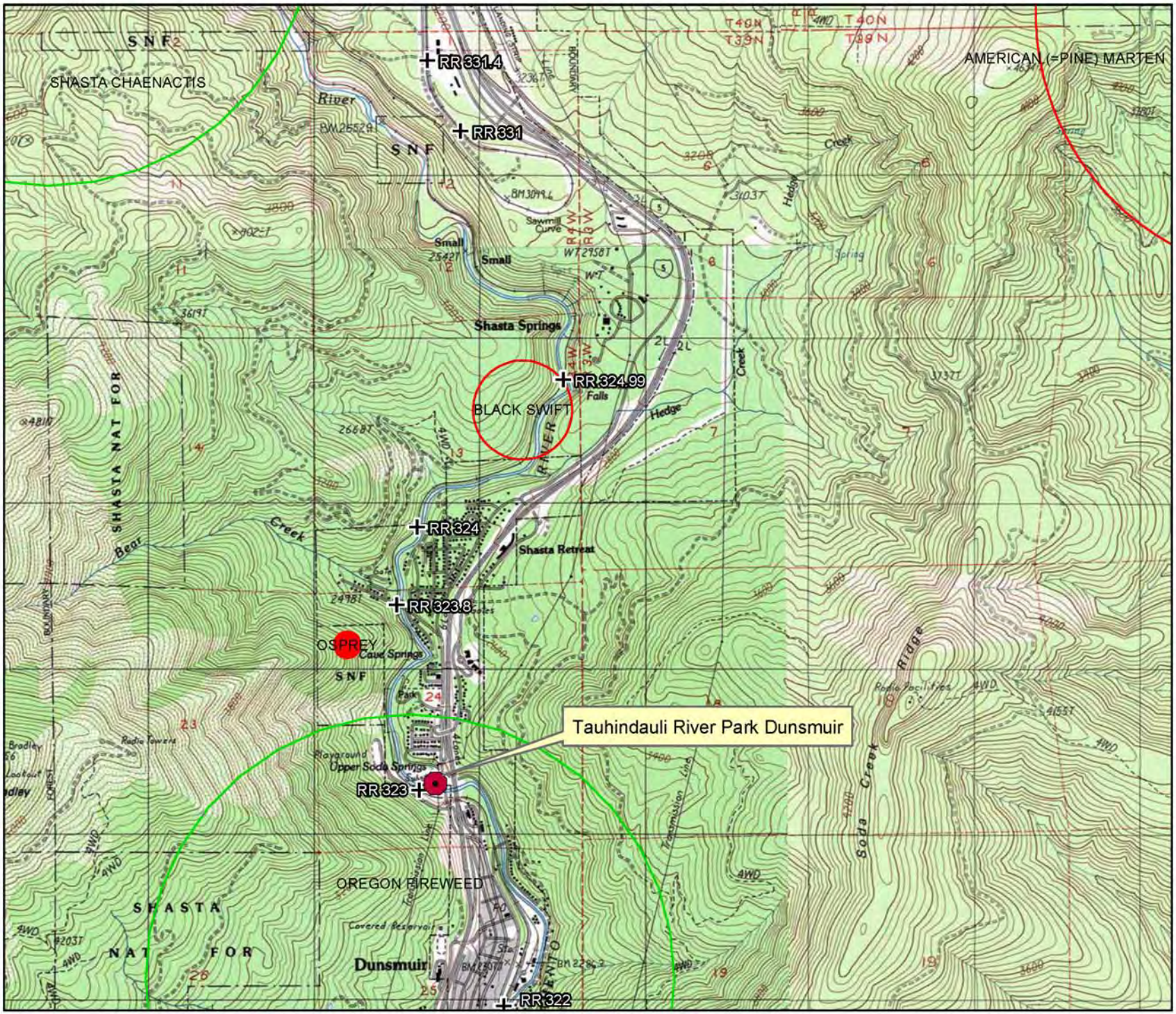
SFD0501108 3 May 2005

0 500 1,000 2,000 3,000 Feet



2

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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SFD0501108.4 May 2005

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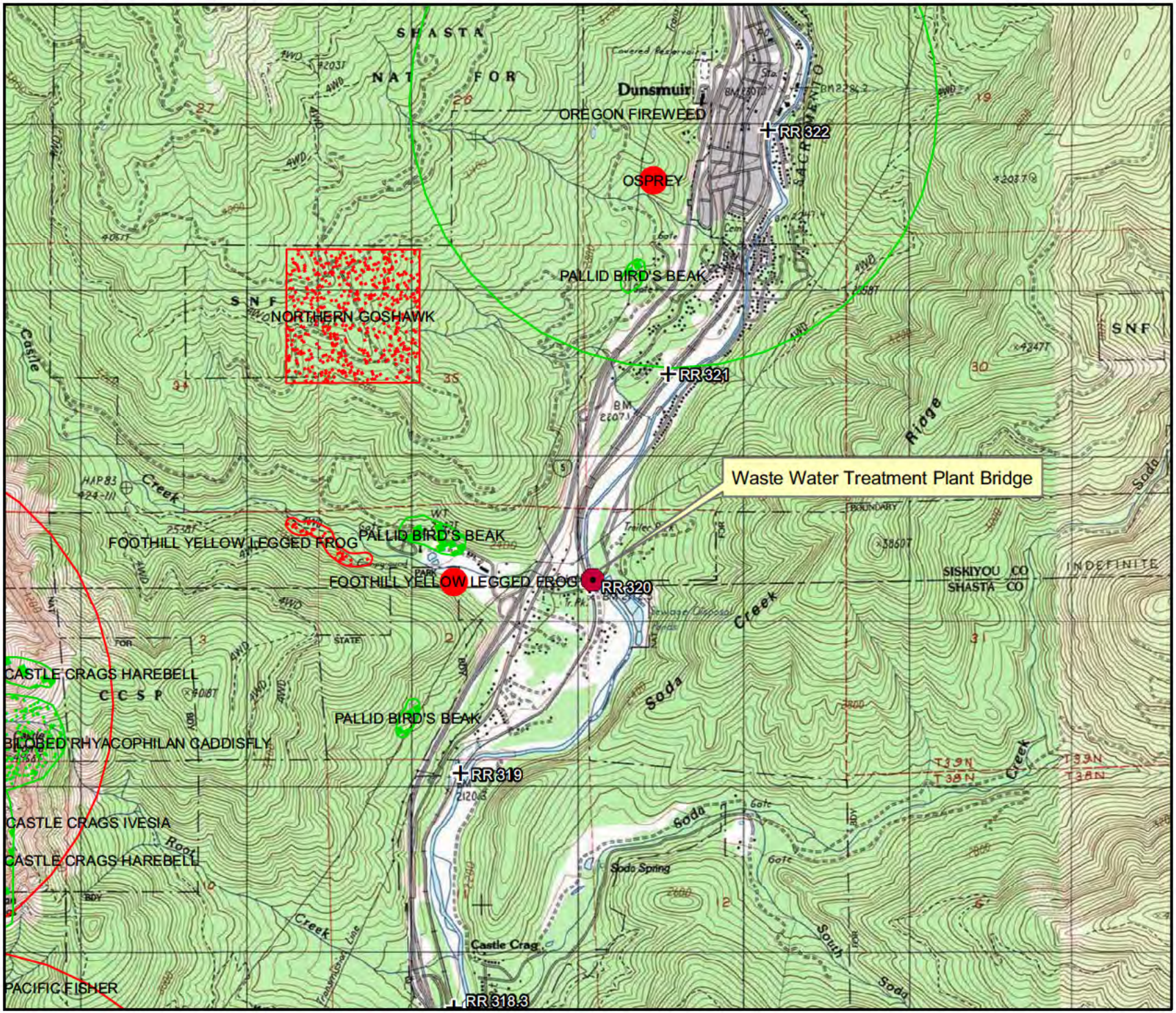

3

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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SFD0501108.5 May 2005

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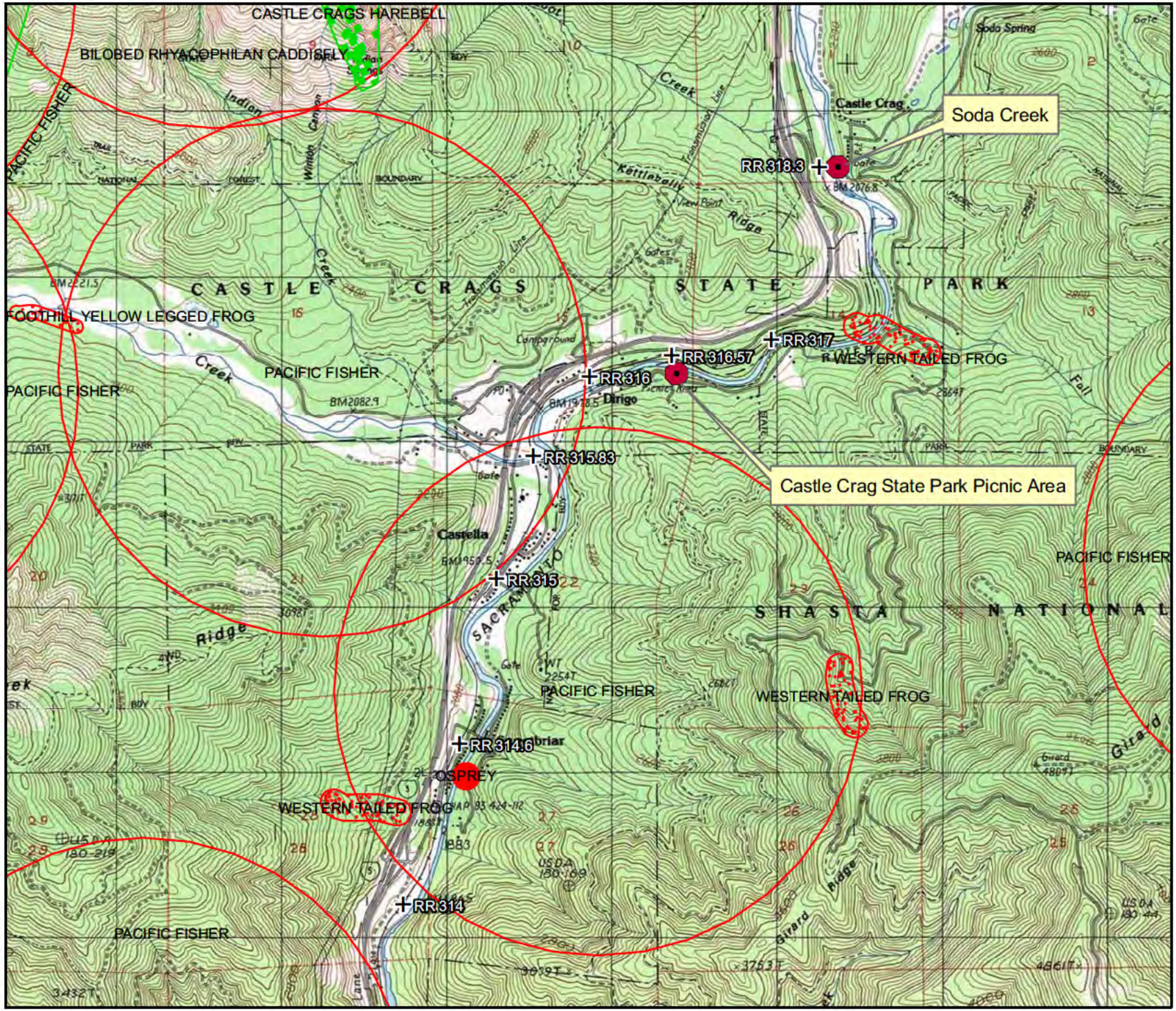

4

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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SFD0501108.6 May 2005

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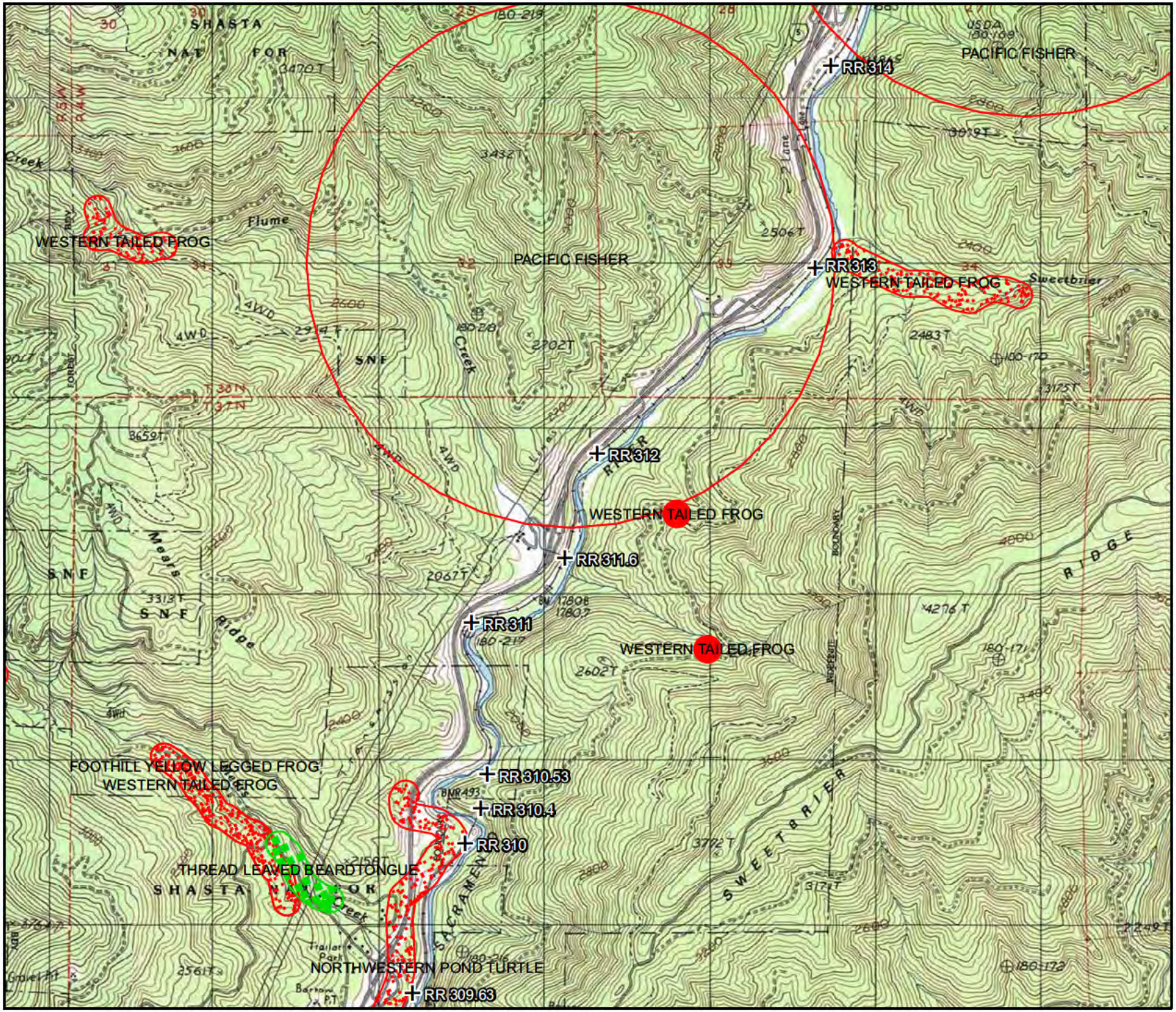

5

Upper Sacramento River Geographic Response Plan

Access Sites

USGS Real-time Gauging Stations

Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

N W E S

SFD0501108.7 May 2005

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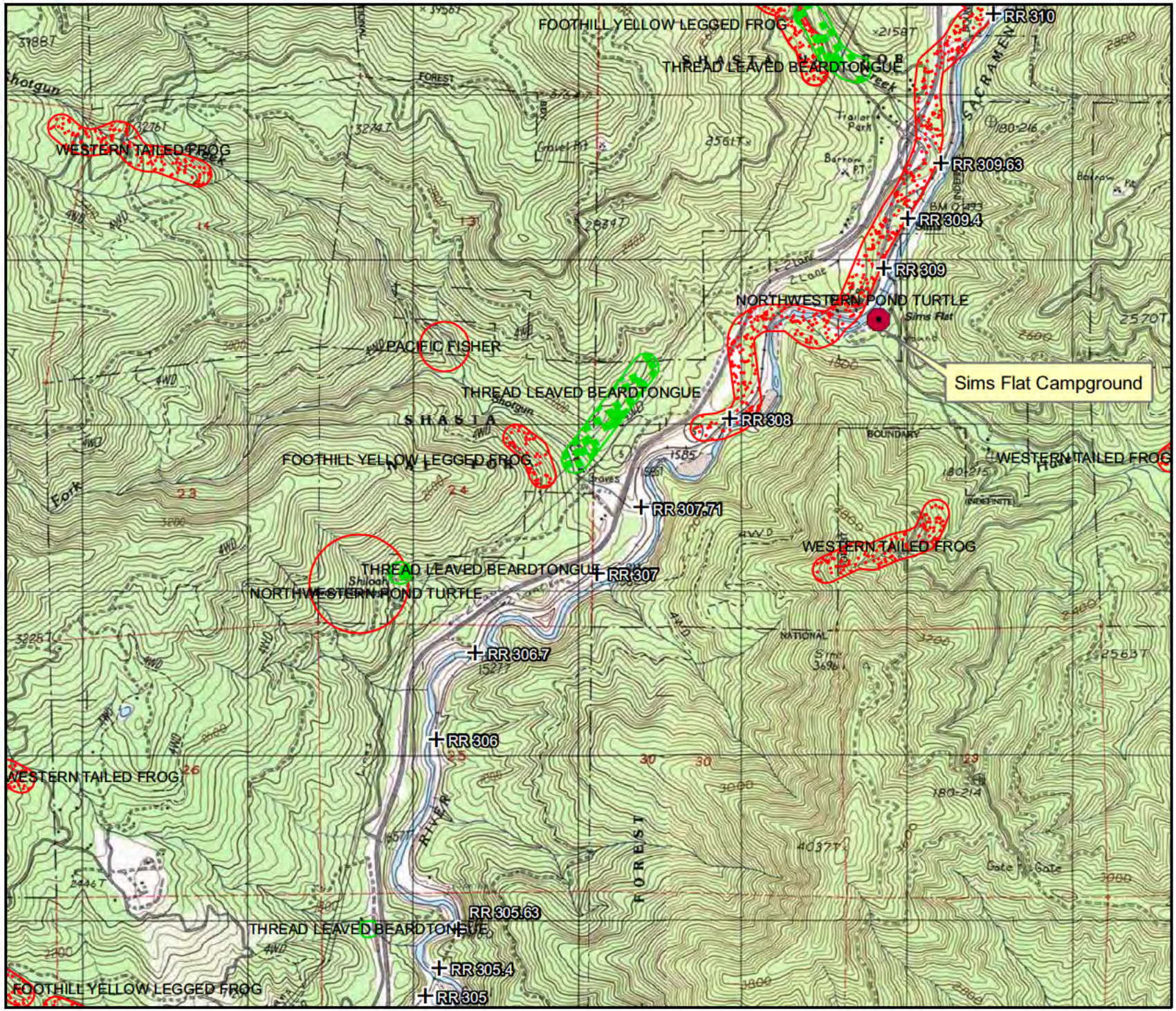

6

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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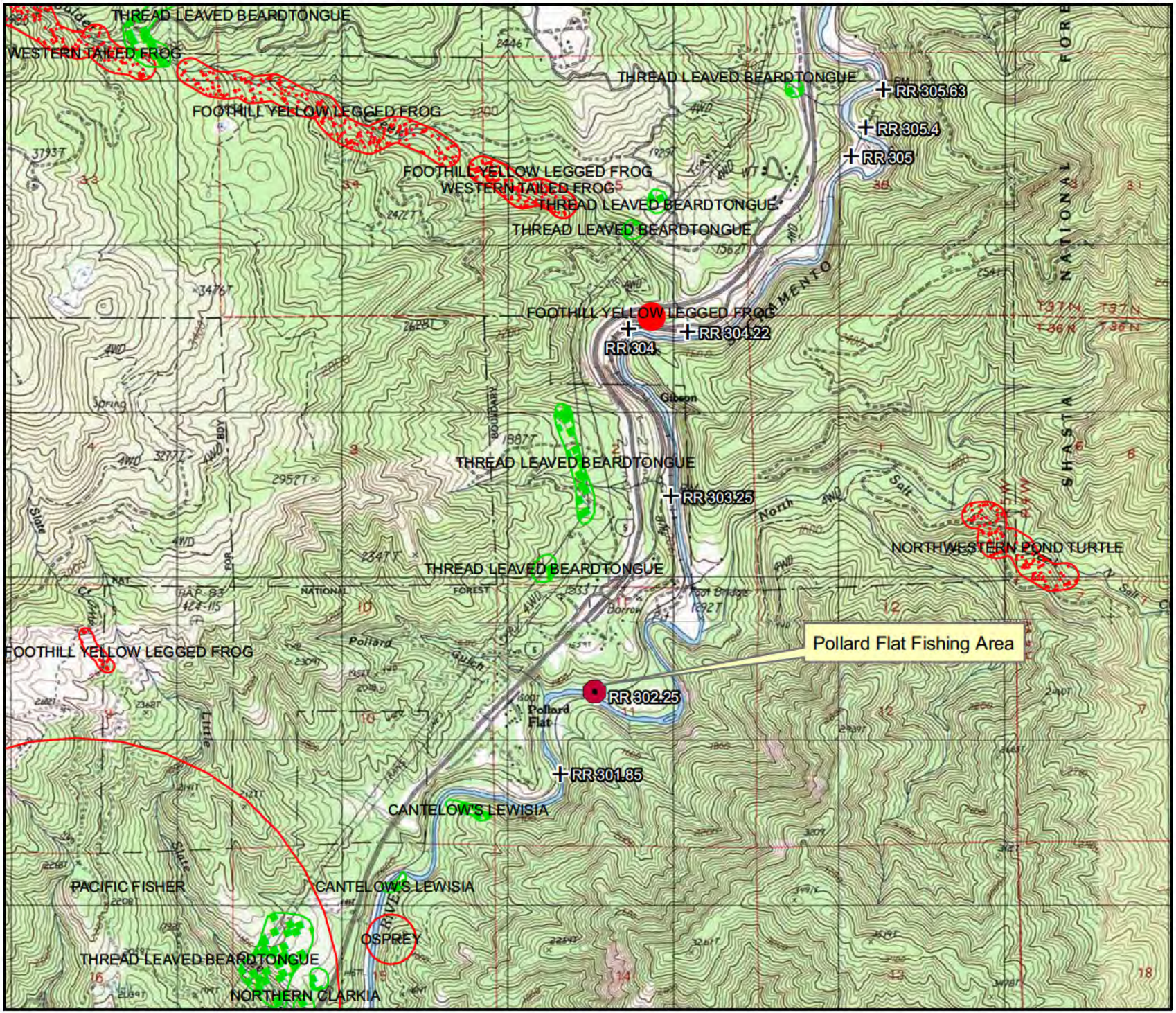
SFD0501108.8 May 2005

0 500 1,000 2,000 3,000 Feet



7

Upper Sacramento River
Geographic Response Plan

Access Sites

USGS Real-time Gauging Stations

Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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SFD0501108.9 May 2005

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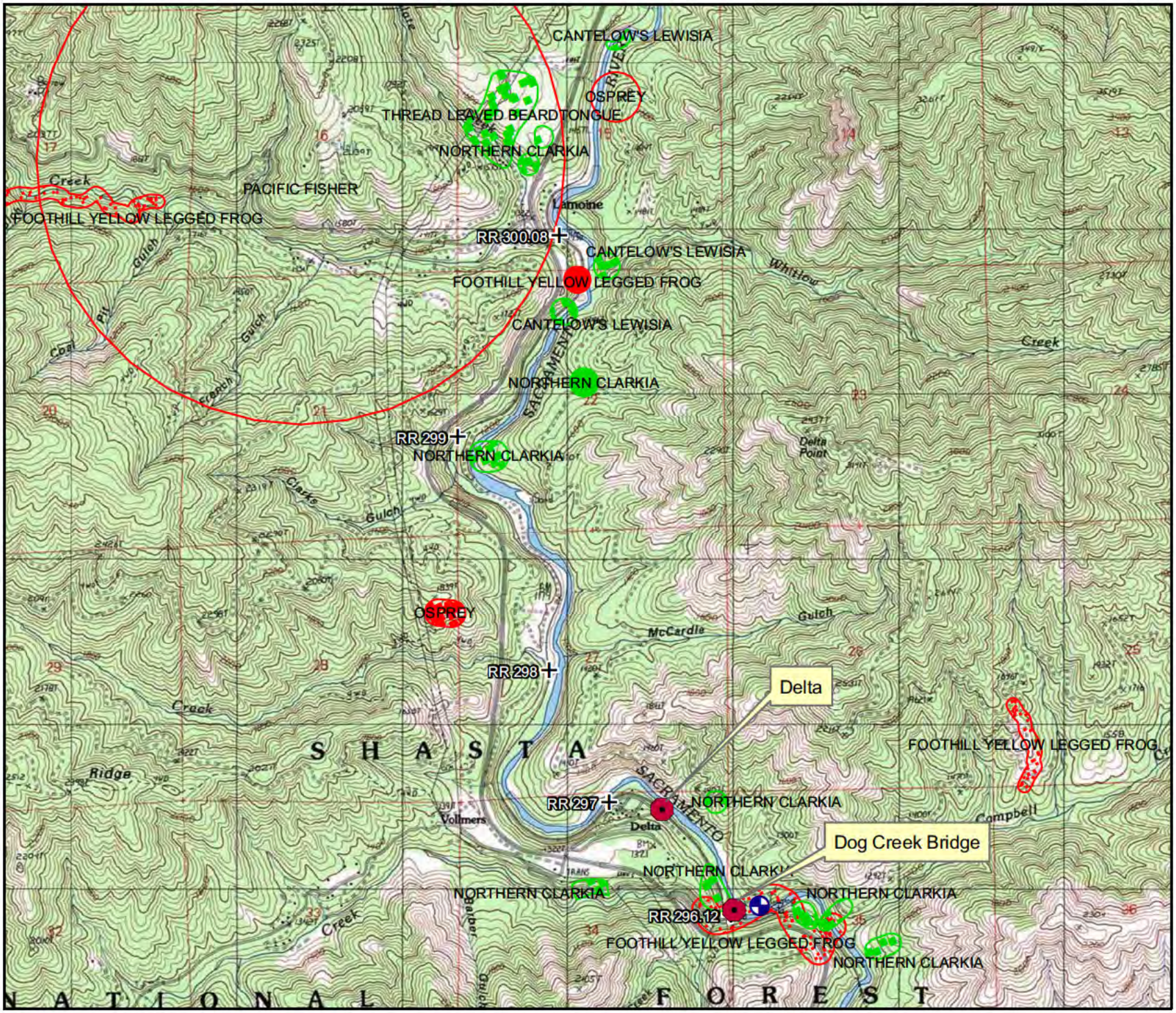

8

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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SFD0501108.10 May 2005

0 500 1,000 2,000 3,000 Feet

9

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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SFD0501108.11 May 2005

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10

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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SFD0501108.12 May 2005

0 500 1 000 2 000 3 000 Feet

11

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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SFD0501108.13 May 2005

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12

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
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- Aqu. Comm. (circular)

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SFD0501108.14 May 2005

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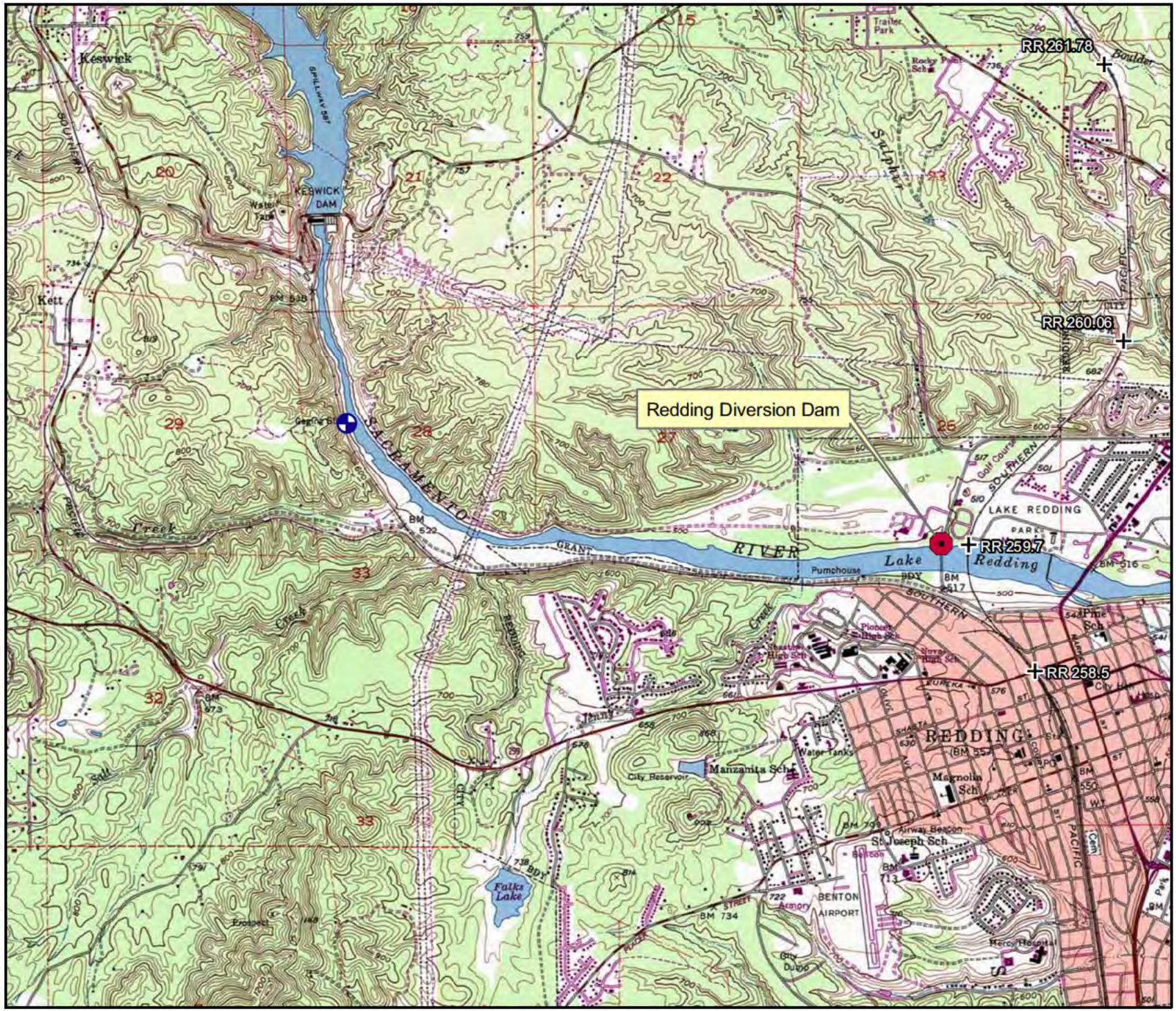

13

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
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- Aqu. Comm. (80)
- Aqu. Comm. (specific)
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- Aqu. Comm. (circular)

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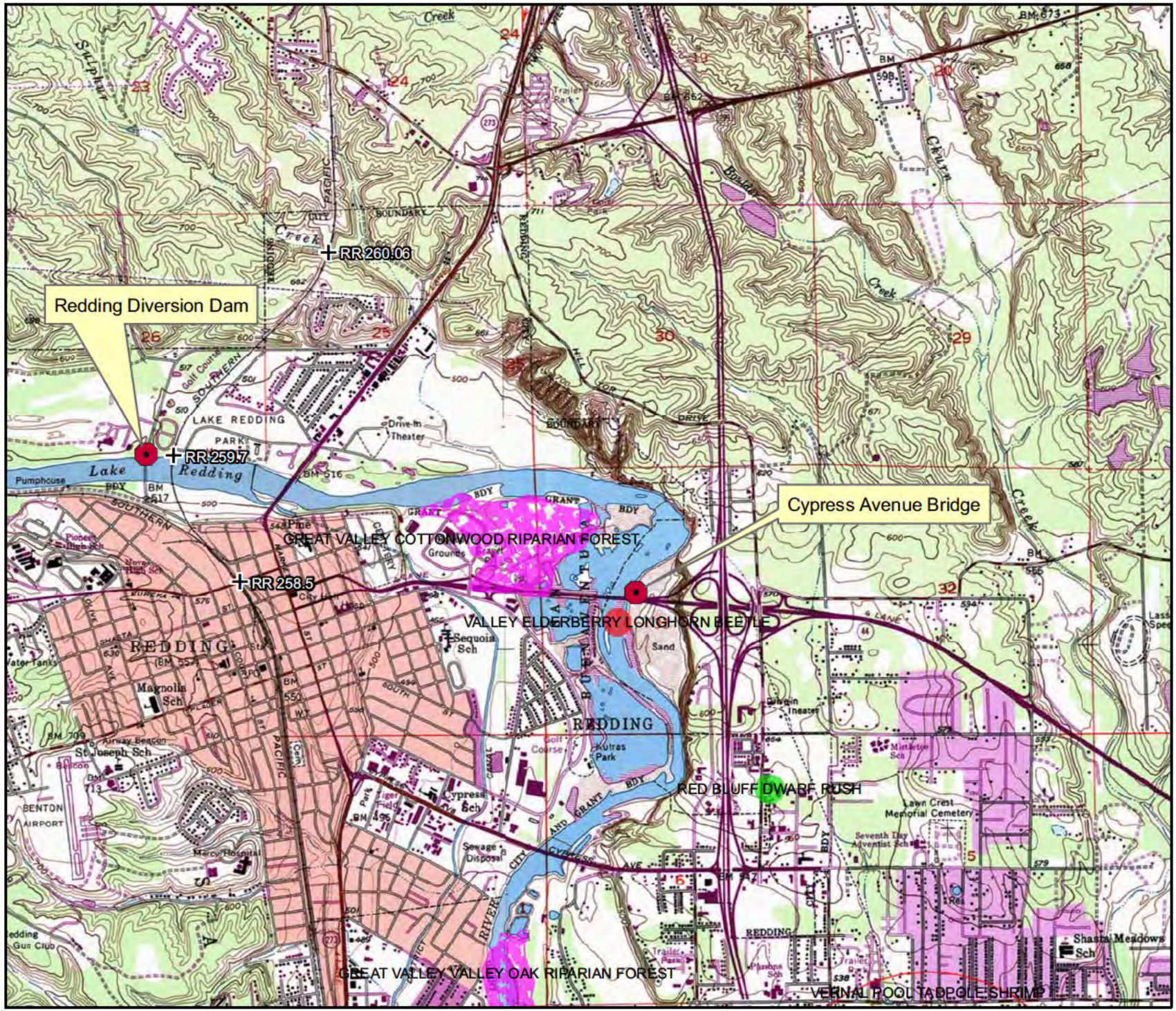

14

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
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- Aqu. Comm. (circular)

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SFD0501108.16 May 2005

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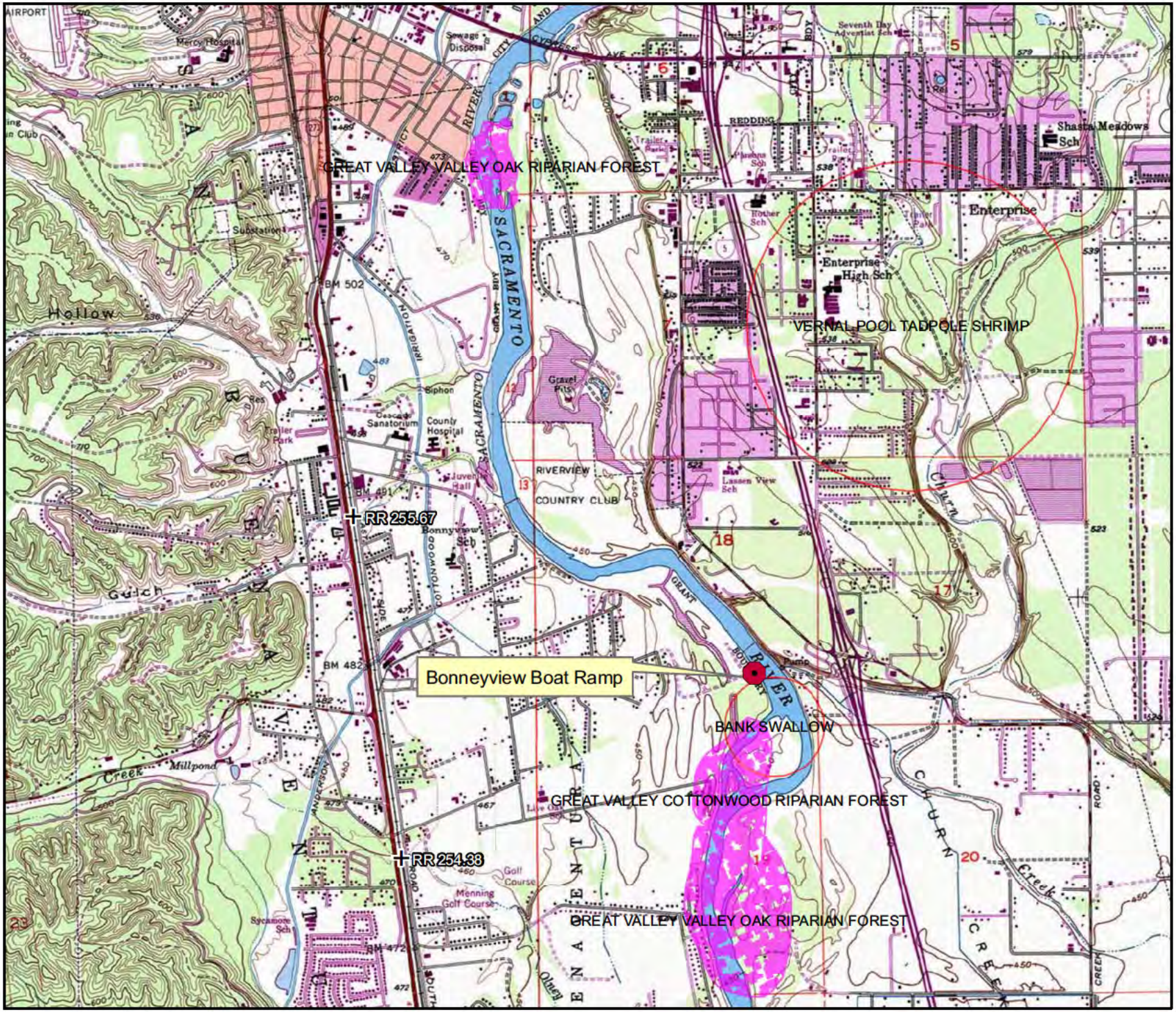

15

Upper Sacramento River
Geographic Response Plan

Access Sites

USGS Real-time Gauging Stations

Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
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- Terr. Comm. (circular)
- Aqu. Comm. (80)
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- Aqu. Comm. (circular)

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SFD0501108.17 May 2005

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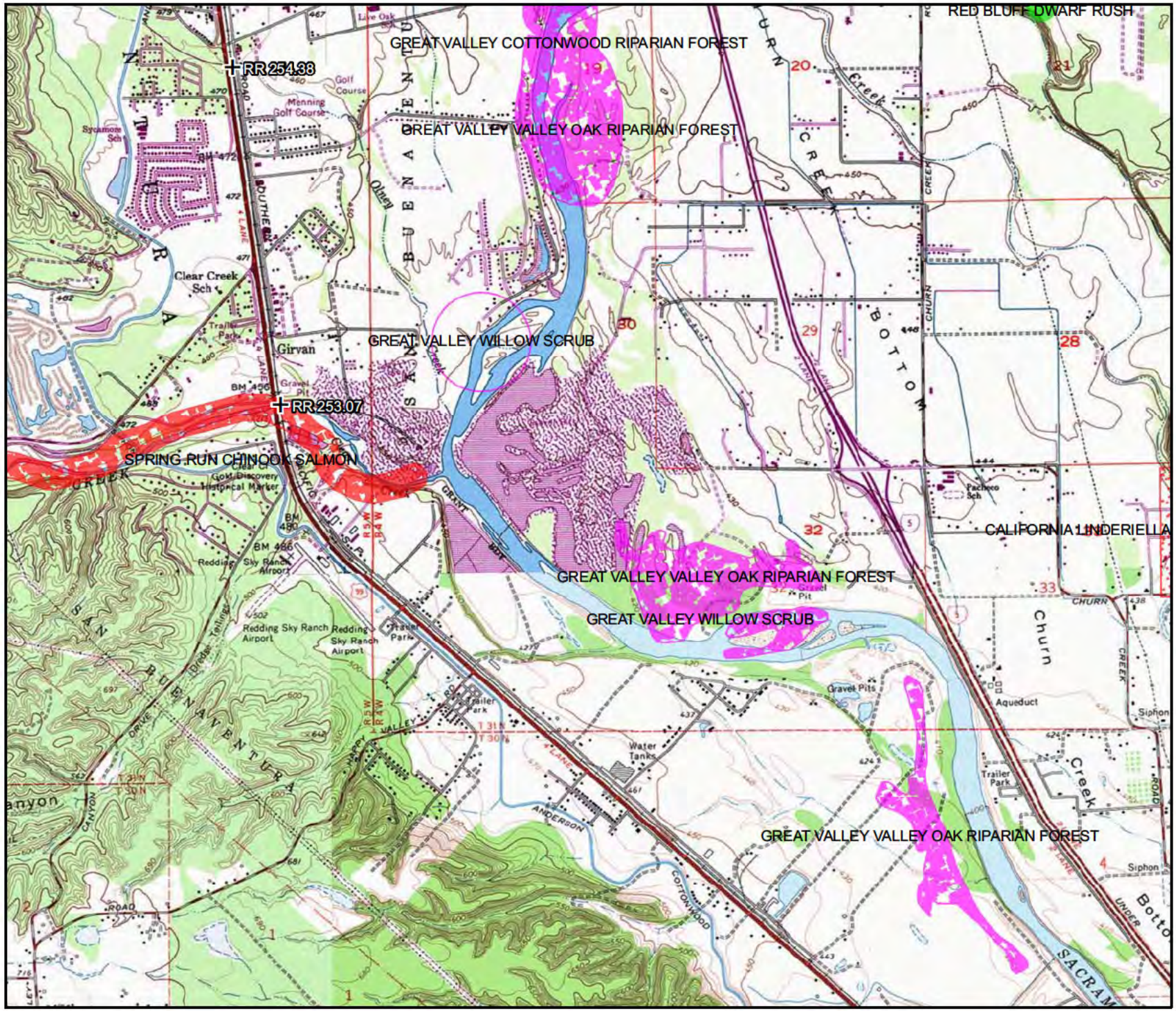

16

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
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- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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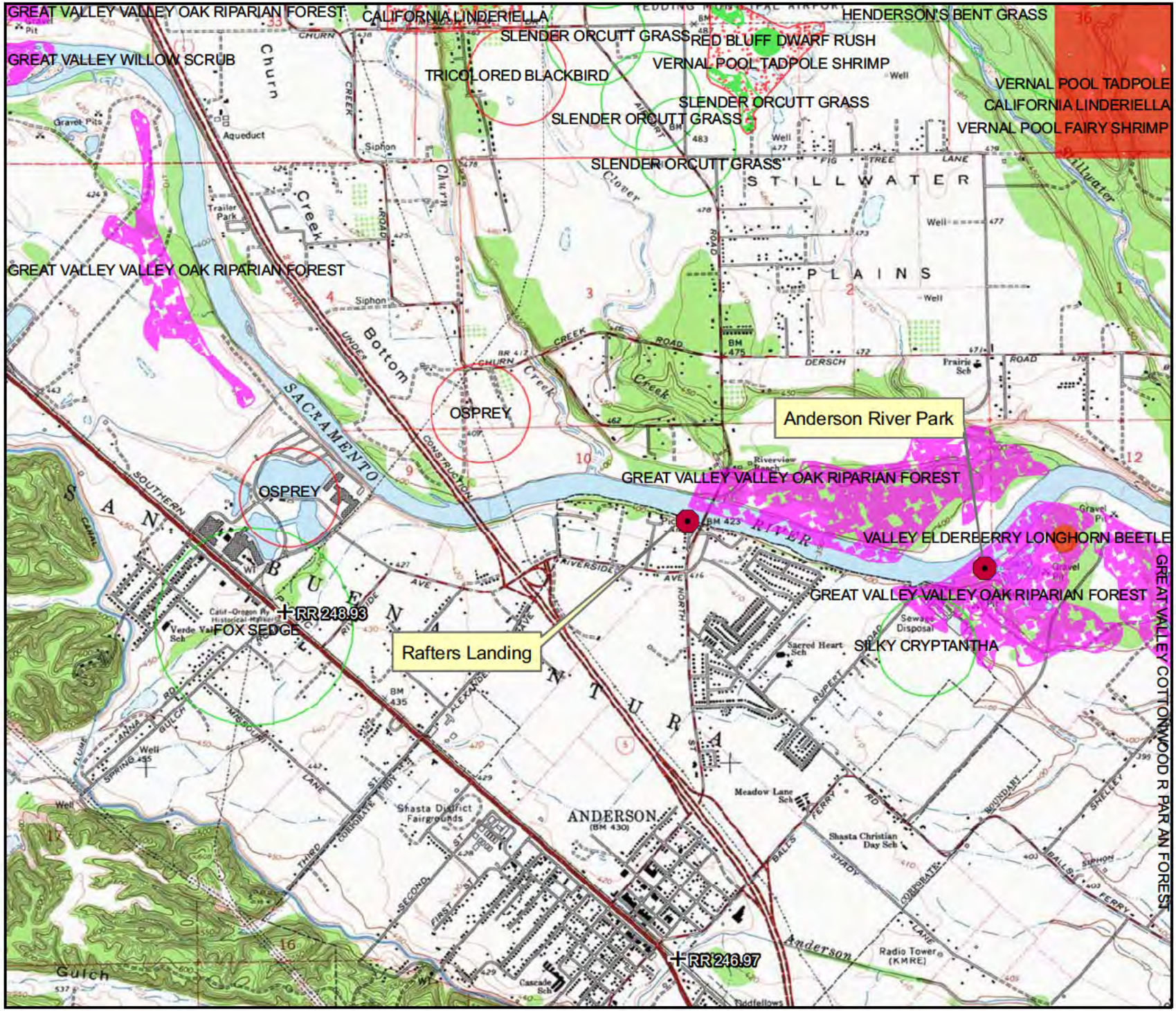

17

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
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- Terr. Comm. (specific)
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- Terr. Comm. (circular)
- Aqu. Comm. (80)
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- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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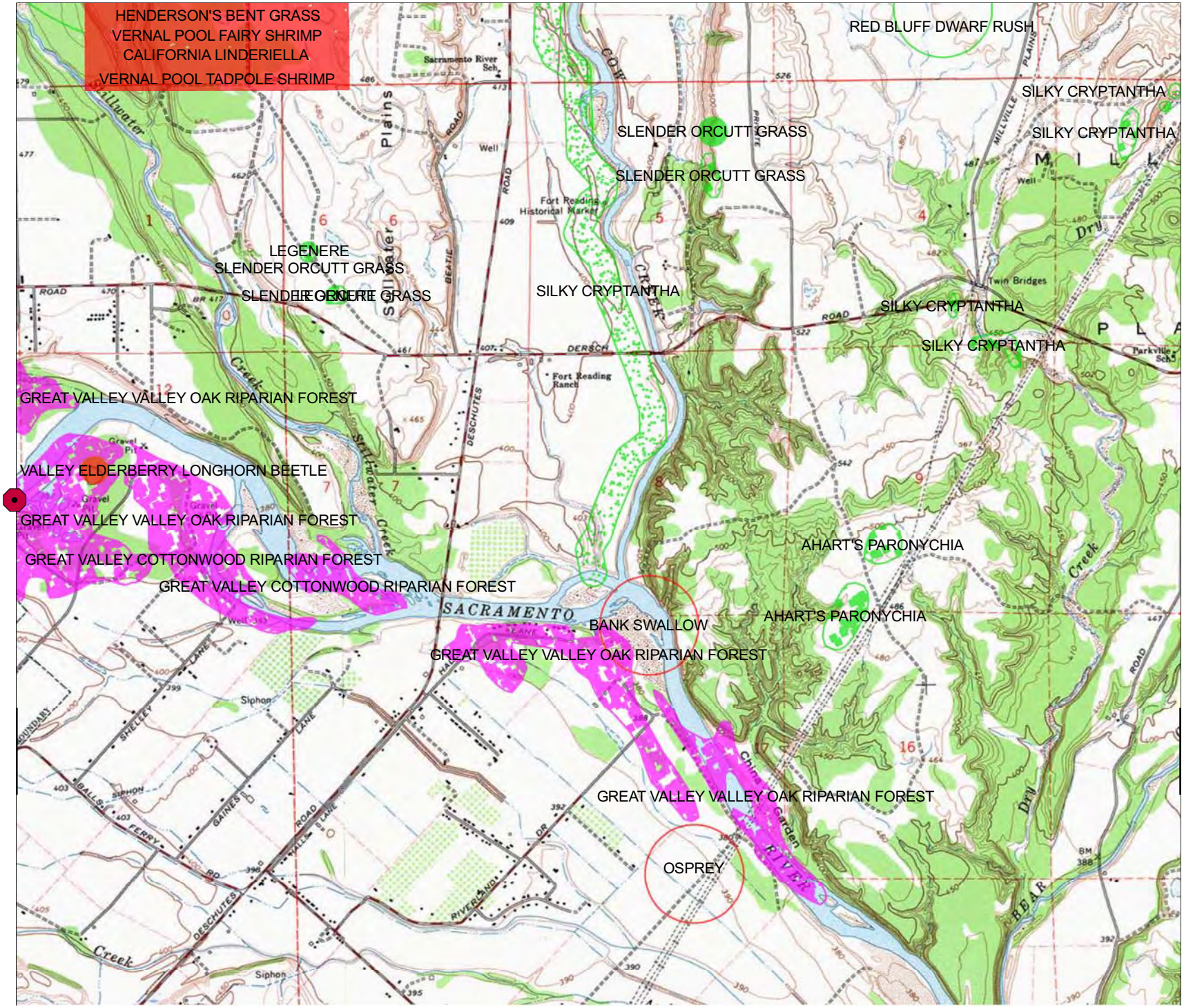

18

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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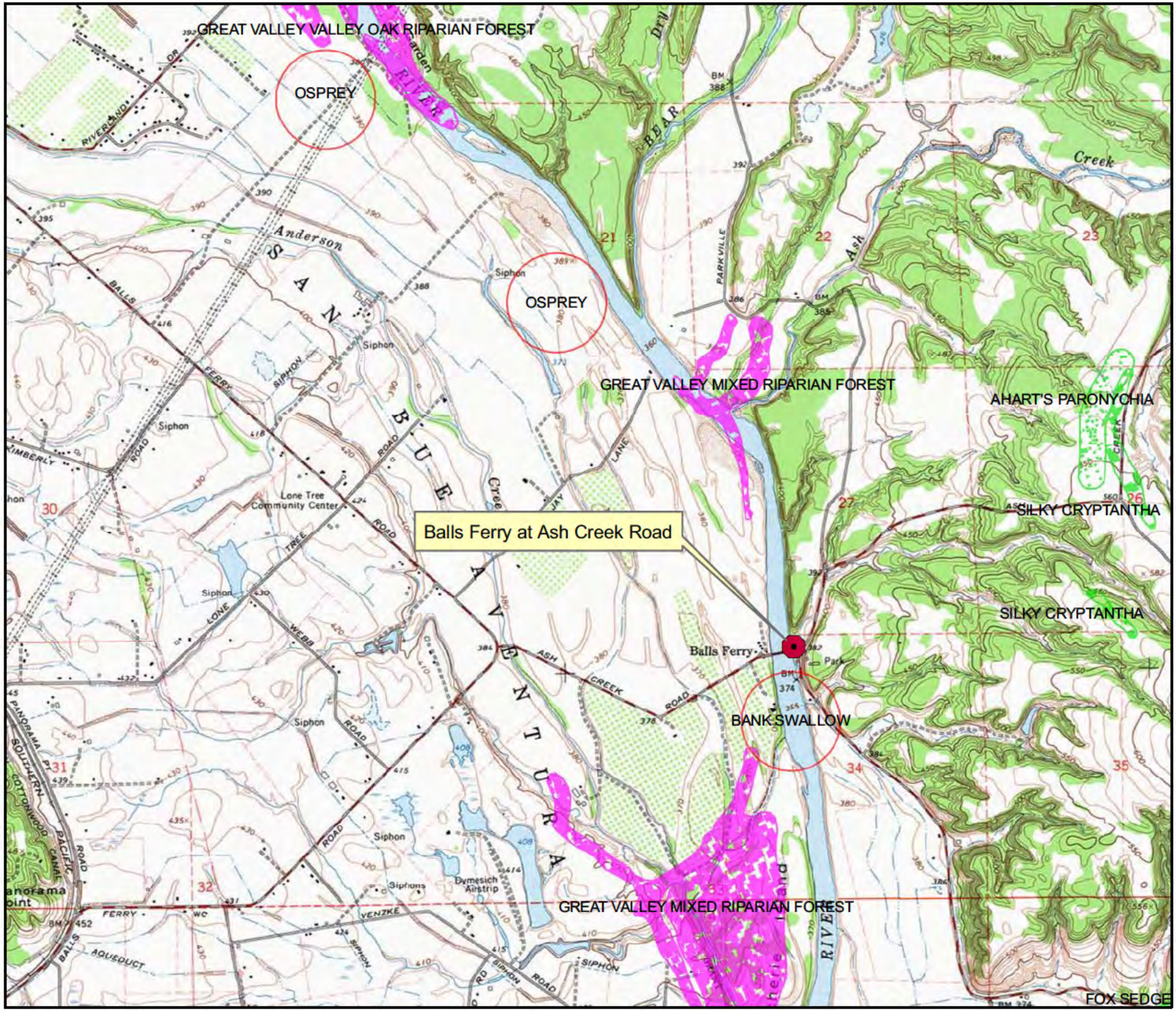

19

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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SFD0501108.21 May 2005

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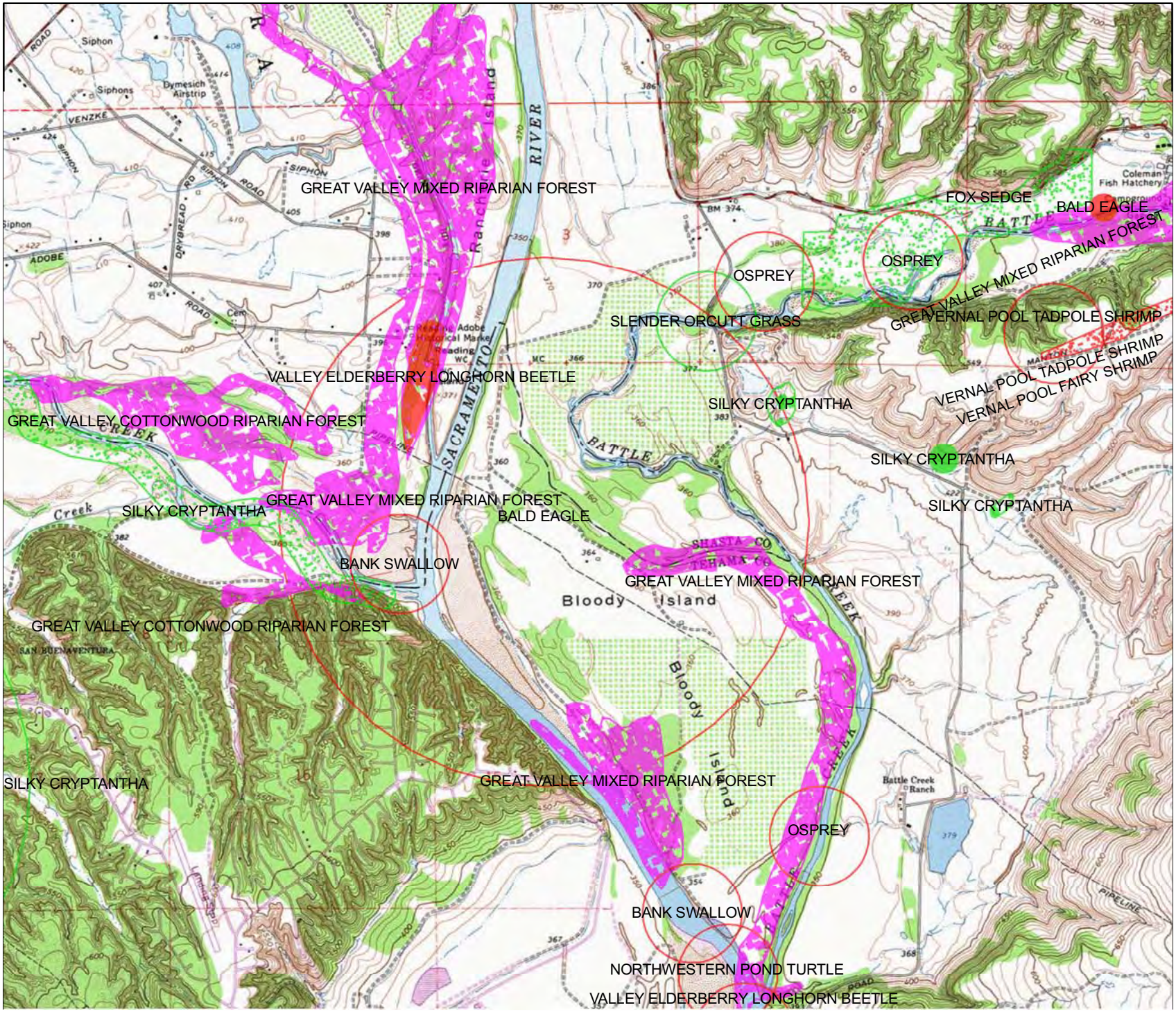

20

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
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- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
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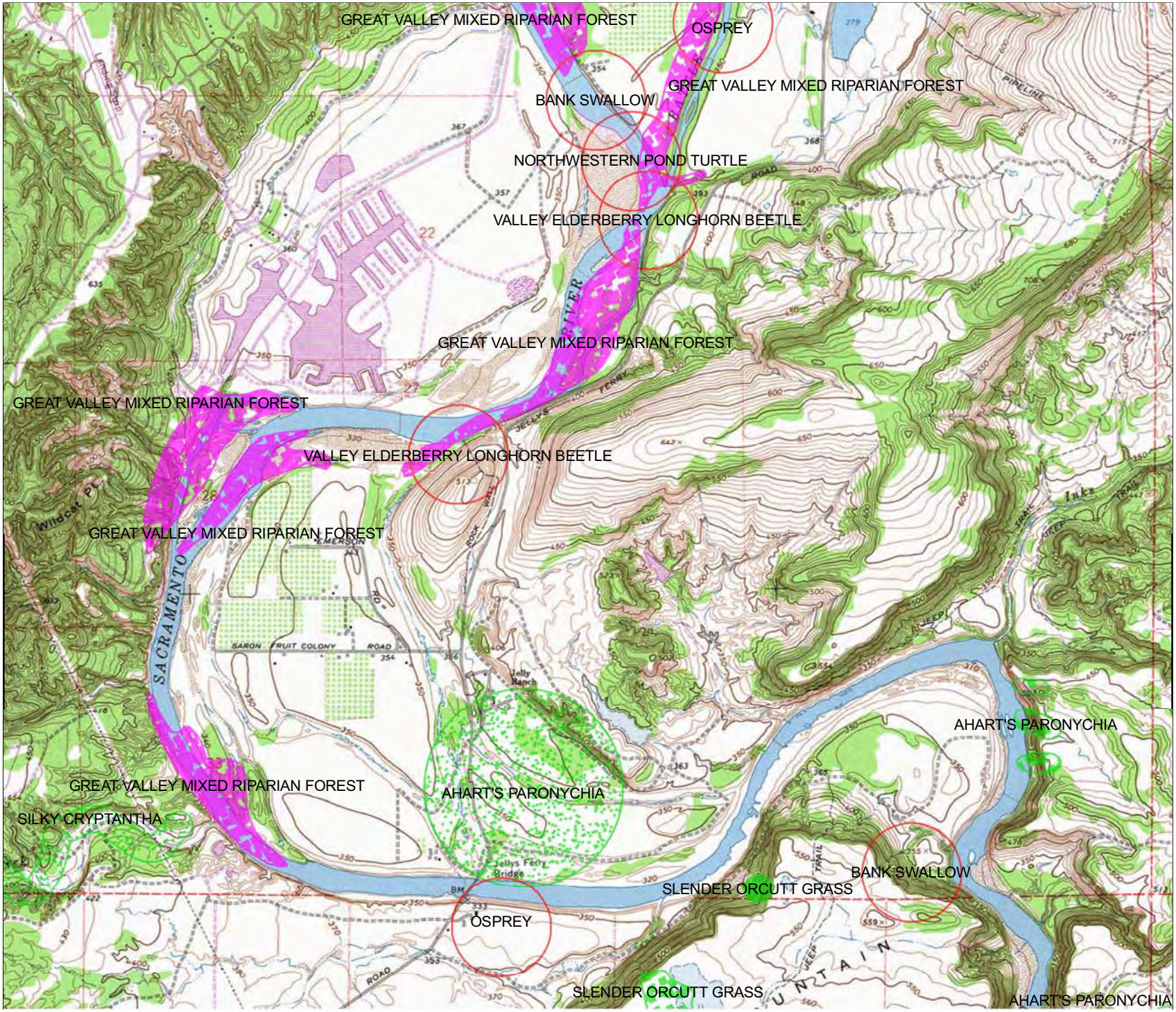
SFD0501108.22 May 2005

0 500 1 000 2 000 3 000 Feet



21

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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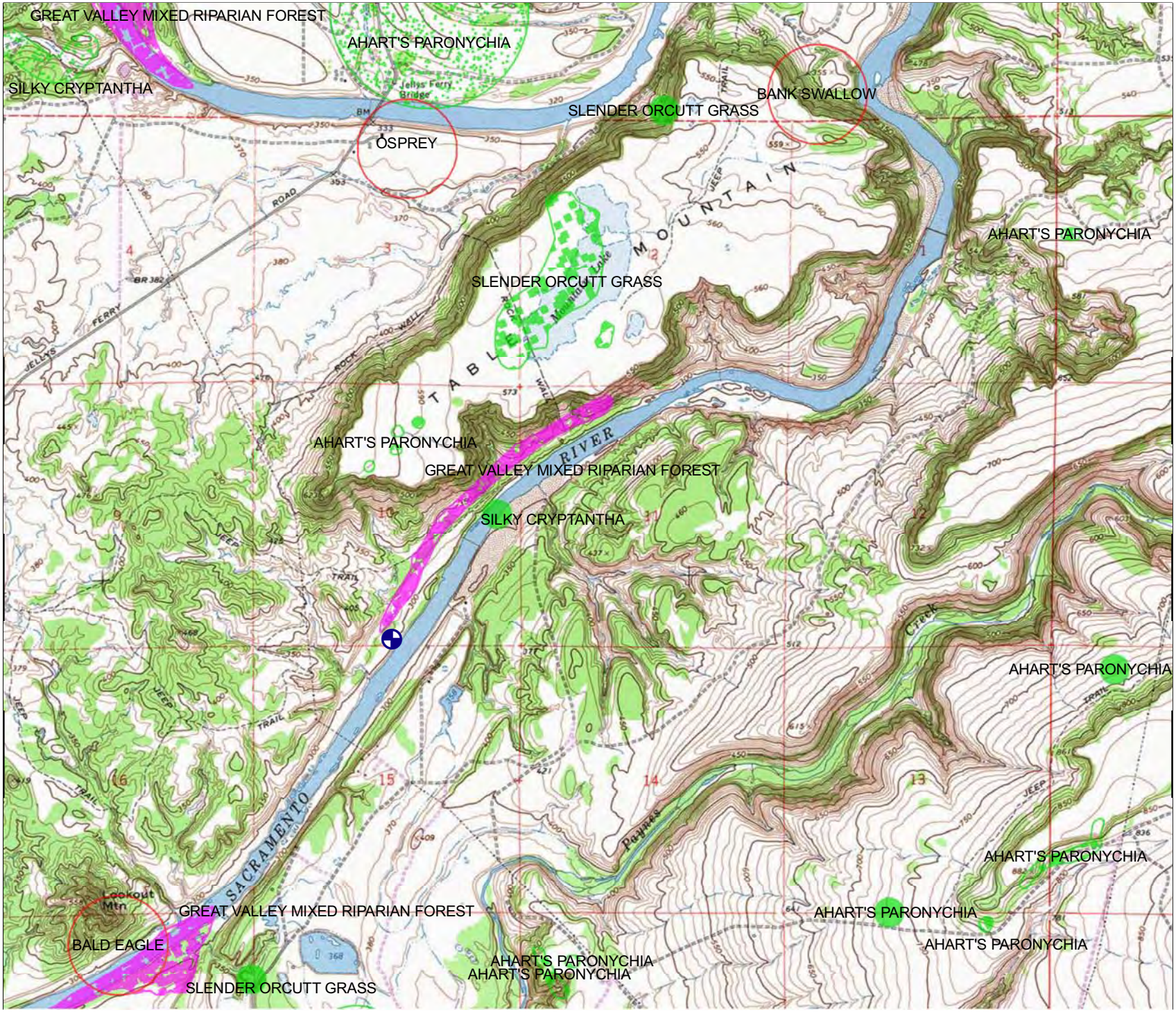
SFD0501108.23 May 2005

0 500 1 000 2 000 3 000 Feet



22

Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specfic)
- Aqu. Comm. (circular)

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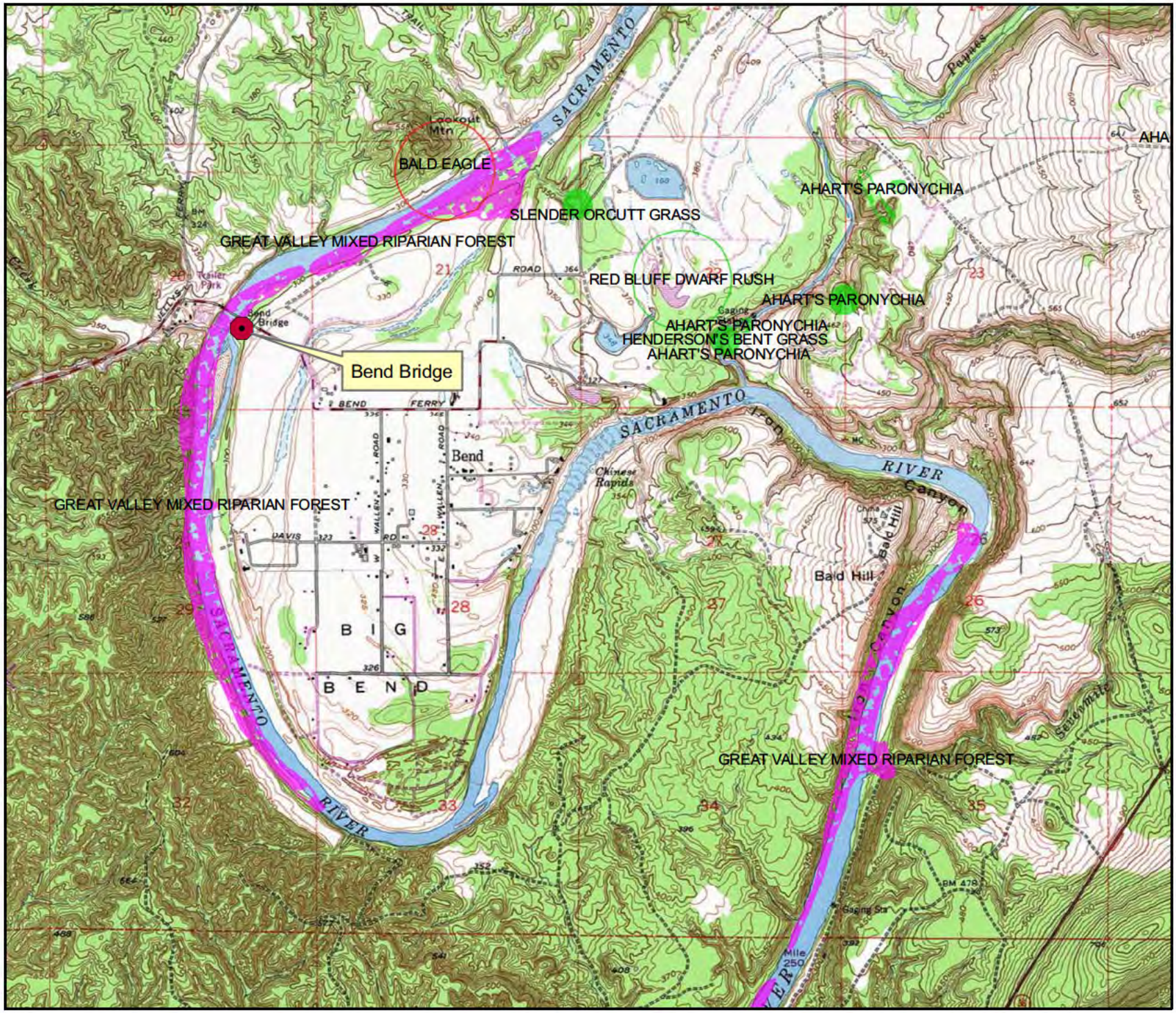
SFD0501108.24 May 2005

0 500 1 000 2 000 3 000 Feet



23

Upper Sacramento River Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

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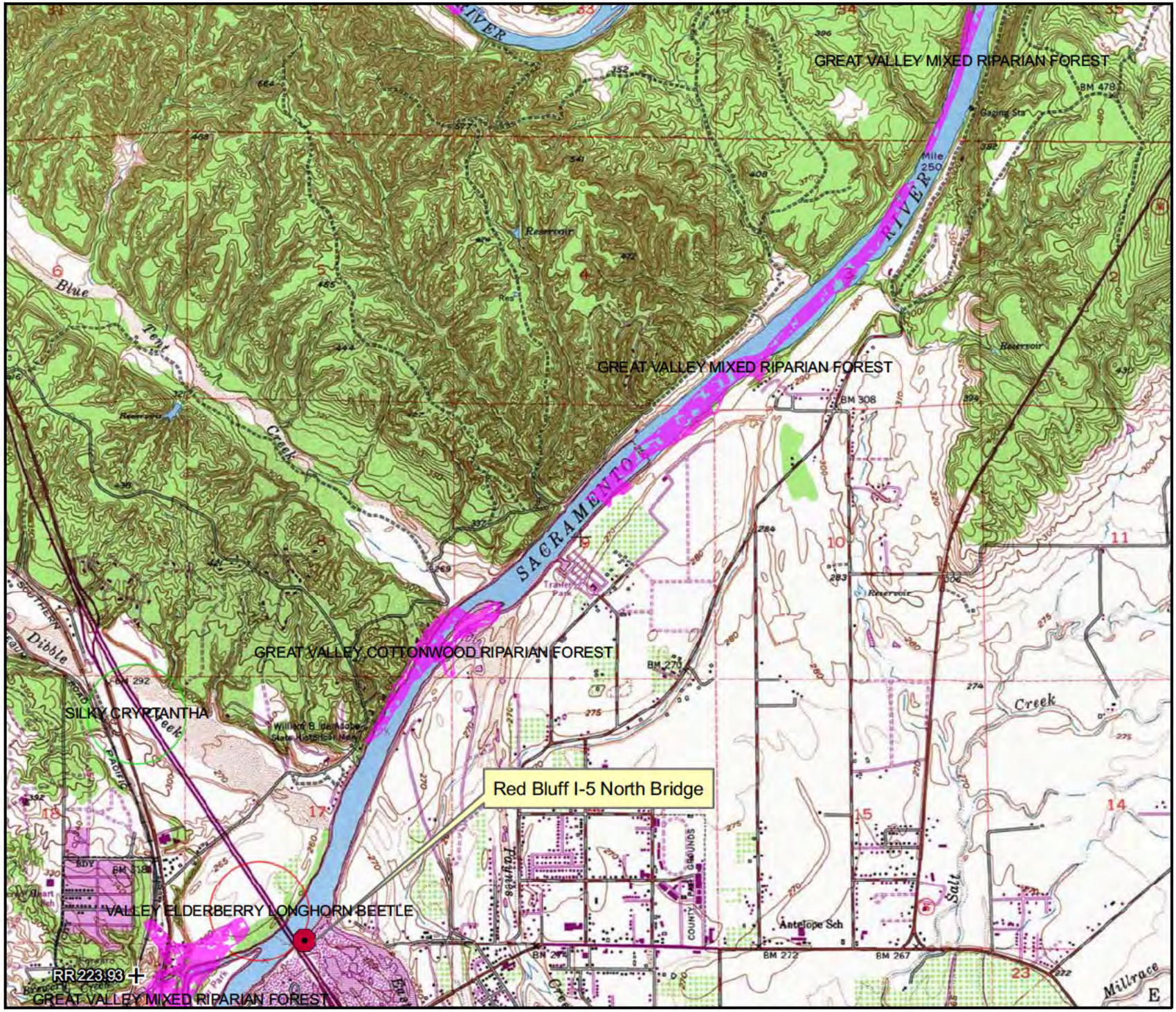
SFD0501108.25 May 2005

0 500 1000 2000 3000 Feet



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Upper Sacramento River
Geographic Response Plan

- Access Sites
- USGS Real-time Gauging Stations
- Railroad Mile Marker

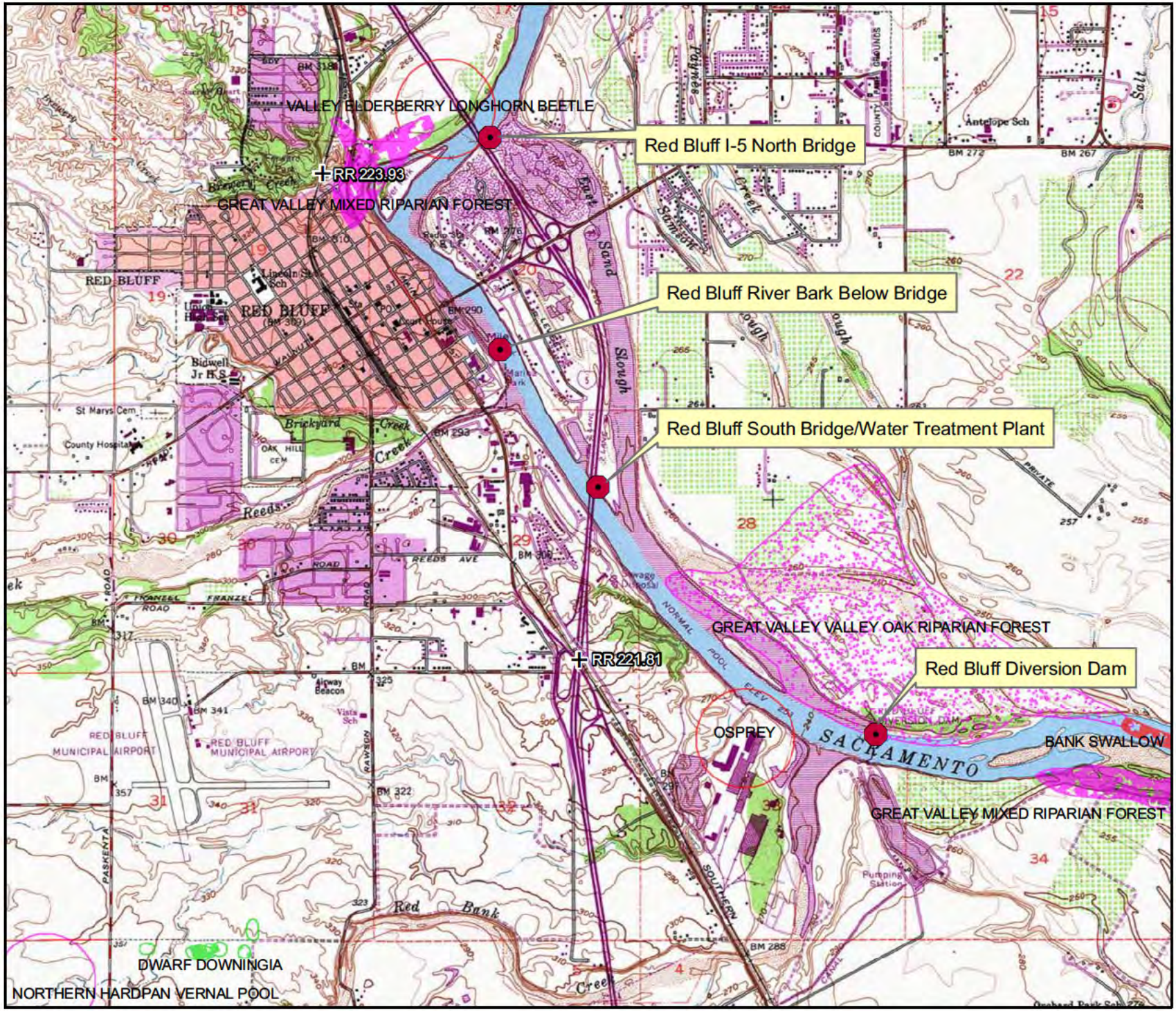
Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

N W E S

SFD0501108.26 May 2005

0 500 1000 2000 3000 Feet



25

Upper Sacramento River
Geographic Response Plan

Access Sites

USGS Real-time Gauging Stations

Railroad Mile Marker

Threatened or Endangered Species

- Plant (80m)
- Plant (specific)
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- Animal (non-specific)
- Animal (circular)
- Terr. Comm. (80)
- Terr. Comm. (specific)
- Terr. Comm. (non-specific)
- Terr. Comm. (circular)
- Aqu. Comm. (80)
- Aqu. Comm. (specific)
- Aqu. Comm. (non-specific)
- Aqu. Comm. (circular)

N W E S

SFD0501108.27 May 2005

0 500 1,000 2,000 3,000 Feet