

ACP 2 - GRA 8 Environ Site Overview

- Environmental Sensitive Sites
- Operational Division Lines
- California Counties

ACP 2 - GRA 8 Environmental Site Overview

Sacramento, San Joaquin, Solano, Yolo Counties

ACP 2 – North Delta

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9821 North Delta (GRA 8)

9821.1 Geographic Response Strategies for Environmental Sensitive Sites

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2-800-A/B Site Summary - Sacramento River, Lower Reach**2-800-A/B****County:** Solano**ACP Division/Segment:** SA - B - S001 SA - B - S003 SA - C - S012 SA - C - S013
SA - C - S001 SA - D - S001 SA - D - S003**NOAA Chart:** 18661 Sacramento &
San Joaquin River**Map Book:****Decimal Degrees:** 38.078341 -121.759575**Site Description:**

Site extends from levied portion of Sherman Island (about marker G11) to Rio Vista Bridge. This is the main stem of the Sacramento River Deep Water Channel system. The entire reach is broad open water with wave swept shores to the windward. The lower sections have modest beaches on the leeward (Solano) side and are rip-rapped on the windward with occasional emergent vegetation sands and beaches. Some mature trees remain, but most were cleared during revetment projects.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Plants	Mason's lilaeopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Dispatch, 24-hr	California Department of Parks and Recreation	(916) 358-1300
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Several sensitive plant species occur in this area.

Concerns and Advice to Responders:

Penetration into the riprap shoreline and potential impacts to salt-marsh habitats. Avoid spreading oil to upland, roadways and banks. Avoid trampling oil into marsh areas or muddy sediments. Do not anchor boom to trees or shrubs on levees.

Hazard and Restrictions:

Roads are narrow with narrow shoulders in many places and traffic on Hwys is fast which poses a traffic hazard. Traffic control should be implemented at this site. Aerial traffic beware of overhead powerlines. Foot traffic beware of slips, trips and falls of riprap banks.

Site Strategies:

Site Validation Level: II

Strategy: 2-800.1 Objective: Diversion to collection at favorable sites such as beaches or riprap to immobilize and prevent further spread.

Strategy: Deploy 500' 9x9+ collection booms at favorable collection points along the windward shores of Sherman Island and Brannon Island (but not on Brannon Island State Park shoreline). Booms should be set into the wind and will intercept along-shore movement of oil collecting on leeward shores. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect any oil that may accumulate. If oil accumulates in skimmable quantities contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Oil Snare (pom-pom)			300	feet	
Boom	Sorbent			300	feet	
Anchor	Danforth	40 lb		9		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-800.2 Objective: Oil Recovery with shore side skimming (SSS)

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Establish skimming at shoreline. Consult IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			2		
Staff	Staff to Deploy			6		

Logistics:

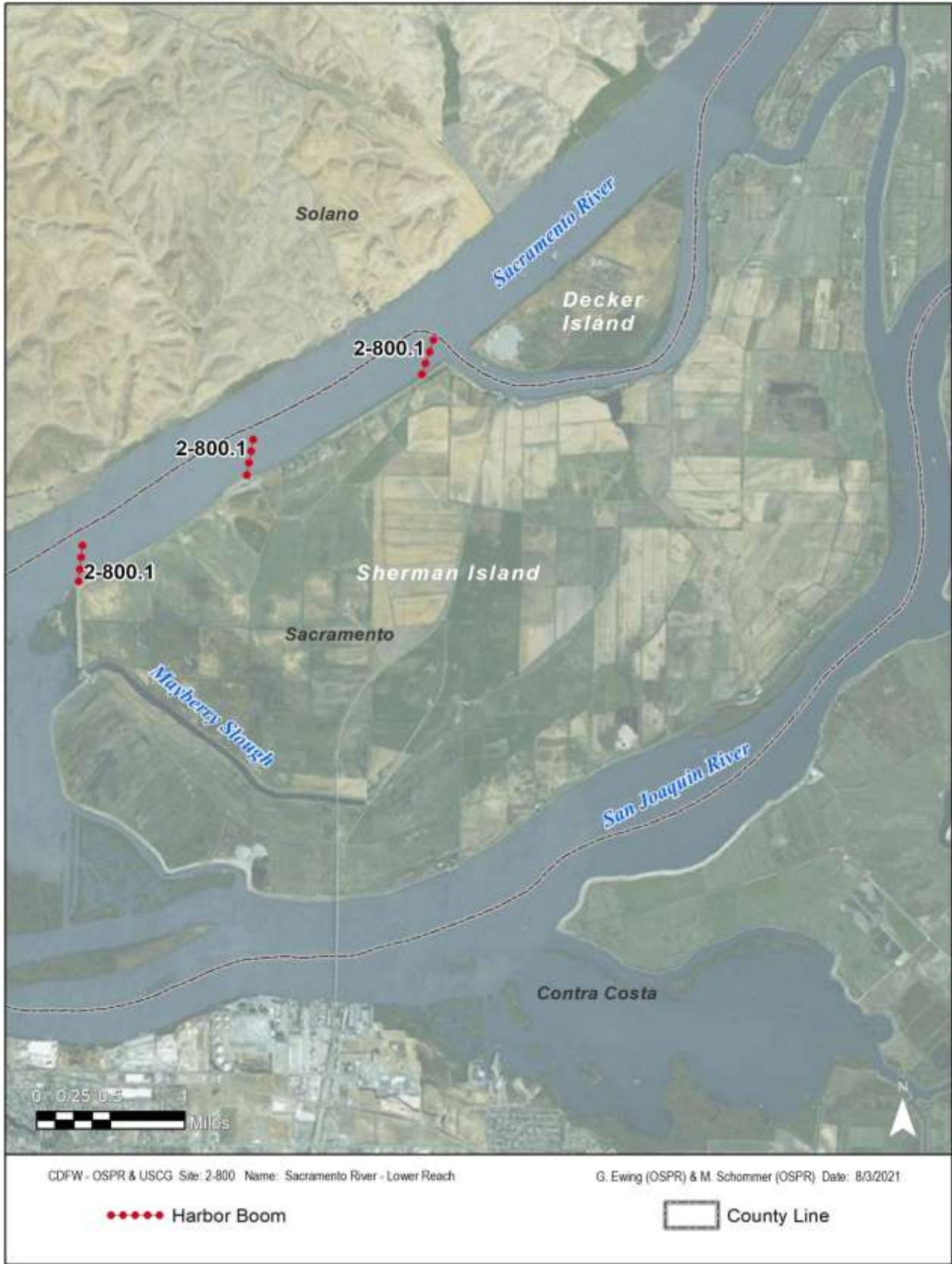
Directions: By boat most obvious access is from Rio Vista directly to the waters of this reach. By vehicle, Hwy 160 south from Hwy 12 at Rio Vista. Section along west Sherman Island is accessible from Sherman Island Rd. off of Hwy 160.

Land Access: Access thru levees, gates are intermittent. Contact DWR or RD for access.

On-Water Limitations: Deep water except at margins.

Facilities, Staging Areas, Command Posts, Available Equipment: Rio Vista has a full range of support facilities. Camping is possible at Brannon Island State Park and Lower Sherman Island Wildlife Conservation Area, and various small marina parks nearby. Rio Vista area marinas have full service. Alternative launches are near Grand Island or the Hwy 84 ferry slip.

Communications Problems: Cell reception varies.



2-804-A Site Summary - Sacramento River, Horseshoe Bend, Decker Island**2-804-A****County:** Sacramento **ACP Division/Segment:** SA - C - S005 SA - C - S008**NOAA Chart:** 18661 Sacramento & San Joaquin River **Map Book:** **Decimal Degrees:** 38.085521 -121.713338**Site Description:**

Site extends from the Sacramento mouth of 3-mile Slough to reunion of Horseshoe Bend at south tip of Decker Island and includes a restored (2001) wetland at the north tip of Decker Island (DWR). This wide riverine habitat is confined between leveed banks. The reach has emergent tule salt-marshes along most of its length and is premium Delta smelt spawning habitat. Uplands are trees and shrubs including many mature trees. Water margins are shallow with some extensive emergent patches particularly near the mouth. The restored marsh at the north tip opens on the Horse Bend side of the Island.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Plants	Mason's lilaeopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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E	/Office	North Delta Water Agency	(916) 446-0197
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Several sensitive plant species occur in the area. There are two islands in the reach which have been developed as residences or marina/mobile parks, but most of the shoreline is undeveloped and natural.

Concerns and Advice to Responders:

Concern for this site is secondary to keeping oil in Sacto River from moving into Threemile Slough and spreading to San Joaquin side of the Delta. Concerns within the site is oil penetrating the small marsh in the tip of Decker Island and the emergent marshes along the length. Beaver burrows and riprap are also places where oil may become lodged.

Hazard and Restrictions:

Roads are narrow and winding with narrow shoulders and low visibility curves in spots, and traffic on Hwy 160 (east levee) is fast and poses hazards: traffic control should be implemented at this site. Channel margins have thick vegetation, shallows and soft bottoms. Aerial traffic beware of occasional power wire crossings.

Site Strategies:**Site Validation Level: II**

Strategy: 2-804.1 Objective: Deflection-exclusion booming: keep oil in main Sacramento River channel and out of 3-mile Slough and Horseshoe Bend.

Strategy: Deploy deflection-exclusion boom in wide chevron to deflect oil past site and keep it in main channel. Use 4800' of 9X9+ curtain boom leaving trailing boom ends to maintain tidal seal.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		4800	feet	
Anchor	Danforth	40 lb		12		
Vessel	Boom Boat			2		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			8		

Strategy: 2-804.2 Objective: Exclude oil from north mouth and divert it to shore for collection.

Strategy: Deploy 1700 ft 9x9+ exclusion-collection boom from the north tip of Decker Island at a diagonal to the Sherman Island levee for collection. Use 50 ft Oil Snare (OS), 100 ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1700	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-804.3 Objective: Exclude/deflect past at south mouth of Slough.

Strategy: Deploy 2300 ft of 9X9+ exclusion-deflection boom across mouth in a shallow chevron from Sherman Island to Decker Island, leaving trailing ends to ensure tidal seal. Additional booming or sorbent booming may be necessary inside the mouth to deter oil movement if the outer chevron fails.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2300	feet	
Anchor	Danforth	25 lb		6		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-804.4 Objective: Oil Collection with Shoreside skimming system if oil accumulates in skimmable quantities

Strategy: Set up shore side skimming (SSS) operation at levee. Back with sorbent boom if entraining or escapement is likely. Consult IC prior to initiation of strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	shoreside			1		
Staff	Staff to Deploy			3		

Logistics:

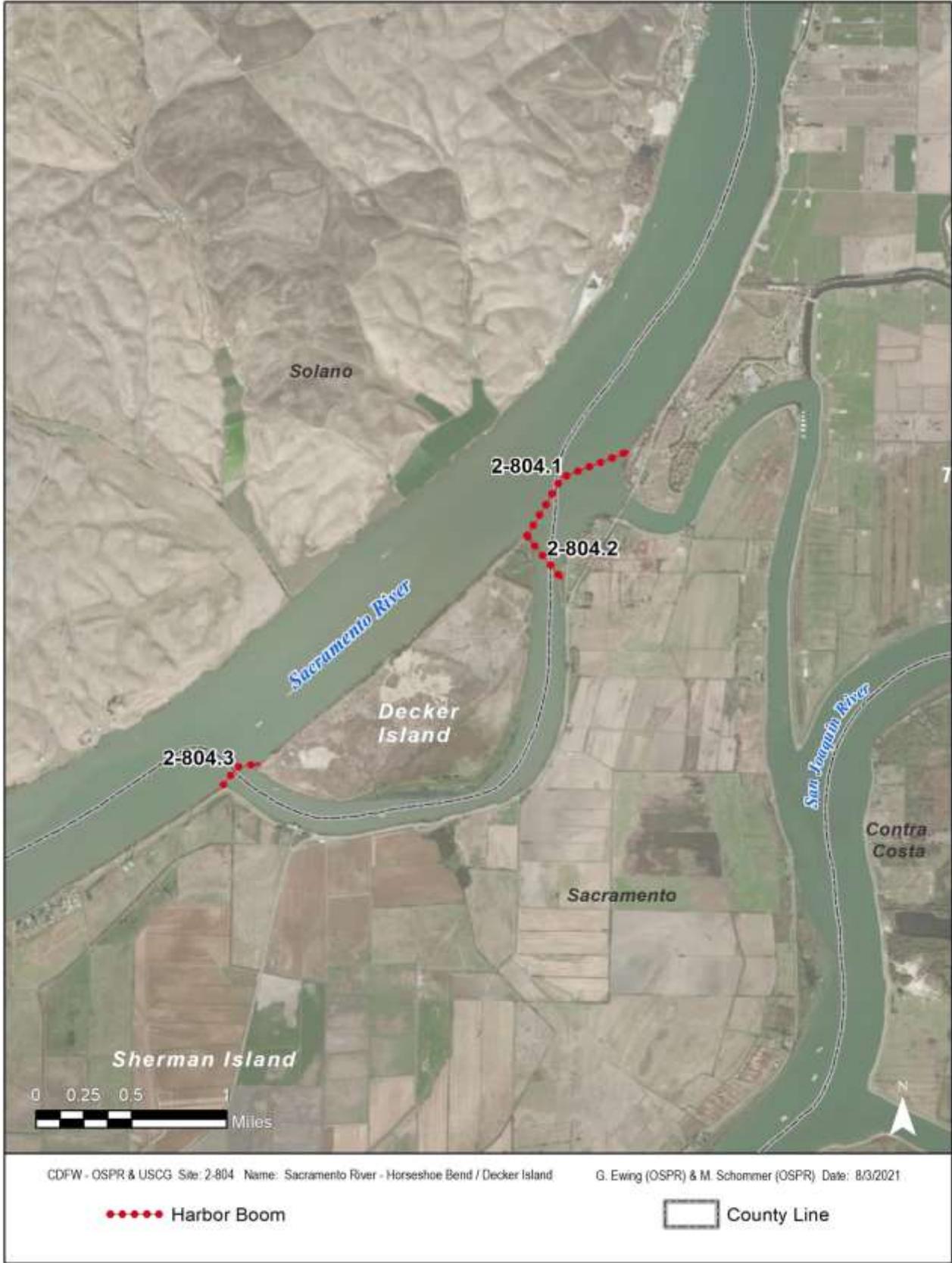
Directions: Via water, the site begins two miles north of the Rio Vista Bridge where the Sacramento River branches off Cache Slough and the Sacramento Deep Water Channel. By vehicle, the site begins two miles north of the Hwy 12 Rio Vista Bridge on Hwy 160.

Land Access: Private Property, best access via water.

On-Water Limitations: Launch facilities are available at Rio Vista or Brannon Island State Park.

Facilities, Staging Areas, Command Posts, Available Equipment: Rio Vista USCG station or Brannon Island State Park would serve well as a staging or command post site for this area. Either could be used as a deployment site as well. Rio Vista is the nearest locale with full support services, food, lodging, emergency service, marine repair, etc.

Communications Problems: Cell reception varies.



2-805-B Site Summary - Three Mile Slough - Sacramento River**2-805-B****County:** Sacramento **ACP Division/Segment:** SA - C - S002 SA - C - S004 SA - C - S009 SA - C - S011**NOAA Chart:** 18661 Sacramento & San Joaquin River **Map Book:** **Decimal Degrees:** 38.106201 -121.701457**Site Description:**

This Slough is about 3.5 mile long from its mouth on the Sacramento River to its mouth on the San Joaquin River. Site also includes the westerly end of Sevenmile Slough. This swift flowing channel is ripped on most of its steep banks. There are pockets of riparian vegetation. Brannon Island State Park borders its northwestern edge. There are pockets of emergent growth along its length, particularly in the Sevenmile Slough channel at the Park. This is a key control point to prevent oil spread from one side of the Delta to the other.

Resources at Risk:*ESI and Habitat:* 6B Riprap**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Insects	Antioch dunes anthicid beetle			
Plants	Mason's lilaeopsis	SR		April-Nov
Reptiles	qiant qarter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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E	/Office	North Delta Water Agency	(916) 446-0197
E	/Office	South Delta Water Agency	(209) 224-5854
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Sensitive plant species in the area.

Concerns and Advice to Responders:

Infiltration of oil into rip-rap, wetland, and riparian habitat.

Hazard and Restrictions:

Steep riprap banks and eroded banks with thick vegetation are obstacles to foot traffic. Narrow road and narrow shoulders creates a hazardous situation. Traffic control should be implemented at this site.

Site Strategies:

Site Validation Level: II

Strategy: 2-805.1 Objective: Exclude oil from mouth on Sacramento River to prevent spread to San Joaquin

Strategy: See Sacramento River, Horseshoe Bend strategy, 2-804.

Table of Response Resources

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Strategy: 2-805.2 Objective: Diversion to collection in westerly portion of Slough, for oil from Sacramento River

Strategy: This is a key deployment to keep oil in the Sacramento River from spreading to the San Joaquin River. At Hwy 160 bridge, deploy a collection diagonal to land the oil at the most favorable collection point under prevailing wind and current conditions. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Repeat this configuration as necessary to intercept oil spreading from west to east.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2600	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	40 lb		6		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Personnel	Staff to Deploy			5		

Strategy: 2-805.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmer if oil accumulates in skimmable quantities. Collect oil with land-based skimmer. Consult with IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: This site is easily accessible from either Sacramento or San Joaquin Rivers since it is a major cross link. Also, the boat ramp at Brannon Island State Park is on the Slough. Levee Roads and Hwy 160 provide vehicle access: Sherman Island Road is an all weather/all traffic paved road; Twitchell Island levee roads are private (DWR).

Land Access: ALL WEATHER/TRAFFIC

On-Water Limitations: GENERALLY VERY GOOD WATER. Launching facilities available at Brannon Island State Recreational Area.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging area available on river side and slough side at Brannon Island Recreational Area. Facilities including restrooms, electricity, and phone available.

Communications Problems:



County: Solano **ACP Division/Segment:****NOAA Chart:** 18661 Sacramento & San Joaquin River **Map Book:****Decimal Degrees:** 38.178558 -121.662426**Site Description:**

Site extends from the Rio Vista Bridge up the Sacramento river past the tip of Grand Island (G1) to the Isleton Bridge (approx 14 miles). This wide riverine habitat is confined between leveed banks. The lower portion has been identified by DFW as having extraordinary habitat values. Uplands are trees and shrubs including many mature trees. Water margins are shallow and salt-marsh with some extensive emergent patches particularly near the mouth, where there is an extensive emergent salt-marsh habitat just downstream from Grand Island. There are two islands (Long & Ida) in the reach which have been developed as residences or marina/mobile parks, but most of the shoreline is undeveloped and natural.

Resources at Risk:*ESI and Habitat:* 6B Riprap

5 Mixed sand and gravel beaches

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	delta smelt	FT, SE		Mar-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Plants	Mason's lilaepsis	SR		Apr-Nov
Reptiles	Western pond turtle	SSC		May-Jul
Reptiles	qiant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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O	/Dispatch, 24-hr	Rio Vista Police	(707) 374-2300
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
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Additional Site Summary Comments:

Other sensitive species to be aware of include: Sacramento anthicid beetle, Antioch Dunes anthicid beetle, delta tule pea, and Suisun marsh aster.

Concerns and Advice to Responders:

Infiltration of oil into thick riparian habitat and emergent salt-marshes. Beaver and other animal burrows may be present.

Hazard and Restrictions:

Roads are narrow and winding with narrow shoulders and low visibility curves in spots, and traffic on Hwy 160 (east levee) is fast and poses hazards: traffic control should be implemented at this site. Channel margins have thick vegetation, shallows and soft bottoms. Aerial traffic beware of occasional powerlines overhead.

Site Strategies:**Site Validation Level: II**

Strategy: 2-810.1 Objective: Deflection to Collection at the east bank to keep oil in main deep-water channel and out of Sacramento River mouth.

Strategy: 1. Deploy 3 deflection booms (3000' 9x9+ each) in Cache Slough upstream from Grand Island tip to divert oil to main channel and keep it away from marsh areas at Grand Island tip.

2. Set a wide chevron of boom (4000' 9x9+ curtain boom) pointing downstream for flood tide. One wing will divert oil near east shore to a collection point just upstream from Das Cliff Haus at the county day use site; the other wing will divert oil on open water into main channel and away from the marshes at the tip of Grand Island.

3. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect any oil that may accumulate. If oil collects in skimmable quantities, contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		13000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	40 lb		30		
Vessel	Boom Boat			5		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			16		

Strategy: 2-810.2 Objective: Exclusion to collection at southeast bank opposite Grand Island tip (at mouth) .

Strategy: Deploy 1500' 9x9+ exclusion-collection boom from tip of Grand Island upstream and across to small sandy beach on Brannon Island shore (at the curve of Hwy 160). Line the marsh downstream with 3000' 6X6+ of protective boom. If there is much wind chop, both will need to be backed with sorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Swamp	6x6 inch		3000	feet	
Anchor	Danforth	22 lb		12		
Vessel	Boom Boat			2		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			8		

Strategy: 2-810.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities as a result of strategy .1 and/or .2. Establish land-based skimming at beach if oil accumulates as a result of strategy .2. Consult with IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			2		
Staff	Staff to Deploy			6		

Logistics:

Directions: Via water, the site begins at the Rio Vista Bridge and branches off the Sacramento Deep Water Ship Channel at Cache Slough, following the easterly shoreline to the Isleton Bridge. By vehicle, Hwy 160 runs along the east levee from Hwy 12 to the Isleton bridge.

Land Access: Access to levees via HWY 160.

On-Water Limitations: Hidden Harbor, Vieira's Resort, Isleton Boat Ramp and Das Cliff Haus have launching, fuel, moorage and limited marine service. There is a free public launch and parking area at the mouth of this site.

Facilities, Staging Areas, Command Posts, Available Equipment: This Wildlife Conservation Board access site opposite the tip of Grand Island along Hwy 160 would serve well as a local deployment site. The major deployment site would still remain either the Ryer Island ferry landing (Hwy 84) on deep water channel above Steamboat Slough or Rio Vista. Rio Vista is the nearest locale with full support services, food, lodging, emergency service, marine repair, etc.

Communications Problems: Cell reception varies.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER**Map Book:****Decimal Degrees:** 38.239335 -121.517718**Site Description:**

This site extends from the bridge at Isleton to the Delta Cross Channel at Walnut Grove (approx 8.5 miles). This site is fully leveed along its length with bench banks on the inside stretches and riprap on outside bends. Most of the riparian vegetation has been removed in riprap areas, but considerable shrub-scrub is found along the reach. Occasional sandy beaches and emergent salt-marsh vegetation are found. The waterway is deep and has a strong flow. It is heavily fished throughout the year, particularly when migratory fish are present such as: salmon, steelhead, American shad and striped bass. Two significant side channels branches off at Walnut Grove: Delta Cross Channel and Georgiana Slough.

Resources at Risk:*ESI and Habitat:* 6B Riprap

5 Mixed sand and gravel beaches

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	white sturgeon	SSC		
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	green sturgeon			
Fish	delta smelt	FT, SE		Mar-May
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

A sensitive plant species, Sanford's arrowhead occurs in this area.

Concerns and Advice to Responders:

Infiltration of oil into riprap and mammal burrows is likely. Petroleum products are liable to be pumped to neighboring ag lands. Penetration in the riprap and potential impacts to riparian habitats.

Hazard and Restrictions:

Aerial traffic beware of power wire crossings over the river; ALSO, TV towers in Walnut Grove area are a severe aerial hazard. Levee roads are narrow with narrow or no shoulders. Steep ripped levees are a hazard to motorists and foot traffic. High boat traffic use and general public use. Narrow road and narrow shoulders creates a hazardous situation. Traffic control should be implemented at this site.

Site Strategies:**Site Validation Level: II**

Strategy: 2-813.1 Objective: If oil is threatening from north, execute Delta Cross Channel closure, boom Georgiana Slough mouth, and divert oil for collection.

Strategy: 1. See sites 2-815, 2-814 for side Cross Channel and Georgiana closures.

2. Using collection, exclusion configuration, set 500 ft of 9X9+ Hboom across the Sacramento River just downstream from the mouth of the Georgiana Slough mouth. Angle the boom to take advantage of favorable current and wind to drive oil to bank for collection. Winds will favor the east bank but currents and eddies may drive oil to west bank. Use 50ft Oil Snare (OS), 100ft sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		500	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-813.2 Objective: For oil spills from the Isleton area, deploy collection, exclusion boom below bridge to intercept oil and prevent spread upstream.

Strategy: Downstream from the Isleton Bridge, deploy 700' 9X9+ Hboom across river to direct oil to shore for collection. Generally winds favor collection at the easterly shoreline, but angel to best advantage under existing wind and current (incoming tide) conditions. Use area at grainery for deployment and operators. Use 50ft Oil Snare (OS), 100ft sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		700	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-813.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Set up a land-based skimming operation at the incident levee if oil accumulates in skimmable quantities as a result of strategy .1. Set up land-based skimmer, back with sorbent as necessary if oil accumulates in skimmable quantities as a result of strategy .2. Consult IC prior to the initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: This portion of the Sacramento River is accessible by boat from marinas at Walnut Grove and Isleton. Both levees have all weather, all vehicle roads along their lengths, including Hwy 160.

Land Access: Unrestricted access.

On-Water Limitations: Launch facilities are available at Isleton and Walnut Grove.

Facilities, Staging Areas, Command Posts, Available Equipment: A wide variety of facilities are available at Isleton and Walnut Grove though capacity is limited in these small communities. Both Sacramento and Rio Vista have full facilities.

Communications Problems: Cell reception varies on your location.



2-814-A/C Site Summary - Georgiana Slough**2-814-A/C****County:** Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.235306 -121.51779**Site Description:**

This site extends from its upper mouth just downstream from the Walnut Grove bridge to its lower mouth on the Mokelumne just north of Hwy 12 (approx 12.5 miles). Georgiana Slough is a winding, leveed waterway which is a side channel of and important by-pass flow management for the Sacramento River. It is deep and swift with few beaches but frequent bench-banks with considerable shrub-scrub and some mature riparian vegetation. Migratory fish stray into this channel from their normal migration pattern: salmon, steelhead, American shad and striped bass.

Resources at Risk:*ESI and Habitat:* 8C Sheltered riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Several rare sensitive plants occur in the area.

Concerns and Advice to Responders:

Petroleum products are liable to be pumped to adjacent agriculture lands. Infiltration of oil into riprap, wetland, riparian habitat and invertebrate burrows is likely.

Hazard and Restrictions:

Aerial traffic beware of power wire crossings over the River; ALSO, TV towers in Walnut Grove area are a severe aerial hazard. Levee roads are narrow with narrow or no shoulders. Steep ripped levees are a hazard to motorists and foot traffic. High boat traffic use and general public use. Narrow road and narrow shoulders creates a hazardous situation. Traffic control should be implemented at this site. Thick vegetation along shore and poison oak. Loose footing near water. Narrow road, narrow shoulders, thick vegetation, deep water and fast flow create a hazardous situation. Traffic control should be implemented at this site.

Site Strategies:

Site Validation Level: II

Strategy: 2-814.1 Objective: Exclusion-diversion boom across the mouth for oil coming down Sacramento River from the north.

Strategy: Deploy 1200 ft of 9x9+ Hboom at north mouth of Georgian Slough. Anchor one end 600ft+ upstream on the east bank and set the other end 200ft+ downstream of mouth on Andrus Island levee. This long diagonal deployment should allow oil to move past the mouth on both flood and ebb.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1200	feet	
Boom	Sorbent			500	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-814.2 Objective: Flood tide oil threats at the South mouth: deter oil entry by deflection into the channel and exclusion booming across mouth.

- Strategy:*
1. Set 600' 9X9 Hboom across the mouth to maximize collection at most favorable shoreline for land collection (south margin has best access).
 2. Deploy five 300' 9X9 Hboom legs from shore at a diagonal into mid-channel from locations downstream from mouth (beginning at bridge abutment).

Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect any oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			1		

Strategy: 2-814.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. If oil accumulates as a result of strategy .2: station on-water skimmers to pickup deflected oil. Or, as an alternate, set two skimming boom configurations on bridge piers to feed two skimmers. Consult IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: The north mouth accessible by boat from marinas at Walnut Grove and the south mouth from marinas on the Mokelumne River. Both levees have all-weather, all-vehicle roads along most of their lengths: access from Walnut Grove or Isleton (0.5 mi north) to Isleton Road (Andrus Island) or Tyler Island Road (east side).

Land Access: Unrestricted access throughout area.

On-Water Limitations: Marina/Launch facilities are available at both mouths. Walnut Grove: Boathouse Marina and Walnut Grove Marina; Mokelumne at Hwy 12: B&W Marina, Spindrift Marina, Perry's Boat Harbor and others.

Facilities, Staging Areas, Command Posts, Available Equipment: A full range of facilities is available at Walnut Grove except for housing (though in limited quantity). Likewise at the southern mouth or nearby Rio Vista. Camping, cabins and motels are more available at south mouth.

Communications Problems: Cell reception varies upon your location.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO
RIVER**Map Book:****Decimal Degrees:** 38.24663 -121.509908**Site Description:**

Site extends from its intersection of the Delta Cross Channel and the Sacramento River to Snodgrass Slough and then southward to the South Mokelumne River (approx 2.5 miles). It does not include upper Snodgrass Slough (see 2-916). The site includes the unnamed cut between Dead Horse Island and McCormick Island and Dead Horse Island which is a restored wetland. The Delta Cross Channel is key to managing flood flows and water quality in the Delta since it connects Sacramento River flows to the central Delta via the Mokelumne River. It is strategic to oil spill containment in the Sacramento River to avoid spread to the central Delta and the Snodgrass Slough complex of wetlands. The lower portion of Snodgrass Slough has rich marsh and riparian growth along its length including emerging channel islands. This habitat abounds with rich aquatic, marsh and terrestrial life.

Resources at Risk:*ESI and Habitat:* 6B Riprap

5 Mixed sand and gravel beaches

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Reptiles	Western pond turtle	SSC		May-Jul
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

"Modesto" song sparrow and Suisun marsh aster are sensitive species that occur in this area also.

Concerns and Advice to Responders:

Primary concern is to keep oil from spreading from Sacramento River to central Delta through this Channel. Failure to contain oil spread here will result in widespread spill impacts to many other sites, particularly neighboring sites and marshes within the site. Oil can penetrate into banks through invertebrate and mammal burrows and tree roots. Minimize wildlife disturbance and vegetation trampling - endangered species are found in this area.

Hazard and Restrictions:

Aerial traffic beware of overhead power wires. Watercraft beware of snags and shallows. Pedestrian hazards include: Poison Oak, riprap, and dense vegetation.

Site Strategies:**Site Validation Level: II**

Strategy: 2-815.1 Objective: Exclude oil from entering Delta Cross Channel

Strategy: 1. Contact Dept Water Resources and request closure of Delta Cross Channel gates. Back gates with sorbant if oil passes thru.

2. If gates cannot be closed, deploy deflection-exclusion boom at mouth and upstream deflection booms: (NOTE: Booming would likely be required only during flood periods when extreme water level fluctuations are common: booms must be rigged to content with fluctuating level changes.)

a. deploy deflection boom across the Channel mouth into the flow of the Sacramento River in a shallow chevron configuration, to encourage oil to slid past mouth (600' 9x9+ exclusion-diversion boom);

b. Deploy two diversion booms from the east side upstream bank, to divert oil away from shoreline and into the center of the current. (500' 9x9+ each) This will require anchoring at both ends using multiple heavy anchors.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor		0 inch	1800	feet	
Boom	Sorbent			200	feet	
Anchor	Danforth		44 lb	7		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-815.2 Objective: Divert oil to shore for collection, if oil enters Delta Cross Channel from the Sacramento River.

Strategy: Deploy two or more collection booms across channel on a long diagonal to land-based collection at favorable locales (600 ft of 6X6+ each). Anchor near shore leaving a trailing boom length to insure tidal seal. Back with sorbent boom. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp		6x6 inch	1200	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			700	feet	
Anchor	Danforth		25 lb	5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-815.3 Objective: If any oil enters site, execute exclusion 2-816.1at mouth to upper Snodgrass Slough and wetland complex: execute

Strategy: see Snodgrass Slough Complex strategy 2-816.

Table of Response Resources

Last Page Update

Strategy: 2-815.4 Objective: Oil Recovery with shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Move SBS skimming systems into the channel at favorable site to intercept oil if slicks are heavy as a result of strategy .2. Consult IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Vehicle access to the Cross Channel and Slough is the levee road along the north and south side of the Delta Cross Channel off of Hwy 160; it is unpaved and seasonal. Lower Snodgrass has an unpaved levee road on the Tyler Island shore. By water the site is accessible from the Sacramento River via the Delta Cross Channel or from the Walnut Grove Marina or from New Hope Landing. Though traffic is only possible when Cross Channel gates are open: gates restrict the height of craft which can pass under.

Land Access: Levee access is good while dry, avoid levees when saturated.

On-Water Limitations: There are several boat launches on each side of the Cross Channel gates: including Boat House, Walnut Grove Marina, New Hope Landing.

Facilities, Staging Areas, Command Posts, Available Equipment: The Cross Channel levees are adequate for land deployment and local staging. Walnut Grove has a wide variety, though limited quantity of resources.

Communications Problems: Cell reception varies on your location.



County: Sacramento ACP Division/Segment:

NOAA Chart: 18662 SACRAMENTO RIVER Map Book:

Decimal Degrees: 38.243053 -121.497007

Site Description:

Site extends from its intersection with the Delta Cross Channel northerly to its various extremities including the Stone Lake Complex (near I-5). The site includes the many adjacent marshes. Snodgrass Slough and its many joining sloughs are an extensive complex of marshes and wetlands that span from the Sacramento levee on the west and north to the Cosumnes River on the east to the Mokelumne River levee on the south and to Stone Lakes Complex to the north. It has extremely rich marsh and riparian growth throughout its length including many channel islands and adjacent marshes. The slough has many shallows and snags. This habitat abounds with rich, aquatic, marsh and terrestrial life.

Resources at Risk:

- ESI and Habitat: 6B Riprap
- 9B Vegetated low banks
- 8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Birds	Western snowy plover	FT, SSC		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Plants	Delta tule pea	SSSP		May-Jul
Plants	Bolander's water-hemlock	SSSP		Jul-Sep
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Dispatch, 24-hr	California Department of Parks and Recreation	(916) 358-1300
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Contact Dept Water Resources and request closure of Delta Cross Channel gates.

Concerns and Advice to Responders:

The concern is that oil will enter this extensive network of marshes on a flood tide from the Delta Cross Channel. Penetration of oil into wetlands. Penetration of oil into banks through invertebrate and mammal burrows.

Hazard and Restrictions:

Aerial traffic beware of overhead powerlines. Watercraft beware of snags and shallows. Pedestrian hazards include: Poison Oak, riprap, and dense vegetation.

Site Strategies:**Site Validation Level: II**

Strategy: 2-816.1 Objective: Exclude oil from moving from/to Snodgrass complex through Delta Cross Channel

Strategy: Contact Dept Water Resources and request closure of Delta Cross Channel gates. Back gates with sorbent.

Deploy 500 ft of 6X6+ curtain boom from north corner of Delta Cross Channel-Snodgrass Slough diagonally southeasterly across Snodgrass Slough. Anchor near shore leaving a trailing boom length to insure tidal seal. Back with sorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Sorbent			500	feet	
Anchor	Danforth	25 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Vehicle to the slough mouth is the levee road along the north side of the Delta Cross Channel off of Hwy 160; it is unpaved an seasonal. There is very little vehicular access. By water the site is accessible from the Sacramento River via the Delta Cross Channel or from the Walnut Grove Marina or from New Hope Landing.

Land Access: Avoid levees when saturated.

On-Water Limitations: There are several boat launches on each side of the Cross Channel gates: including Boat House, Walnut Grove Marina, New Hope Landing.

Facilities, Staging Areas, Command Posts, Available Equipment: The Cross Channel levees are adequate for land deployment and local staging. Walnut Grove has a wide variety, though limited quantity of resources.

Communications Problems: Cell reception varies in area.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.342791 -121.499888**Site Description:**

One of the most important ecological complexes in the Delta. The area has overflow basins, with diversity of habitat types; lakes, freshwater marshes, riparian trees and bushes, grassland and quiet sloughs.

Resources at Risk:*ESI and Habitat:* 10B Freshwater marshes**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	great blue heron	FP		Nov-Apr
Birds	Swainson's hawk	FP, ST		Mar-Sep
Birds	waterfowl			
Fish	delta smelt	FT, SE		Mar-May
Plants	slough thistle	SSSP		May-Aug
Reptiles	qiant qarter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

This area is critical habitat for waterfowl and other marsh species. It is a rookery site for great blue heron and egret and has archaeological significance also.

Concerns and Advice to Responders:**Hazard and Restrictions:**

Boat traffic beware of shallows, many snags and mud bars. Poison Oak.

Site Strategies:**Site Validation Level: 0****Logistics:**

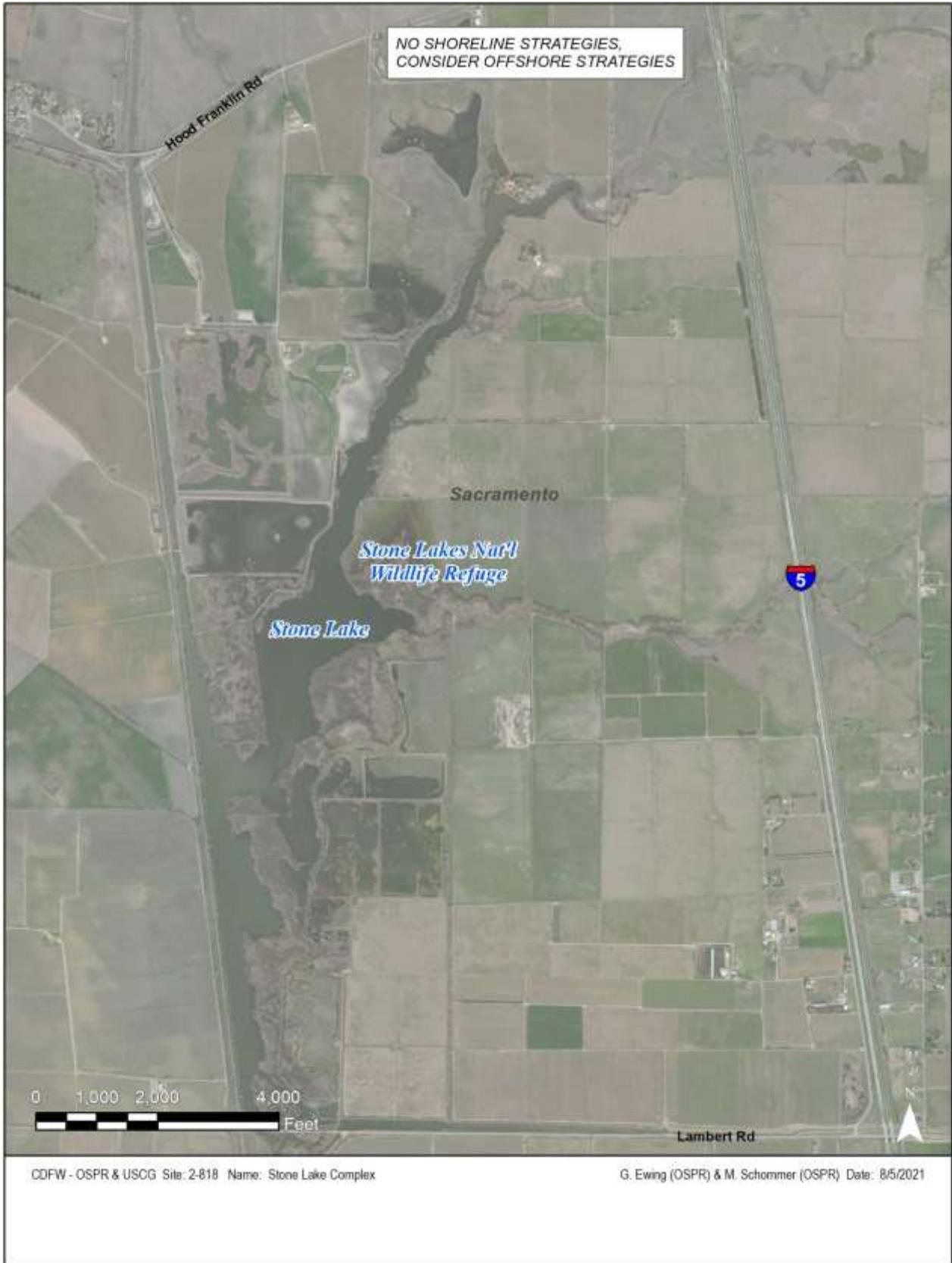
Directions: Access: Highway 160 from Walnut Grove or Sacramento to Hood Franklin Rd. Go east on Hood Franklin Rd. to Stone Lake complex.

Land Access:

On-Water Limitations:

Facilities, Staging Areas, Command Posts, Available Equipment:

Communications Problems:



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.561525 -121.520568**Site Description:**

This site extends from Sacramento (Hwy 50 bridge over the Sacramento River) downstream to the Delta Cross Channel at Walnut Grove, approx 31 river miles. This site is fully leveed along its length with riprapped shoreline. Most of the riparian vegetation has been removed though remnants remain. Occasional sandy beaches and emergent vegetation are found in the upper portion. This reach is deep and has a strong flow. Several significant channels branch off: Steamboat Slough, Sutter Slough, Delta Cross Channel, Sacramento Ship Channel Locks.

Resources at Risk:*ESI and Habitat:* 8C Sheltered riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Spring-run	FT, ST		Apr-Aug
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	longfin smelt	ST		Nov-May
Fish	delta smelt	FT, SE		Mar-May
Insects	valley elderberry longhorn beetle	FT		
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Sacramento splittail is a species of special concern that occurs in this area.

Concerns and Advice to Responders:

Infiltration of oil into riprap and burrows is likely. Petroleum products are liable to be pumped to neighboring ag lands.

Hazard and Restrictions:

Aerial traffic beware of power wire crossings over the River; TV towers in Walnut Grove area are a severe aerial hazard. Levee roads are narrow with narrow or no shoulders. Steep rip-rapped levees are a hazard to motorists and foot traffic. Heavy recreational boat traffic use and general public use area.

Site Strategies:

Site Validation Level: II

Strategy: 2-820.1 Objective: Diversion to collection at Miller Park sandy beaches, for oil in the River above the locks

- Strategy:* 1. Prepare beach just down stream from marina mouth for oil collection: preclean beach.
 2. Set a diversion boom at a long diagonal across the river to land oil on beach near marina mouth. Lay 3000 ft of 6X6+ diversion boom from west bank levee to the east side beach. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. If oil accumulates in skimmable quantities contact IC.
 3. Block marina 400ft 6X6+ with Swamp boom. Back with sorbent as necessary.
 4. Block the river mouth of the Channel locks. Block with 1000ft of 6X6+ exclusion boom. Back with 300 ft of sorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		4400	feet	
Boom	Sorbent			700	feet	
Anchor	Danforth	50 lb		9		
Vessel	Boom Boat			2		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			8		

Strategy: 2-820.2 Objective: Divert to collection at a favorable location where logistics and prevailing conditions permit oil interception and collection.

Strategy: Deploy deflection booms across main channel on a long diagonal to divert oil onto most favorable riverbank for collection. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. If oil accumulates in skimmable quantities contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		3000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	50 lb		7		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-820.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Consult IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Sacramento River is accessible by boat from a number of marinas throughout its length. Both levees have all weather, all vehicle roads along most of its length, including Hwy 160.

Land Access: Unrestricted access to area, best access via vessels.

On-Water Limitations: Sacramento Marina and Miller Park provide numerous boat launching opportunities. A crane was observed on west shore in the channel lock compound. Various marinas along river.

Facilities, Staging Areas, Command Posts, Available Equipment: Excellent staging areas at marina and park. Amenities include launch facility, fuel docks, large paved staging area, restrooms. Small towns along river provide limited services.

Communications Problems: Cell reception varies in area.



2-830-A Site Summary - Steamboat Slough**2-830-A****County:** Solano **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.30479 -121.574187**Site Description:**

Site extends from its mouth on the Sacramento River near Courtland to its mouth on Cache Slough at the tips of Grand and Ryer Islands, approx 14 river miles. Sutter Slough connects at mid-length. This Slough is a north-south (shortcut) side channel of the Sacramento River. It has abrupt steep levees with occasional water side benches and beaches. Much of its length is rip-rapped but it has mature and shrub-scrub riparian growth at its northerly and southerly reaches.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	delta smelt	FT, SE		Mar-May
Plants	Mason's lilaeopsis	SR		Apr-Nov
Plants	Delta tule pea	SSSP		May-Jul
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

Infiltration of oil into riprap and into levees via invertebrate, muskrat and beaver burrows. Penetration and potential impacts to riparian habitats.

Hazard and Restrictions:

Aerial traffic beware of overhead powerlines and TV antennae towers in Walnut Grove vicinity. Narrow road, narrow bridges, and narrow shoulders with riparian vegetation makes this site a dangerous hazard. Traffic control should be implemented at this site. Bridge height is 14' 6". Narrow road and narrow shoulders creates a hazardous situation. Loose footing near water.

Site Strategies:**Site Validation Level: II**

Strategy: 2-830.1 Objective: Exclusion/diversion to collection at the Sacramento mouth: divert it to shore-side collection.

Strategy: 1. Lay 600' 6X6 deflection boom from a point up the Sacramento from marina docks above the mouth at a downstream 45 degree angle to mid-channel to divert oil away from slough mouth. Back with sorbent.

2. Deploy exclusion-collection boom across Steamboat Slough at a slight angle to take advantage of eddying along the north bank.

3. Deploy absorbent booms behind exclusionary booms to capture oil streamers.

4. Establish land-based collection unit to collect accumulating oil. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil begins to accumulate in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1300	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			600	feet	
Anchor	Danforth	25 lb		7		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-830.2 Objective: Exclusion/deflection booming Steamboat Slough south mouth on Cache Slough on incoming tides.

Strategy: Set 500' 9x9+ Hboom in a shallow chevron to shunt oil past mouth and simultaneously block its entry. Anchor near shore and leave a trailing boom length to insure tidal seal. Back with sorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		500	feet	
Boom	Sorbent			500	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-830.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmer if oil accumulates in skimmable quantities. Consult with IC prior to the initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: By water, site is accessible via its northerly mouth on the Sacramento River just south of Sutter Slough (Courtland) or via its southerly mouth just east of the Ryer Island Ferry (hwy 84) on Cache Slough. Best vehicle access is Grand Island Road off Hwy 160.

Land Access: Good access via levees, best access from vessels.

On-Water Limitations: Courtland Docks and Morgan Landing closest northerly boating facility. Snug Harbor, Rio Vista or Real McCoy Ferry Landing are nearest launch point to south.

Facilities, Staging Areas, Command Posts, Available Equipment: Steamboat Landing is the nearest facility. Small front parking lot available but not convenient for large-scale deployment. Stairs available for beach access. Hidden Harbor and Snug Harbor closest facilities. Rio Vista has best service for south mouth. Deployment at south mouth may be staged at ferry landing or local marinas.

Communications Problems: Cell reception may be spotty.



County: Yolo ACP Division/Segment:

NOAA Chart: 18662 SACRAMENTO RIVER Map Book:

Decimal Degrees: 38.327814 -121.576639

Site Description:

Sutter Slough is a side channel of the Sacramento River and flows to Steamboat Slough, approx 4.5 river miles. It is bordered on the east side by Sutter Island. It is relatively narrow slough with mature and shrub-scrub riparian growth mix along steep and partially rip-rapped levees. Strong currents are common; the channel is deep though encroached upon by riparian growth. Several significant side sloughs intersect: Elk Slough and Miner Slough. This is an important pathway for migratory fish.

Resources at Risk:

ESI and Habitat: 8C Sheltered riprap
 9B Vegetated low banks
 8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Insects	valley elderberry longhorn beetle	FT		
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
S	/Dispatch, 24-hr	Yolo County Office of Emergency Services	(530) 666-8920
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Oil Spill Point of Contact	NOAA National Marine Fisheries Service	(707) 480-3496
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

Infiltration of oil into riprap and also into levees via invertebrate and beaver burrows. Difficult cleanup of riparian vegetation. Toxicity to riparian growth and migratory fish.

Hazard and Restrictions:

Narrow road, narrow bridge, and narrow shoulders with riparian vegetation makes this site a dangerous hazard. Traffic control should be implemented at this site. Aerial traffic should note powerline crossings and TV antennae towers in the vicinity.

Site Strategies:**Site Validation Level: II**

Strategy: 2-832.1 Objective: Exclude oil and divert to shore for collection, for oil threats to Sacramento mouth.

Strategy: 1. Deploy exclusion-collection boom across Sutter Slough mouth using the bridge pier as anchor point. Deploy at an angle to take advantage of local eddy (which tends to be inside mouth along northside levee.

2. Deploy double sorbent booms behind exclusionary booms to capture oil streamers.

3. Establish land based collection of oil. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			1100	feet	
Anchor	Danforth			5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-832.2 Objective: For oil threats from upstream, deflection boom above the Sacramento mouth to keep oil to mid channel and away from mouth.

Strategy: From a point 300 feet upstream from mouth on the west bank of the Sacramento River, deploy 600ft of 6X6+ deflection boom to mid channel at a 45 degree angle.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		600	feet	
Anchor	Danforth	25 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-832.3 Objective: Exclusion boom at the south mouth on Steamboat Slough.

Strategy: Deploy 500' 6X6+ boom across the mouth. Anchor one end 100' up Steamboat slough near the Sutter Island levee and the other downstream from the mouth, leaving trailing boom lengths to ensure a tidal seal.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-832.4 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmer if oil accumulates in skimmable quantities. Consult IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: By water, Sutter Slough branches off the Sacramento River just south of Courtland and rejoins Steamboat Slough at mid-length. The all weather levee road on Sutter Island is accessible from Hwy 160 opposite Courtland.

Land Access: Paved road on SE levee. Best access via vessel.

On-Water Limitations: Courtland Docks and Morgan Landing closest boating facility at northerly mouth. Steamboat Landing, Hog Island or Snug Harbor on Steamboat Slough are closest to southerly mouth.

Facilities, Staging Areas, Command Posts, Available Equipment: Courtland Docks are the nearest facilities. Large front parking lot available but not convenient for large-scale deployment.

Communications Problems: Cell reception varies upon your location.



2-834-A Site Summary - Elk Slough**2-834-A****County:** Yolo **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.332375 -121.583962**Site Description:**

Site extends from its mouth on Sutter Slough to its terminus 11 miles to the north at the Sacramento River levee road. Though once a throughway it is now a dead-end slough with extensive mature riparian forest and growth along its banks. It is shallow and full of snags. It is premium wildlife and warmwater fish habitat. It provides snags and cavities, a habitat type which has become rare in the Delta. It is used extensively by riparian birds, waterbirds and wildlife.

Resources at Risk:

- ESI and Habitat:* 8C Sheltered riprap
 9B Vegetated low banks
 8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Plants	Delta tule pea	SSSP		May-Jul
Reptiles	qiant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Yolo County Office of Emergency Services	(530) 666-8920
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

The objective is to keep this habitat from becoming contaminated by excluding oil. If oil gets in this slough there are problems of infiltration of oil into thick riparian habitat or into levees via beaver and muskrat burrows.

Hazard and Restrictions:

Narrow road, narrow shoulders, thick vegetation, deep water and fast flow at mouth creates a hazardous situation. Traffic control should be implemented at this site. Aerial traffic should be alert to overhead powerlines in the area and the TV antennae towers nearby.

Site Strategies:**Site Validation Level: II**

Strategy: 2-834.1 Objective: Exclude oil from entering Elk Slough

Strategy: Execute Sacramento River Sutter Slough mouth strategy. Then set exclusion boom across the mouth or outside the mouth at an angle to minimize oil movement into the slough. Anchor near shore leaving a trailing length to maintain a seal during tidal fluctuations. Back with sorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		200	feet	
Boom	Swamp	6x6 inch		200	feet	
Boom	Sorbent			70	feet	
Anchor	Danforth	25 lb		4		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Water access is from the Sacramento River via Sutter Slough a 0.5 mile west to the mouth of Elk Slough. Paved vehicle access is Waukeena Rd, the west levee road, intersecting Courtland Road near Jefferson Blvd. East levee roads are private (Merritt Island).

Land Access: West side is best access.

On-Water Limitations: Courtland Docks and Morgan's Landing.

Facilities, Staging Areas, Command Posts, Available Equipment: Same as Steamboat and Sutter Sloughs.

Communications Problems: Cell reception varies pending your location.



2-840-A Site Summary - Lindsey Slough**2-840-A****County:** Solano **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.246512 -121.697146**Site Description:**

Site extends from its mouth on Cache Slough (about 1.5 miles west of the Sacramento Deep Water Channel) about 4.5 miles to its terminus plus several miles of three minor sloughs and marshes at its terminal end including Hastings Cut, Calhoun Cut, Wright Cut and Barker Slough. This meandering freshwater marsh habitat dead-end slough has rich riparian growth throughout its length. Both banks are leveed and riprapped. It has many shallows and snags. This habitat is rich in aquatic, marsh and terrestrial life.

Resources at Risk:

- ESI and Habitat:* 8C Sheltered riprap
 9B Vegetated low banks
 8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Plants	Mason's lilaeopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Operations	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

The intention is to protect this extensive marsh -riparian area by excluding oil. Infiltration of oil into wetlands. Penetration of oil into levee, riprap and banks by animal burrows and tree root channels.

Hazard and Restrictions:

Aerial traffic beware of overhead power wires. Watercraft beware of snags and shallows. Pedestrian hazards include: Poison Oak, riprap, and dense vegetation.

Site Strategies:

Site Validation Level: 0

Strategy: 2-840.1 Objective: Exclude Oil

Strategy: Execute 2-850 Cache Slough strategies.

Table of Response Resources

Last Page Update

Logistics:

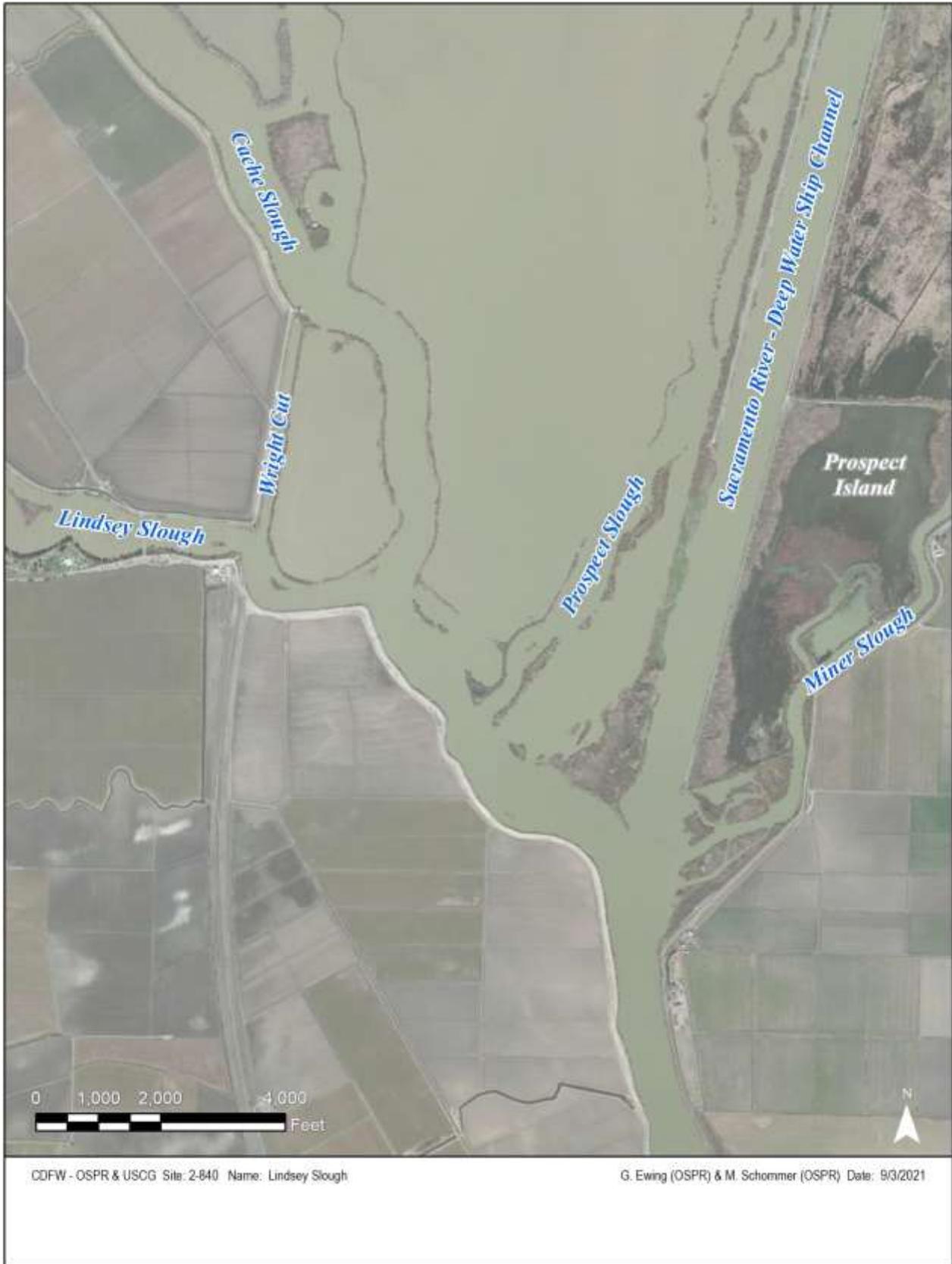
Directions: Vehicle access is levee road 7 miles north from Rio Vista via Hwy 84. By water from Rio Vista north up the Sacramento River and then 1.5 miles west of the Sacramento Deep Water Channel along the westerly bank.

Land Access: Use levee access where available.

On-Water Limitations: Private boat launch on east side (near Miner Slough Mouth) but needs to be cleared prior to use. "Real McCoy Ferry" (Hwy 84) can be used as a launch site. Launch, moorage and fuel are also available at Steamboat Slough and Rio Vista.

Facilities, Staging Areas, Command Posts, Available Equipment: Real McCoy Ferry has large deployment site. Another deployment site is past mouth of Prospect Slough but access is limited. Rio Vista has a full range of support facilities.

Communications Problems: Cell reception varies in area.



2-850-A Site Summary - Cache Slough**2-850-A****County:** Solano **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.236615 -121.682392**Site Description:**

Site extends from the mouth of the Sacramento River Deep Water Channel about 8 miles to its terminus with additional river miles of smaller sloughs (Haas Slough and Shag Slough) and many minor sloughs and marshes (20+ miles total). This meandering, freshwater marsh, dead-end slough has rich riparian growth throughout its length including channel islands. Both banks are leveed and rip-rapped in places. It has many shallows and snags. This habitat is rich in aquatic, freshwater marsh and terrestrial life.

Resources at Risk:

ESI and Habitat: 8C Sheltered riprap
 9B Vegetated low banks
 10B Freshwater marshes

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	migratory waterfowl	FP		
Fish	delta smelt	FT, SE		Mar-May
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	longfin smelt	ST		Nov-May
Plants	Mason's lilaepsis	SR		Apr-Nov
Reptiles	qiant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Office	Ryer Island Reclamation District	(209) 946-0268
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Operations	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

This sensitive site is best protected by excluding oil from entering by exclusion booming and deflection to collection near mouth. Infiltration of oil into wetlands and penetration into levees, riprap, and banks.

Hazard and Restrictions:

Aerial traffic beware of overhead powerlines. Watercraft beware of snags and shallows. Pedestrian hazards include: Poison Oak, riprap, and dense vegetation.

Site Strategies:**Site Validation Level: III**

Strategy: 2-850.1 Objective: Deflection/exclusion to keep oil in main ship channel and prevent oil from entering reaches of upper Cache, Miner, Prospect, and Lindsey Sloughs.

Strategy: a. Power down water transfer pumps upstream in Lindsey Slough (at Barker Slough - DWR.)
b. Deploy deflection boom keep oil in Ship Channel. From inside the Deep Water Channel mouth, lay 9X9+ Hboom in a shallow chevron parallel to the Ship Channel and across upper Cache on the west and Miner Slough on the east.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Anchor	Danforth	44 lb		6		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-850.2 Objective: Exclusion/to confinement/collection across Cache Slough at Prospect Slough mouth. Create collection pocket on river right shoreline.

Strategy: Cascade 3 legs (800, 800, 900ft) of 2500' 6X6+ Sboom across Cache Slough to exclude oil from entering upper sloughs and direct it to shore for collection. Cascade each leg to allow vessel traffic passage. Anchor near shore with overlap of north bank and trailing boom ends to maintain tidal seal. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Water depth ranges up to 80 ft.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp Boom	6x6 inch		2500	feet	<i>Strategy Updated:</i>
Boom	Oil Snare (pom-pom)			50	feet	<i>Last Test: 3/5/2020</i>
Boom	Sorbent			100	feet	
Anchor	Danforth	40 lb		10		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			2		
Staff	Staff to Deploy			8		

Strategy: 2-850.3 Objective: Exclusion boom at Lindsey Slough mouth

Strategy: Deploy 1200' 9x9+ Hboom from north ferry cable-ferry landing at mouth of Prospect Slough diagonally west across Cache Slough to the levee near the mouth of Lindsey Slough. Anchor near shore leaving, trailing boom ends to maintain tidal seal. If conditions permit, collect oil with on the south levee. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Execute Prospect Slough strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1200	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-850.4 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Collect oil with land-based skimmer on the south levee, back with sorbent if oil presence is great as a result of strategy .2. Oil collection with a land based skimmer may also be used to collect oil as a result of strategy .3. Consult with IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

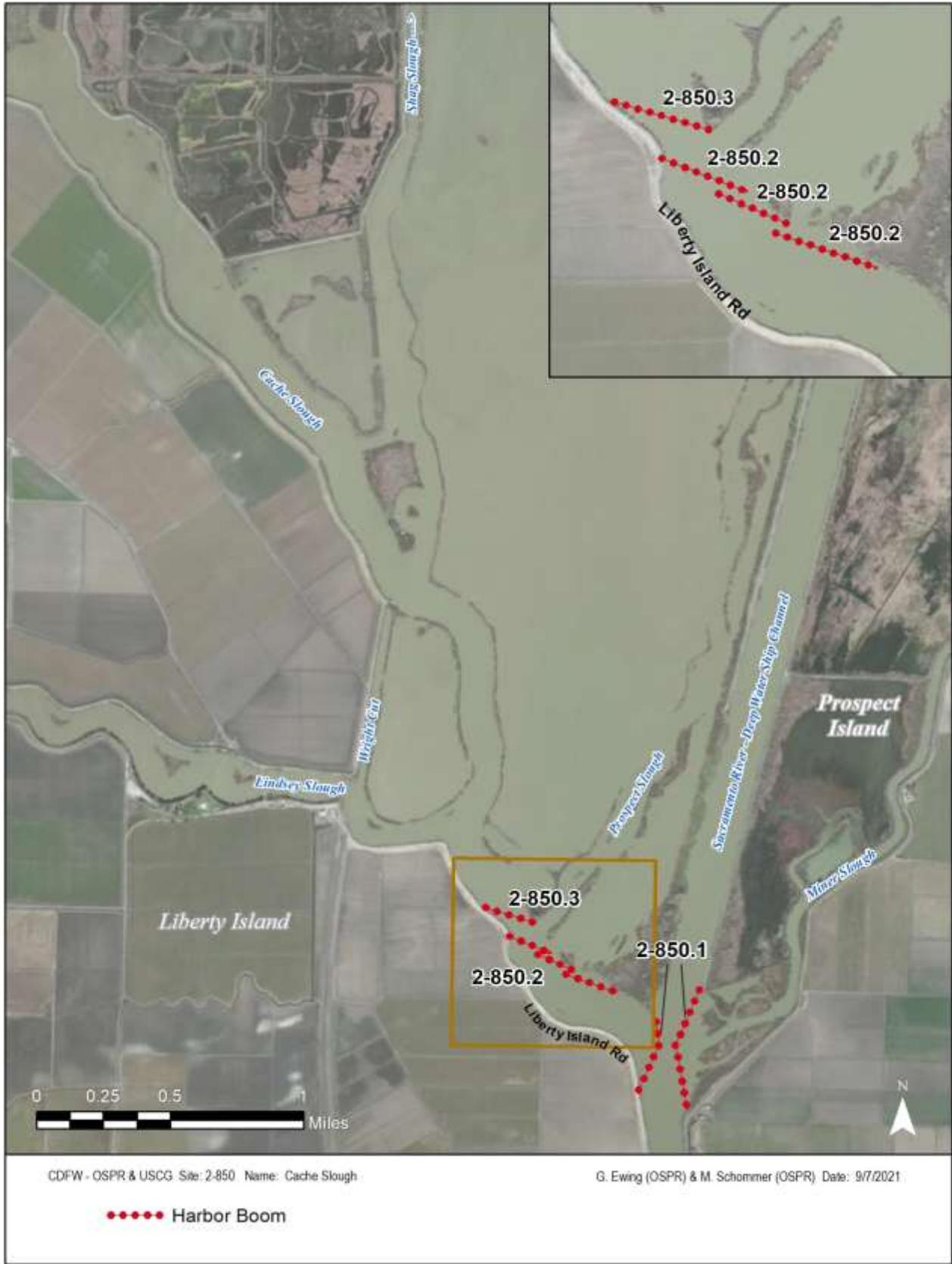
Directions: Vehicle access to the mouth is levee road 6 miles north from Rio Vista via Hwy 84. Levee roads are less accessible thru locked gates from Reclamation District or DWR. By water from Rio Vista north up the Sacramento River and lower Cache Slough to the mouth of the Sacramento Deep Water Ship Channel.

Land Access: Access via levees when dry, avoid when saturated.

On-Water Limitations: Private boat launch on east side (near Miner Slough Mouth) but needs to be cleared prior to use. Real McCoy Ferry (Hwy 84) can be used as a launch site. Launch, moorage and fuel are also available at Steamboat Slough and City of Rio Vista.

Facilities, Staging Areas, Command Posts, Available Equipment: Real McCoy Ferry has large deployment site. Rio Vista has a full range of support facilities.

Communications Problems: Cell reception may vary pending your location.



2-855-A Site Summary - Miner Slough**2-855-A****County:** Solano **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:****Decimal Degrees:** 38.286144 -121.606113**Site Description:**

Site extends from its mouth on the Sutter Slough southwest of Courtland to its mouth on Cache Slough near the confluence of the Sacramento Deep Water Ship Channel, approx 8 river miles. This Slough is another side channel off of the Sacramento River. It has abrupt steep levees with pocket beaches. Much of its length is riprapped but it has mature and shrub-scrub riparian growth at points throughout and particularly at southerly reaches where there are channel islands and extensive open brackish marshes.

Resources at Risk:

ESI and Habitat: 8C Sheltered riprap
 9B Vegetated low banks
 5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

Infiltration of oil into riprap and into levees via invertebrate, muskrat and beaver burrows. Infiltration of oil into dense riparian habitat.

Hazard and Restrictions:

Aerial traffic beware of overhead powerlines and TV antennae towers in Walnut Grove vicinity. Narrow road, narrow bridges, and narrow shoulders with riparian vegetation makes create hazards. Traffic control should be implemented at this site. Narrow road, narrow shoulders, thick vegetation, and deep water creates a hazardous situation. Traffic control should be implemented at this site.

Site Strategies:

Site Validation Level: II

Strategy: 2-855.1 Objective: Exclude oil from entering north mouth at Sutter Slough by deploying diversion/exclusion oil to shunt oil past mouth.

Strategy: 1. Deploy strategy for Sutter Slough (2-832) path of oil slick and Steamboat Slough path, ie. stop it from getting near mouth.

2. Deploy additional exclusion-diverson boom across narrow entrance of Miner Slough: 200' 6X6+ swamp boom from well upstream of mouth on Sutter Slough to well downstream. Anchor with trailing boom length to maintain tidal seal. Back with sorbent boom. Good site for land-based deployment.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		200	feet	
Boom	Sorbent			150	feet	
Anchor	Danforth	22 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-855.2 Objective: Exclude oil into south mouth at Cache Slough using deflection/exclusion booming at mouth. See Cache Slough primary strategy.

Strategy: See 2-850 Cache Slough strategy. Additional strategy may be needed.

Table of Response Resources

Last Page Update

Logistics:

Directions: By water, site is accessible via its northerly mouth on Sutter Slough (Courtland) or via its southerly mouth just east of the Ryer Island Ferry (Hwy 84) on Cache Slough. Best vehicle access is Hwy 84 which is the Ryer Island levee road 7 miles north of Rio Vista.

Land Access: Good access to site from levees.

On-Water Limitations: Use Arrowhead Marina at NW corner of Ryer Island.

Facilities, Staging Areas, Command Posts, Available Equipment: At upper mouth, deploy from levee: nearest facility is Arrowhead Marina. Lower mouth, deploy from ferry or from deployment sites on south bank or Cache Slough or ferry landing. Use Rio Vista facilities.

Communications Problems: Cell reception varies in area.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** 18662 Sacramento River **Decimal Degrees:** 38.245478 -121.670519**Site Description:**

Site extends from the Port of West Sacramento to its mouth on Cache Slough, approx river 25 miles. This is an artificially constructed deep channel for ships to access the Port. Although relatively narrow and artificial, the margin is emergent marsh along its entire length with occasional shrub-scrub. Conjoined to the west of the port facilities is the remnant Lake Washington which has several acres of tule-cattail marsh.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Fish	delta smelt	FT, SE		Mar-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Mason's lilaopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

Concern here is that should an oil spill occur in the ship channel, the oil should remain contained in the channel. The channel itself is also lined with marshes which are vulnerable to oiling: penetration of oil into marsh and into the levee via beaver, muskrat and invertebrate burrows.

Hazard and Restrictions:

Aerial traffic be aware there are overhead wires in this area.

Site Strategies:**Site Validation Level: II**

Strategy: 2-859.1 Objective: For oil threat from Cache Slough, divert to shore for stranding & collection inside and near the mouth of the channel using prevailing wind

Strategy: Set diversion/exclusion boom across the mouth of the ship channel at a diagonal from its windward tip to a leeward shore in the vicinity of R52 or G51. Strand oil on bank and set up collection. If oil is escaping past this collection point, back with sorbent and set up a second diversion/collection boom. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1300	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-859.2 Objective: Exclusion of Lake Washington (east of Port) and deflection to shoreside confinement

Strategy: a. Contact DWR lock control to keep locks shut.

B. Establish collection/diversion booming at best locations along ship channel or along basin shoreline as follows: booms diagonally across channel to collectionsites. Back last boom with sorbent. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

C. boom off Lake Washington (west end of port) with 700 ft of Sboom 6X6+

d. Prepare to execute Lindsey, Prospect and Miner Sloughs Strategies if oil advances downstream.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Boom	Swamp	6x6 inch		700	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			1100	feet	
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-859.3 Objective: Oil Recovery with shoreside skimming

Strategy: Deploy skimmer if oil accumulates in skimmable quantities. Consult with IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: By water the Ship Channel may be reached from Cache Slough 7 miles north of Rio Vista or from the Port of Sacramento. Land access is possible on seasonal levee roads on each side of the Channel: access is restricted and may be reached from various routes on Prospect Island at the Port.

Land Access: Access from levees when dry, avoid when saturated. Contact RD for gate access.

On-Water Limitations: Access by vessel only. Boat launch and marine support are available at Snug Harbor (Steamboat Slough mouth) or Rio Vista.

Facilities, Staging Areas, Command Posts, Available Equipment: The Ryer Island Ferry landing or the Port would be good deployment sites. Considerable facilities are available at either Rio Vista or the Port.

Communications Problems: Cell reception varies in area.



2-860-A Site Summary - Prospect Slough and Liberty Island**2-860-A****County:** Solano **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** 18662 Sacramento R **Decimal Degrees:** 38.243002 -121.678642**Site Description:**

This site includes Prospect Slough and the freshwater marshes on both sides near its mouth as well as its upstream tributaries and Liberty Island which is flooded and has a large opening on Cache Slough just to the west of Prospect Slough mouth but multiple openings on Prospect and Shag Sloughs as well. Included are over 3000 acres on Liberty Island and 10 miles of marsh/riparian waterways and adjacent marsh habitat. This reach leads to a dead-end slough has extremely rich marsh and riparian growth throughout its length including channel islands. Portions are leveed but much is not. It has many shallows and snags. This habitat is rich in aquatic, marsh and terrestrial life. Liberty Island flooded in 2000 and has been evolving as a cattail-tule marsh ever since. This site is the overflow outlet for the Yolo Bypass.

Resources at Risk:

ESI and Habitat: 10B Freshwater marshes
 9B Vegetated low banks
 8C Sheltered riprap

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Fish	delta smelt	FT, SE		Mar-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Mason's lilaepsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Manager	Solano County Water Agency	(707) 455-1105
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

This is an extensive marsh / riparian area (including the 3000+ acres inside Liberty Island) which can be best protected by excluding or deflecting oil to collection at the mouth to avoid penetration of oil into wetlands. Penetration of oil into banks through invertebrate and mammal burrows and tree root channels. Minimize disturbance of wildlife and trampling vegetation; there are small endangered species in the area.

Hazard and Restrictions:

Aerial traffic beware of overhead powerlines. Watercraft beware of snags and shallows. Pedestrian hazards include: Poison Oak, riprap, and dense vegetation.

Site Strategies:**Site Validation Level: II**

Strategy: 2-860.1 Objective: Exclusion boom Prospect Slough mouth and marsh and upper Cache Slough openings to Liberty Isl.

Strategy: Exclude oil from traveling into Prospect Slough, Liberty Island and nearby marshes.

A. Execute strategy 2-850.3 Exclusion to shore confinement/collection to keep oil from moving up Cache Slough and entering levee breaks in Liberty Island.

B. across open water of the mouth itself, lay 1300' of 9x9+ Hboom backed with sorbent

c. across marshy area from Prospect Slough mouth to the high ground near the ship channel, lay 2200' of 6X6+ boom backed with sorbent., at the west end, angle boom out toward the center channel to divert oil away from the mouth; leave trailing boom lengths to promote sealing during tidal flux.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1300	feet	
Boom	Swamp	6x6 inch		2200	feet	
Boom	Sorbent			3500	feet	
Anchor	Danforth	25 lb		10		
Vessel	Boom Boat			2		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Vehicle access here is seasonal and via private levee roads. All year access to road across Cache Slough from mouth: levee road 7 miles north from Rio Vista via Hwy 84. Also Sacto Ship Channel levee. By water from Rio Vista north up the Sacramento River and then half mile west of the Sacramento Deep Water Channel along the northerly bank.

Land Access: Access from levees when dry, avoid levees when saturated.

On-Water Limitations: Private boat launch on east side (near Miner Slough Mouth) but needs to be cleared prior to use. Real McCoy Ferry (Hwy 84) can be used as a launch site. Launch, moorage and fuel are also available at Steamboat Slough and Rio Vista.

Facilities, Staging Areas, Command Posts, Available Equipment: Real McCoy Ferry has large deployment site. Another deployment site is past mouth of Prospect Slough but access is limited. Rio Vista has a full range of support facilities.

Communications Problems: Cell reception varies in area.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18661 Sacramento & San Joaquin River **Map Book:****Decimal Degrees:** 38.095905 -121.569467**Site Description:**

Site extends from the mouth on the San Joaquin River approx 4 river miles upstream to the split of North & South Mokelumne River. This large river mouth has a marshy channel island in the middle of its mouth and marshy pockets to each side of the mouth. The marsh island has a shallow shoal to the south. Upstream, there are numerous berm and channel islands and emergent marsh habitat along the rip-rapped shoreline. The ebb flow out may be strong. Oil threats are from within or from a flood tide from the San Joaquin River.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Fish	delta smelt	FT, SE		Mar-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Delta tule pea	SSSP		May-Jul
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Bouldin Island Reclamation District	(209) 943-5551
E	/Superintendent	Brannan-Andrus Reclamation District	(916) 952-9967
E	/Manager	Central Delta Water Agency	(209) 969-7755
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Office	Webb Tract Reclamation District	(209) 943-5551
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

Major concern is oiling of emergent marshes at margins and on berm islands. To do this, the strategy is to exclude oil from entering this reach of the river.

Hazard and Restrictions:

Boat traffic beware of shallows, many submerged snags and mud bars. Poison Oak.

Site Strategies:**Site Validation Level: II**

Strategy: 2-870.1 Objective: Exclude oil from entering Mokelumne mouth on the flood tide by exclusion-collection booming toward eddy to west of mouth.

Strategy: From the breakwater of Korth's Marina at the west side of the Mokelumne mouth, deploy 1500' 9x9+ Curtain boom WSW to the shoal in mid-channel. This will tend to convey oil to the Andrus Island shore. Line the shore and/or preclean the shoreline and commence collection. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Swamp	6x6 inch		1000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		5		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-870.2 Objective: Back up strategy: Diversion to collection at favorable shore-side collection and boom marina entries.

Strategy: Deploy 2000' 6x6+ collection boom at a long diagonal to a favorable collection point along the the Bouldin Island shore to encourage stranding of oil and collection at the shore. Mid-boom anchoring will be necessary to minimize catenary entrainment. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		8		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-870.3 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmers if oil accumulates in skimmable quantities. Consult IC prior to the initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Levee roads provide vehicle access from Hwy 12. Andrus Island road is paved to the mouth of the Mokelumne

2-870-A Site Strategy - Mokelumne River Mouth

2-870-A

River. Water access is from a variety of marinas at or near the mouth of the Mokelumne. Channel marker at mouth is G47.

Land Access: Access site via levees in good weather.

On-Water Limitations: GOOD WATER EXCEPT SHALLOW TO WEST. Launching facilities available at mouth of Mokelumne River. Boat launch and marine support are available at Antioch, Bethel Island and mouth of Mokelumne. Launch is also at Brannon Island State Park.

Facilities, Staging Areas, Command Posts, Available Equipment: Complete support facilities at Rio Vista and Antioch. Lesser degree at Bethel Island and Mokelumne River. Staging is possible at Rio Vista, Brannon Island, Mokelumne, Bethel Island, and Antioch.

Communications Problems: Cell reception may vary.



County: Sacramento **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER**Map Book:****Decimal Degrees:** 38.133677 -121.567289**Site Description:**

This site extends from New Hope Landing (upper Mokelumne fork at north end of Staten Island) to the confluence with South Mokelumne River at southwest tip of Staten Island, approx 10 linear river miles. It is bordered by Tyler Island on west bank and Staten Island on the east bank. This section of meandering river is bordered by rip-rapped levees throughout. Emergent patches and riparian growths are scattered throughout the site. It connects with the Delta Cross Channel via lower Snodgrass Slough and a cut between Dead Horse Island and McCormack Island. The channel is relatively deep and swift with only occasional in-channel islands, but there is one sizeable channel island which has high ecological value as it supports several rare plant species. It is an important waterway for migrant fish, water supply conveyance, flood control and boat traffic. The waters of the Sacramento flow to the central Delta, so very important to mitigate spread of oil.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Mason's lilaepsis	SR		Apr-Nov
Reptiles	qiant garter snake	FT, ST		Jul-Oct
Reptiles	Western pond turtle	SSC		May-Jul

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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E	/Office	South Delta Water Agency	(209) 224-5854
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

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Additional Site Summary Comments:

Concerns and Advice to Responders:

Greatest concerns are oiling of sensitive plant habitats, toxicity to sensitive fish, and penetration into marshes, levees and riprap through openings and burrows. The intention is to exclude oil from this reach of the river by exclusion and collection booming.

Hazard and Restrictions:

Narrow levee roads and shoulders pose potential traffic hazard, necessitating traffic control.

Site Strategies:**Site Validation Level: II**

Strategy: 2-873.1 Objective: For oil threats from the north, diversion booming to favorable shore-side collection.

Strategy: After assessing prevailing wind and current situation, deploy a exclusion-collection boom across the North Mokelumne south of Walnut Creek Road. Local conditions usually favor collection on the east levee (Staten Island); however, currents may permit collection on Tyler Island levee which has better access. Anchor near shore and ensure a tidal seal at margins. Back with sorbant boom or additional collection booms. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		400	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			500	feet	
Anchor	Danforth	25 lb		4		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			1		

Strategy: 2-873.2 Objective: If oil is threatening from south (San Joaquin River), execute south Georgiana Slough strategy and exclude oil movement upstream on flood tide.

Strategy: 1. Excute Georgiana Slough strategy 2-814.3.

2. Deploy 700' 6X6+ exclusion-collection boom to exclude oil from reach and to divert it to most favorable shore for collection. Prevailing conditions usually favor collection oil on the east bank (Staten Island). Deploy boom to favor a land-based collection about 300 yards upstream from Staten Island tip.

3. Back with sorbent.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		700	feet	
Boom	Sorbent			600	feet	
Anchor	Danforth	25 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-873.3 Objective: Protection/deflection boom around mid-channel island for oil moving in midstream.

Strategy: Deploy 1000 ft 6X6+ protective boom around island using anchors and stakes position boom. Sorbent boom as needed and at every point where bridging may occur. Check often until verified that tidal fluxuation seal is intact.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1000	feet	
Boom	Sorbent			400	feet	
Anchor	Danforth	22 lb		4		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-873.4 Objective: Collect Oil with Skimmer

Strategy: Deploy skimmers when oil accumulates in skimmable quantities. Consult with IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

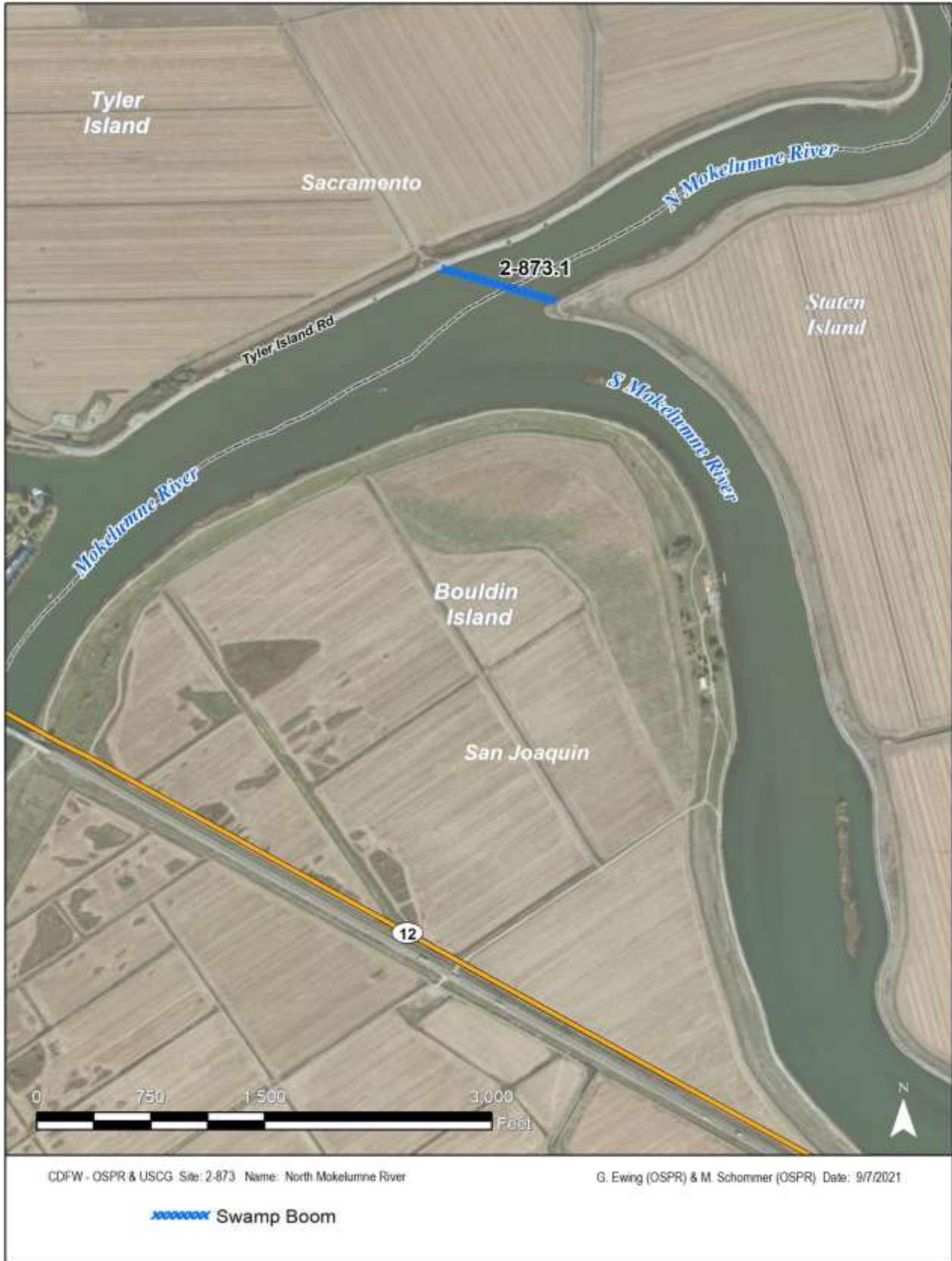
Directions: Water access from south is from B&W Resort at Hwy 12 or from the north from Walnut Grove Marina or Wimp's. Levees on Staten, Tyler and Brannon Islands provide access: Tyler and Brannon are both paved.

Land Access: Levee access when dry, avoid when saturated.

On-Water Limitations: B&W Resort Marina at Hwy 12 is well equipped and spacious. Walnut Grove and New Hope Landing at north end have similar facilities.

Facilities, Staging Areas, Command Posts, Available Equipment: Both sites provide good deployment sites and facility support. Rental boats and house boats are available at Hwy 12. Most of these strategies can be supported by supplying boom from the shore.

Communications Problems: Good cell reception.



County: San Joaquin **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO **Map Book:** SF Bay and Delta **Decimal Degrees:** 38.227246 -121.492142
RIVER**Site Description:**

This site from its confluence with the North Mokelumne at New Hope Landing to its reunion with the North Mokelumne at the south tip of Staten Island, approx 15 linear river miles. This wide, deep channel is mostly rip-rapped levees, but there are also numerous ecologically sensitive marsh fringe, channel and berm islands throughout its length. Most of the islands are small but several are up to an acre in size. It is important as a fish migration route. Many Special Status Species occur within this area.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

8B Sheltered solid man-made structures

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Mason's lilaeopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Manager	Central Delta Water Agency	(209) 969-7755
E	/Office	Mandeville Island Reclamation District	(209) 946-0268
E	/Office	North Delta Water Agency	(916) 446-0197
E	/Office	Sherman Island Reclamation District	(925) 978-0583
E	/Engineer	Terminus Tract Reclamation District	(209) 649-4555
E	/Engineer	Terminus Tract Reclamation District	(209) 465-5883
E	/Office	Webb Tract Reclamation District	(209) 943-5551
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Several sensitive plant species occur in this area.

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported though this site to other parts of the delta; and second, that marsh islands will be come oiled. These marsh areas are high value habitat supporting many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Low flying aircraft beware of high powerlines near New Hope Landing. Slips, trips and falls on riprap and steep levees. Regarding vessel handling, beware of shallows, snags and mud bars. Poison Oak dense.

Site Strategies:**Site Validation Level: II**

Strategy: 2-880.1 Objective: Exclusion booming at south mouth.

Strategy: Set 500 ft of 6X6 boom completely across mouth at a diagonal using levees as anchor points, leaving a trailing boom length to maintain seal during tidal ranges. Back with sorbent.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Sorbent			500	feet	
Anchor	Danforth	25 lb		2		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-880.2 Objective: Exclusion booming at north end. Current is downstream during most times of the year.

Strategy: Set 100' of 6X6 boom from the seawall at New Hope Landing to a point 50' downstream on Staten Island. Use Staten Island attachment as a collection point. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		2		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-880.3 Objective: Protect marsh islands within channel

Strategy: Exclusion boom and sorbent boom around and close-off entry to islands.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		3000	feet	
Boom	Sorbent			1000	feet	
Anchor	Danforth	22 lb		7		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-880.4 Objective: Oil Recovery by Shoreside skimming

Strategy: Deploy skimmer when oil accumulates in skimmable quantities. Use Staten Island attachment as a collection point. Consult with IC prior to the initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Staff	Staff to Deploy			3		

Logistics:

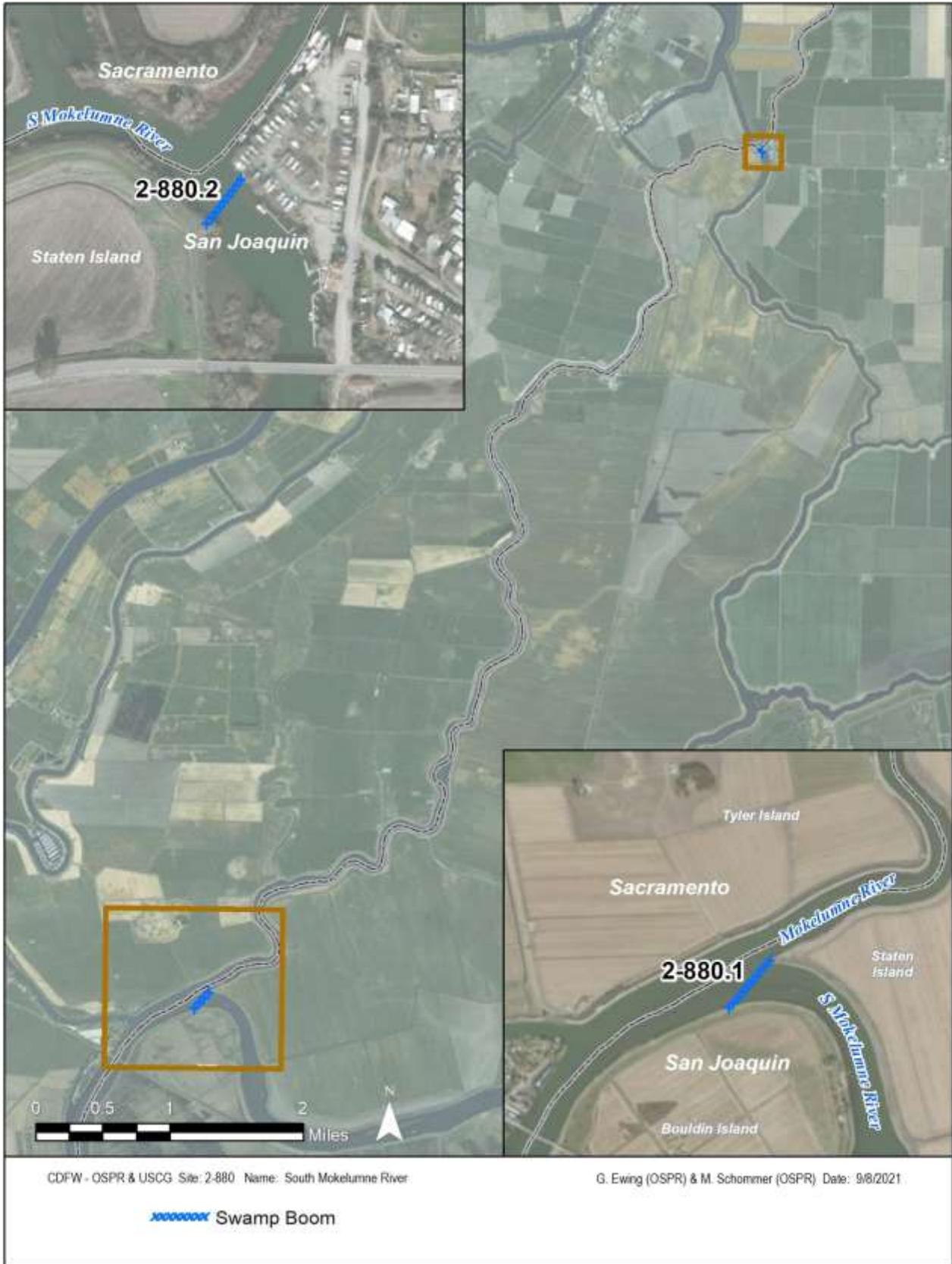
Directions: Key access to site is from west side from Staten Island levees which may be reached via I-5, exit at Thornton/Walnut Grove Rd and continue west to Staten Island Road and from east side levees as well (see Sycamore Slough 2-890). Water access is via marinas on south end along Hwy 12 (Terminus and B&W) or at north end at New Hope Landing.

Land Access: Access to site via levees when dry, avoid when saturated.

On-Water Limitations: Marina and boat launch south at Terminus and B&W Resort at Hwy 12 or up-river at New Hope Landing at Thornton Road. Rental boats, restaurants, facilities, and some lodging/camping are available also.

Facilities, Staging Areas, Command Posts, Available Equipment: Adjacent levees should be adequate as long as roads are passable. There are roads leading to levees from west (Staten Island) or east and material may be staged nearby. Otherwise transport material by skiff.

Communications Problems: Cell reception varies.



County: San Joaquin **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** SF Bay and Delta **Decimal Degrees:** 38.14477 -121.506728**Site Description:**

This dead-end slough extends from its mouth at its junction with the South Mokelumne River about 5 river miles to its terminus. There are a number of ecologically rich marsh channel islands. Shorelines consist of mostly heavily rip-rapped but with pockets of emergent marsh and scrub habitat. Snags and shallows are common this low energy slough.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Birds	greater sandhill crane	FP, SSC		
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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E	/Office	Sherman Island Reclamation District	(925) 978-0583
E	/Engineer	Terminus Tract Reclamation District	(209) 649-4555
E	/Engineer	Terminus Tract Reclamation District	(209) 465-5883
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported though this site to other parts of the delta; and second, that marsh islands will be come oiled. These marshy areas are sensitive and habitat to many sensitive species, including a nearby heron rookery at Sycamore Island: KEEP HELICOPTERS AWAY. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Vessels beware of submerged objects and shallows along margins.

Site Strategies:**Site Validation Level: II**

Strategy: 2-882.1 Objective: Exclusion booming across the mouth.

Strategy: Set 300 ft of 6X6 Swamp boom completely across slough mouth using levees as anchor points, leaving a trailing boom length to maintain seal during tidal vacillations. Back with sorbent.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		300	feet	
Boom	Sorbent			300	feet	
Anchor	Danforth	22 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Key access to site is from levee Roads: I-5, exit Turner Rd and continue north on Thornton and west on Woodbridge to access north levee road; or Glascock Rd north from Hwy 12 to south levee. Water access is South Mokelumne River north from Terminous (2.5 mi) or south from New Hope Landing (8 mi).

Land Access: Good access from levees except when they are saturated, stay off when wet.

On-Water Limitations: SHALLOW & SNAGS. Marina and boat launch 2 river miles south at Terminous at Hwy 12 or 6.5 miles up-river at New Hope Landing at Thornton Road.

Facilities, Staging Areas, Command Posts, Available Equipment: Adjacent levees should be adequate as long as roads are passable. There are roads leading to levees from the east and material may be staged nearby. Otherwise transport material by skiff.

Communications Problems: Cell reception may vary on your location.



County: San Joaquin **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** SF Bay and Delta **Decimal Degrees:** 38.145453 -121.509216**Site Description:**

This site is a densely vegetated island in an oxbow of the S.Mokelumne River just above Sycamore Slough. Most of the island is covered with willows, and vegetation. A large crane rookery exists on the west side. The east side is inundated and eroding because of wake action from river traffic, and is particularly vulnerable to oil intrusion. Water flow on east side tends to be swift while flow on west side tends to be less energy.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	greater sandhill crane	FP, SSC		
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Manager	Central Delta Water Agency	(209) 969-7755
E	/Office	Mandeville Island Reclamation District	(209) 946-0268
E	/Office	Sherman Island Reclamation District	(925) 978-0583
E	/Engineer	Terminus Tract Reclamation District	(209) 649-4555
E	/Engineer	Terminus Tract Reclamation District	(209) 465-5883
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

There are multiple pilings at the northeast margin.

Concerns and Advice to Responders:

This is a very sensitive site because of the bird use. KEEP HELICOPTERS AWAY from this site. Concerns are penetration into the marshy areas, woody cover. Cleanup would be impossible during breeding season and inadvisable at other times. No helicopters may be flown within one mile of this site. Keep operational disturbance to a minimum.

Hazard and Restrictions:

Vessels beware of submerged objects and shallows at margins.

Site Strategies:**Site Validation Level: II**

Strategy: 2-884.1 Objective: Phase I: Stop oil from penetrating or oiling the island by placing exclusionary boom across the channel meander and the east side.

Strategy: Set 1500 ft of 6X6 Sboom completely across the meander channel and east side of island. Anchor one boom end near levee to north and lay boom across channel mouth to island, then along island and continue to levee across downstream channel. Leave a trailing boom length to maintain seal during tidal vacillations. Back with sorbent.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1500	feet	
Boom	Sorbent			1500	feet	
Anchor	Danforth	22 lb		6		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-884.2 Objective: Phase II: Divert oil away from island side of river toward the east bank to minimize exposure of island to oil.

Strategy: Run 300 ft 6X6 Sboom diagonally downstream across Mokeleumne River. Anchor upstream end 75 ft upstream from exclusion boom. Use downstream anchor point as possible skim/collection site.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		300	feet	
Anchor	Danforth	22 lb		2		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Key access to this island site is water access via South Fork Mokelumne River north from Terminous or south from New Hope Landing. Road support from east side via I-5, exit at Turner Rd and continue north on J8 and west on Woodbridge Rd to access levee roads which border the slough.

Land Access: Stay off levees unless they are dry.

On-Water Limitations: Marina and boat launch 2 river miles south at Terminous at Hwy 12 or 6.5 miles up-river at New Hope Landing at Thornton Road. Beware of shallows and snags.

Facilities, Staging Areas, Command Posts, Available Equipment: Adjacent levees should be adequate as long as roads are passable. Either levee (Staten Island or Brack Tract) can be used to off-load boom from ground transport. All weather roads approach this site from both east and west. Otherwise transport material by skiff.

Communications Problems: Cell reception varies upon location.



2-886-A Site Summary - Hog Slough**2-886-A****County:** San Joaquin **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** SF Bay and Delta **Decimal Degrees:** 38.166349 -121.490523**Site Description:**

This dead-end slough extends from its mouth at its junction with the South Fork Mokelumne River Cut approx 3 river miles to its terminus. There are a number of ecologically rich freshwater marsh channel islands. Margins mostly heavily rip-rapped but with pockets of emergent marsh. Snags and shallows are common in this low energy slough. It becomes fairly narrow and shallow towards its easterly end.

Resources at Risk:

ESI and Habitat: 8C Sheltered riprap
9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	greater sandhill crane	FP, SSC		
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	longfin smelt	ST		Nov-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Plants	Mason's lilaeopsis	SR		Apr-Nov
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

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E	/Office	Mandeville Island Reclamation District	(209) 946-0268
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E	/Office	Webb Tract Reclamation District	(209) 943-5551
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported through this site to other parts of the delta; and second, that marsh islands and margins will be come oiled. These marshy areas are sensitive and habitat to many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Vessels beware of submerged objects and shallows along margins.

Site Strategies:**Site Validation Level: II**

Strategy: 2-886.1 Objective: Exclusion booming at mouth by stringing lengths of boom between the two channel islands.

Strategy: Set boom completely across slough mouth using levees and channel islands as anchor points, leaving a trailing boom length to maintain seal during tidal vacillations. Back with sorbent. The lengths between land falls are (from north to south) 200', 300', 200', and 200'.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		900	feet	
Boom	Sorbent			900	feet	
Anchor	Danforth	22 lb		10		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

Directions: Key access to site is from east side via I-5, exit at Turner Rd and continue north to Woodbridge then west to access levee road which border the slough and River. Water access is South Fork Mokelumne River: south from New Hope Landing or north from Terminous.

Land Access: Stay off of levees unless they are dry, they're easily damaged and you may get stuck.

On-Water Limitations: Marina and boat launch 4 river miles south at Terminous at Hwy 12 or 4.5 miles up-river at New Hope Landing at Thornton Road. Beware of shallows and submerged snags.

Facilities, Staging Areas, Command Posts, Available Equipment: Adjacent levees should be adequate as long as roads are passable. There are roads leading to levees from the east and material may be staged nearby. Otherwise transport material by skiff.

Communications Problems: Cell reception varies upon your location.



2-888-A Site Summary - Beaver Slough**2-888-A****County:** San Joaquin **ACP Division/Segment:****NOAA Chart:** 18662 SACRAMENTO RIVER **Map Book:** SF Bay and Delta **Decimal Degrees:** 38.194431 -121.478092**Site Description:**

This dead-end slough extends from its mouth at its junction with the South Fork Mokelumne River Cut about 4 miles to its terminus near I-5. There are a number of ecologically rich freshwater marsh islands. Margins mostly heavily rip-rapped but with pockets of emergent freshwater marsh vegetations and scrub habitat. It becomes fairly narrow and shallow water towards its easterly end.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Birds	greater sandhill crane	FP, SSC		
Fish	chinook salmon - Winter-run	FE, SE		Oct-May
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Reptiles	giant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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E	/Office	Webb Tract Reclamation District	(209) 943-5551
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C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Snags and shallows are common this low energy slough.

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported through this site to other parts of the delta; and second, that marsh islands and margins will be come oiled. These marshy areas are sensitive and habitat to many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Vessels beware of submerged objects and shallows at margins.

Site Strategies:**Site Validation Level: II**

Strategy: 2-888.1 Objective: Exclusion booming across the mouth.

Strategy: Set 300 ft of 6X6 boom completely across slough mouth using levees as anchor points and leaving a trailing boom length to maintain seal during tidal vacillations. Back with sorbent. Also, position 50 ft of 6X6 swamp boom across the opening and 50 ft of sorbent for a collection point.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		350	feet	
Boom	Sorbent			50	feet	
Anchor	Danforth	22 lb		4		
Vessel	Boom Boat			1		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Logistics:

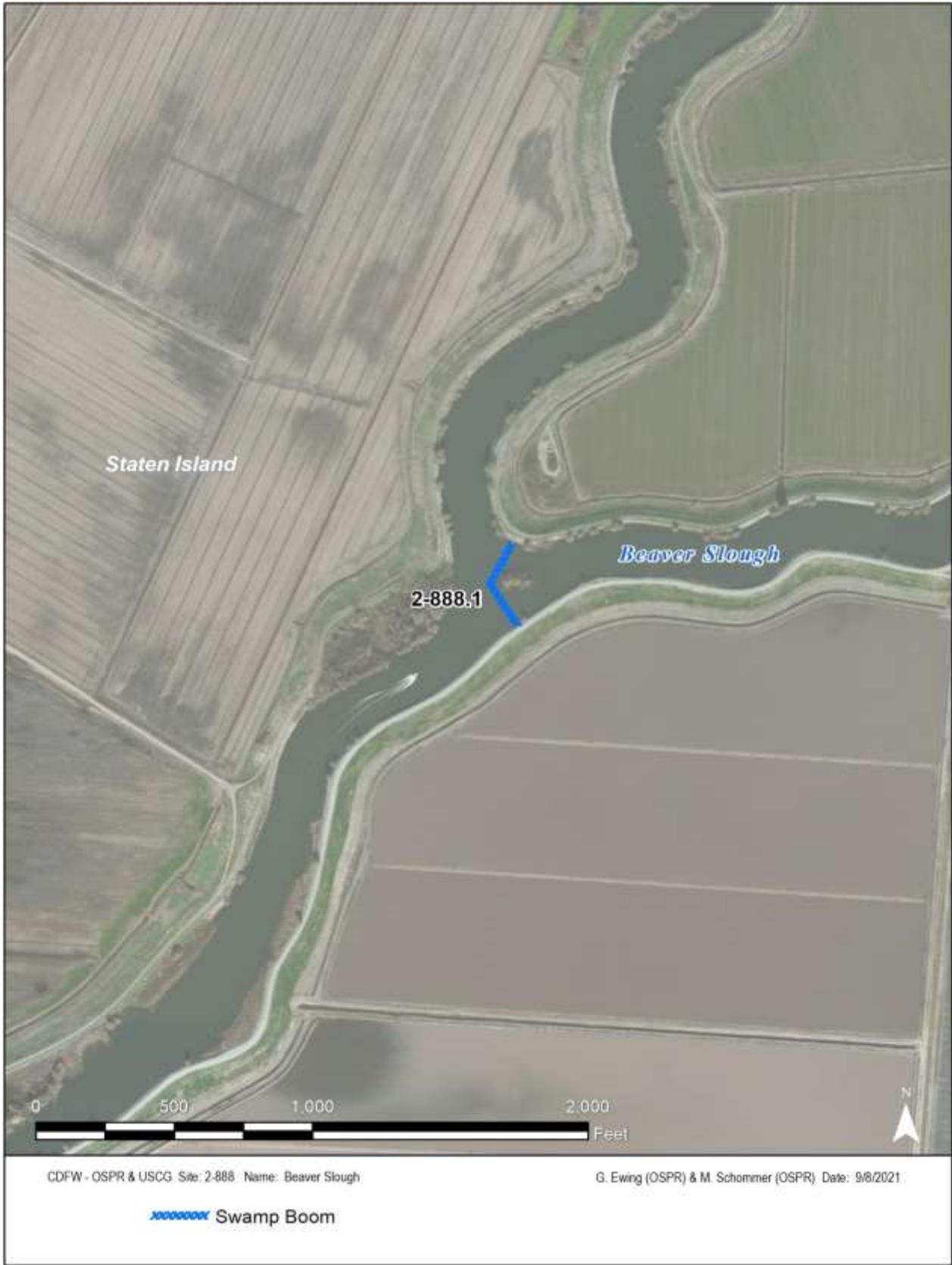
Directions: Key access to site is levee roads: via I-5, exit at Walnut Grove Rd and continue west, then south on Blossom Rd Bridge over slough: access levee roads which border the slough (other farm roads access levee from county roads). Water access is South Fork Mokelumne River south from New Hope Landing (2.5 mi) or north from Terminous.

Land Access: Levee access good when dry, stay off when saturated.

On-Water Limitations: Marina and boat launch 4 river miles south at Terminous at Hwy 12 or 4.5 miles up-river at New Hope Landing at Thornton Road. Beware of shallows and snags.

Facilities, Staging Areas, Command Posts, Available Equipment: Adjacent levees should be adequate as long as roads are passable. There are roads leading to levees from the east and material may be staged nearby. Otherwise transport material by skiff.

Communications Problems: Cell reception varies on your location.



County: San Joaquin ACP Division/Segment:

NOAA Chart: 18662 SACRAMENTO RIVER Map Book:

Decimal Degrees: 38.257321 -121.455605

Site Description:

From landing at Thornton Road to confluence with Cosumnes River, approx 5 miles. Extensive woody riparian and freshwater marsh habitat. Prone to overflow to Snodgrass Slough during heavy flooding.

Resources at Risk:

ESI and Habitat: 8C Sheltered riprap
9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Reptiles	qiant garter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported though this site to other parts of the delta; and second, that marsh islands and margins will be come oiled. These marshy areas are sensitive and habitat to many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Vessel traffic beware of shallows, many snags and mud bars. Dense Poison Oak.

Site Strategies:

Site Validation Level: 0

Strategy: 2-890.1 Objective: Divert Oil

Strategy: No strategy developed

Table of Response Resources

Last Page Update

Logistics:

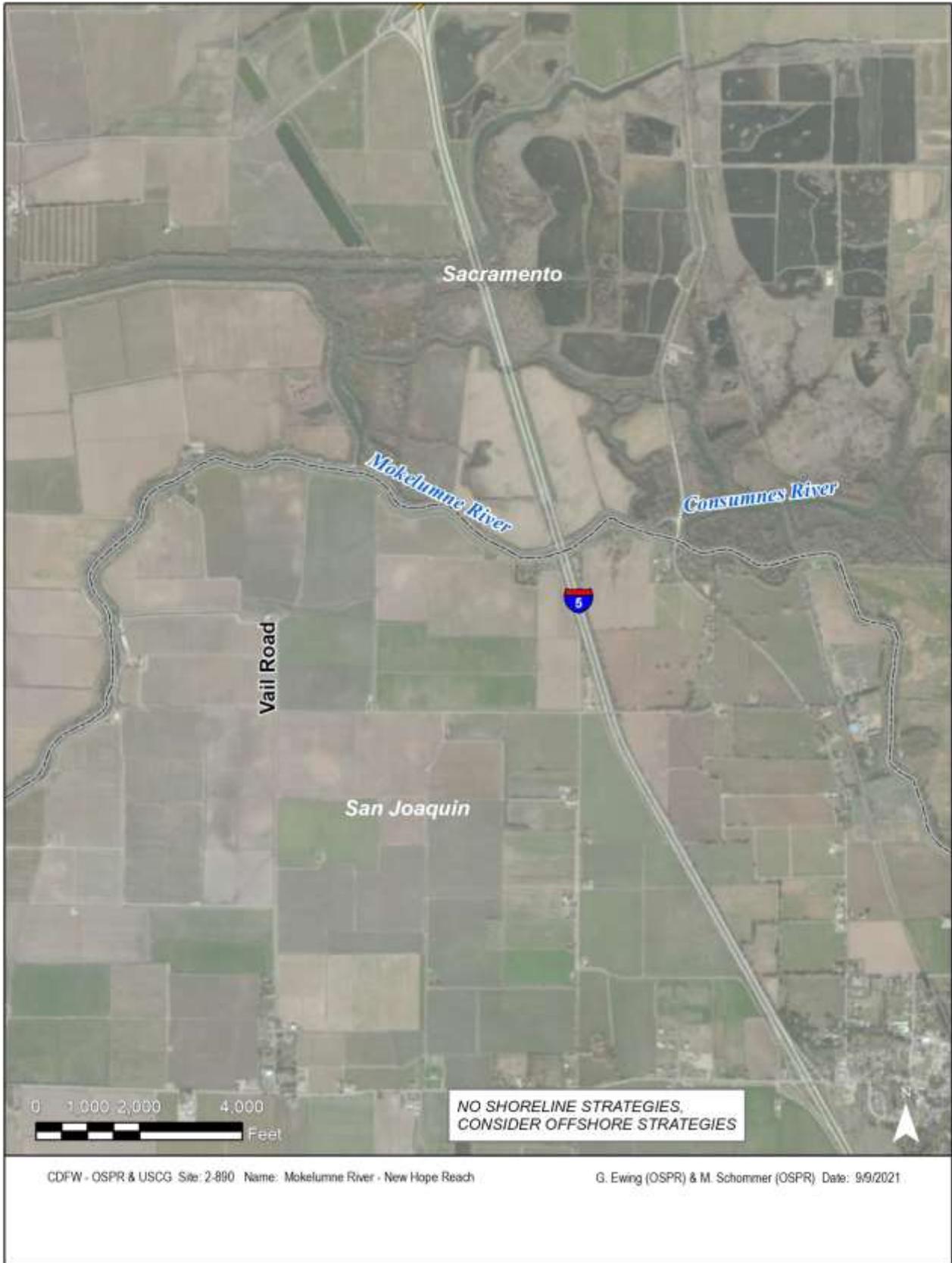
Directions: From I-5 exit Barber Rd to several access points North and West on the Mokelumne River.

Land Access: Stay off levees when saturated.

On-Water Limitations: Access from Beaver Slough or Hog Slough.

Facilities, Staging Areas, Command Posts, Available Equipment: N/A

Communications Problems: Cell reception varies in area.



County: Sacramento ACP Division/Segment:

NOAA Chart: Map Book:

Decimal Degrees: 38.257677 -121.432618

Site Description:

Nature Conservancy and Bureau of Land Management have established and manage the Cosumnes River Preserve. The sloughs are tidally influenced.

Resources at Risk:

ESI and Habitat: 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Fish	delta smelt	FT, SE		Mar-May
Reptiles	giant garter snake	FT, ST		Jul-Oct
Reptiles	Western pond turtle	SSC		

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Dispatch, 24-hr	California Department of Water Resources	(916) 574-2714
S	/Dispatch, 24-hr	Sacramento Co. Office of Emergency Services	(916) 875-6900
T	/Environmental Program Manager	CA Dept. of Fish & Wildlife, Bay Delta Region	(707) 576-2837
T	/Office	US Bureau of Land Management	(916) 683-1740
T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:

Several sensitive plant species occur in this area.

Concerns and Advice to Responders:

The concern is two-fold: first, that oil will be transported through this site to other parts of the delta; and second, that marsh islands and margins will be come oiled. These marsh areas are sensitive and habitat to many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Vessel traffic beware of shallows, many snags and mud bars. Poison Oak.

Site Strategies:

Site Validation Level: 0

Strategy: 2-895.1 Objective:

Strategy: No technique developed.

Table of Response Resources

Last Page Update

Logistics:

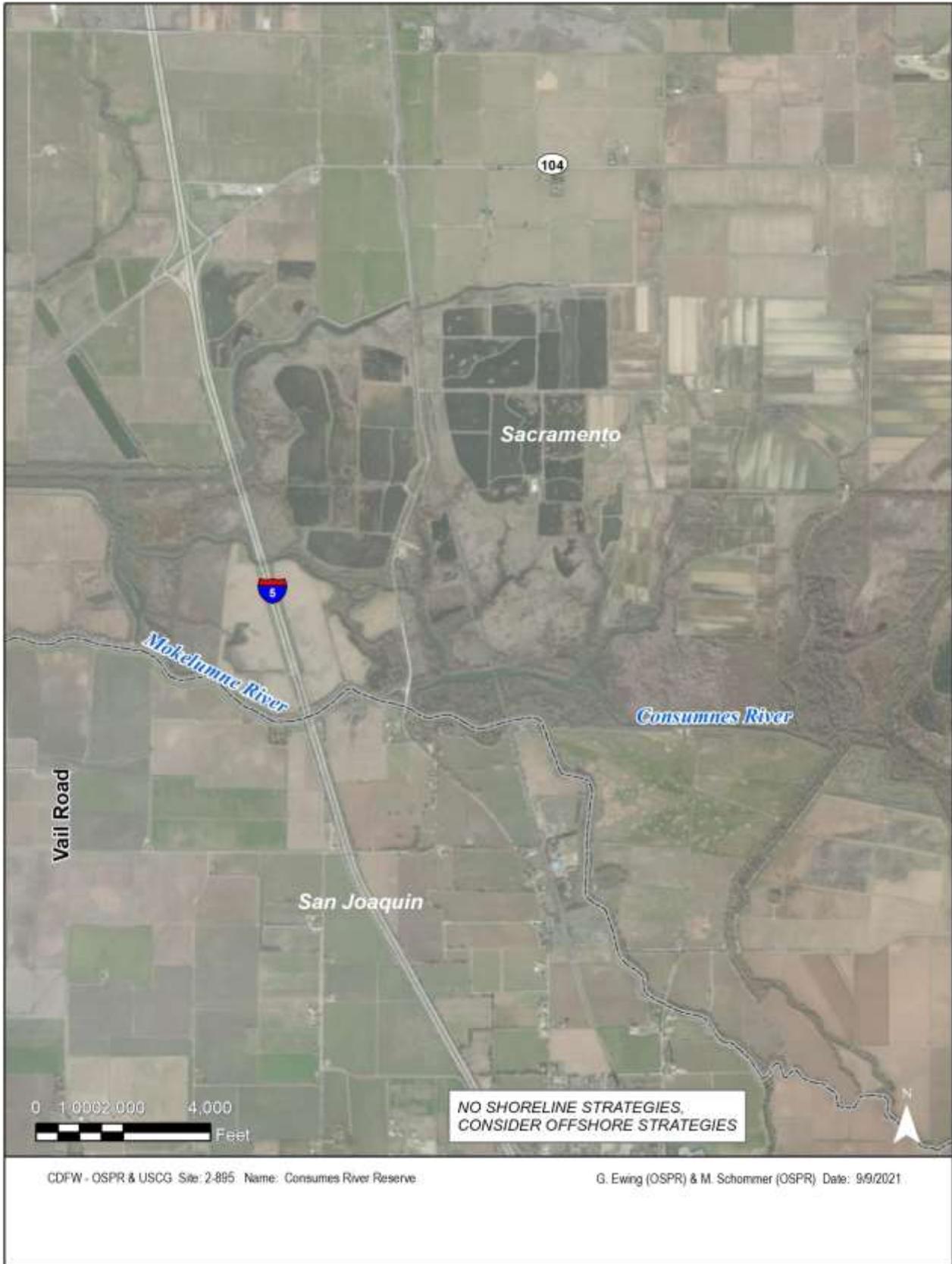
Directions: Access: Interstate 5 to Twin Cities Rd (26 miles north of Stockton, or 22 miles south of Sacramento). East on Twin Cities Rd to Franklin Blvd. Turn right on Franklin Rd and proceed south 1.5 miles.

Land Access: Access from levees when dry, stay off when saturated.

On-Water Limitations: Very shallow for boat access.

Facilities, Staging Areas, Command Posts, Available Equipment: N/A

Communications Problems: Cell reception varies upon your location.



County: San Joaquin **ACP Division/Segment:****NOAA Chart:****Map Book:****Decimal Degrees:** 38.241573 -121.423195**Site Description:**

From confluence with Cosumnes River to eastern boundary of Delta (Devries Rd), approx 8 river miles. Extensive woody riparian and freshwater marsh margin. Some remnants of riparian live oak uplands. Area prone to overflow during flood flows.

Resources at Risk:*ESI and Habitat:* 6B Riprap

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Swainson's hawk	FP, ST		Mar-Sep
Fish	delta smelt	FT, SE		Mar-May
Fish	steelhead - Central/Northern California	FT		Nov-Apr
Reptiles	qiant qarter snake	FT, ST		Jul-Oct

FT-Federally Threatened, FE-Federally Endangered, FP-Federally Protected, SE-State Endangered, ST-State Threatened, SP -State Protected, SR-State Rare, SSC-Species of Special Concern, BGEPA-Bald and Golden Eagle Protection Act, SSSP-State Special Status Species

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T	/Restoration Ecologist	US Department of Agriculture	(530) 304-2304
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

C – Cultural, Historic, Archaeological; E – Entry/Owner/Access; O – Other; S – Safety; T – Trustee; X – Exclusion or Security

Additional Site Summary Comments:**Concerns and Advice to Responders:**

The concern is two-fold: first, that oil will be transported though this site to other parts of the delta; and second, that marsh islands and margins will be oiled. These marshy areas are sensitive and habitat to many sensitive species. There is always the concern of impacts from response and cleanup: trampling vegetation, disturbing wildlife, and tracking oil into marshes and sediments.

Hazard and Restrictions:

Boat traffic beware of shallows, many snags and mud bars. Poison Oak.

Site Strategies:**Site Validation Level: 0****Strategy: 2-896.1 Objective:**

Strategy: no technique developed.

Table of Response Resources

Last Page Update**Logistics:****Directions:**

Land Access:

On-Water Limitations: #

Facilities, Staging Areas, Command Posts, Available Equipment:

Communications Problems:



9821.2 Response Summary Tables

A summary of the response resources is listed by site and sub-strategy next.

Summary of ACP 2 GRA 8 Response Resources by Site and Sub-Strategy

Site	Site Name	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT		
Sub-Strategy	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-800	Sacramento River, Lower Reach			
.1 - Diversion to collection at favorable sites such as beaches or riprap to immobilize and prevent further spread.				
	Boom	Sorbent		300 feet
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Anchor	Danforth	40 lb	9
	Boom	Oil Snare (pom-pom)		300 feet
	Boom	Harbor	9x9 inch	1500 feet
	Vessel	Boom Boat		1
.2 - Oil Recovery with shore side skimming (SSS)				
	skimmer	self propelled		2
	Staff	Staff to Deploy		6
2-804	Sacramento River, Horseshoe Bend, Decker Island			
.1 - Deflection-exclusion booming: keep oil in main Sacramento River channel and out of 3-mile Slough and Horseshoe Bend.				
	Boom	Harbor	9x9 inch	4800 feet
	Anchor	Danforth	40 lb	12
	Vessel	Boom Boat		2
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		8
.2 - Exclude oil from north mouth and divert it to shore for collection.				
	Boom	Harbor	9x9 inch	1700 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Boom	Sorbent		100 feet
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Vessel	Boom Boat		1
	Anchor	Danforth	25 lb	5
.3 - Exclude/deflect past at south mouth of Slough.				
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Vessel	Boom Boat		1
	Anchor	Danforth	25 lb	6
	Boom	Harbor	9x9 inch	2300 feet
.4 - Oil Collection with Shoreside skimming system if oil accumulates in skimmable quantities				
	skimmer	shoreside		1
	Staff	Staff to Deploy		3
2-805	Three Mile Slough - Sacramento River			
.1 - Exclude oil from mouth on Sacramento River to prevent spread to San Joaquin				
.2 - Diversion to collection in westerly portion of Slough, for oil from Sacramento River				
	Anchor	Danforth	40 lb	6
	Boom	Harbor	9x9 inch	2600 feet
	Personnel	Staff to Deploy		5
	Vessel	Boom Boat		1
	Boom	Sorbent		100 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Vessel	Skiff or Punt		1
.3 - Oil Recovery by Shoreside skimming				
	skimmer	self propelled		1
	Staff	Staff to Deploy		3

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-810 Sacramento River, Lower Grand Island Reach			
.1 - Deflection to Collection at the east bank to keep oil in main deep-water channel and out of Sacramento River mouth.			
Staff	Staff to Deploy		16
Vessel	Boom Boat		5
Boom	Harbor	9x9 inch	13000 feet
Boom	Oil Snare (pom-pom)		50 feet
Anchor	Danforth	40 lb	30
Vessel	Skiff or Punt		1
Boom	Sorbent		100 feet
.2 - Exclusion to collection at southeast bank opposite Grand Island tip (at mouth).			
Anchor	Danforth	22 lb	12
Vessel	Boom Boat		2
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	3000 feet
Staff	Staff to Deploy		8
Boom	Harbor	9x9 inch	1500 feet
.3 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		2
Staff	Staff to Deploy		6
2-813 Sacramento River, Isleton-Walnut Grove Reach			
.1 - If oil is threatening from north, execute Delta Cross Channel closure, boom Georgiana Slough mouth, and divert oil for collection.			
Staff	Staff to Deploy		5
Boom	Harbor	9x9 inch	500 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		100 feet
Anchor	Danforth	25 lb	5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
.2 - For oil spills from the Isleton area, deploy collection, exclusion boom below bridge to intercept oil and prevent spread upstream.			
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Boom	Harbor	9x9 inch	700 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		100 feet
Anchor	Danforth	25 lb	5
Staff	Staff to Deploy		5
.3 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3
2-814 Georgiana Slough			
.1 - Exclusion-diversion boom across the mouth for oil coming down Sacramento River from the north.			
Boom	Sorbent		500 feet
Anchor	Danforth	25 lb	5
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Boom	Harbor	9x9 inch	1200 feet
.2 - Flood tide oil threats at the South mouth: deter oil entry by deflection into the channel and exclusion booming across mouth.			
Boom	Harbor	9x9 inch	2100 feet
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Anchor	Danforth	25 lb	5
Boom	Sorbent		100 feet
Boom	Oil Snare (pom-pom)		50 feet
Staff	Staff to Deploy		1
.3 - Oil Recovery by Shoreside skimming			
Staff	Staff to Deploy		3
skimmer	self propelled		1

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-815 Delta Cross Channel / Lower Snodgrass Slough			
.1 - Exclude oil from entering Delta Cross Channel			
Boom	Sorbent		200 feet
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Anchor	Danforth	44 lb	7
Boom	Harbor	0 inch	1800 feet
Staff	Staff to Deploy		5
.2 - Divert oil to shore for collection, if oil enters Delta Cross Channel from the Sacramento River.			
Vessel	Boom Boat		1
Anchor	Danforth	25 lb	5
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	1200 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		700 feet
Staff	Staff to Deploy		5
.3 - If any oil enters site, execute exclusion 2-816.1at mouth to upper Snodgrass Slough and wetland complex: execute			
.4 - Oil Recovery with shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3
2-816 Snodgrass Slough Complex			
.1 - Exclude oil from moving from/to Snodgrass complex through Delta Cross Channel			
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Vessel	Boom Boat		1
Anchor	Danforth	25 lb	3
Boom	Sorbent		500 feet
Boom	Swamp	6x6 inch	500 feet
2-818 Stone Lake Complex			
2-820 Sacramento River, Courtland-Sacramento Reach			
.1 - Diversion to collection at Miller Park sandy beaches, for oil in the River above the locks			
Boom	Sorbent		700 feet
Anchor	Danforth	50 lb	9
Vessel	Boom Boat		2
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		8
Boom	Swamp	6x6 inch	4400 feet
.2 - Divert to collection at a favorable location where logistics and prevailing conditions permit oil interception and collection.			
Boom	Oil Snare (pom-pom)		50 feet
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	3000 feet
Anchor	Danforth	50 lb	7
Boom	Sorbent		100 feet
.3 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-830 Steamboat Slough			
.1 - Exclusion/diversion to collection at the Sacramento mouth: divert it to shore-side collection.			
Anchor	Danforth	25 lb	7
Staff	Staff to Deploy		5
Vessel	Boom Boat		1
Boom	Sorbent		600 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Swamp	6x6 inch	1300 feet
Vessel	Skiff or Punt		1
.2 - Exclusion/deflection booming Steamboat Slough south mouth on Cache Slough on incoming tides.			
Vessel	Skiff or Punt		1
Boom	Harbor	9x9 inch	500 feet
Boom	Sorbent		500 feet
Anchor	Danforth	25 lb	5
Vessel	Boom Boat		1
Staff	Staff to Deploy		5
.3 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3
2-832 Sutter Slough			
.1 - Exclude oil and divert to shore for collection, for oil threats to Sacramento mouth.			
Staff	Staff to Deploy		5
Boom	Swamp	6x6 inch	500 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		1100 feet
Anchor	Danforth		5
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
.2 - For oil threats from upstream, deflection boom above the Sacramento mouth to keep oil to mid channel and away from mouth.			
Staff	Staff to Deploy		5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	600 feet
Anchor	Danforth	25 lb	3
.3 - Exclusion boom at the south mouth on Steamboat Slough.			
Staff	Staff to Deploy		5
Boom	Swamp	6x6 inch	500 feet
Boom	Sorbent		100 feet
Anchor	Danforth	25 lb	3
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
.4 - Oil Recovery by Shoreside skimming			
Staff	Staff to Deploy		3
skimmer	self propelled		1
2-834 Elk Slough			
.1 - Exclude oil from entering Elk Slough			
Boom	Harbor	9x9 inch	200 feet
Boom	Swamp	6x6 inch	200 feet
Boom	Sorbent		70 feet
Anchor	Danforth	25 lb	4
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
2-840 Lindsey Slough			
.1 - Exclusion/deflection to keep oil in main ship channel and prevent oil from entering reaches of upper Cache, Miner, Prospect, and Lindsey Sloughs.			

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-850 Cache Slough			
.1 - Deflection/exclusion to keep oil in main ship channel and prevent oil from entering reaches of upper Cache, Miner, Prospect, and Lindsey Sloughs.			
Staff	Staff to Deploy		5
Boom	Harbor	9x9 inch	1500 feet
Anchor	Danforth	44 lb	6
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
.2 - Exclusion/to confinement/collection across Cache Slough at Prospect Slough mouth. Create collection pocket on river right shoreline.			
Boom	Swamp Boom	6x6 inch	2500 feet
Staff	Staff to Deploy		8
Vessel	Skiff or Punt		2
Vessel	Boom Boat		1
Anchor	Danforth	40 lb	10
Boom	Sorbent		100 feet
Boom	Oil Snare (pom-pom)		50 feet
.3 - Exclusion boom at Lindsey Slough mouth			
Boom	Sorbent		100 feet
Staff	Staff to Deploy		5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Anchor	Danforth	25 lb	5
Boom	Harbor	9x9 inch	1200 feet
Boom	Oil Snare (pom-pom)		50 feet
.4 - Oil Recovery by Shoreside skimming			
Staff	Staff to Deploy		3
skimmer	self propelled		1
2-855 Miner Slough			
.1 - Exclude oil from entering north mouth at Sutter Slough by deploying diversion/exclusion oil to shunt oil past mouth.			
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		3
Anchor	Danforth	22 lb	3
Boom	Swamp	6x6 inch	200 feet
Boom	Sorbent		150 feet
.2 - Exclude oil into south mouth at Cache Slough using deflection/exclusion booming at mouth. See Cache Slough primary strategy.			
2-859 Sacramento River Deep Water Ship Channel			
.1 - For oil threat from Cache Slough, divert to shore for stranding & collection inside and near the mouth of the channel using prevailing wind			
Boom	Harbor	9x9 inch	1300 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		100 feet
Anchor	Danforth	25 lb	5
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
.2 - Exclusion of Lake Washington (east of Port) and deflection to shoreside confinement			
Staff	Staff to Deploy		5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	700 feet
Boom	Harbor	9x9 inch	2000 feet
Boom	Sorbent		1100 feet
Boom	Oil Snare (pom-pom)		50 feet
.3 - Oil Recovery with shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-860 Prospect Slough and Liberty Island			
.1 - Exclusion boom Prospect Slough mouth and marsh and upper Cache Slough openings to Liberty Isl.			
Boom	Swamp	6x6 inch	2200 feet
Vessel	Skiff or Punt		1
Boom	Sorbent		3500 feet
Staff	Staff to Deploy		5
Boom	Harbor	9x9 inch	1300 feet
Vessel	Boom Boat		2
Anchor	Danforth	25 lb	10
2-870 Mokelumne River Mouth			
.1 - Exclude oil from entering Mokelumne mouth on the flood tide by exclusion-collection booming toward eddy to west of mouth.			
Anchor	Danforth	25 lb	5
Staff	Staff to Deploy		5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
Boom	Sorbent		100 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Harbor	9x9 inch	1500 feet
Boom	Swamp	6x6 inch	1000 feet
.2 - Back up strategy: Diversion to collection at favorable shore-side collection and boom marina entries.			
Boom	Oil Snare (pom-pom)		50 feet
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	2000 feet
Anchor	Danforth	25 lb	8
Boom	Sorbent		100 feet
.3 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3
2-873 North Mokelumne River			
.1 - For oil threats from the north, diversion booming to favorable shore-side collection.			
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Anchor	Danforth	25 lb	4
Boom	Sorbent		500 feet
Boom	Oil Snare (pom-pom)		50 feet
Boom	Swamp	6x6 inch	400 feet
Staff	Staff to Deploy		1
.2 - If oil is threatening from south (San Joaquin River), execute south Georgiana Slough strategy and exclude oil movement upstream on flood tide.			
Boom	Swamp	6x6 inch	700 feet
Boom	Sorbent		600 feet
Anchor	Danforth	25 lb	3
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
.3 - Protection/deflection boom around mid-channel island for oil moving in midstream.			
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Vessel	Boom Boat		1
Boom	Sorbent		400 feet
Boom	Swamp	6x6 inch	1000 feet
Anchor	Danforth	22 lb	4
.4 - Oil Recovery by Shoreside skimming			
skimmer	self propelled		1
Staff	Staff to Deploy		3

Site **Site Name**

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-880 South Mokelumne River			
.1 - Exclusion booming at south mouth.			
Boom	Swamp	6x6 inch	500 feet
Boom	Sorbent		500 feet
Anchor	Danforth	25 lb	2
Staff	Staff to Deploy		5
Vessel	Skiff or Punt		1
Vessel	Boom Boat		1
.2 - Exclusion booming at north end. Current is downstream during most times of the year.			
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	100 feet
Boom	Oil Snare (pom-pom)		50 feet
Anchor	Danforth	25 lb	2
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Boom	Sorbent		100 feet
.3 - Protect marsh islands within channel			
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	3000 feet
Boom	Sorbent		1000 feet
Anchor	Danforth	22 lb	7
Vessel	Boom Boat		1
Staff	Staff to Deploy		5
.4 - Oil Recovery by Shoreside skimming			
Staff	Staff to Deploy		3
skimmer	self propelled		1
2-882 Sycamore Slough			
.1 - Exclusion booming across the mouth.			
Vessel	Skiff or Punt		1
Anchor	Danforth	22 lb	3
Boom	Sorbent		300 feet
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	300 feet
Staff	Staff to Deploy		5
2-884 Sycamore Island			
.1 - Phase I: Stop oil from penetrating or oiling the island by placing exclusionary boom across the channel meander and the east side.			
Staff	Staff to Deploy		5
Anchor	Danforth	22 lb	6
Boom	Swamp	6x6 inch	1500 feet
Boom	Sorbent		1500 feet
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1
.2 - Phase II: Divert oil away from island side of river toward the east bank to minimize exposure of island to oil.			
Vessel	Skiff or Punt		1
Anchor	Danforth	22 lb	2
Vessel	Boom Boat		1
Boom	Swamp	6x6 inch	300 feet
Staff	Staff to Deploy		5
2-886 Hog Slough			
.1 - Exclusion booming at mouth by stringing lengths of boom between the two channel islands.			
Staff	Staff to Deploy		5
Boom	Swamp	6x6 inch	900 feet
Boom	Sorbent		900 feet
Anchor	Danforth	22 lb	10
Vessel	Boom Boat		1
Vessel	Skiff or Punt		1

Sub-Strategy **PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT**

	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-888	<i>Beaver Slough</i>			
.1 - Exclusion booming across the mouth.				
	Boom	Sorbent		50 feet
	Anchor	Danforth	22 lb	4
	Vessel	Boom Boat		1
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		5
	Boom	Swamp	6x6 inch	350 feet

2-890 ***Mokelumne River, New Hope Reach***

.1 - Diversion to collection: Stop oil from moving freely moving down the river

2-895 ***Cosumnes River Preserve***

.1 - Diversion to collection: Stop oil from moving freely in the reserve and down the river.

2-896 ***Mokelumne River, Thornton Reach***

.1 - Diversion to collection.

9821.3 Lists of Economic Resources Susceptible to Oiling

A summary of Human Health and Safety Sites and Economic Resources is listed by GRA next. Refer to Section 9804 for more information.

Economic Sites - GRA 8

Site Information	Site Number & Location	Lat/Long & Priority
<p>B&W Resort Marina 964 Brannan Island Rd Isleton CA 95641 Phone: 916-777-6161 Site Description:</p>	<p>Site Number: 2-8-SA-100-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.13 -121.58</p>
<p>Owl Harbor 1550 W Twitchell Island Rd Isleton CA 95641 Phone: 916-777-6055 Site Description:</p>	<p>Site Number: 2-8-SA-105-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.63</p>
<p>Brothers Island Marina 1200 W Brannan Island Isleton CA 95641 Phone: 916-777-6084 Site Description:</p>	<p>Site Number: 2-8-SA-110-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.12 -121.62</p>
<p>Rivers Edge Marina & Resort 1100 W Brannan Island Rd Isleton CA 95641 Phone: 916-777-6172 Site Description:</p>	<p>Site Number: 2-8-SA-115-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.61</p>
<p>Park Delta Bay 922 W Brannan Island Rd Isleton CA 95641 Phone: 916-777-5588 Site Description:</p>	<p>Site Number: 2-8-SA-120-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.6</p>
<p>Rancho Marina RV Park 395 Brannan Island Rd Isleton CA 95641 Phone: 707-640-3005 Site Description:</p>	<p>Site Number: 2-8-SA-125-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.58</p>
<p>Willow Berm Marina 140 Brannan Island Rd Isleton CA 95641 Phone: 916-777-6313 Site Description:</p>	<p>Site Number: 2-8-SA-130-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.1 -121.57</p>
<p>Riverboat Marina 106 W Brannan Island Rd Isleton CA 95641 Phone: 916-777-6462 Site Description:</p>	<p>Site Number: 2-8-SA-135-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.1 -121.58</p>
<p>Pirate's Lair Marina 169 W Brannan Island Rd Isleton CA 95641 Phone: 916-777-6464 Site Description:</p>	<p>Site Number: 2-8-SA-140-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.1 -121.57</p>
<p>Lighthouse Marina & Resort 151 Brannan Island Rd Isleton CA 95641 Phone: 916-777-5511 Site Description:</p>	<p>Site Number: 2-8-SA-145-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.1 -121.57</p>

Economic Sites - GRA 8

Site Information	Site Number & Location	Lat/Long & Priority
<p>Spindrift Marina 841 W Brannan Island Rd Isleton CA 95641 Phone: 916-756-3499 Site Description:</p>	<p>Site Number: 2-8-SA-150-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.6</p>
<p>Oxbow Marina 100 Oxbow Marina Dr Isleton CA 95641 Phone: 916-777-6060 Site Description:</p>	<p>Site Number: 2-8-SA-155-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.15 -121.59</p>
<p>Perry's Boat Harbor 500 Brannan Island Rd Isleton ca 95641 Phone: 916-777-5000 Site Description:</p>	<p>Site Number: 2-8-SA-160-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.12 -121.58</p>
<p>Brannan Island State Recreation Area 17645 CA-160 Rio Vista CA 94571 Phone: 916-777-6671 Site Description:</p>	<p>Site Number: 2-8-SA-165-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long: 38.11 -121.7</p>
<p>Sacramento Marina 2710 Ramp Way Sacramento CA 95818 Phone: 916-808-5712 Site Description:</p>	<p>Site Number: 2-8-SA-170-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.56 -121.52</p>
<p>Dagmar's Landing 14181 River Rd Walnut Grove CA 95690 Phone: 916-776-1961 Site Description:</p>	<p>Site Number: 2-8-SA-175-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.24 -121.52</p>
<p>Walnut Grove Landing 63 14031 ca-160 Walnut Grove CA 95690 Phone: 916-776-1050 Site Description:</p>	<p>Site Number: 2-8-SA-180-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.25 -121.51</p>
<p>Walnut Grove Marina 1400 Old Levee Rd Walnut Grove CA 95690 Phone: 916-776-1181 Site Description:</p>	<p>Site Number: 2-8-SA-185-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.23 -121.51</p>
<p>Boathouse Marina at Locke 13900 River Rd Walnut Grove CA 95690 Phone: 916-776-1204 Site Description:</p>	<p>Site Number: 2-8-SA-190-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.25 -121.51</p>
<p>Tower Park Marina 14900 W Hwy 12 Lodi CA 95242 Phone: 209-369-1041 Site Description:</p>	<p>Site Number: 2-8-SJ-100-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.11 -121.5</p>

Economic Sites - GRA 8

Site Information	Site Number & Location	Lat/Long & Priority
<p>New Hope Landing RV Park & Marina 13945 W Walnut Grove Rd Walnut Grove CA 95690 Phone: 209-210-4485 Site Description:</p>	<p>Site Number: 2-8-SJ-105-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.23 -121.49</p>
<p>Wimpy's Marina & RV Park 14001 W Walnut Grove Rd Walnut Grove CA 95690 Phone: 209-794-2544 Site Description:</p>	<p>Site Number: 2-8-SJ-110-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.23 -121.49</p>
<p>Delta Marina Yacht Harbor 100 Marina Dr Rio Vista CA 94571 Phone: 707-374-2315 Site Description:</p>	<p>Site Number: 2-8-SO-100-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.16 -121.7</p>
<p>Snug Harbor 3356 Snug Harbor Dr Walnut Grove CA 95690 Phone: 916-775-1455 Site Description:</p>	<p>Site Number: 2-8-SO-105-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.2 -121.61</p>
<p>Arrowhead Harbor Marinas 4396 Holland Rd Clarksburg CA 95612 Phone: 916-775-0077 Site Description:</p>	<p>Site Number: 2-8-SO-110-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.29 -121.65</p>