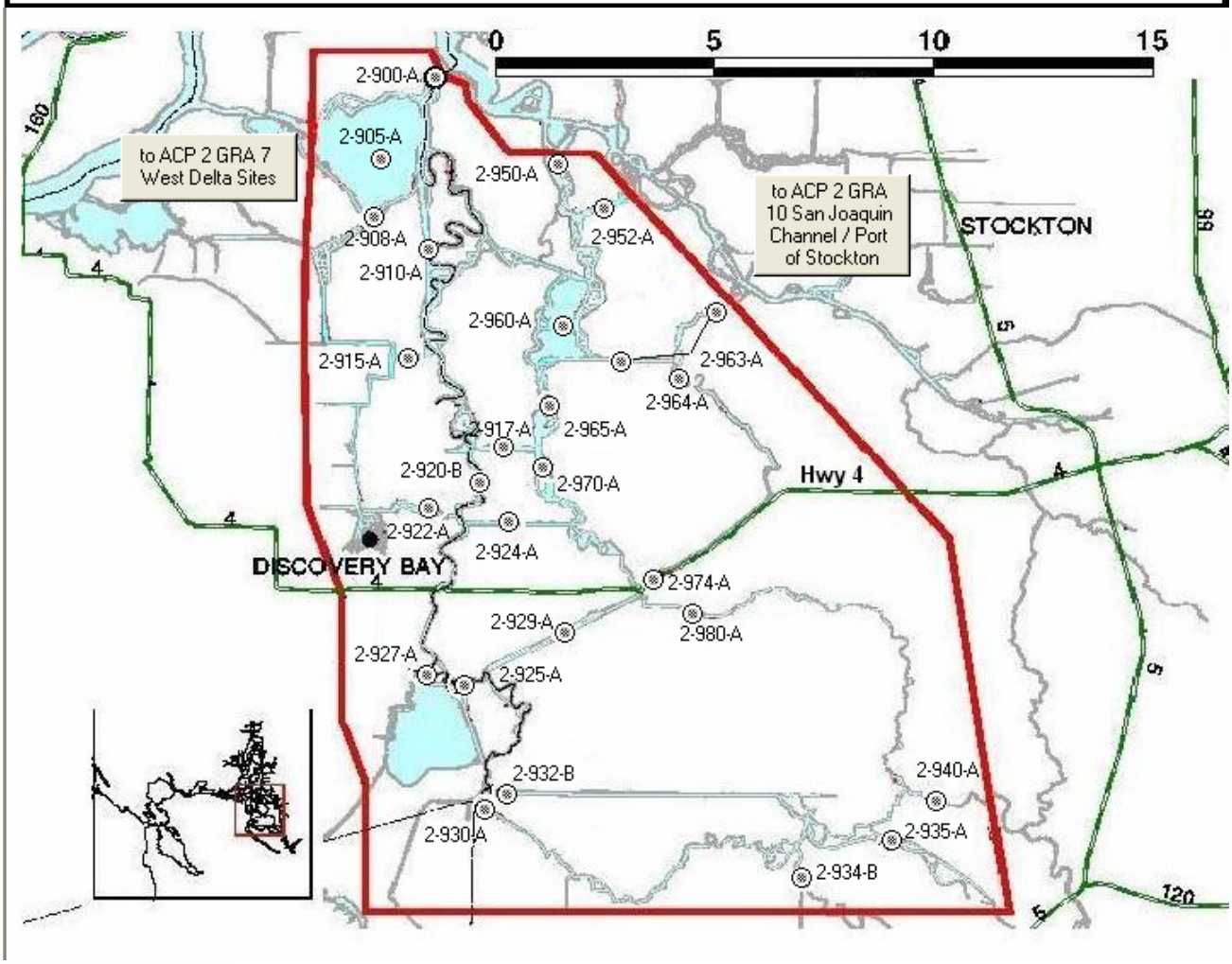
SF Geographic Response Area 9
South Delta - Middle River and Old River to Tracy
Environmentally Sensitive Sites



Site markers symbols ⊙ are only references and do not indicate full extent of sites.

Section 9849 – Geographic Response Area 9, South Delta

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Contra Costa County
San Joaquin County

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9849.5 Shoreline Access…….……To be developed

GRA 9 Site Index / Response Actions

Site ID	Priority	Site Description	Assignment	Date/Time Required	Date/Time Completed
2-900		Old River Mouth at San Joaquin River			
2-905		Franks Tract Complex			
2-908		Sand Mound Slough			
2-910		Old River: Quimby Island Complex			
2-915		Rock Slough			
2-917		Railroad Cut			
2-920		Old River: Orwood Reach			
2-922		Indian Slough			
2-924		Woodward Canal			
2-925		Old River: Coney Island Reach			
2-927		Widdows and Eucalyptus Islands			
2-929		Victoria Canal			
2-930		Old River: Fabian Tract Reach			
2-932		Grant Line Canal (West)			
2-934		Tom Paine Slough			
2-935		Paradise Cut			
2-940		Old River, Stewart Tract Reach			
2-950		Middle River, Mandeville Reach			
2-952		Columbia Cut			
2-960		Mildred Island/Latham Slough			
2-963		Turner-Empire Cut			
2-964		Whiskey Slough			
2-965		Middle River: Bacon Island Reach			
2-970		Middle River: Upper Jones Tract			
2-974		Trapper Slough			
2-980		Middle River: Union Island Reach			

Summary of Geographic Response Area 9 (GRA 9) Response Resources by Site and Sub-Strategy

Site / sub-strategy	Site Name / PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	Anchoring type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment (and notes) No and kinds	deploy staff	Staff t tend
2-900	*Old River Mouth at San Joaquin Rive*													
.1 -	**Exclusion booming Old River at the mouth. Wind wash and strong currents can be a problem.**													
		2000	200		2200	11	9/25/ & 2/15/danforths,	2	1	1	portabal		8	
2-905	*Franks Tract Complex*													
.1 -	**NO STRATEGY HAS BEEN DEVELOPED.**													
		0	0	0	0	0	0	0		0	0	0		
2-908	*Sand Mound Slough*													
.1 -	**Exclude oil from site by executing adjacent strategies. If oil is coming from the San Joaquin River, prevent oil from enter**													
		0	0	0	0	0	0	0		0	0	0		
.2 -	**For oil coming from Bethel Island area marinas, prevent oil from contaminating marsh habitat.**													
			3000					3					12	
2-910	*Old River: Quimby Island Complex*													
.1 -	**Exclude oil from moving downstream (northerly) into this reach of Old River using exclusion boom.**													
		1000		50 OS	100	10	8-10 / 25-40lb Danforth	1	2				8	
.2 -	**Exclude/collect oil from moving upstream (southward) with the tide into Old River from Frank's Tract.**													
		1900		50 OS	100	24	25-40lb Danforth	2	3				12	
.3 -	**Oil Recovery by Shoreside skimming**													
		0	0	0	0	0		0	0	3	SSS/SP	0		
2-915	*Rock Slough*													
.1 -	**Exclude oil from Rock Slough at the confluence with Old River near Holland Riverside Marina.**													
		1000				12	8-12 / 25lb Danforth	1	1	0			7	
2-917	*Railroad Cut*													
.1 -	**Exclude / Collect oil at west ends (Old River) and deflect to collection at island levee.**													
		500		50 OS	100	10	10 / 25lb Danforth	1					3	
.2 -	**Exclude oil at east ends (Middle River)**													
		800				12	10-12 / 25lb Danforth	1	0				3	
.3 -	**Protection booming of marshy entire margin of railroad grade both sides**													
		0	15000			35	20 lb or stakes	4	8			stakes	30	
.4 -	**Oil Recovery by Shoreside skimming**													
		0	0	0	0	0		0	0	1	SSS	0		
2-920	*Old River: Orwood Reach*													
.1 -	**Deflection booming: Protect in-channel marsh islands from oil either coming up river or down river.**													
		500						1	0	0			3	
.2 -	**Deflection booming: Protect in-channel marsh islands from oil. Recover oil in channel north of Indian Slough.**													
		1200				12	9-12 / 25lb Danforth	1	1	1			8	
2-922	*Indian Slough*													
.1 -	**Deflection booming - Protect slough by deflecting oil coming down Old River.**													
		500				5	5 / 25lb Danforth	1	0	1	SSS			
.2 -	**Exclude oil from entering Island Slough from Old River. Recover oil near the confluence.**													
		1000				10	8-10 / 25lb Danforth	1	1	1	SSS		7	
.3 -	**Exclude oil from impacting in-channel tule marsh islands.**													
		0	3000	0	0	30	24-30 / 10-25lb danforth	0	4	0		0		
.4 -	**Exclude oil from entering Discovery Bay and channel west of Discovery Bay.**													
		1300	0	0	0	10	8-10 / 10-25lb danforth	0	2	0		0	6	
2-924	*Woodward Canal*													
.1 -	**Exclude oil from entering the canal and impacting marsh islands.**													
		1200				20	20 / 20lb Danforth	2	2				10	
2-925	*Old River: Coney Island Reach*													
.1 -	**Excludion to collection at shore**													
		1500		50 OS	100	15	12-15 / 25 lb Danforth	2	1				11	
.2 -	**Exclude oil from entering Clifton Court Forebay.**													
		300				2	2 / 25-40lb into levees	1	0				3	
.3 -	**Oil Recovery by Shoreside skimming**													
		0	0	0	0	0		0	0	2	SSS	0		
2-927	*Widdows and Eucalyptus Islands*													
.1 -	**Exclude oil from entering Widdows Island.**													
		0	800		800	6	6 / 20lb or stakes	1	1				4	

Site	Site Name															
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT															
	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Type	Special Equipment No	and kinds	(and notes)		deploy staff	Staff t tend
.2	-	Prevent oil from reaching both islands.														
	1500		50 OS	100	12	12 / 25 lb Danforth	2	0							8	
.3	-	Prevent oil from entering Eucalyptus Island														
	0	550		250			1	1							4	
.4	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	1	SSS	0					
2-929	Victoria Canal															
.1	-	West end of canal: Keep oil out of marsh areas located in middle of canal.														
	0	0	0	0	0	0	0		0	0			See SF-925-A and SF-927-A strategies.			
.2	-	Exclude oil and stop spread when oil threatens from east end of canal.														
	800		50 OS	100			1	0							5	
.3	-	Exclude oil from entering Clifton Court Forebay.														
	0	0	0	0	0	0	0		0	0			See SF-925.03-A			
.4	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	1	SSS	0					
2-930	Old River: Fabian Tract Reach															
.1	-	Divert and collect oil at the river confluence at Hammer Island.														
	500						1	1	2	SSS					9	
.2	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	2	SSS	0					
2-932	Grant Line Canal (West)															
.1	-	Exclude oil moving up Old River from entering Grant Line Canal.														
	1000		50 OS	100			2	1							6	
.2	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	1	SSS	0					
2-934	Tom Paine Slough															
.1	-	NO STRATEGY HAS BEEN DEVELOPED.														
	0	0	0	0	0	0	0		0	0						
2-935	Paradise Cut															
.1	-	NO STRATEGY HAS BEEN DEVELOPED.														
	0															
2-940	Old River: Stewart Tract Reach															
.1	-	NO STRATEGY HAS BEEN DEVELOPED.														
	0	0	0	0	0	0	0		0	0						
2-950	Middle River, Mandeville Reach															
.1	-	Exclusion/Collection at mouth of Middle River. Wind wash and strong currents can be a problem.														
	1700		50 OS	2100	6	6/25/DANFORTH									4	
.2	-	Exclude/Collect oil at junction with Latham Slough / Mildred Island open water.														
	1500			1500	5	5/25/danforths	2	1								
.3	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	3	SSS	0					
2-952	Columbia Cut															
.1	-	Exclude oil from entering or leaving Columbia Cut at the mouth (at San Joaquin R).														
	0	1000		2000	4	4/25/DANFORTH	0	2							4	
.2	-	Exclusion booming at junction with Middle River.														
	900			900	3	3/15/danforths	1	1							5	
.3	-	Exclusion/Collection backup strategy for Head Reach end: exclude and divert for collection, under prevailing wind and c														
	1500				4	4/25lbs/danforths	1		1	SSS						
2-960	Mildred Island/Latham Slough															
.1	-	Exclude by executing adjacent strategies. No specific strategy for this site. See Old River Quimby Island (2-910); Middle														
	0	0	0	0	0	0	0		0	0		0				
2-963	Turner-Empire Cut															
.1	-	Exclude/contain oil At San Joaquin River (at Acker Island): Stop oil from entering or leaving slough mouth.														
	600			300	4	4/25 lb Danforth									2	
.2	-	Exclusion/contain at south end - junction with Latham Slough at Mildred Island. Stop oil from entering or leaving slough														
	1200		50 OS	100	5	5/25lb danforth + chain + line									4	
.3	-	Oil Recovery by Shoreside skimming														
	0	0	0	0	0		0	0	1	SSS	0					
2-964	Whiskey Slough															

Site	Site Name

sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT																
	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Type	Special Equipment No	and	kinds	(and notes)		deploy staff	Staff t tend
.1 -	Exclude oil at mouth on Turner Cut																
	0	400		300	3	3/15/DANFORTH	0	1								2	
2-965	Middle River: Bacon Island Reach																
.1 -	North end: Exclusion booming at the river mouth																
	600		50 OS	100	8	8 / 25lb Danforth	1	1								5	
.2 -	South end: Prevent oil from entering the river and contaminating the marshes																
	2000	600	50 OS	100	25	25 / 25lb Danforth	3	2								17	
.3 -	Oil Recovery by Shoreside skimming																
	0	0	0	0	0		0	0	3	SSS	0						
2-970	Middle River: Upper Jones Tract																
.1 -	North End: prevent oil from contaminating in-channel marshes																
	2000		50 OS	100	18	12-18 / 25lb Danforth	2	1								9	
.2 -	South End: Prevent oil from contaminating in-channel marches.																
	2000		50 OS	100	18	12-18 / 25lb Danforth	2	1								12	
.3 -	Oil Recovery by Shoreside skimming																
	0	0	0	0	0		0	0	3	SSS	0						
2-974	Trapper Slough																
.1 -	Exclude oil from entering slough																
	0	0	0	0	0	0	0		0	0							
2-980	Middle River: Union Island Reach																
.1 -	Deflect oil away from in-channel islands and marshes																
	400				10	10 / 25lb Danforth	1	1	1	SSS						6	

Site Summary- Old River Mouth at San Joaquin River

County:	Contra Costa / San Joaquin	Thomas Guide Location	SF Bay and Delt	Latitude N	38 04.4	Longitude W	121 34.3
USGS Quad:	Bouldin Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Site is from intersection of Old River and Deep Water Channel at 53 to Frank's Tract. This mile long section of Old River is wide and deep with berm islands paralleling ripped levees. The berm islands are vegetated with emergent marsh and scrub shrub, particularly at mouth. Waves and currents can be strong here.

SEASONAL and SPECIAL RESOURCE CONCERN

Marsh area is of "A" priority at all times. From September to December there are modest numbers of Delta smelt (F/CT) in this area. Rare plants occur nearby.

RESOURCES OF PRIMARY CONCERN

This area has been designated as a Significant Natural Area (DFG-NHD). The main ecological values in this site are the berm islands, particularly at the mouth, and the access to sites in Frank's tract and south. Aquatic environment supports diverse freshwater community.

Bird species which occur here are typical waterfowl and marsh birds.

Other vertebrates are typical aquatic and semi-aquatic mammals, reptiles and amphibians of the delta.

This area has modest occurrence of Delta smelt during fall/winter. Juvenile and adult striped bass are typical as are warm water species.

Several Special Status Species occur near but have not been recorded in this site including: Mason's lilaeopsis, Delta tule pea, Delta mudwort, California hibiscus and Suisun marsh aster.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
E	Gilbert Cosio	Webb Tract Reclamation District	(916) 456-0253
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
E	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
OEL	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River Mouth at San Joaquin River

2-900 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
SF Bay and Delt Contra Costa / San Joaquin	18661 Sacramento & San Joaquin River	38 04.4	121 34.3

Last Page Update :

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 marshy 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 muds.

HAZARDS and RESTRICTIONS:

Aerial traffic beware of power wires. Shallows at margins.

SITE STRATEGIES

Strategy 2-900.1 **Objective: Exclusion booming Old River at the mouth. Wind wash and strong currents can be a problem.**

ACP DATE 7/1/1996

A) Set an exclusion-diversion boom across the mouth at a diagonal to land oil on the Mandeville levee. Anchor one end near the Webb Tract tip and set 1500' of 12X12 diagonally to anchor the other end near the Mandeville levee. Leave a trailing boom length to maintain seal during tidal vacillations.
B) Set 200' of 4X4+ exclusion boom across mouth of slough parallel to the above boom. Anchor one end near the un-named tule island tip and anchor the other near the Mandeville levee. Back with sorbent.
C) Multiple layers may be necessary to brake the wave chop: repeat (step 1) as necessary.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-900.1	2000	200		2200	11	9/25/ & 2/15/danforths,	2	1	1	portabal			8	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to site is by boat, from Stockton Deep Water Channel at R53 from marinas at Mokelumne. Vehicle access is very restricted: private levee roads via convoluted routes: Hwy 4 to Jersey Island Rd to private ferry to Webb Tract and Hwy 4 to acon Island Rd to Bacon Isl. to Mandeville Island. Site is from intersection of Old River and Deep Water Channel at 53 to Frank's Tract.

LAND ACCESS: LEVEE ROADS ARE GOOD WHEN DRY

WATER LOGISTICS:
Limitations: depth, obstruction — deep draft, except near shore

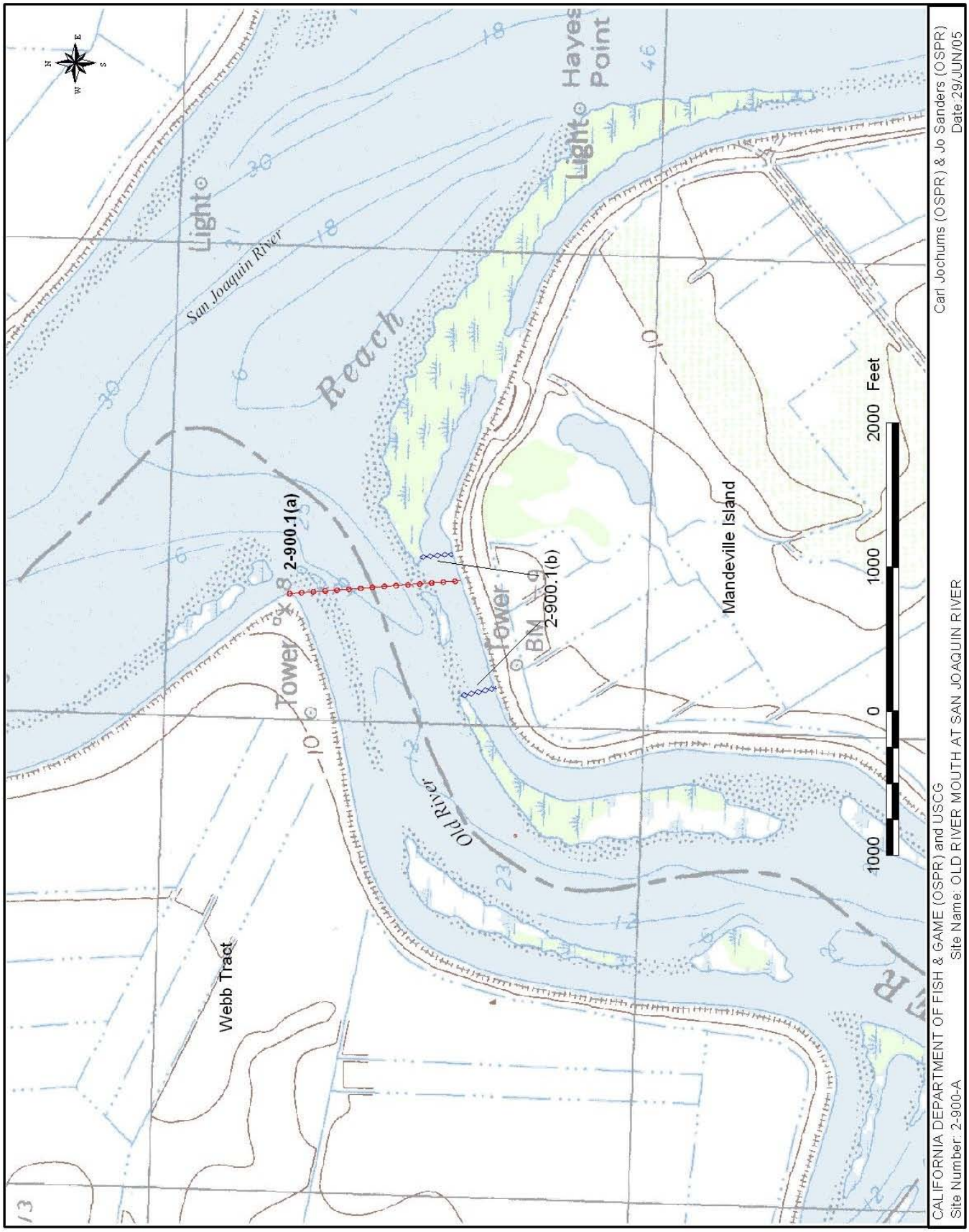
Launching, Loading, Docking and Services Available: — Nearest boat launch and marine service is at the mouth of the Mokelumne. Additional marine facilities are at Bethel Island or 8-mile road.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Good deployment sites and facilities are at marinas above: rental boats, fuel, restaurants, water, and some camping and lodging. Consider the Mokelumne mouth as an area deployment site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Franks Tract Complex

2-905 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 02	Longitude W 121 36'
USGS Quad:	Bouldin Island	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Franks Tract is a submerged 3,507 acre island with only 300 acres remaining above water. It is located at the intesection of Piper Slough to west, False River to north, Old River to east, Sand Mound Slough to south. The flooded island is surrounded by broken levee remnants and berm islands of bordering waterways. Some of the tract can be seen from the levee road on Bethel Island and the Holland Tract. This is a Delta Master Recreational Plan (DMRP) designated scenic area.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A" level sensitivity throughout the year.

RESOURCES OF PRIMARY CONCERN

This is an open water environment with surrounding marshy islands, supporting a open water and freshwater marsh system.

Waterfowl, marsh birds.

Mammals associated with freshwater marsh areas, including otters and beavers.

These are all T&E spp: Mason's Lileopsis (CR), delta tule pea, Suisun marsh aster

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

2-905 -A Site Strategy - Franks Tract Complex

2-905 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento & San Joaquin River	3 8 02	121 36'

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

No Strategy has been developed. This site has many resources, including marshy island around the perimeter, and is a part of the path for potential spread of oil.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins. Aircraft beware of power lines.

SITE STRATEGIES

Strategy 2-905.1 Objective: NO STRATEGY HAS BEEN DEVELOPED.

ACP DATE
7/1/1996

Execute adjacent strategies to exclude flow into and out of the site.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-905.1	0	0	0	0	0	0	0	0	0		0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 4 to Bethel Island area. Closest launch ramp is Delta Resort. Franks Tract is a submerged 3,507 acre island with only 300 acres remaining above water. It is located at the intesection of Piper Slough to west, False River to north, Old River to east, Sand Mound Slough to south.

LAND ACCESS: no limitations to Bethel Island, other Islands have only dirt tracks.

WATER LOGISTICS: There are a few shallows and obstructions.
Limitations: depth, obstruction

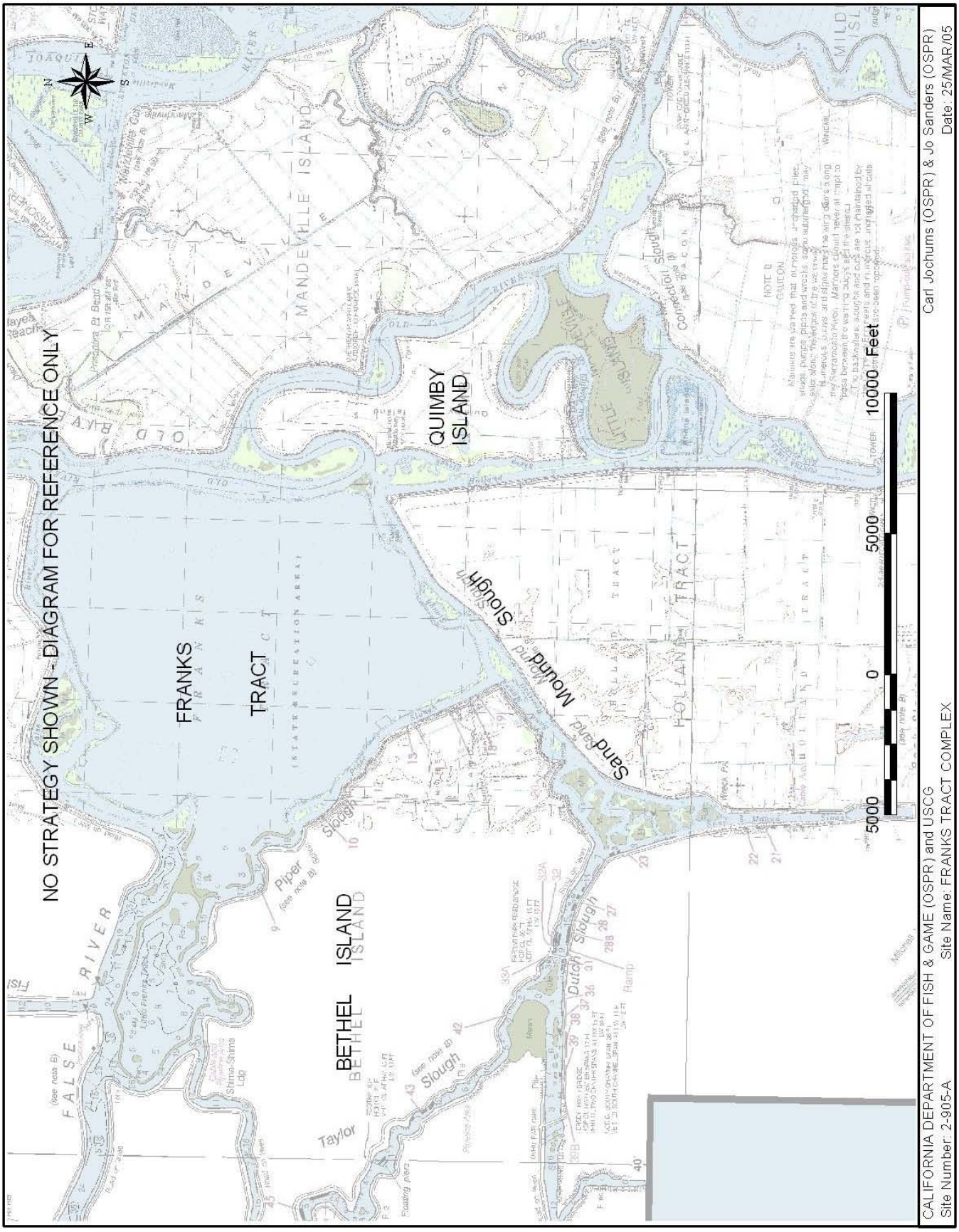
Launching, Loading, Docking and Services Available: Bethel Island marinas. Closest launch ramp is Delta Resort.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at fire station in Bethel Island.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Sand Mound Slough

2-908 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 00	Longitude W 121 37
USGS Quad:	Bouldin Is, Woodward Is, Bethel Is	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Bounded by Franks Tract on the north, Dutch Slough on the west, Rock Slough on the south, and the levee of Holland Tract on the east. The slough has extensive mid-channel marsh islands and emergent vegetation. West side levees of Bethel Island are developed with residences and marinas with docks. East side levees of Holland Tract are undeveloped and covered with rip-rap.

SEASONAL and SPECIAL RESOURCE CONCERN

Site is an "A" priority for protection all year due to extensive marsh islands and wildlife.

RESOURCES OF PRIMARY CONCERN

The habitats of particular concern are the tule marsh and riparian vegetation habitat types.

Herons, egrets, songbirds, raptors, migratory waterfowl in fall and winter.

Winter-run Chinook salmon (CE, FE), striped bass, largemouth bass, channel catfish

Suisun marsh aster, Mason's Lilaeopsis (CR)

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	State Water Project Ops C	CA Dept. of Water Resources	(916) 574-2714
		Empty	
	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
	Gilbert Cosio	Webb Tract Reclamation District	(916) 456-0253
	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

2-908 -A Site Strategy - Sand Mound Slough

2-908 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento & San Joaquin River	3 8 00	121 37

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Hazards are shallow water throughout the site, and overhead power lines near slough.

SITE STRATEGIES

Strategy 2-908.1 **Objective: Exclude oil from site by executing adjacent strategies. If oil is coming from the San Joaquin River, prevent oil from entering slough and marsh habitat.** ACP DATE 7/1/2005

Deploy strategies for False River, Taylor Slough, Franks Tract (2-905-A), and Dutch Slough.

Strategy 2-908.2 **Objective: For oil coming from Bethel Island area marinas, prevent oil from contaminating marsh habitat.** ACP DATE 7/1/1996

Recover oil by on-water skimming or deflect it to a levee for shoreline cleanup. Calm water marinas may also be used as recovery areas provided adequate exclusion and containment booms can be deployed. Line marsh islands with 4x4 boom or sorbent boom. Avoid trampling of marsh and mudflats and avoid in-channel activity from October 15 through May 31 due to the presence of salmon.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-908.1	0	0	0	0	0	0	0	0	0		0			
2-908.2		3000					3						12	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Take Hwy 4 east to Oakley, to Cypress Road east to Bethel Island Road. Follow to Bethel island or turn right on Sand Mound Slough Road. Bounded by Franks Tract on the north, Dutch Slough on the west, Rock Slough on the south, and the levee of Holland Tract on the east.

LAND ACCESS: All types on Bethel. Private levee roads on Holland Tract

WATER LOGISTICS: Shallow at head of slough
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Several launch facilities and marinas throughout slough and Bethel Island.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

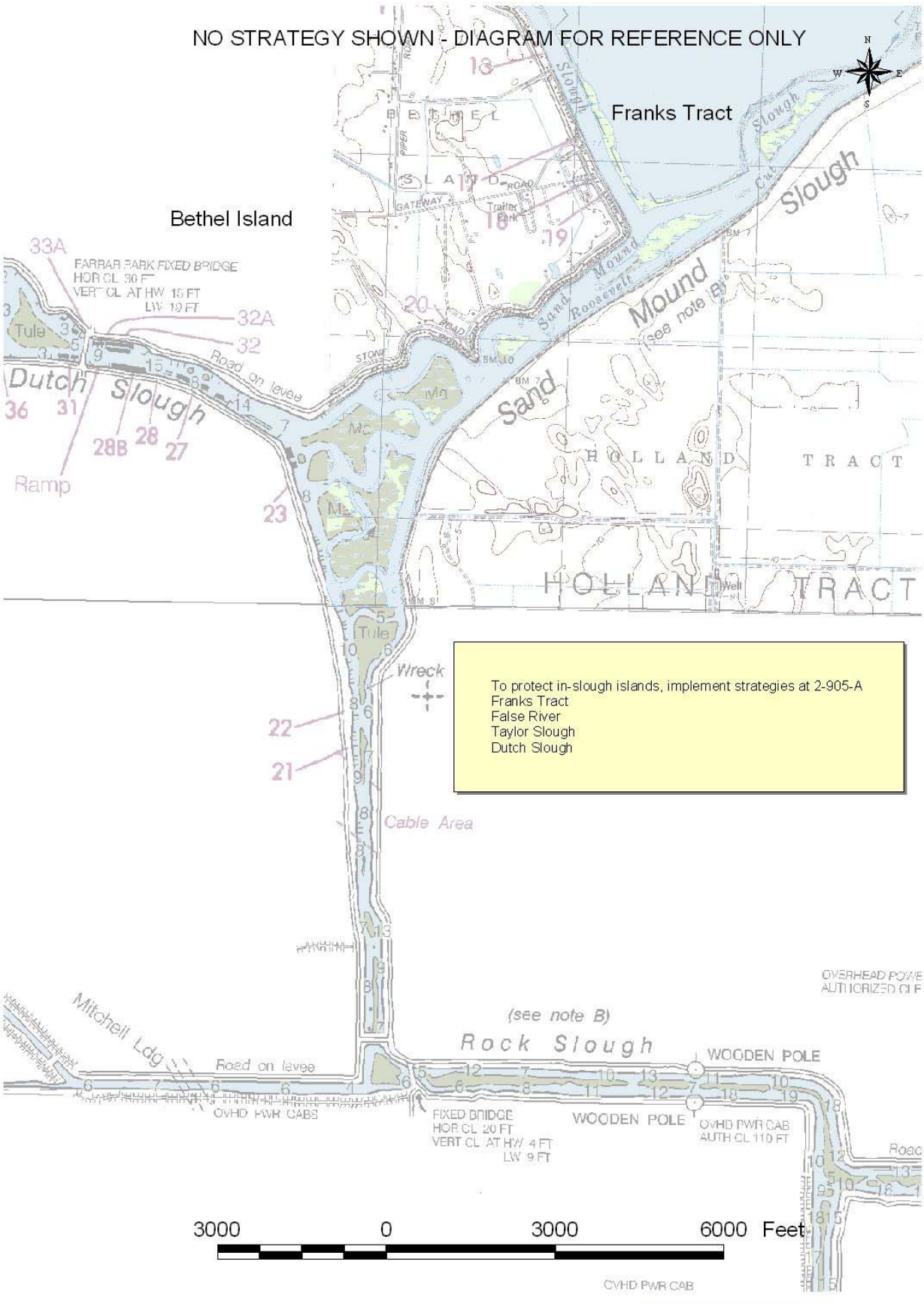
Several on Bethel Island and also levee of Holland Tract.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy Diagram- Sand Mound Slough

2-908 -A



To protect in-slough islands, implement strategies at 2-905-A
Franks Tract
False River
Taylor Slough
Dutch Slough

Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Carl Jochums (OSPR) & Jo Sanders (OSPR)

Date: 25/MAR/05

CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD

Site Name: SAND MOUND SLOUGH

Site Number: 2-908-A

Site Summary- Old River: Quimby Island Complex

2-910 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin	Bay and River A	3 7 56	121 34
USGS Quad:	Woodward Island and Bouldin Island	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This area is a complex of reclaimed and marshy berm islands bordered by Mandeville Island, Franks Tract, Holland Tract, Palm Tract and Bacon Island. It includes Connection Slough, Old River, Sheep Cut, Holland Cut and other unnamed side channels. This complex of islands has a diverse mix of upland habitat, agricultural lands, riparian woodlands, and shrub-brush communities.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A" level sensitivity all year. Sensitive species and marshes are present throughout the year.

RESOURCES OF PRIMARY CONCERN

The site is emergent marsh throughout and provides excellent wildlife habitat, especially for raptors. All islands, except Quimby Island, are designated as natural areas by Delta Master Recreation Plan. Sloughs are designated as scenic areas. In-channel tule marsh islands are at risk.

The complex of islands provides excellent habitat for raptors and migratory waterfowl. Clapper rails, herons, songbirds, cormorants, and waterfowl are found at the site.

River otter, beaver, muskrat, western pond turtles, and red-eared slider turtles are found here.

Several species of fish are found at the site, including delta smelt (CT/FT), winter-run chinook salmon (CE,FE), striped bass, largemouth bass, and catfish.

Special Status Species found here include Mason's Lilaeopsis (CR), delta tule pea, and California hibiscus. In addition, tules, cattails, and willows are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River: Quimby Island Complex

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A San Joaquin	18661 Sacramento & San Joaquin River	3 7 56	121 34

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

SITE STRATEGIES

Strategy 2-910.1 Objective: Exclude oil from moving downstream (northerly) into this reach of Old River using exclusion boom.

ACP DATE 7/1/2005

At the southern end of the site at Old River and Railroad Cut:
A) Deploy exclusion boom across the two channels of Old River which flow downstream (northward) with 400-500 ft. of curtain boom (<=18"). In the west side channel, deflect to the western shore for collection in the pocket.
B) Deploy 250 ft of deflection curtain boom (18") across the north channel of Railroad Cut. Deflect oil to the levee of Bacon Island.
C) Boom the two small channels north and west of Railroad Bridge (next to house) with 100 ft. each of curtain boom (18"). The current flow is slow here and mainly wind effects are present.
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.

Strategy 2-910.2 Objective: Exclude/collect oil from moving upstream (southward) with the tide into Old River from Frank's Tract.

ACP DATE 7/1/2005

At the north end of the site at the confluence of Old River and Frank's Tract:
A) Deflect oil to the Holland Tract levee for collection at the north tip of the Holland Tract where Old River meets Frank's Tract. Use 18" deflection curtain boom to take advantage of local eddies and direct oil to for collection from the levee road:
- Deploy 200 ft of boom from the dock inside the Old River channel, and 200 ft in Sandmound Slough near the point of land at the confluence with Old River.
B) Use 18+' deflection boom in each of three channels near this confluence: one channel is alittle north of confluence, the other two are on east side of confluence. Each channel will require 200-500 ft. of boom. Deflect to sandy shores, levees, or collection as appropriate. Do not deflect to marshes. Currents in this area are complex and will require site specific observations prior to deployment to determine optimum placement. 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.

Strategy 2-910.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-910.1	1000		50 OS	100	10	8-10 / 25-40lb Danforth	1	2					8	
2-910.2	1900		50 OS	100	24	25-40lb Danforth	2	3					12	
2-910.3	0	0	0	0	0		0	0	3	SSS/SP	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to the site is from Highway 4 to Knightsen Road in Knightsen, to Holland Tract Road, to Holland Riverside Marina where the launching facilities are located. Shoreline access Highway 4 to Trapper Rd. on Upper Jones Tract to Bacon Island Rd. across bridge to Bacon Island's levee Rd. This area is a complex of reclaimed and marshy berm islands bordered by Mandeville Island, Franks Tract, Holland Tract, Palm Tract and Bacon Island. It includes Connection Slough, Old River, Sheep Cut, Holland Cut and other unnamed side channels.

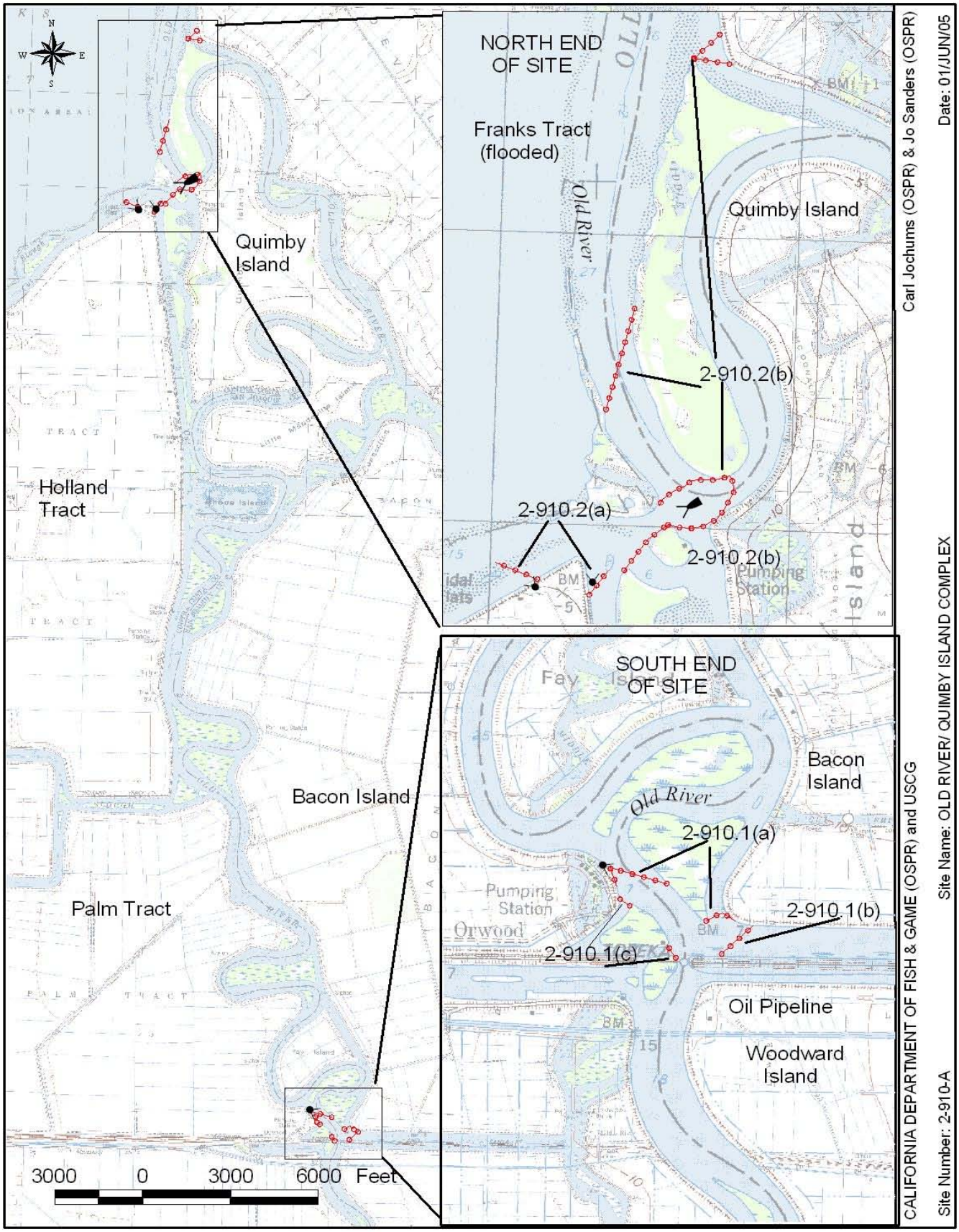
LAND ACCESS: Levee roads support all types of transport

WATER LOGISTICS: NONE
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Boat launching facilities are available in and around Frank's Tract and at Sandmound Slough.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Facilities and deployment sites can be found/located at Frank's Tract marinas.



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Rock Slough

2-915 -A

County:	Contra Costa	Thomas Guide Location	Bay and River A	Latitude N	37 56.0	Longitude W	121 34.0
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site contains all of Rock Slough from the confluence with Old River at the southeastern tip of Holland Tract to the Railroad bridge to the south. This slough contains berm islands throughout its length with emergent marsh vegetation and shrubby riparian growth along the banks.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A" sensitivity throughout the year.

RESOURCES OF PRIMARY CONCERN

The marsh and riparian habitats are at risk.

Raptors, waterfowl, herons, egrets and songbirds are found in this area.

River otter, western pond turtles, and muskrat are found here.

California hibiscus, a Special Status Species, is found here as are tules.

Willows are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-915 -A Site Strategy - Rock Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A Contra Costa	18661 Sacramento & San Joaquin River	37 56.0	121 34.0

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

SITE STRATEGIES

Strategy 2-915.1 **Objective: Exclude oil from Rock Slough at the confluence with Old River near Holland Riverside Marina.**

ACP DATE 7/1/1996

Deflect and exclude oil from Rock Slough. Deploy curtain boom (18") of varying length across all channels to Rock Slough and parallel to the current of Old River (see diagram). Any collection/recovery would best be set up in Old River before oil reaches Rock Slough though there are opportunities within Rock Slough.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-915.1	1000				12	8-12 / 25lb Danforth	1	1	0			7	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access is from Highway 4 east to Oakley. Turn left (east) on Delta Road to Holland Riverside Marina. This site contains all of Rock Slough from the confluence with Old River at the southeastern tip of Holland Tract to the Railroad bridge to the south.

LAND ACCESS: All transportation on paved levels. Limitations on some levees.

WATER LOGISTICS: SHALLOW NEXT TO ISLANDS
Limitations: depth, obstruction

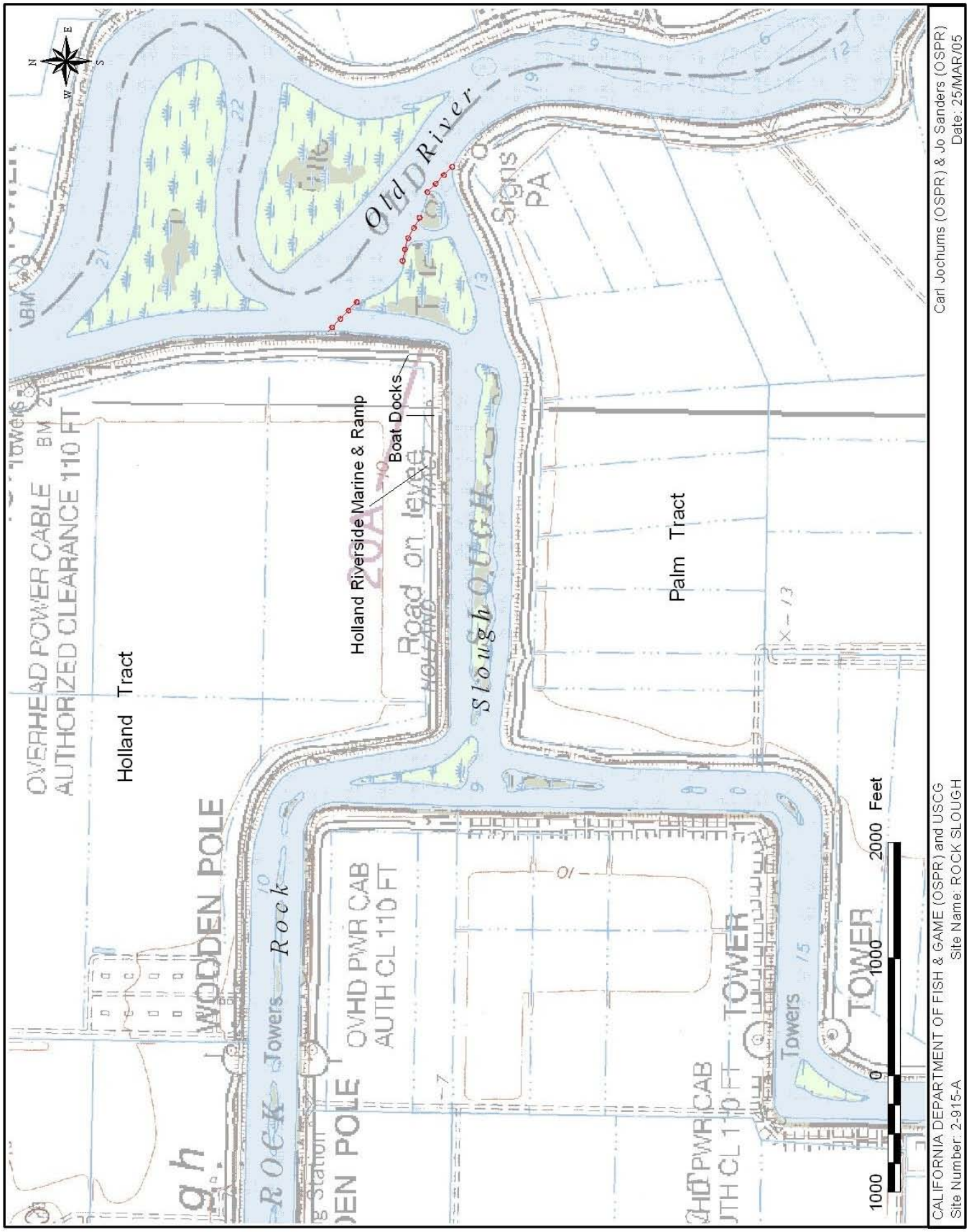
Launching, Loading, Docking and Services Available: Good boat launching ramps are available at the Holland Riverside Marina adjacent to the confluence of the slough and Old River.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Facilities and deployment sites can be found/located at the Holland Riverside Marina.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Railroad Cut

2-917 -A

County:	San Joaquin	Thomas Guide Location	Bay and River A	Latitude N	37 56.0	Longitude W	121 31.0
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is a pair of artificial channels (that resulted from the construction of an elevated railroad berm) on each side of the Union Pacific Railroad track. These sloughs are located between Bacon and Woodward Islands and connect Middle River and Old River. At this site shallow waters engender emergent vegetation and marshy margins.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshy habitats have "A" sensitivity year round.

RESOURCES OF PRIMARY CONCERN

The freshwater marsh is at risk year-round. The site contains little to no upland habitat.

Red-winged blackbirds, sparrows, marsh wrens, and possibly Tri-color blackbirds are found in this area.

River otter, beaver, turtles and muskrat, are possibly found here.

Tules and cattails are common at the site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-917 -A Site Strategy - Railroad Cut

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A San Joaquin	18661 Sacramento & San Joaquin River	37 56.0	121 31.0

Last Page Update :

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 marshy 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 muds.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

SITE STRATEGIES

Strategy 2-917.1 Objective: Exclude / Collect oil at west ends (Old River) and deflect to collection at island levee.

ACP DATE 7/1/2005

Depending on the oil trajectory, set deflections with 250 ft each of 18" curtain boom from the railroad marsh out to the island levees north and south of the railroad. Collect oil with 50ft Oil Snare (OS), 100ft sorbent boom from the levees of Bacon or Woodward Island. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-917.2 Objective: Exclude oil at east ends (Middle River)

ACP DATE 1/1/1998

Deploy 400 ft of exclusionary swamp boom (4x4) or 18" across north canal, and 400 ft of exclusionary swamp boom or 18" across south canal. Due to the strong current in Middle River, boom can be laid out at almost a 90 degree angle from the RR, straight across the canal, but parallel to the river current.

Strategy 2-917.3 Objective: Protection booming of marshy entire margin of railroad grade both sides

ACP DATE 1/1/1998

Boom marsh on both sides of railroad in each canal, effectively encircling the railroad island and fringing marsh. Place sorbent boom or small curtain boom (swamp/4x4") along the marshfront edge.

Strategy 2-917.4 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

Collect oil with a Shoreside Skimming System from the levees of Bacon or Woodward Island if oil accumulates in skimmable quantities. Consult IC prior to the initiation of this strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-917.1	500		50 OS	100	10	10 / 25lb Danforth	1						3	
2-917.2	800				12	10-12 / 25lb Danforth	1	0					3	
2-917.3	0	15000			35	20 lb or stakes	4	8				stakes	30	
2-917.4	0	0	0	0	0		0	0	1	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

This site accessible by water by proceeding south from Frank's Tract vicinity down Old River to the Union Pacific railroad crossing, the west mouth of Railroad Cut. The adjacent levee of Bacon Island provides the nearest land access. This site is a pair of artificial channels (that resulted from the construction of an elevated railroad berm) on each side of the Union Pacific Railroad track. These sloughs are located between Bacon and Woodward Islands and connect Middle River and Old River.

LAND ACCESS: Adjacent levees can support large truck traffic

WATER LOGISTICS: SHALLOW NEAR MARSH EDGE

Limitations: depth, obstruction

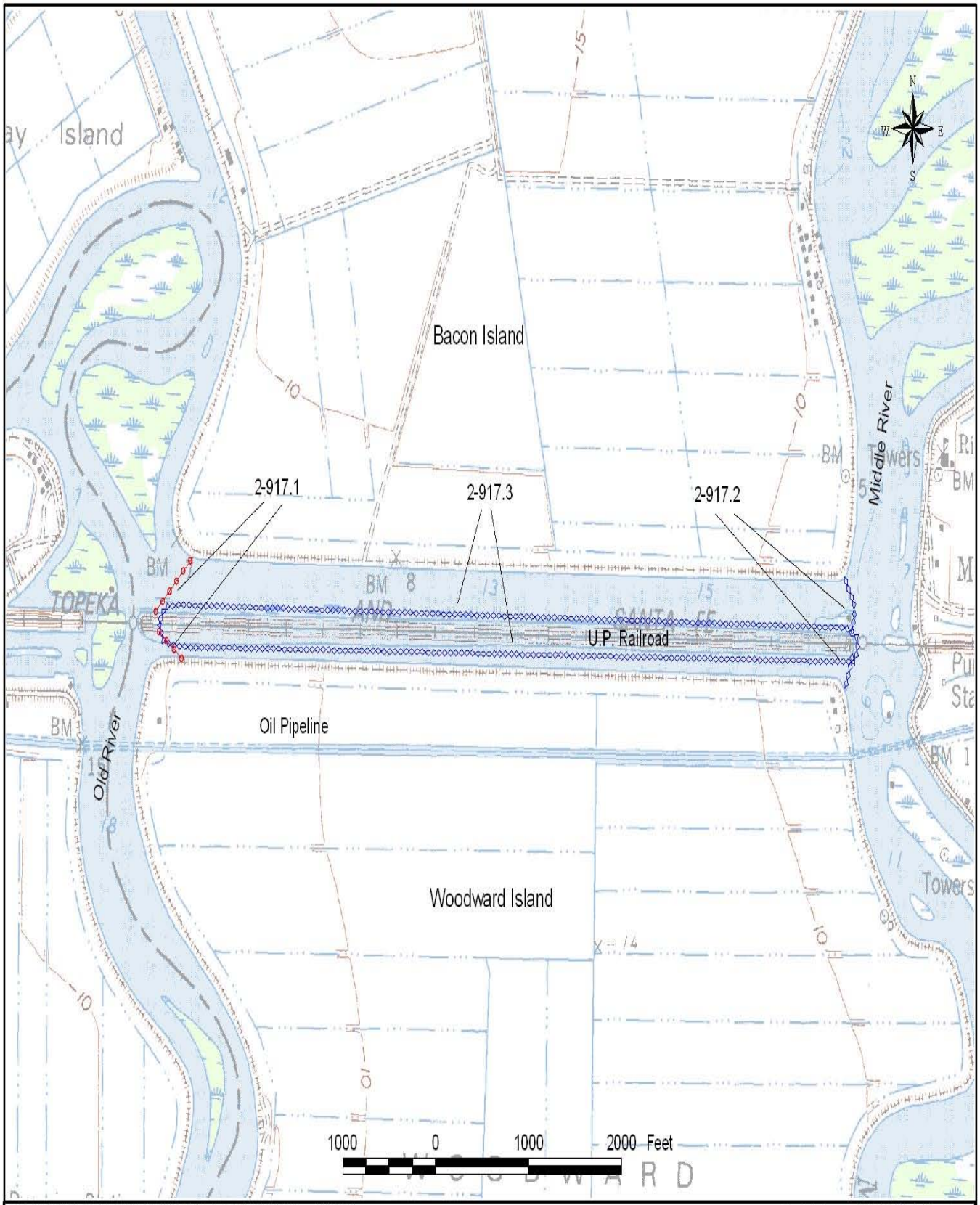
Launching, Loading, Docking and Services Available: Small punts can be put in from the levees. Boat launching facilities for larger boats can be found at Franks Tract and Discovery Bay.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging areas can possibly be located along the south levee of Bacon Island or near the junction with Middle River.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Old River: Orwood Reach

2-920 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	Contra Costa & San Joaquin County	Bay and River A	37 56.0	121 34.0
USGS Quad:	Woodward Island	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

The site is the reach of Old River south from the Union Pacific Rail Bridge to Hwy 4. Although this site is riprapped and levied, this reach contains fragile tule berm islands with emergent and riparian vegetation.

SEASONAL and SPECIAL RESOURCE CONCERN

"B" priority all year due to the few remaining small in-channel island present along this reach.

RESOURCES OF PRIMARY CONCERN

In-channel marsh islands are at risk year-round. Special Status Species of marsh plants on the islands are vulnerable to oil.

Herons and egrets inhabit this area.

River otters are found here.

The slough provides habitat for several species of fish including, winter-run chinook salmon (CE, FE) striped bass, delta smelt and largemouth bass.

Special Status Species found here include Mason's lilaeopsis and California Hibiscus. In addition, tules and willows are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River: Orwood Reach

2-920 -B

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A Contra Costa & San Joaquin County	18661 Sacramento & San Joaquin River	37 56.0	121 34.0

Last Page Update :

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 marshy 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 mudflats. These island shores are eroding and fragile.

HAZARDS and RESTRICTIONS:

There are shallows and submerged hazards throughout the Delta.

SITE STRATEGIES

Strategy 2-920.1 **Objective: Deflection booming: Protect in-channel marsh islands from oil either coming up river or down river.** ACP DATE 7/1/1996

Deploy deflection curtain boom (<=18") in a "V" shape at either end of the several in-channel islands. Boom legs should be 50 to 100 ft. each to deflect oil away from oil and into the current.

Strategy 2-920.2 **Objective: Deflection booming: Protect in-channel marsh islands from oil. Recover oil in channel north of Indian Slough.** ACP DATE 7/1/1996

a) Place 600 ft of deflection boom and skimmer in west channel adjacent to the largest island at the river bend north of Indian Slough.
b) Deploy 600 ft. of curtain boom (<=18") to deflect oil from across channel to the west shore.
c) Use another 600 ft to exclude oil from the largest island by "wrapping" the exposed shoreline.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-920.1	500						1	0	0				3	
2-920.2	1200				12	9-12 / 25lb Danforth	1	1	1				8	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

BY ROAD: take Hwy 4 east to Brentwood, turn left (east) on Chestnut Street, turn left on Byron Hwy, Turn right (east) on Orwood Road, proceed to river at Cruiser Haven Marina. Can also access through Discovery Bay off Hwy 4 south of Brentwood. BY BOAT: From Frank's Tract area proceed south down Old River to Railroad Cut; or from Discovery Bay follow Indian Slough to Old River and Orwood Tract. The site is the reach of Old River south from the Union Pacific Rail Bridge to Woodward Canal.

LAND ACCESS: 2WD, LG TRUCK, HVY EQUIP, 4WD,

WATER LOGISTICS:
Limitations: depth, obstruction — No restrictions noted

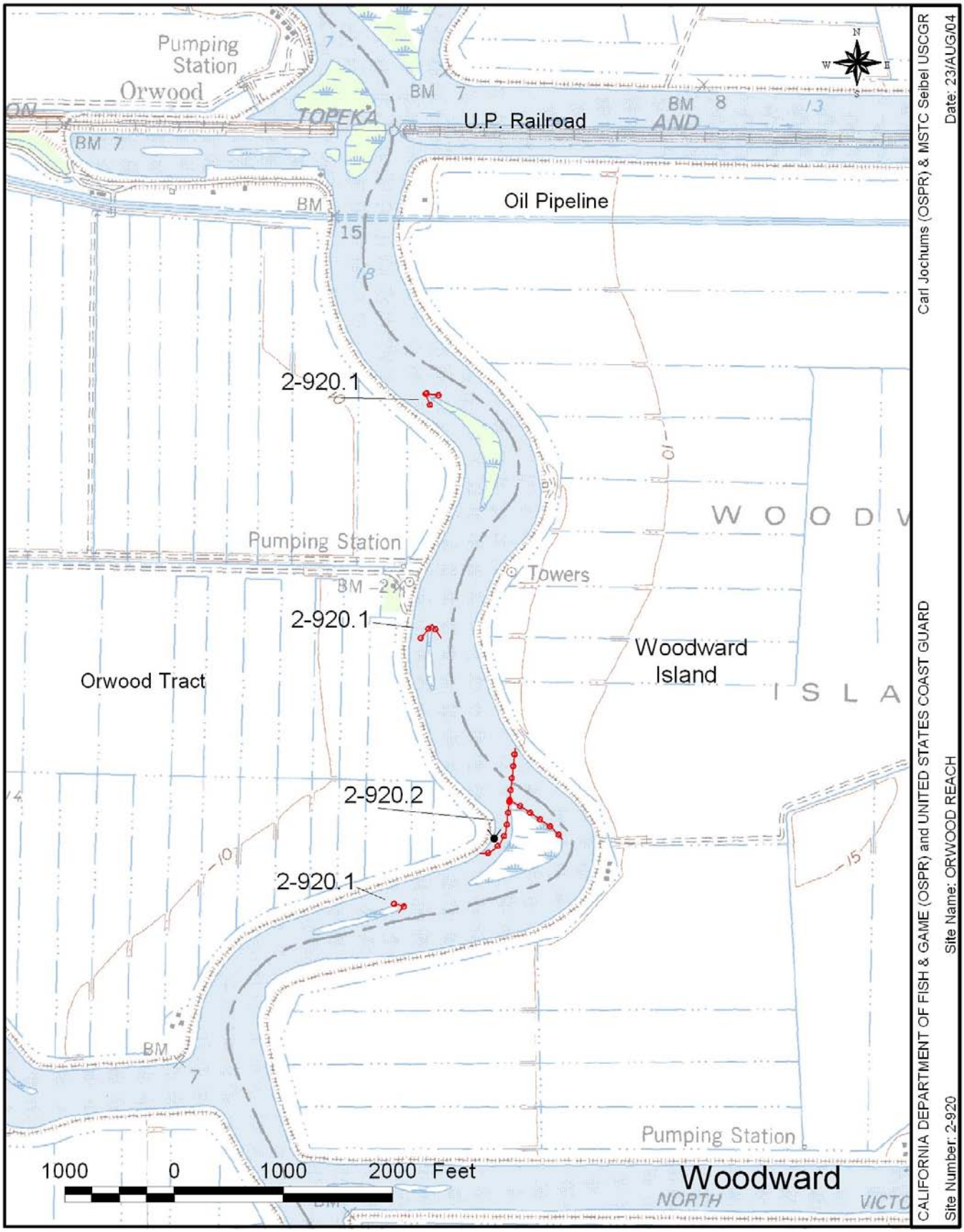
Launching, Loading, Docking and Services Available: Boat launching facilities are available at Discovery Bay and at a small marina located near the Railroad Bridge.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Levee roads on the Orwood Tract can be used as deployment sites.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Indian Slough

2-922 -A

County:	Contra Costa	Thomas Guide Location	Bay and River A	Latitude N	37 56.0	Longitude W	121 34.0
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site consists of Indian Slough from the confluence with Old River to Bixler Road, including Werner Dredger Cut to the Union Pacific Railroad. The site includes a few in-channel "islands" and areas of emergent marsh and riparian vegetation. Discovery Bay, a residential complex, is located near its terminus.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority all year due to the in-channel islands and marsh habitat along the banks of Werner Dredger Cut.

RESOURCES OF PRIMARY CONCERN

In-channel marsh islands and associated wildlife are at risk.

Songbirds, herons, and egrets are found in this area.

River otter and muskrat inhabit the site.

Tules are common.

Willows are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Indian Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A Contra Costa	18661 Sacramento & San Joaquin River	37 56.0	121 34.0

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

SITE STRATEGIES

Strategy 2-922.1 **Objective: Deflection booming - Protect slough by deflecting oil coming down Old River.** ACP DATE 7/1/1996

Keep oil in Old River by deploying 300-500 ft. sections of curtain boom (18") from either the north or south point at the confluence, deflecting oil away from Indian Slough and back into the main current of Old River.

Strategy 2-922.2 **Objective: Exclude oil from entering Island Slough from Old River. Recover oil near the confluence.** ACP DATE 7/1/1996

Oil collection at two locations:
a) At the confluence with Old River deploy 300-500 ft. of curtain boom from the south point at the slough entrance extending into Old River. Form a J-hook against the levee to facilitate the placement of a skimmer operated by a vacuum truck from the levee. Deploy a second 300 ft. curtain boom from the day marker in mid-channel. Line levee with sorbent booms.
b) At the second collection location, deploy 2 or 3 - 200 ft (<=18") curtain boom sections in the Old River at the bend immediately north of the confluence with Indian Slough. Form a J-hook and place the skimmer where the water eddies at the bend (near the large trees). Collect oil with the skimmer and vacuum truck from the levee.

Strategy 2-922.3 **Objective: Exclude oil from impacting in-channel tule marsh islands.** ACP DATE

If oil is present in Indian Slough or coming from Discovery Bay, deploy 4X4+" curtain boom to exclude and deflect oil away from the islands. Depending on currents and winds, sorbent boom may be satisfactory.

Strategy 2-922.4 **Objective: Exclude oil from entering Discovery Bay and channel west of Discovery Bay.** ACP DATE

Deploy exclusionary 8 or 18" curtain boom across east and west channel entrances to Discovery Bay. Use 300 ft at east entrance. Use 200 ft at west entrance. Deploy 800 ft from west entrance across slough channel and tule island to "Point of Timber."

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-922.1	500				5	5 / 25lb Danforth	1	0	1	SSS				
2-922.2	1000				10	8-10 / 25lb Danforth	1	1	1	SSS			7	
2-922.3	0	3000	0	0	30	24-30 / 10-25lb danforth	0	4	0		0			
2-922.4	1300	0	0	0	10	8-10 / 10-25lb danforth	0	2	0		0		6	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to the site is from Highway 4 east to Discovery Bay Blvd.. Turn right on Willow Lane Road, then right on Marina Road, and left on Channel Drive to launch ramp. This site consists of Indian Slough from the confluence with Old River to Bixler Road, including Werner Dredger Cut to the Union Pacific Railroad.

LAND ACCESS: 2WD, LG TRUCK, HVY EQUIP, 4WD,

WATER LOGISTICS: LOW CLEARANCE ON DREDGER CUT
Limitations: depth, obstruction

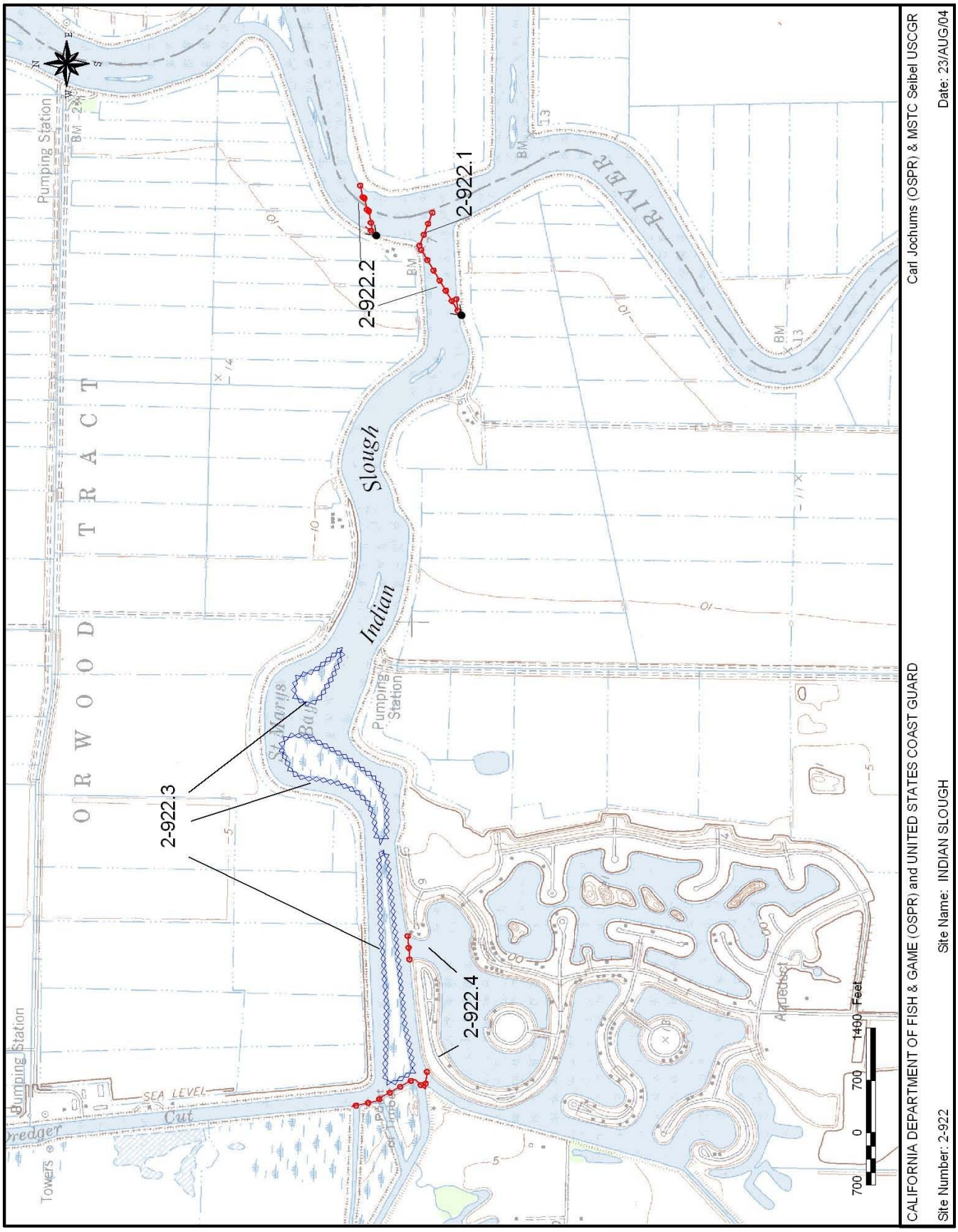
Launching, Loading, Docking and Services Available: Boat launching facilities are available at Discovery Bay and the Orwood Resort/Marina.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Facilities and deployment sites can possibly be found/located along the levees of the Orwood Tract and Byron Tract or at the Discovery Bay launch ramp.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Woodward Canal

2-924 -A

County:	San Joaquin	Thomas Guide Location	Bay and River A	Latitude N	3 7 56	Longitude W	121 31
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This canal runs between Old River and Middle River and is situated between Woodward and Victoria Islands. This canal is a man-made waterway consisting of two parallel channels with tule island berms in the middle of the canal. Levees are rip-rapped. However, occasional emergent and marsh vegetation are present along the margins. The south channel is also referred to as North Victoria Canal.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshes are "A" sensitivity year round. Special Status Species occur here.

RESOURCES OF PRIMARY CONCERN

In channel, marsh islands and various species of sensitive plants are at risk.

Herons, egrets, and possibly, clapper rails are found in this area.

River otter, beaver, and muskrat, are possibly found here.

Winter-run chinook salmon (an endangered species) are present almost all year either as migrating adults (winter) or outmigrating smolts (spring-summer).

Special Status Species found here include Mason's lilaeopsis and California hibiscus. Tules and willows are also found at this site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-924 -A Site Strategy - Woodward Canal

2-924 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A San Joaquin	18661 Sacramento & San Joaquin River	3 7 56	121 31

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Shallow water near the middle of the canal is potentially hazardous.

SITE STRATEGIES

Strategy 2-924.1 **Objective: Exclude oil from entering the canal and impacting marsh islands.** ACP DATE 7/1/1996

Very little current flows into this canal. The main current flows past the canal down river. Position an exclusionary curtain boom (<=18") straight across the canal entrance at both ends (i.e., Old and Middle River) to prevent oil from entering the canal. Deploy 600 ft. at both ends, and anchor into the rip-rapped shore. (Total boom 1200 ft.)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-924.1	1200				20	20 / 20lb Danforth	2	2					10	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access is by boat from Highway 4 up Old or Middle Rivers approximately 3.5 miles to Woodward Canal. By road, take Hwy 4 east to Discovery Bay or to the levee roads on Victoria Island. This canal runs between Old River and Middle River and is situated between Woodward and Victoria Islands.

LAND ACCESS: Levee roads may be impassible when wet

WATER LOGISTICS: No limitations.
Limitations: depth, obstruction

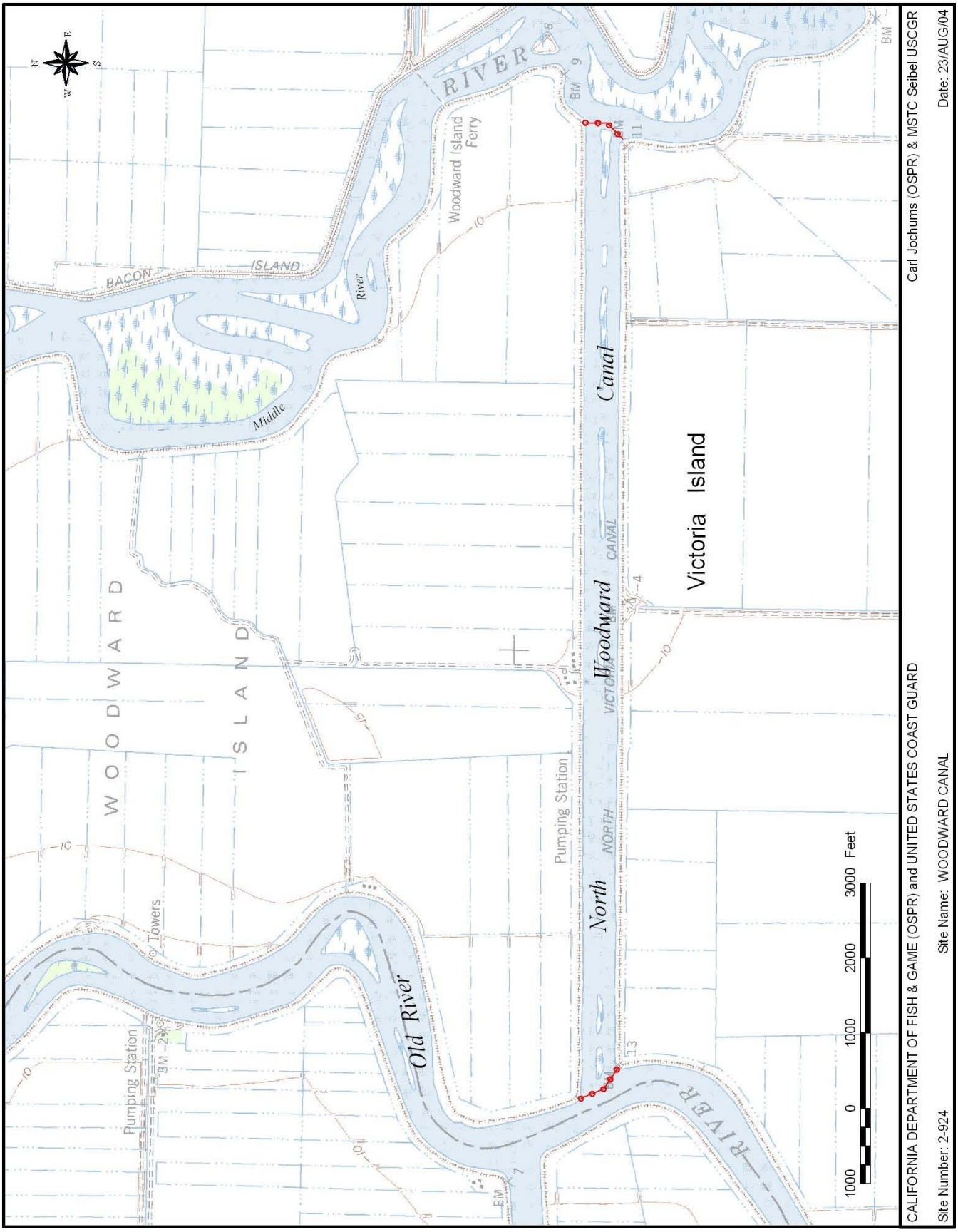
Launching, Loading, Docking and Services Available: Boat launching facilities are available at Discovery Bay or Cruiser Haven Harbor at Old River near Railroad Cut.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Facilities and deployment sites can be found/located at Discovery Bay in the west or on the levees of Upper Jones Tract to the east.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Old River: Coney Island Reach

2-925 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Contra Costa		3 7 51	121 33
USGS Quad:	Clifton Court Forebay	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Site is the reach of Old River from Hwy 4 to the Delta Mendota Canal intake (at the tip of Pescadero Island) and includes Old River around the east side of Coney Island and West Canal on the west side. Rip-rap lined levees with many large tule berm island in Old River: islands include marsh, riparian and terrestrial habitats. West Canal is a straight channel of rip-rap with small patches of marsh.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" sensitivity year round because of marshes present. Salmon present between Oct. 15 through May 31. Main water intakes to Clifton Court Forebay are from West Canal.

RESOURCES OF PRIMARY CONCERN

Marsh, riparian and aquatic habitats are at risk year-around.

Waterfowl, egrets, herons, double- crested cormorants, and songbirds. This is a nesting and foraging area for Swanson's Hawk (CSC).

River otters, muskrats

Tule, willows, oaks, and coyote bush. Mason's Lilaeopsis (CR). California hibiscus

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River: Coney Island Reach

2-925 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento & San Joaquin River	3 7 51	121 33

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Slips, trips and falls on riprap and steep levees. Regarding boat handling, beware of shallows, snags and mud bars. Poison Oak.

SITE STRATEGIES

Strategy 2-925.1 Objective: Excludion to collection at shore

ACP DATE 7/1/2005

Depending on direction of on-coming oil; deploy booms across confluence(s) from Old River and West Canal and/or Victoria Canal to exclude oil. Deflect oil to collection areas operating from levees on surrounding islands. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-925.2 Objective: Exclude oil from entering Clifton Court Forebay.

ACP DATE 7/1/1996

Exclude oil from water intake pumps at the south end of West Canal. Deploy 300 ft of 18" harbor boom straight across intake cove outside debris fence. Notify facility of oil spill and instruct to shut down pumps to minimize flow of water and oil through canal.

Strategy 2-925.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

Deploy skimmers if oil accumulates in skimmable quantites. Consult with IC prior to the initiation of this strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-925.1	1500		50 OS	100	15	12-15 / 25 lb Danforth	2	1					11	
2-925.2	300				2	2 / 25-40lb into levees	1	0					3	
2-925.3	0	0	0	0	0		0	0	2	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 4 east to town of Byron. Take Byron-Bethany Road south. Left on Herdlyn Rd along levee to West Canal. Site is the reach of Old River from Woodward Cannal to the Delta Mendota Canal intake (at the tip of Pescadero Island) and includes Old River around the east side of Coney Island and West Canal on the west side.

LAND ACCESS: Levees may not be passable when wet.

WATER LOGISTICS: None

Limitations: depth, obstruction

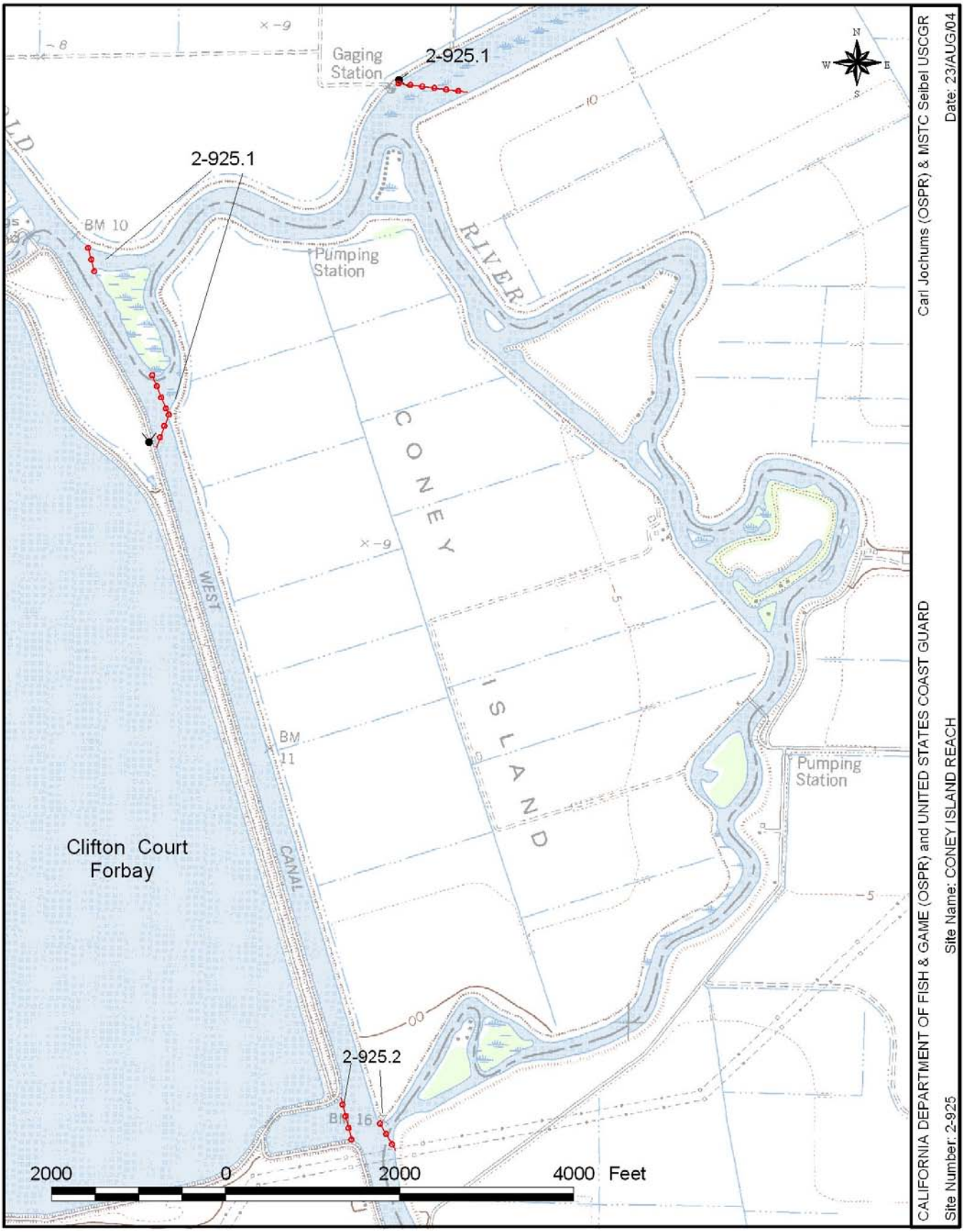
Launching, Loading, Docking and Services Available: Launching facilities for small boats at Dell's Boat Harbor.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Stage from levees on surrounding islands. Dell's Boat Harbor.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Widdows and Eucalyptus Islands

2-927 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 52	121 34
USGS Quad:	Clifton Court Forebay	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Site includes the three islands: the flooded interiors and surrounding levees of both Widdows, Eucalyptus, and King Islands. Freshwater habitat is present on the inside and exterior side of the levees. Inside is shallow, lots of water hyacinth. Riparian forest habitat on upper levees. These islands have been designated as "Significant Natural Areas" by the Delta Levees Master Environmental Assessment. Channel between the two islands in impassable by boat.

SEASONAL and SPECIAL RESOURCE CONCERN

A year-round "A" priority for protection due to marsh and riparian habitats, the presence of special status species, and nesting birds.

RESOURCES OF PRIMARY CONCERN

Freshwater marshes and riparian habitat inside and surrounding island.

Swainson's hawk (CSC), redshoulder redtail hawks, herons, egrets, waterfowl, kingfishers, songbirds.

River otter

Winter-run Chinook salmon(endangered) are present all year either as migrating adults (winter) or as out-migrating smolts (spring-summer), also large mouth bass, delta smelt (endangered).

Rushes, water hyacinth

California hibiscus and Mason's Lilaeopsis (CR). Cattails, willows and oaks.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-927 -A Site Strategy - Widdows and Eucalyptus Islands

2-927 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 52	121 34

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and wildlife. Avoid trampling of marsh and forest habitats. Avoid disturbance to nesting hawks, egrets, and herons. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Vessels beware of shallow water and tree snags underwater.

SITE STRATEGIES

Strategy 2-927.1 Objective: Exclude oil from entering Widdows Island.

ACP DATE 7/1/2005

At Widdows Island there is a levee breech along Old River - deploy 4x4 curtain boom (800 ft) across breech and parallel with river current. Back boom with sorbent boom if necessary.

Strategy 2-927.2 Objective: Prevent oil from reaching both islands.

ACP DATE 7/1/2005

Deploy 2 layers of deflection curtain boom (600 ft of 18" each) across Old River Channel up or down current from islands.

a) Deflect at angle to Byron Tract or Victoria Island levees. Recover accumulated oil against levee. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect accumulated oil. Contact IC if oil accumulates in skimmable quantities.

b) Deploy deflection boom across confluence with Italian Slough (300 ft.)

Strategy 2-927.3 Objective: Prevent oil from entering Eucalyptus Island

ACP DATE 7/1/1996

a) At Eucalyptus Island, the levee breeches are primarily along the south and SE levees. Breeches are less than 50 ft wide. Block with 4x4 curtain boom as needed. Back boom with sorbent boom if necessary.

b) Block entrance channels (4) around Eucalyptus and King Islands to Old River with exclusion boom (300 ft)

Strategy 2-927.4 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-927.1	0	800		800	6	6 / 20lb or stakes	1	1					4	
2-927.2	1500		50 OS	100	12	12 / 25 lb Danforth	2	0					8	
2-927.3	0	550		250			1	1					4	
2-927.4	0	0	0	0	0		0	0	1	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access is from Highway 4 east to Byron. Take Byron Highway south, turn left (east) on Clifton Court Rd., follow to north side of forebay. Site includes the three islands: the flooded interiors and surrounding levees of both Widdows, Eucalyptus, and King Islands.

LAND ACCESS: No restrictions to nearby levees

WATER LOGISTICS:
Limitations: depth, obstruction — Margin Shallows; Channel between islands impassable by boat.

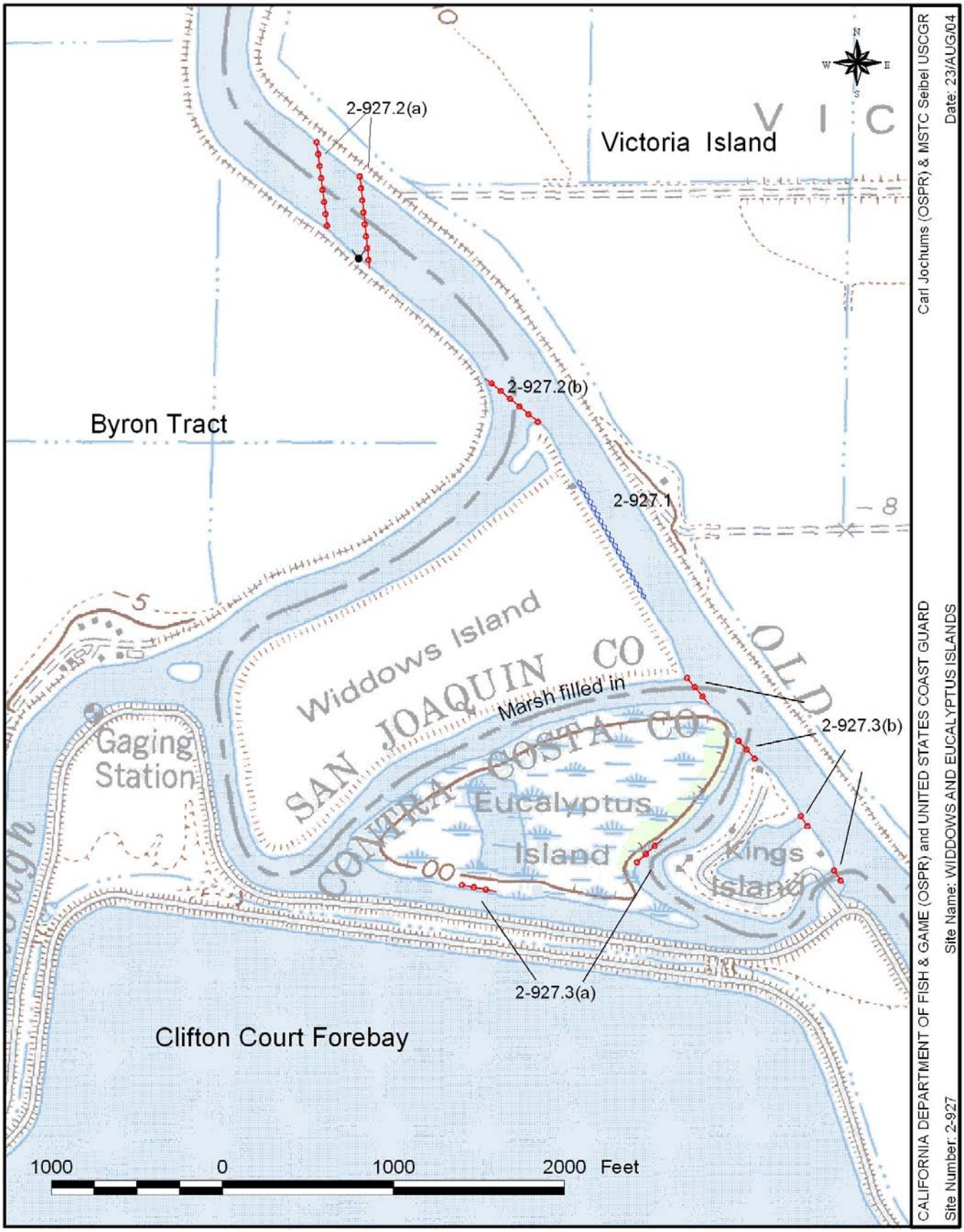
Launching, Loading, Docking and Services Available: Facilities for small boats only are available at Del's Boat harbor

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Stage from levees around Clifton Court Forebay.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Victoria Canal

2-929 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 52	121 32
USGS Quad:	Clifton Court Forebay & Holt	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

A straight canal located between Victoria and Union Islands, this connects Old River on the west to Middle River on the east. Sensitive resources in the site include tule marshes and berm island down the middle. Bounded on both sides by rip-rap lined levees.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection all year for the freshwater marsh and associated special status species.

RESOURCES OF PRIMARY CONCERN

Tule marsh and berm islands along center of canal. A small riparian forest exists on a mid-channel island at the east end of the canal.

Swainson's hawk (CSC), waterfowl, egrets, herons,

River otters and beaver.

Winter-run Chinook salmon (CE,FE) are present all year as adults (winter) and smolts (spring and summer).

Delta tule pea, delta button celery, tules and phragmites

Mason's Lilaeopsis (CR), California hibiscus,

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 52	121 32

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and wildlife. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Vessels be aware of shallow water near middle on canal. Aircraft beware of powerlines at west end.

SITE STRATEGIES

Strategy 2-929.1 **Objective: West end of canal: Keep oil out of marsh areas located in middle of canal.** ACP DATE 7/1/1996

For oil coming from northern reaches of Old River, deploy strategy as described for Widdows and Eucalyptus Islands
(SF-927-A) and Old River: Coney Island (SF-925-A). Oil may be deflected to levees of Victoria Canal. For resources necessary see the above mentioned strategy.

Strategy 2-929.2 **Objective: Exclude oil and stop spread when oil threatens from east end of canal.** ACP DATE 7/1/2005

For oil coming from Highway 4 or Middle River, deploy 18" curtain boom to deflect oil to either levee in J-hook configuration. Angle boom to fit the best current and wind conditions and shoreside recovery needs. Recover oil with 50ft Oil Snare (OS), 100ft sorbent boom from levees of Union Island or Victoria Island. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-929.3 **Objective: Exclude oil from entering Clifton Court Forebay.** ACP DATE 7/1/1996

Notify facility of oil spill and instruct to shut down pumps to stop or decrease the flow of water and oil through the canal.

Strategy 2-929.4 **Objective: Oil Recovery by Shoreside skimming** ACP DATE 7/1/2005

Recover oil with skimmers from levees of Union Island or Victoria Island if oil accumulates in skimmable quantities. Consult with IC prior to the initiation of this strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-929.1	0	0	0	0	0	0	0	0	0			See SF-925-A and SF-927-A strategies.		
2-929.2	800		50 OS	100			1	0					5	
2-929.3	0	0	0	0	0	0	0	0	0			See SF-925.03-A		
2-929.4	0	0	0	0	0		0	0	1	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Access is from Highway 4 east to Union Point at confluence with Middle River and Victoria Canal. A straight canal located between Victoria and Union Islands, this connects Old River on the west to Middle River on the east.

LAND ACCESS: 2WD, LG TRUCK, HVY EQ, 4WD, ATV, FOOT

WATER LOGISTICS: SHALLOW WATER, POWERLINES
Limitations: depth, obstruction

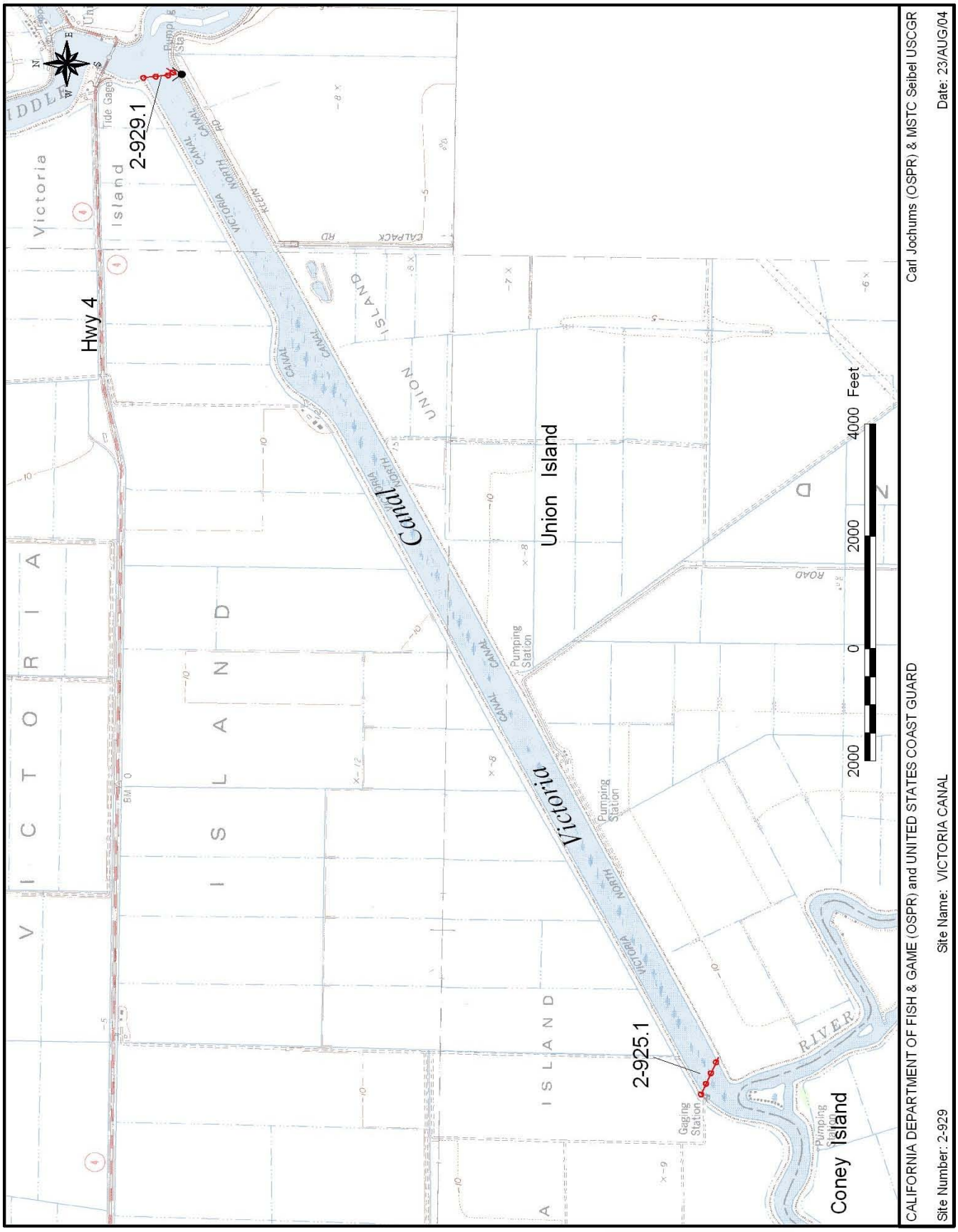
Launching, Loading, Docking and Services Available: Larger boats launch from Discovery Bay. Skiffs from levees.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging and boat mooring at Union Point.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Old River: Fabian Tract Reach

2-930 -A

County:	San Joaquin	Thomas Guide Location	Bay and River A	Latitude N	3 7 49	Longitude W	121 33
USGS Quad:	Clifton Court Forebay	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This reach extends from Old River and side channels along the southern margin of Pescadero Island to Salmon Slough. This reach contains tule berm islands and marshy/riparian margins with some upland habitat. Water depths range approximately two to three meters in depth. It has been designated as a natural area by Delta Master Recreational Plan.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A" level sensitivity all year because of marshes and sensitive species. Also, the entrance to the Delta Mendota Canal is at the confluence with Old River.

RESOURCES OF PRIMARY CONCERN

There are marshy islands and margins.

The area is of major importance to migratory waterfowl. A variety of raptors including Swainsons Hawk, , waterfowl, herons, and egrets nest, roost and forage at this site.

River otter, beaver, muskrat, and western pond turtle (CSC) are found here.

Bass are common.

Special Status Species found here include Mason's lilaeopsis and California hibiscus. In addition, tules are common at the site.

Willows and oaks are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River: Fabian Tract Reach

2-930 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Bay and River A San Joaquin	18661 Sacramento & San Joaquin River	3 7 49	121 33

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Beware of shallow sloughs and submerged objects, water hyacinth choked water ways.

SITE STRATEGIES

Strategy 2-930.1 Objective: Divert and collect oil at the river confluence at Hammer Island.

ACP DATE 7/1/2005

Deploy curtain boom (<=18") across channels around Hammer Island to exclude oil from ajoining sloughs and to facilitate collection. Boom off/exclude oil from the two small channels west of Hammer Island. Set deflection boom in Old River channel at Hammer Island. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-930.2 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

Deploy skimmers across channels around Hammer Island to collect oil if it accumulates in skimmable quantities. Consult IC prior to the intiation of this straegy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-930.1	500						1	1	2	SSS			9	
2-930.2	0	0	0	0	0		0	0	2	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to site is from highway 4 east to the town of Byron. Take Byron Bethany Road south, and turn left on Lindeman Road to the boat ramp at the river confluence with the Delta Mendota Canal. This reach extends from Old River and side channels along the southern margin of Pescadero Island to Salmon Slough.

LAND ACCESS: 2WD, LG TRUCK, HVY EQ, 4WD, AT

WATER LOGISTICS: SMALL BOATS RECOMMENDED

Limitations: depth, obstruction

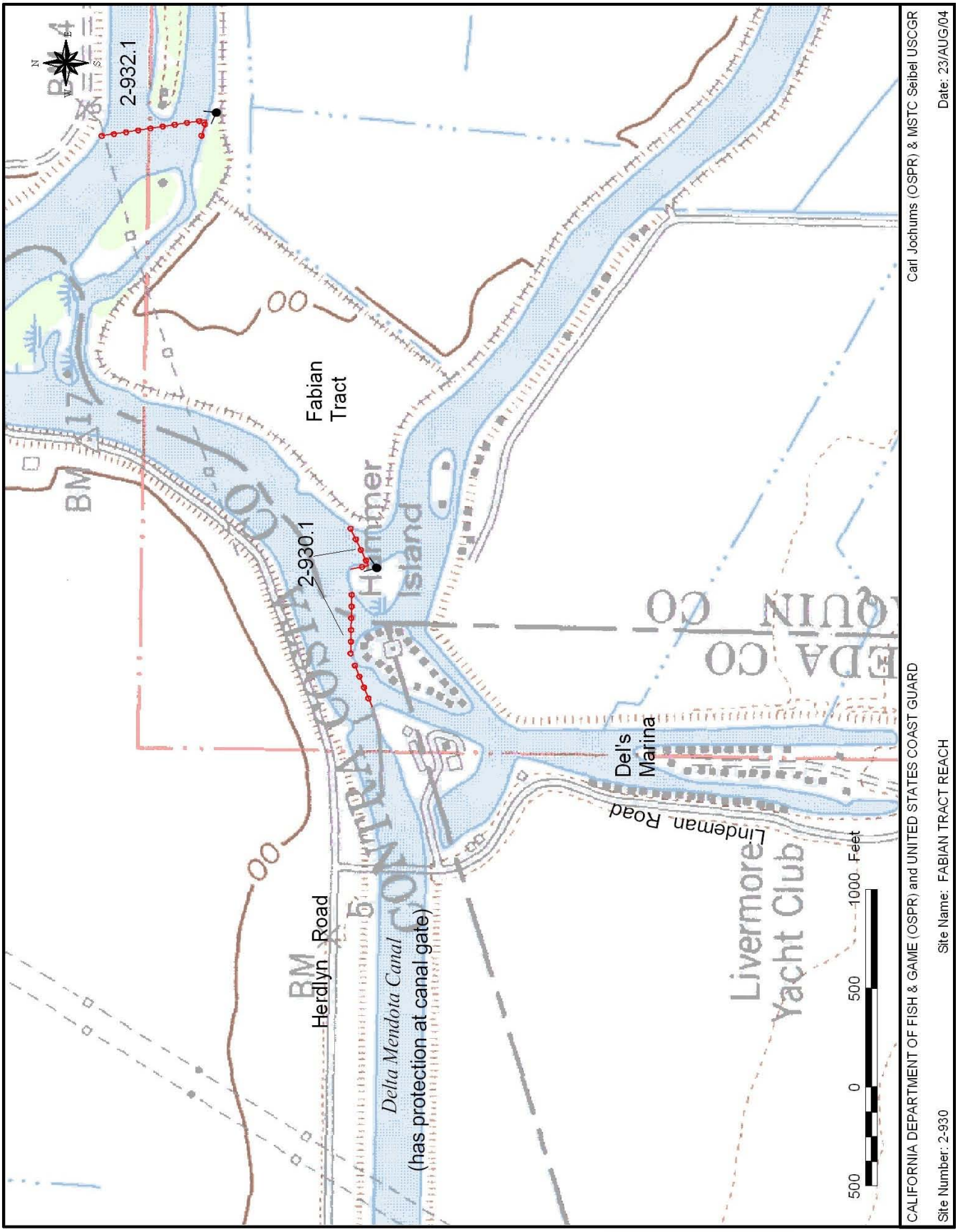
Launching, Loading, Docking and Services Available: Boat launching facilities for small boats (<20 ft.) are available at Del's Boat Harbor.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Facilities and deployment sites can be found/located at Del's Boat Harbor.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Grant Line Canal (West)

2-932 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 51	121 33
USGS Quad:	Clifton Court Forebay	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Located at the south side of Union Island, this site includes "Grant Line" and Fabian and Bell" Canals. They run parallel from confluence with Old River on the west end to Salmon Slough on the east end. Tule berm islands and marshy/riparian areas in and along levees bordering Grant Line Canal, Fabian and Bell Canal and Salmon Slough.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection all year due to the marsh habitat and presence of special status species of plants and wildlife.

RESOURCES OF PRIMARY CONCERN

Freshwater marsh and riparian habitats and associated wildlife year-round.

Swainson's hawk (CT)

River otters, beaver and muskrat.

Delta tule pea, tule, cattails, and water hyacinth

Mason's Lilaeopsis (CR)

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Grant Line Canal (West)

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 51	121 33

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and wildlife. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Slips, trips and falls on riprap and steep levees. Regarding boat handling, beware of shallows, snags and mud bars. Poison Oak.

SITE STRATEGIES

Strategy 2-932.1 Objective: Exclude oil moving up Old River from entering Grant Line Canal.

ACP DATE 7/1/2005

a) Deploy 500 ft curtain boom (18") in J-hook across Old River above confluence with Grant Line Canal. Begin at gauging station on west shore, deflecting to the east shore at Union Island. Collect oil off of Union Island levee in slow water on east side of channel. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

b) If necessary, deploy similar boom configuration at mouth of Grant Line and Fabian-Bell Canals. Set collection J-hook in slow water on south side of channel.

Strategy 2-932.2 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

Deploy skimmers when oil accumulations in skimmable quantities. Consult IC prior to the initiation of this strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-932.1	1000		50 OS	100			2	1					6	
2-932.2	0	0	0	0	0		0	0	1	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Access is from Highway 4 east to the town of Byron. Take Bryon Highway south. Turn left on Herdlyn Road. Proceed to confluence of Old River and grant Line Canal. Or: left on Lindeman Road to Del's Boat Harbor. Located at the south side of Union Island, this site includes "Grant Line" and Fabian and Bell" Canals. They run parallel from confluence with Old River on the west end to Salmon Slough on the east end.

LAND ACCESS: 2WD, LG TRUCK, HVY EQUIP, 4WD, ATV

WATER LOGISTICS:
Limitations: depth, obstruction — Shoals and snags possible.

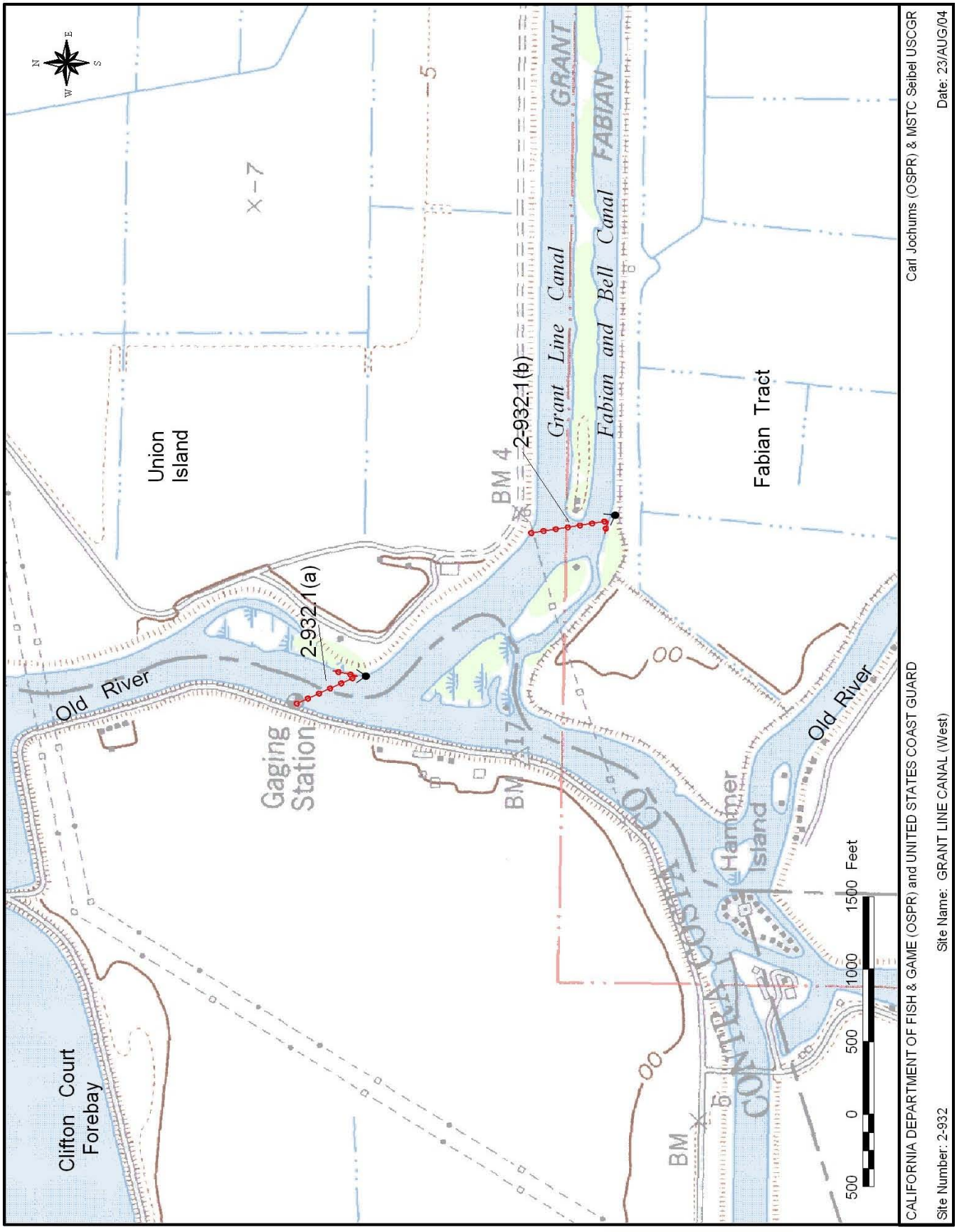
Launching, Loading, Docking and Services Available: — Launching facilities for small boats are available at Del's Harbor. Additional facilities are available at Tracy Oasis Marina

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Stage at Del's Boat Harbor and levees, or at Tracy Oasis Marina.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Tom Paine Slough

2-934 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 8 02	121 49
USGS Quad:	Union Island	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Upper Tom Paine Slough, well-developed oak riparian along steep, nonrip-rapped banks; oak Savannah remnants in places.

SEASONAL and SPECIAL RESOURCE CONCERN

RESOURCES OF PRIMARY CONCERN

This extensive freshwater marsh system is good habitat for marsh birds and mammals of all kinds. This is nesting and foraging habitat for all manner of waterfowl and marsh birds. The marsh also supports a wide diversity of marsh mammals and other vertebrates. The area is important to migratory waterfowl. Designated natural area by Delta Levees Master Environmental Assessment (DLMEA). Archaeological site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There is an archeological site here. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Tom Paine Slough

2-934 -B

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 8 02	121 49

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Penetration into marshy areas, woody cover, riprap, and animal and invertebrate burrows in levees, islands and uplands. There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and creatures. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Slips, trips and falls on riprap and steep levees. Regarding boat handling, beware of shallows, snags and mud bars. Poison Oak.

SITE STRATEGIES

Strategy 2-934.1 **Objective: NO STRATEGY HAS BEEN DEVELOPED.** ACP DATE

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-934.1	0	0	0	0	0	0	0	0	0					

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 205 to Tracy Blvd/Central Tracy. Go north on Tracy Blvd. For approximately 5 miles to Grimes Rd. Go left on grimes Rd. for 1/2 mile to Tracy Oasis Marina. Main boundary road in J4 (Byron Highway) which can be reached also from Highway 4.

LAND ACCESS:

WATER LOGISTICS:

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available:

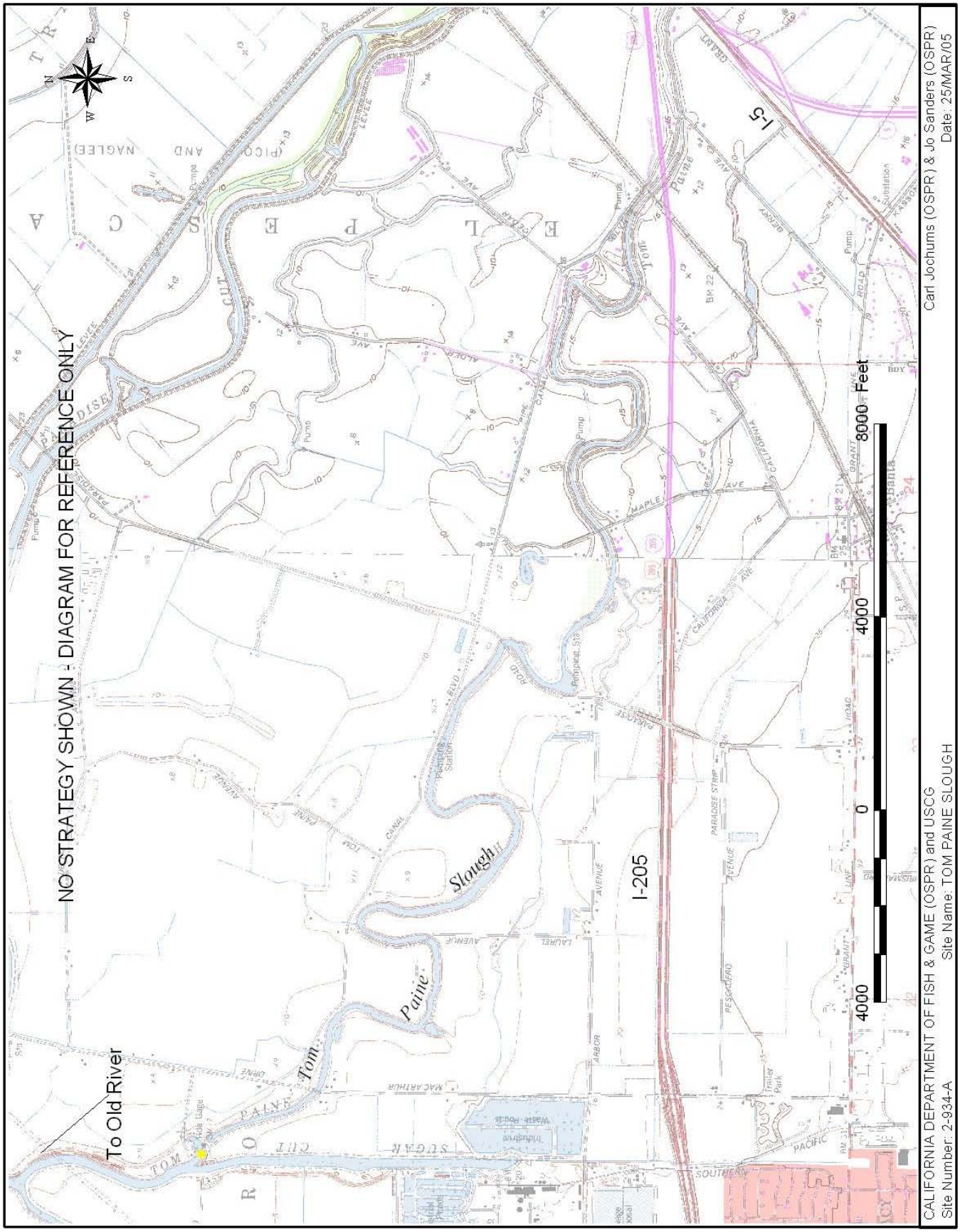
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy Diagram- Tom Paine Slough

2-934 -B



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Paradise Cut

2-935 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 48	121 22
USGS Quad:	Lathrop, Union Island	NOAA Chart:	Sacramento-San Joaquin	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This marshey site includes all of Paradise Cut. There is a marshy area northwest of Paradise Dame. The western ed has mature oak riparian woodland. Cottonwood riparian is the habitat on the middle portion of the reach. To the east, the levees are lined with riparian shrub-brush and flanked with walnut orchards.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A " sensitivity year-round. Several Special Status Species occur here.

RESOURCES OF PRIMARY CONCERN

The extensive freshwater marsh and riparian woodland system is good habitat for marsh birds and mammals of all kinds.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds.

The marsh also supports a wide diversity of marsh mammals and other vertebrates.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-935 -A Site Strategy - Paradise Cut

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	Sacramento-San Joaquin	3 7 48	121 22

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Minimize oil spread into, out of, and within this site. This habitat is premium and difficult to clean up. Minimize disturbance of wildlife and vegetation so far as possible.

HAZARDS and RESTRICTIONS:

Hazards have yet to be identified.

SITE STRATEGIES

Strategy 2-935.1 Objective: NO STRATEGY HAS BEEN DEVELOPED.

ACP DATE
7/1/1996

No strategy or response information has been developed.

There is no strategy diagram

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and	Special Equipment kinds	staff deploy	Staff tend
2-935.1	0														

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

By vehicle, you may reach this site from Tracy by traveling east on Grantline Rd to Paradise Rd to the levee of Paradise Cut. This marshey site includes all of Paradise Cut.

LAND ACCESS: no info available

WATER LOGISTICS: no info available

Limitations: depth, obstruction

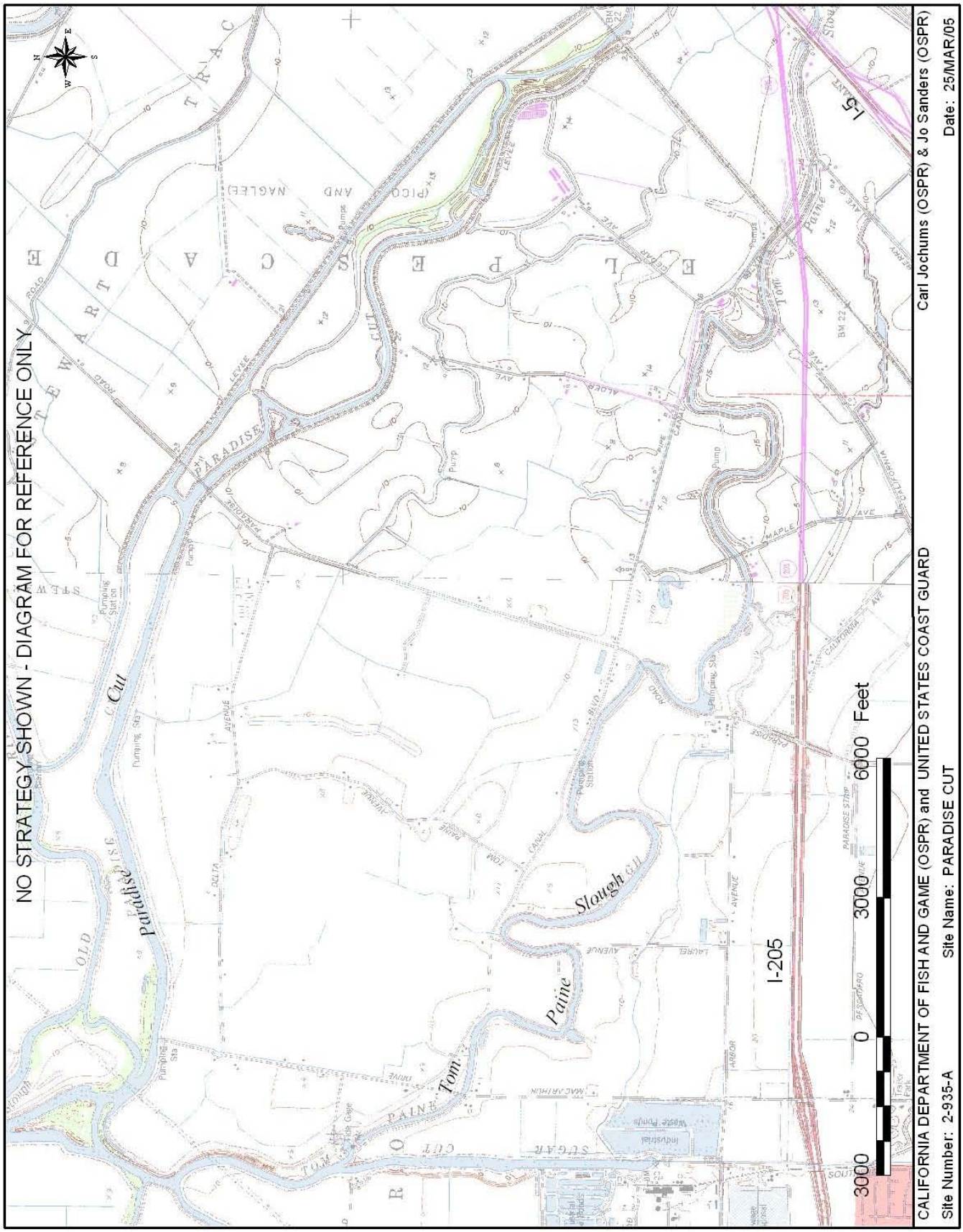
Launching, Loading, Docking and Services Available: no info available

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

No info available

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Old River: Stewart Tract Reach

2-940 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 8	121
USGS Quad:	Union Island, Lathrop	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Lowest extreme of Old River from Salmon Slough to the San Joaquin River. Riparian growth and emergent vegetation in marshy margins.

SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority all year. Several Special Status Species occur here.

RESOURCES OF PRIMARY CONCERN

This extensive freshwater marsh system is good habitat for marsh birds and mammals of all kinds. This is nesting and foraging habitat for all manner of waterfowl and marsh birds. The marsh also supports a wide diversity of marsh mammals and other vertebrates.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Old River: Stewart Tract Reach

2-940 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 8	121

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and creatures. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Slips, trips and falls on riprap and steep levees. Regarding boat handling, beware of shallows, snags and mud bars. Poison Oak.

SITE STRATEGIES

Strategy 2-940.1 **Objective: NO STRATEGY HAS BEEN DEVELOPED.** ACP DATE

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-940.1	0	0	0	0	0	0	0	0	0					

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Not Available

LAND ACCESS:

WATER LOGISTICS:

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available:

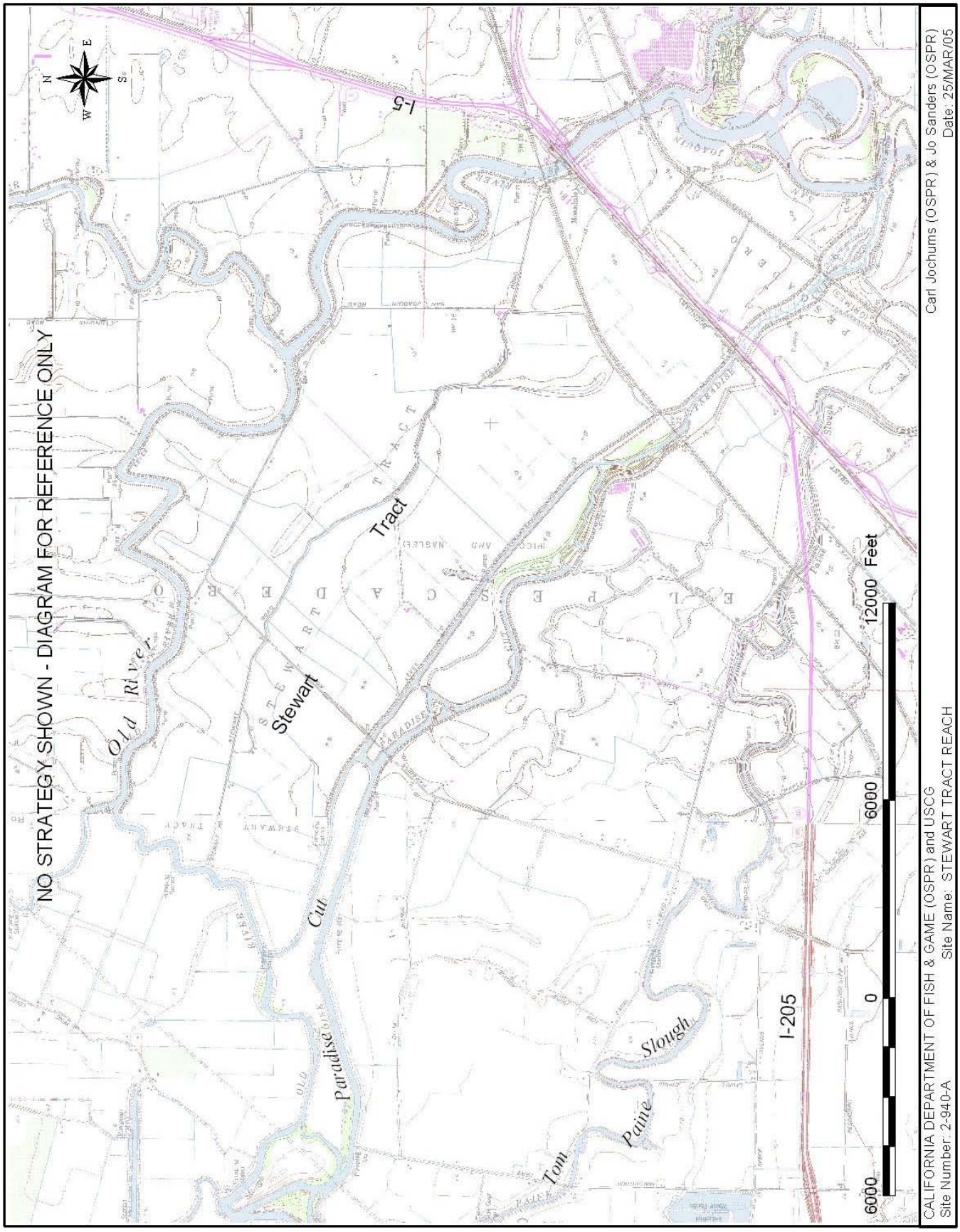
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy Diagram- Old River: Stewart Tract Reach

2-940 -A



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Middle River, Mandeville Reach

2-950 -A

County:	San Joaquin	Thomas Guide Location	SF Bay and Delt	Latitude N	38 02.5	Longitude W	121 31.7
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Site extends 4 miles from Venice tip south to Mildred Islandt. Its westerly margin is Mandeville Island. The east side is Medford and McDonald Islands. Middle River is a Delta Master Recreational Plan designated Natural Resource Area with Significant Habitat Values. This river reach is wide and deep with many sizable channel and berm islands and ripped levees. The berm and channel islands are vegetated with emergent marsh and scrub shrub. This is an important delta circulation and cross flow channel. Waves and currents can be strong here.

SEASONAL and SPECIAL RESOURCE CONCERN

All marsh areas are of "A" priority at all times. Special Status Species occur here: From September to December there are modest numbers of Delta smelt (F/CT) in this area; several rare plants.

RESOURCES OF PRIMARY CONCERN

This Delta Master Recreational Plan designation emphasizes the ecological value of the islands in this site. This aquatic environment supports diverse freshwater community. Also this is an important transport channel to/from Mildred Island and the south delta.

Bird species which occur here are typical Delta waterbirds and marsh birds.

Other vertebrates are typical aquatic and semi-aquatic mammals, reptiles and amphibians of the Delta. Western pond turtle (CSC) may occur here.

This area has modest occurrence of Delta smelt (FT, CT) during fall/winter. Juvenile and adult striped bass are typical as are warm water species.

Plants here include several Special Status Species including: Mason's lilaeopsis (CR), California hibiscus and Suisun marsh aster.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
E	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
OEL	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Middle River, Mandeville Reach

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
SF Bay and Delt San Joaquin	18661 Sacramento & San Joaquin River	38 02.5	121 31.7

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are many important ecological resources and rare species in this reach of river, and this is also a significant route for spill spread. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and creatures. Do not tie boom to trees on the levee. Oil issues here are oiling of marshy vegetation and penetration into riprap.

HAZARDS and RESTRICTIONS:

Arial traffic beware of power wires. Slips, trips and falls are a hazard of riprap.

SITE STRATEGIES

Strategy 2-950.1 Objective: Exclusion/Collection at mouth of Middle River. Wind wash and strong currents can be a problem.

ACP DATE 7/1/2005

This site can be used to deflect to collection for oil moving both north and south.
a) For oil moving upstream from ditection of Ship Channel, set an exclusion-diversion boom across the mouth at a diagonal to land oil on the Medford Isl levee. Anchor one end near the Mandeville levee just north of the first berm island and set boom diagonally from levee to berm island to berm island to Medford levee. Leave a trailing boom length to maintain seal during tidal fluctuations. Back with sorbent boom as necessary and set up collection at Medford levee.
b) For oil threats from the south delta, set the exclusion-diversion across the south tips of the channel islands at a diagonal to land oil on the Mandeville Isl levee. Anchor one end near the Mandeville levee opposite of the middle channel island and set boom diagonally from levee to channel island then to the next channel island to Medford levee. Leave a trailing boom length to maintain seal during tidal fluctuations. Back with sorbent boom as necessary and set up collection at Mandeville levee.

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

Strategy 2-950.2 Objective: Exclude/Collect oil at junction with Latham Slough / Mildred Island open water.

ACP DATE 7/1/1996

This location may be used to deal with oil threats from upstream or downstream. Set 1500' of 4X4+ diversion-exclusion boom diagonally across slough just north of Mildred Island/Latham Slough. Anchor one end at the cable ferry landing on McDonald Isl and the other near the Mandeville levee. Back with sorbent.
a) For oil threats from the south (Mildred/Latham Slough) set up collection on the Mandeville shore;
b) for threats from the north (ship channel) collect oil at the McDonald shore.

Strategy 2-950.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-950.1	1700		50 OS	2100	6	6/25/DANFORTH							4	
2-950.2	1500			1500	5	5/25/danforths	2	1						
2-950.3	0	0	0	0	0		0	0	3	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to site is by boat, from Stockton Deep Water Channel at R4 and R6. Vehicle access is very restricted: private levee roads via convoluted routes: Hwy 4 to Inland Dr to McDonald Rd to private bridge or ferry McDonald Island or Hwy 4 to Bacon Island Rd to Bacon Isl. to private bridge to Mandeville Island. Site extends 4 miles from Venice tip south to Mildred Islandt. Its westerly margin is Mandeville Island. The east side is Medford and McDonald Islands.

LAND ACCESS: LEVEE ROADS ARE GOOD WHEN DRY

WATER LOGISTICS: deep draft, except near shore
Limitations: depth, obstruction

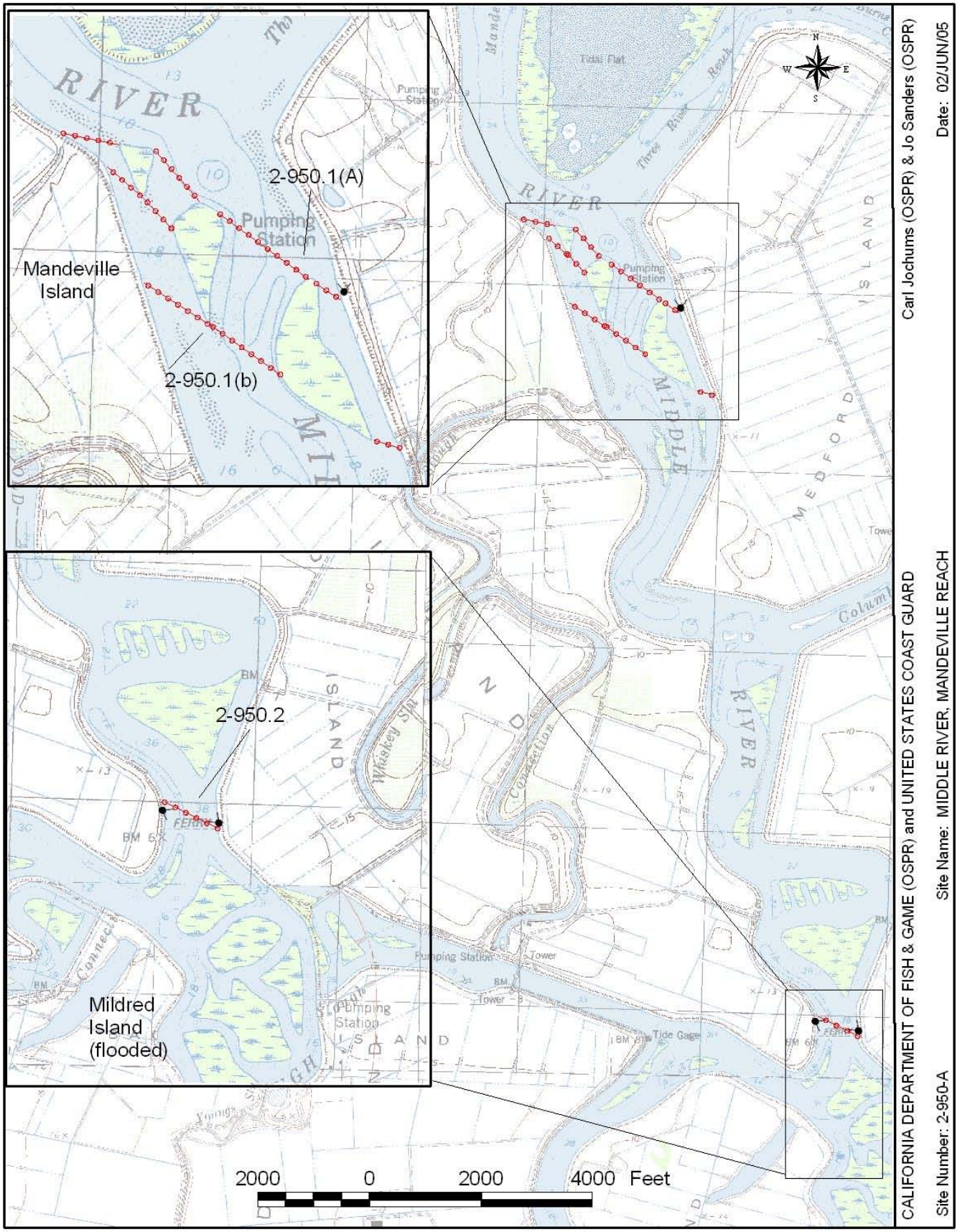
Launching, Loading, Docking and Services Available: Nearest boat launch and marine service is 8-mile road. Additional marine facilities are at Bethel Island or at the mouth of the Mokelumne.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Good deployment sites and facilities are at marinas above: rental boats, fuel, restaurants, water, and some camping and lodging. Consider the 8-mile road area as an area deployment site. Lower Jones Tract levees are another deployment area.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Columbia Cut

2-952 -A

County:	San Joaquin	Thomas Guide Location	SF Bay and Delt	Latitude N	38 01.8	Longitude W	121 29.7
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Columbia Cut extends 1.5 miles connecting the San Joaquin Channel (Head Reach) with Middle River. It is bordered by Medford Island to the north and McDonald Island to the south. Columbia Cut has a Berm Island dividing most of its length to the Middle River confluence and a large channel island at its confluence with the San Joaquin. These islands have high ecological value as freshwater marsh and riparian shrub scrub. Levees are ripped with emergent vegetation pockets. Currents can be strong here. Draft is good throughout length.

SEASONAL and SPECIAL RESOURCE CONCERN

All marsh areas are of "A" priority at all times. Special Status Species are present: from September to December there are modest numbers of Delta smelt (F/CT) in this area; birds: black rail; rare plants occur in this site.

RESOURCES OF PRIMARY CONCERN

The primary issue at this site is the high ecological value of marsh islands, particularly the island at the north end which supports black rails. The aquatic environment supports diverse freshwater community. Also this is an important oil dispersion/transport channel to/from Mildred Island and the south delta.

Black rail (FSC/CT) occurs here. Other bird species which occur here are typical Delta waterbirds and marsh birds.

Other vertebrates are typical aquatic and semi-aquatic mammals, reptiles and amphibians of the Delta. Western pond turtle may occur here.

This area has modest occurrence of Delta smelt during fall/winter. Juvenile and adult striped bass are typical as are warm water ǵ■species.

Only one Special Status plant Species has been recorded here: Mason's lilaeopsis. Others, California hibiscus and Suisun marsh aster, may also occur on larger channel island here.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
E	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
OEL	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
SF Bay and Delt San Joaquin	18661 Sacramento & San Joaquin River	38 01.8	121 29.7

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil issues here are oiling of marshy vegetation and penetration into riprap. This is also a significant route for spill spread. There are many important ecological resources in this reach of river and upstream sites where oil may be carried on tides and currents. The intent is to limit the free movement of oil into and through this site by exclusion and collection booming. Oil issues within the site are oiling of marshy vegetation and penetration into riprap. Minimize disturbance of vegetation and creatures. Do not tie boom to trees on the levee.

HAZARDS and RESTRICTIONS:

Aerial traffic beware of power wires. Slips, trips and falls. Deep water except at margins.

SITE STRATEGIES

Strategy 2-952.1 **Objective: Exclude oil from entering or leaving Columbia Cut at the mouth (at San Joaquin R).** ACP DATE 7/1/1996

Set exclusion-diversion booms (4x4 curtain) across each mouth at Head Reach. Anchor one end near the Medford levee and anchor other end along Head Reach shore of unnamed tule island. Do the same on south side to close channel on McDonald Island side. Leave a trailing boom length to maintain seal during tidal vacillations. Back with sorbent boom as necessary. Set protective sorbents between hard boom if oil threatens from Head Reach. Wind wash and strong currents can be a problem, requiring back-up strategy (see .3).

Strategy 2-952.2 **Objective: Exclusion booming at junction with Middle River.** ACP DATE 7/1/1996

Set 900' of 8X8+ diversion-exclusion boom across mouth of Columbia Cut. Anchor one end near McDonald levee and the other near the Medford levee. Back with sorbent.

Strategy 2-952.3 **Objective: Exclusion/Collection backup strategy for Head Reach end: exclude and divert for collection, under prevailing wind and current pattern.** ACP DATE 7/1/1996

Set 1500' 8X8+ diversion/exclusion boom at a diagonal across Columbia Cut just south of unnamed tule island. Angle to promote collection at appropriate shore under prevailing wind conditions.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-952.1	0	1000		2000	4	4/25/DANFORTH	0	2					4	
2-952.2	900			900	3	3/15/danforths	1	1					5	
2-952.3	1500				4	4/25lbs/danforths	1		1	SSS				

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to site is by boat, from Stockton Deep Water Channel at R12 or R16 though Head Reach. Vehicle access is very restricted: private levee roads via convoluted routes: Hwy 4 to Inland Dr to McDonald Rd to private bridge or ferry to McDonald Island or I-5 to 8-mile road to private ferry to Medford Island. Columbia Cut extends 1.5 miles connecting the San Joaquin Channel (Head Reach) with Middle River. It is bordered by Medford Island to the north and McDonald Island to the south.

LAND ACCESS: LEVEE ROADS ARE GOOD WHEN DRY

WATER LOGISTICS: deep draft, except near shore
Limitations: depth, obstruction

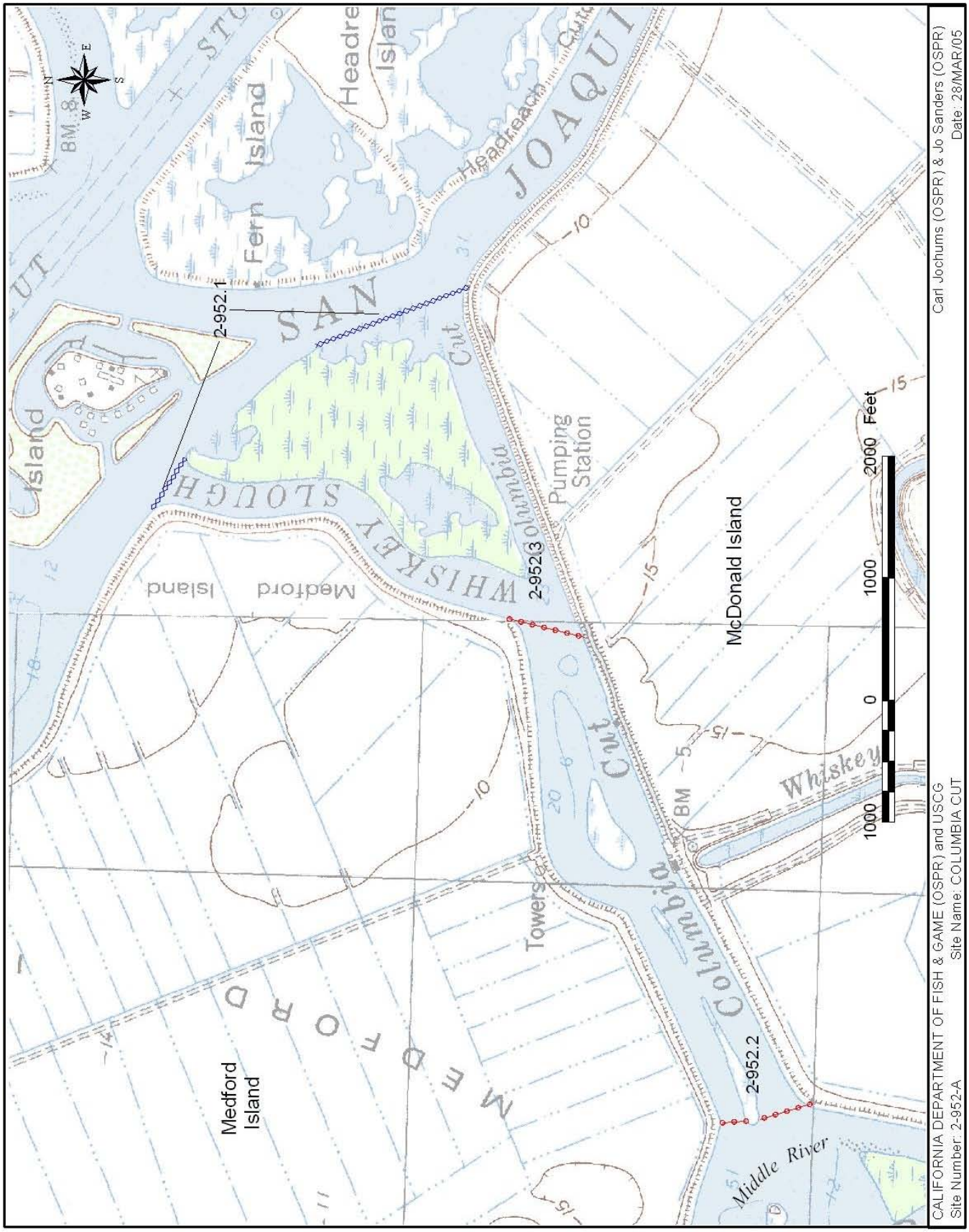
Launching, Loading, Docking and Services Available: Nearest boat launch and marine service is 8-mile road. Additional marine facilities are at Bethel Island or at the mouth of the Mokelumne.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Good deployment sites and facilities are at marinas above: rental boats, fuel, restaurants, water, and some camping and lodging. Consider the 8-mile road area as an area deployment site. Lower Jones Tract levees are another deployment area.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Mildred Island/Latham Slough

2-960 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 59	121 32
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes the flooded Mildred Island and adjacent Latham Slough from Empire Cut to Connection Slough. This site is a flooded island and adjacent slough. The flooded Mildred Island is surrounded by severely deteriorating levees which are covered with shrub and marsh vegetation. Latham Slough has several in-channel marsh islands and berms. This area has been designated as a "Significant Natural Area" by the Delta Levees Master Environmental Assessment.

SEASONAL and SPECIAL RESOURCE CONCERN

A year-round "A" priority for protection due to the extremely numerous and sensitive marsh islands and associated wildlife. Migratory waterfowl are numerous and vulnerable throughout the fall and winter months.

RESOURCES OF PRIMARY CONCERN

Marsh berms and island areas are a year-round priority. In fall and winter, this flooded island is a major area important to migratory waterfowl. Tule marshes of Latham Slough and Mildred Island levees are at risk.

California black rail (CT)

River otters, western pond turtle (CSC)

Delta smelt (CT,FT), winter-run chinook salmon (CE,FE), catfish, striped bass

tule

Mason's Lilaeopsis (CR), California hibiscus

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Mildred Island/Latham Slough

2-960 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 59	121 32

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Shallow water. Tree snags inside flooded Mildred Island.

SITE STRATEGIES

Strategy 2-960.1 **Objective: Exclude by executing adjacent strategies. No specific strategy for this site. See Old River Quimby Island (2-910); Middle River: Bacon Island Reach (2-965-A); Middle River: Mandeville Reach (2-950-A), and Turner/Empire Cuts (2-963-A).**

ACP DATE 7/1/2005

For oil coming from outside this site, deploy appropriate strategies from among the following to exclude oil: Old River Quimby Island (2-910); Middle River: Bacon Island Reach (2-965-A); Middle River: Mandeville Reach (2-950-A), and Turner/Empire Cuts (2-963-A).

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-960.1	0	0	0	0	0	0	0	0	0		0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 4 east past Middle River to Bacon Island Road. Turn left on Bacon Island Road out to Middle River Follow along Lower Jones Tract levee. This site includes the flooded Mildred Island and adjacent Latham Slough from Empire Cut to Connection Slough.

LAND ACCESS: 2WD, TRUCK, 4WD,/LEVEE ROAD MAY BE IMPASSABLE WHEN WET

WATER LOGISTICS: SHALLOW NEAR ISLAND, BUT DEEP CHANNELS EXIST
Limitations: depth, obstruction

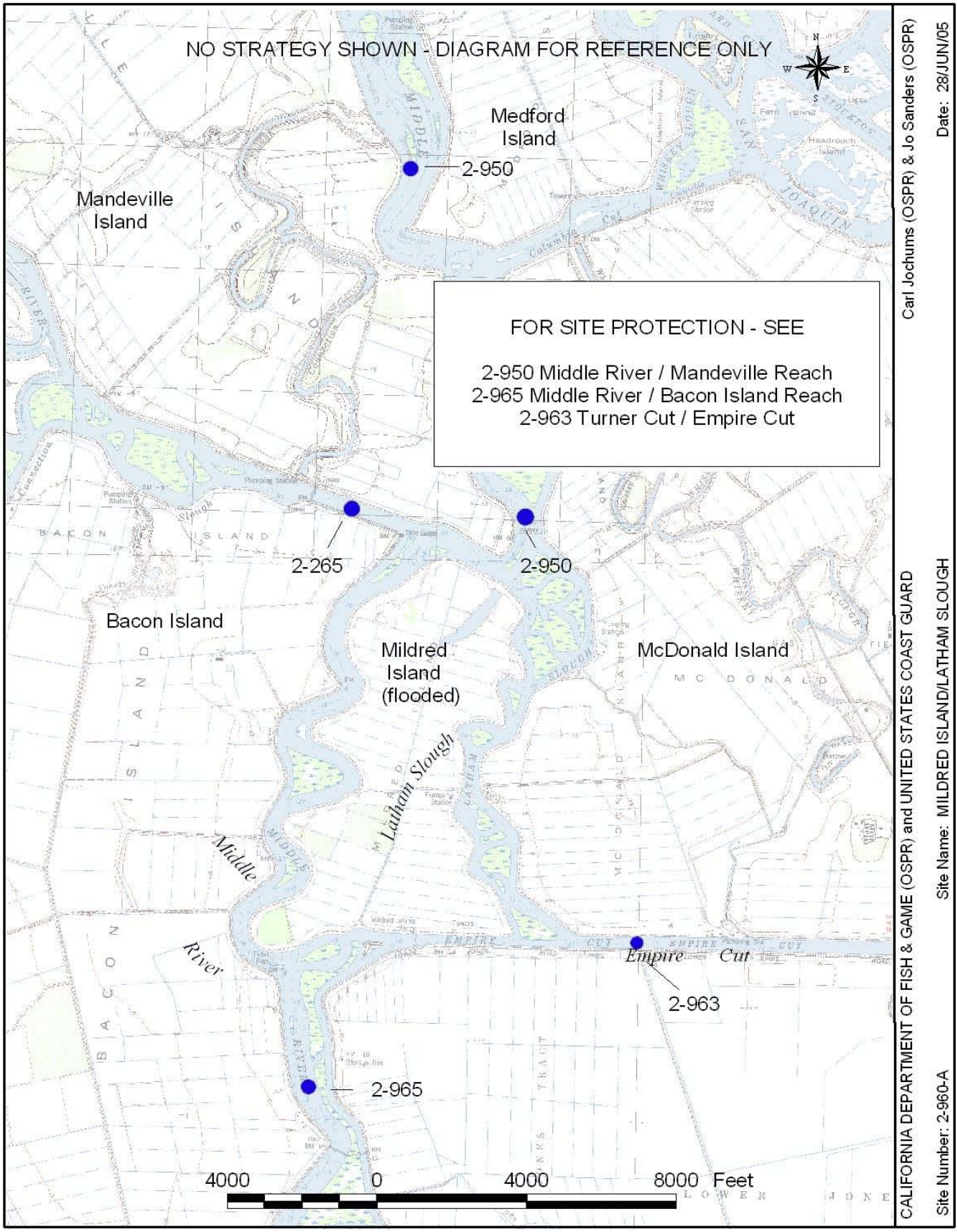
Launching, Loading, Docking and Services Available: Marina services at Tiki Lagoon Resort Marina and Turner Cut Resort on Turner Cut are closest.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at marinas or along Bacon Island Road. Tiki Lagoon Resort Marina and Turner Cut Resort on Turner Cut are closest.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Turner-Empire Cut

2-963 -A

County:	San Joaquin	Thomas Guide Location	SF Bay and Delt	Latitude N	37 59.7	Longitude W	121 27
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Five miles of channel bordering south and east side of McDonald Island, from the Stockton Channel (R24) to Latham Slough (Mildred Island). Whiskey Slough forks off to southeast marking Turner from Empire Cuts. This is a deep water slough with ripped levees with pockets of emergent marsh. Berm and channel islands throughout its length are marshy and shrub scrub and have high ecological value. Currents can be strong in this slough.

SEASONAL and SPECIAL RESOURCE CONCERN

Marsh and riparian vegetation zones are of "A" concern year-round. Special Status Species: in Nov-Dec Delta smelt occur in modest numbers. Winter-run chinook are of moderate concern Oct 15 - May 31. One rare plant.

RESOURCES OF PRIMARY CONCERN

Channel and berm islands have rich marsh/riparian communities. Levee community has been minimized by riprap. Aquatic community is typical of strong-current delta waters.

Species present are those typical of riverine habitats: waterbirds, marsh and shorebirds.

Islands are used by aquatic and semi-aquatic wildlife.

This area has modest numbers of Delta smelt (F/CT) at some times. Wandering winter-run chinook (F/CE) smolts are of moderate concern mid Oct-May. Juvenile and adult striped bass and warm water fish are typical.

Well developed emergent and rooted vegetation around the channel islands.

The rare plant California hibiscus has been found several places in this site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
E	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
OEL	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752
E	Tom Rosten	Terminous Tract Reclamation District	(209) 836-0829

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Turner-Empire Cut

2-963 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
SF Bay and Delt San Joaquin	18661 Sacramento & San Joaquin River	37 59.7	121 27

Last Page Update :

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 marshy 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 muds.

HAZARDS and RESTRICTIONS:

Aerial high wire hazards. Underwater cables and pipelines. Slips, trips and falls on riprap. Poison oak on levees.

SITE STRATEGIES

Strategy 2-963.1 **Objective: Exclude/contain oil At San Joaquin River (at Acker Island): Stop oil from entering or leaving slough mouth.** ACP DATE 7/1/2005

For oil threats on the San Joaquin, this deployment should be done at the same time as strategy 2-040 San Joaquin River - Hog Island Cut Complex.

a) Set boom across slough mouth (400' Hboom). Anchor one boom end upstream near riprap bank of Roberts Isl. At R24. Anchor downstream boom end at the marshy beach of Acker Island, with substantial overlapping of Acker tip. Back with sorbent, leaving a trailing boom length to maintain seal during tidal vacillations.

b) Anchor exclusion boom across Turner Cut mouth from riprap levee of McDonald Isl easterly to Lost Isl Resort (200' Hboom.) Back with sorbent boom. Leave trailing boom ends to keep a tidal seal.

Strategy 2-963.2 **Objective: Exclusion/contain at south end - junction with Latham Slough at Mildred Island. Stop oil from entering or leaving slough mouth.** ACP DATE 7/1/2005

Deploy 1220 ft of 18" curtain boom across west end of Empire Cut on a diagonal favorable to divert oil to south shore. Anchor boom near riprap levees on each side leaving trailing ends to maintain tidal seal. Back with second layer of boom or sorbent boom. Strong current here. Collect oil at south bank (Lower Jones Tract) if oil is concentrated sufficiently 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.

Strategy 2-963.3 **Objective: Oil Recovery by Shoreside skimming** ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-963.1	600			300	4	4/25 lb Danforth							2	
2-963.2	1200		50 OS	100	5	5/25lb danforth + chain + line							4	
2-963.3	0	0	0	0	0		0	0	1	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Levee roads border this site on south and east are on Roberts Island and Lower Jones Tract and are accessible from Hwy 4 (Lower Jones road and McDonald Rd). North/west levee roads of McDonald Isl. are private. By water, site begins at Ship Channel light R24. Five miles of channel bordering south and east side of McDonald Island, from the Stockton Channel (R24) to Latham Slough (Mildred Island). Whiskey Slough forks off to southeast marking Turner from Empire Cuts.

LAND ACCESS: Southeast levee roads paved

WATER LOGISTICS: deep water except around isles

Limitations: depth, obstruction

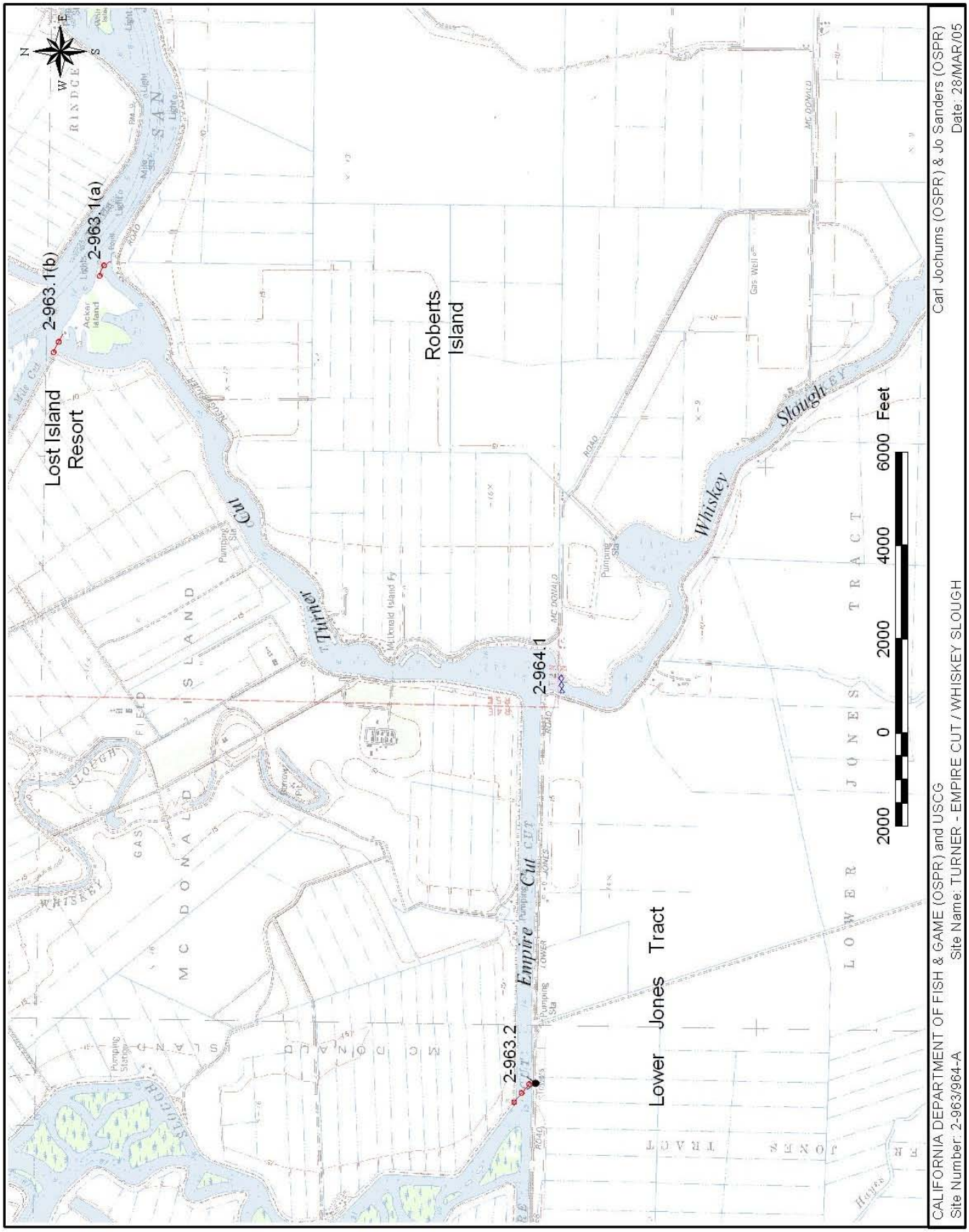
Launching, Loading, Docking and Services Available: Nearby marinas include: Tiki Lagun Resort, Turner Cut Resort, Whiskey Slough Resort, and others.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Roberts Island at Turner Cut/Stockton Channel junction is good major deployment site for this area. Adjacent levees and marinas are good for boom deployment and other response.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Whiskey Slough

2-964 -A

County:	San Joaquin	Thomas Guide Location	SF Bay and Delt	Latitude N	38 58.2	Longitude W	121 28.5
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River				

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This dead-end slough extends from its mouth at junction of Turner Cut and Empire Cut about 3 miles to its terminus. A fairly narrow, shallow water slough with margins mostly ripped but with pockets of emergent marsh vegetations. There are several marshy channel islands. Snags and shallows are common in this low energy slough.

SEASONAL and SPECIAL RESOURCE CONCERN

Marsh and riparian vegetation zones are of "A" concern year-round. Special Status Species: in Nov-Dec Delta smelt occur in modest numbers. Winter-run chinook are of modest concern Oct 15 - May 31.

RESOURCES OF PRIMARY CONCERN

The several channel islands are natural freshwater marshes. Aquatic community is typical for delta except that salmonids are not common.

Birds are riverine species: waterbirds and marsh birds.

Other fauna include riverine and semiaquatic species common to marshy island habitats or those species which use or pass though disturbed and patchy habitat. Habitat may be suitable for western pond turtle.

This area has modest numbers of Delta smelt (F/CT) at some times. Wandering winter-run chinook (F/CE) smolts are of moderate concern mid Oct-May. Juvenile and adult striped bass and warm water fish are typical.

Emergent vegetation patches occur throughout.

No sensitive plant species have been identified here.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

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B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
OEL	Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752
E	Tom Rosten	Terminous Tract Reclamation District	(209) 836-0829

ADDITIONAL SITE SUMMARY COMMENTS:

2-964 -A Site Strategy - Whiskey Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
SF Bay and Delt San Joaquin	18661 Sacramento & San Joaquin River	38 58.2	121 28.5

Last Page Update :

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 marshy 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 muds.

HAZARDS and RESTRICTIONS:

Aerial hazard of high wires. Slips, trips and falls on riprap and steep levees. Regarding boat handling, beware of shallows, snags and mud bars. Poison Oak.

SITE STRATEGIES

Strategy 2-964.1 Objective: Exclude oil at mouth on Turner Cut

ACP DATE 7/1/1996

Set boom across slough mouth. Anchor one boom end near Roberts Island riprap levee. Anchor other boom end diagonally up-slough on Lower Jones Tract levee, leaving a trailing boom length to maintain seal during tidal vacillations. If collection is opportune, shore side skim at appropriate bank. Back with sorbent.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-964.1	0	400		300	3	3/15/DANFORTH	0	1					2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access to site is from southerly side via I-5 to Hwy 4 to Roberts Island Road to Upper Jones Tract Road. Private levee roads also border north side. Water access is from Turner or Empire Cuts from Ship Channel. This dead-end slough extends from its mouth at junction of Turner Cut and Empire Cut about 3 miles to its terminus.

LAND ACCESS: levee roads good except wet

WATER LOGISTICS: Shallow and shallower, snags
Limitations: depth, obstruction

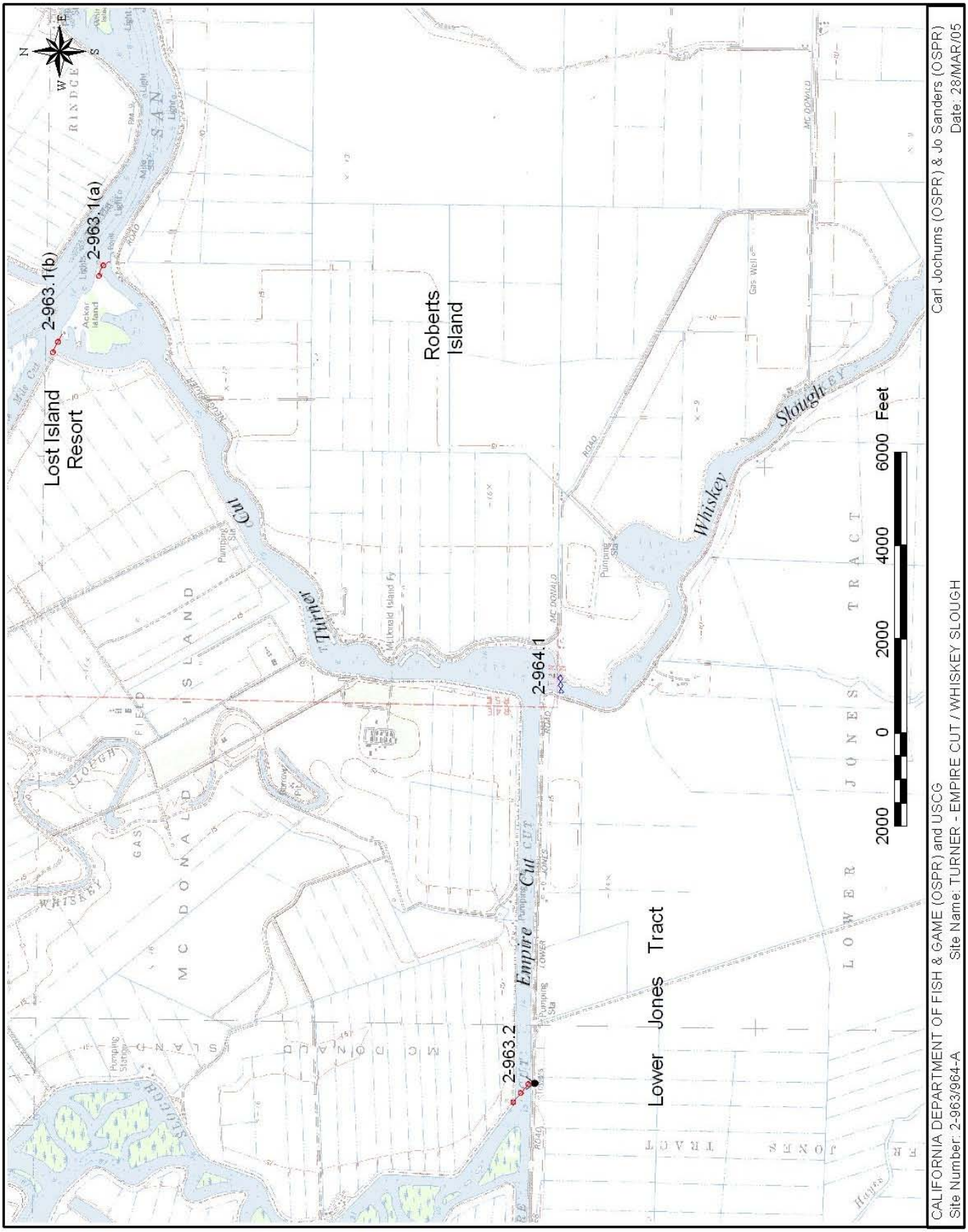
Launching, Loading, Docking and Services Available: Marinas nearby have wide range of facilities including launch, rental boats, fuel: Whiskey Slough Resort, Tiki Lagun Resort, Turner Cut Resort.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Local marinas are possible area deployment sites and have most facilities including restaurants, water, toilets and some camping. If roads are passable, deploy from adjacent levees. Otherwise transport material by skiff.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Middle River: Bacon Island Reach

2-965 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 57	121 32
USGS Quad:	Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is the reach of Middle River from Connection Slough on the north, along the east side of Bacon Island, to SP Railroad Bridge on the south. This site has tule marshes and in-channel and berm islands. There are some riparian shrub-brush and woodland areas along levees. This area has been designated as a "Significant Natural Area" by the Delta Levees Master Environmental Assessment.

SEASONAL and SPECIAL RESOURCE CONCERN

A year-round "A" priority for protection due to the extremely numerous and sensitive marsh islands and wildlife.

RESOURCES OF PRIMARY CONCERN

Area is of major importance to migratory waterfowl. Riparian, woodland, and marsh habitats with associated wildlife are at risk.

Bird species of interest are Swainson's hawk (CT) and California black rail (CT), egrets, and herons. Migratory waterfowl are numerous and vulnerable throughout the fall and winter months.

River otters occur here.

Fish species occurring here include Delta smelt (CT,FT), winter-run chinook salmon (CE, FE), striped bass, largemouth bass, catfish.

The rare plants occur here: Delta tule pea, Mason's Lilaeopsis (CR), and California hibiscus.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There is an archeological site here. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Middle River: Bacon Island Reach

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 57	121 32

Last Page Update :

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 marshy 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 mudflats.

HAZARDS and RESTRICTIONS:

Shallow water west on in-channel islands. Bridge midway between Railroad Bridge and Mildred Island has low clearance.

SITE STRATEGIES

Strategy 2-965.1 Objective: North end: Exclusion booming at the river mouth

ACP DATE 7/1/2005

For oil form the north; deploy strategy for Middle River: Mandeville Reach (2-950-A). Deploy 600 ft of 18" deflection boom across channel of Connection Slough near low bridge. Deflect to Bacon Island levee as a collection site. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-965.2 Objective: South end: Prevent oil from entering the river and contaminating the marshes

ACP DATE 7/1/2005

For oil from the south:
a) Deploy a series of deflection and exclusion booms near river divergence north of Railroad Bridge. Deploy 1000 ft and 350 ft of 18" curtain boom across the western and middle channels, respectively. Deflect to west levee (Bacon Island) for collection.
b) Deploy 3-200 ft. sections of 18" curtain boom in mid-channel north of Railroad Bridge; deflect to east levee (Lower Jones Tract), collecting against levee just south of boat docks.
c) Deploy 200 ft of small curtain ("swamp") boom across east channel entrance in front of pilings and floating "boxes", extending out from in-channel island.
d) Deploy 400 ft. of small curtain boom across north entrance of Railroad Cut - from Railroad berm north to levee.
Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities

Strategy 2-965.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-965.1	600		50 OS	100	8	8 / 25lb Danforth	1	1					5	
2-965.2	2000	600	50 OS	100	25	25 / 25lb Danforth	3	2					17	
2-965.3	0	0	0	0	0		0	0	3	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 4 east past Middle River to Bacon Island Road. Turn left on Bacon Island Road out to Middle River. Follow along Lower Jones Tract levee. This site is the reach of Middle River from Connection Slough on the north, along the east side of Bacon Island, to SP Railroad Bridge on the south.

LAND ACCESS: No restriction.

WATER LOGISTICS: SHALLOW WATER NEAR ISLANDS
Limitations: depth, obstruction

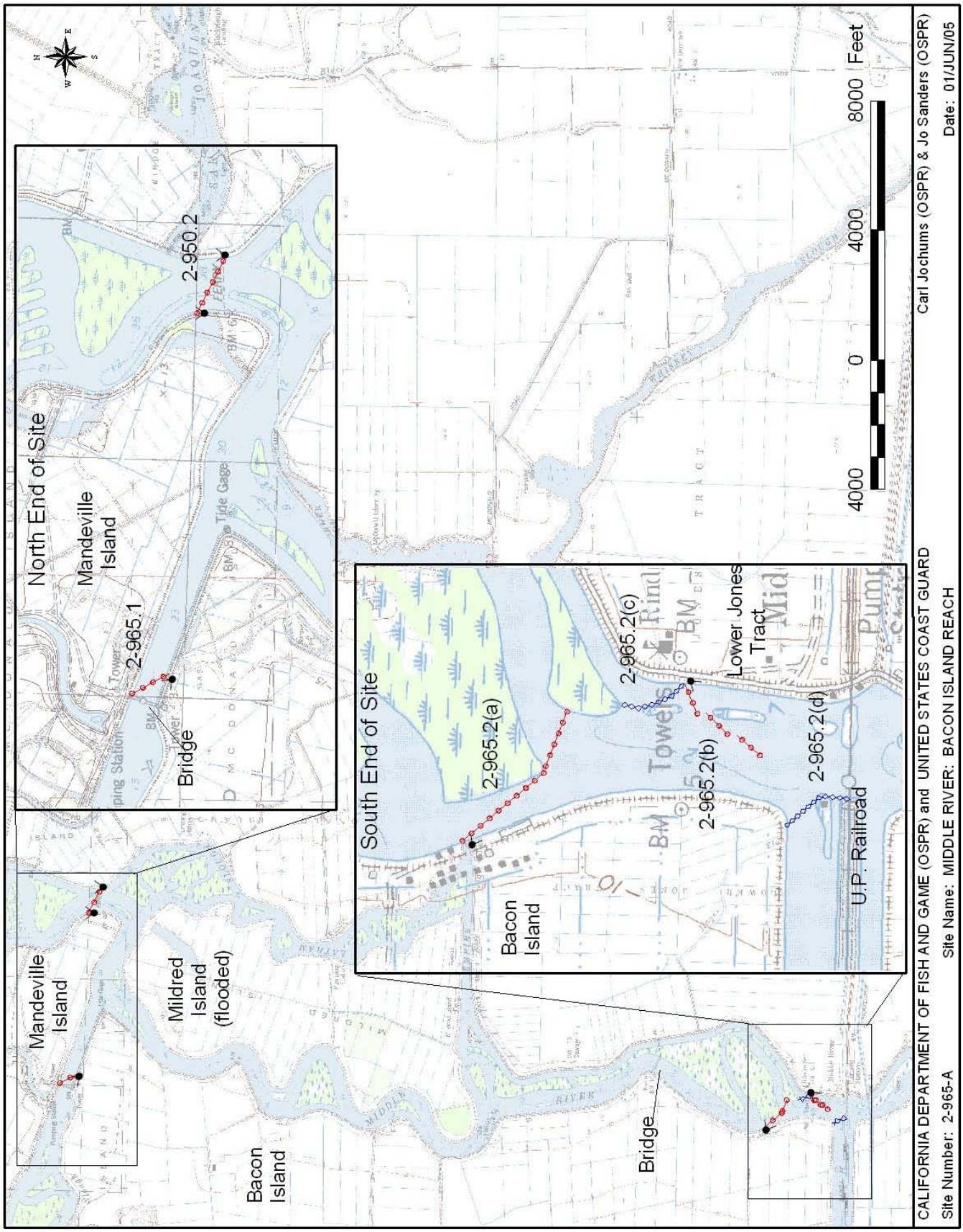
Launching, Loading, Docking and Services Available: Marina services at Tiki Lagoon Resort Marina and Turner Cut Resort on Turner Cut east of site.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Bullfrog Landing and levees on Lower Jones Tract, and levees on Bacon Island. At Tiki Lagoon Resort Marina and Turner Cut Resort on Turner Cut east of site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Middle River: Upper Jones Tract

2-970 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 54	121 30
USGS Quad:	Holt & Woodward Island	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is the reach from SP railroad crossing on the north to the Highway 4 bridge on the south. A large river reach with several in-channel tule marsh islands. Bordering island levees are ripped with emergent marsh along the levee margins.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection all year.

RESOURCES OF PRIMARY CONCERN

This site has large in-channel tule marsh, islands, and associated wildlife.

The following species are found here: Swainson's hawk (CT), California clapper rail (CT), herons egrets, waterfowl, marsh birds, songbirds

River otter, beaver

Winter-run Chinook salmon (CE, FE) adults in winter, smolts in spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Middle River: Upper Jones Tract

2-970 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 54	121 30

Last Page Update :

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 marshy 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 mudflats

HAZARDS and RESTRICTIONS:

The low clearance of the bridge is a restriction to boat travel.

SITE STRATEGIES

Strategy 2-970.1 Objective: North End: prevent oil from contaminating in-channel marshes

ACP DATE 7/1/2005

a) For oil from the north; deploy 1000 ft of 18" defection boom near the UP railroad cut. Deflect oil away from islands towards levees for shore-based skimming and recovery.

b) Boom off entrances (2) to ski areas inside larger tule-island (200 ft each). Fall back position is up river towards Woodward Island Ferry.

c) Place deflection boom (18") in front of islands or outline with curtain or sorbent boom (800 ft).

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

Strategy 2-970.2 Objective: South End: Prevent oil from contaminating in-channel marches.

ACP DATE 7/1/2005

For oil from the south; deploy 1500 to 2000 ft of 18" deflection boom across channel north of Trapper Slough confluence. Deflect to west side levee (Victoria Island) for 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.

Strategy 2-970.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE 7/1/2005

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-970.1	2000		50 OS	100	18	12-18 / 25lb Danforth	2	1					9	
2-970.2	2000		50 OS	100	18	12-18 / 25lb Danforth	2	1					12	
2-970.3	0	0	0	0	0		0	0	3	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Key access is from Highway 4 east to Union Pacific at Middle River. Turn left on levee road across Trapper Slough to Bacon Island Road. This site is the reach from SP railroad crossing on the north to the Highway 4 bridge on the south.

LAND ACCESS: all types on paved levee roads

WATER LOGISTICS: SHALLOW WATER NEAR ISLANDS

Limitations: depth, obstruction

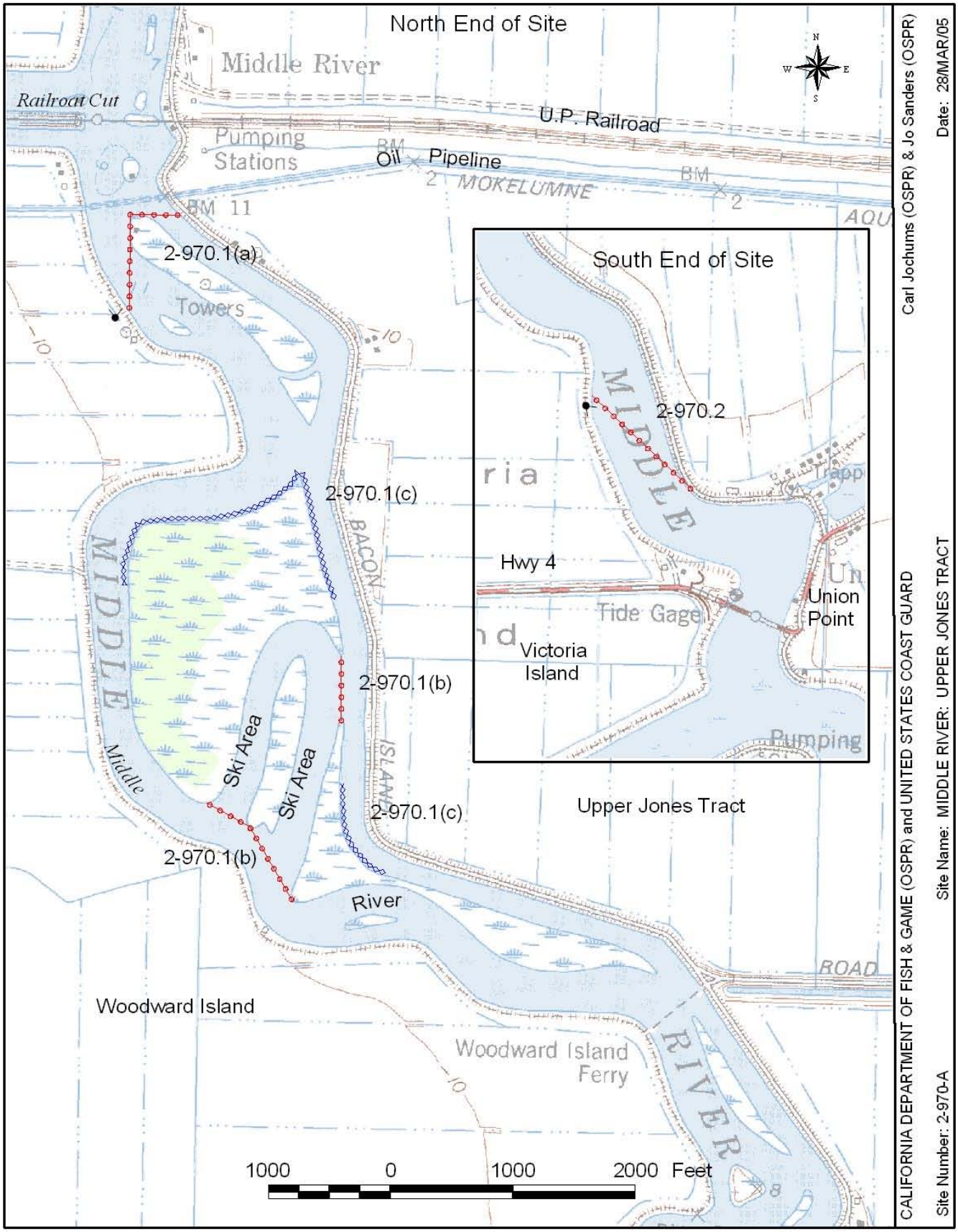
Launching, Loading, Docking and Services Available: Launch skiffs from levee, larger vessels launch from Discovery Bay.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Union Point or along levees.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Trapper Slough

2-974 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 53	121 29
USGS Quad:	Holt	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes the entire enclosed freshwater marsh bounded by levees between Middle River and Whiskey Slough. It is a freshwater marsh with a lush growth of tules. It is connected to Middle River only by a pump. This site has been designated as a "Significant Natural Area" by the Delta Levees Master Environmental Assessment.

SEASONAL and SPECIAL RESOURCE CONCERN

"B" priority all year. ----- Although this is an extremely productive and sensitive marsh, it is not exceptionally vulnerable to a water-borne oil threat from Middle River because of its levied isolation and only connection via a pump. When considering threats from Hwy 4 traffic, the site should be considered an "A" priority.

RESOURCES OF PRIMARY CONCERN

It is a tules and cattail freshwater marsh year round.

This site is used by waterfowl, herons, egrets, and songbirds.

River otters occur here.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

2-974 -B Site Strategy - Trapper Slough

2-974 -B

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 53	121 29

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concern is that oil will be pumped into the slough from the river. Avoid trampling of marsh habitat during cleanup activities.

HAZARDS and RESTRICTIONS:

From water: the Highway 4 bridge.

SITE STRATEGIES

Strategy 2-974.1 Objective: Exclude oil from entering slough

ACP DATE 7/1/1996

Shut off pump and close all culverts leading to the slough from Middle River.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-974.1	0	0	0	0	0	0	0	0	0					

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Access is from Highway 4 east to Middle River at Union Point Marina. This site includes the entire enclosed freshwater marsh bounded by levees between Middle River and Whiskey Slough.

LAND ACCESS: 2WD, LG TRUCK, HVY EQ, 4WD, ATV, FOOT

WATER LOGISTICS: NONE

Limitations: depth, obstruction

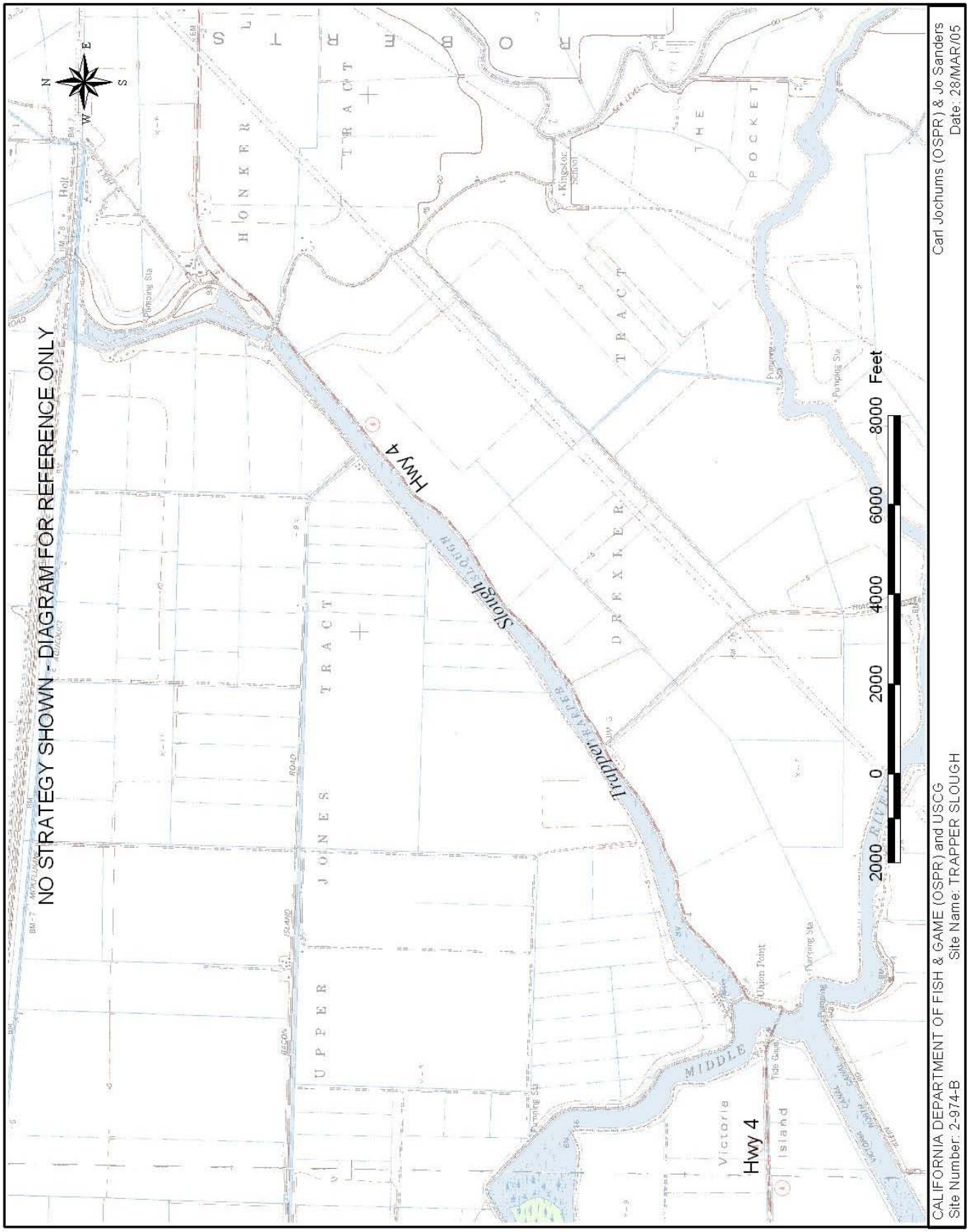
Launching, Loading, Docking and Services Available: Larger boats can be launched from Discovery Bay Yacht Harbor

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging and boat docks at Union Point. Small skiffs from levees.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Middle River: Union Island Reach

2-980 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	San Joaquin		3 7 53	121 28
USGS Quad:	Holt	NOAA Chart: 18661 Sacramento & San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is the southern extreme reach of Middle River: from Highway 4 bridge at Victoria Canal south to confluence with the San Joaquin and Old Rivers. It is bounded by rip rap lined levees. River has several islands with riparian vegetation. Tule marsh berm islands and fringe mashes are also present along its length.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection all year. Includes all marsh and riparian islands and fringe marsh habitats, associated wildlife and special status species.

RESOURCES OF PRIMARY CONCERN

The habitats of concern are tule marshes and islands of riparian vegetation and the wildlife associated with these islands.

The rare Swainson's hawk (CT) is found in this area. Also present are waterfowl, egrets, herons, songbirds.

A variety of aquatic mammals are found here including river otter and beaver.

Winter-run chinook salmon (CE, FE) adults are present during winter, smolts during spring and summer.

In addition to the tule, rushes and riparian vegetation rare plants occur here including California hibiscus and Mason's Lilaeopsis (CR).

Willows, oaks, coyote bush, elderberry bush,

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Middle River: Union Island Reach

2-980 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
San Joaquin	18661 Sacramento & San Joaquin River	3 7 53	121 28

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concern is to minimize spread of oil to habitats up-current and down and to protect mid-channel islands by deflecting oil out of center channel to collection on riprap shoreline. There are marshy islands and margins which are sensitive habitat supporting sensitive species. Minimize response and cleanup impacts: disturbing wildlife, trampling vegetation, and tracking oil in to sediments.

HAZARDS and RESTRICTIONS:

Beware of shallow water and power lines.

SITE STRATEGIES

Strategy 2-980.1 Objective: Deflect oil away from in-channel islands and marshes

ACP DATE 7/1/1996

a) Deploy 18" deflection boom in 100 ft legs in several locations near lower (northern) reach. Deflect oil from islands using "V" configuration (or chevron) at upstream end of island. Deflect oil to both levee shores.

b) As two channels form on either side of the island, deploy 100 ft sections of deflection boom from island to levee in both channels, downstream of "V" configuration.

c) Recover oil from levees with shoreside skimming system and/or vacuum trucks.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-980.1	400				10	10 / 25lb Danforth	1	1	1	SSS			6	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 4 east to Union Point at confluence of Middle River and Victoria Canal This site is the southern extreme reach of Middle River: from Highway 4 bridge at Victoria Canal south to confluence with the San Joaquin and Old Rivers.

LAND ACCESS: all types.

WATER LOGISTICS: SHALLOW WATER NEAR ISLANDS
Limitations: depth, obstruction

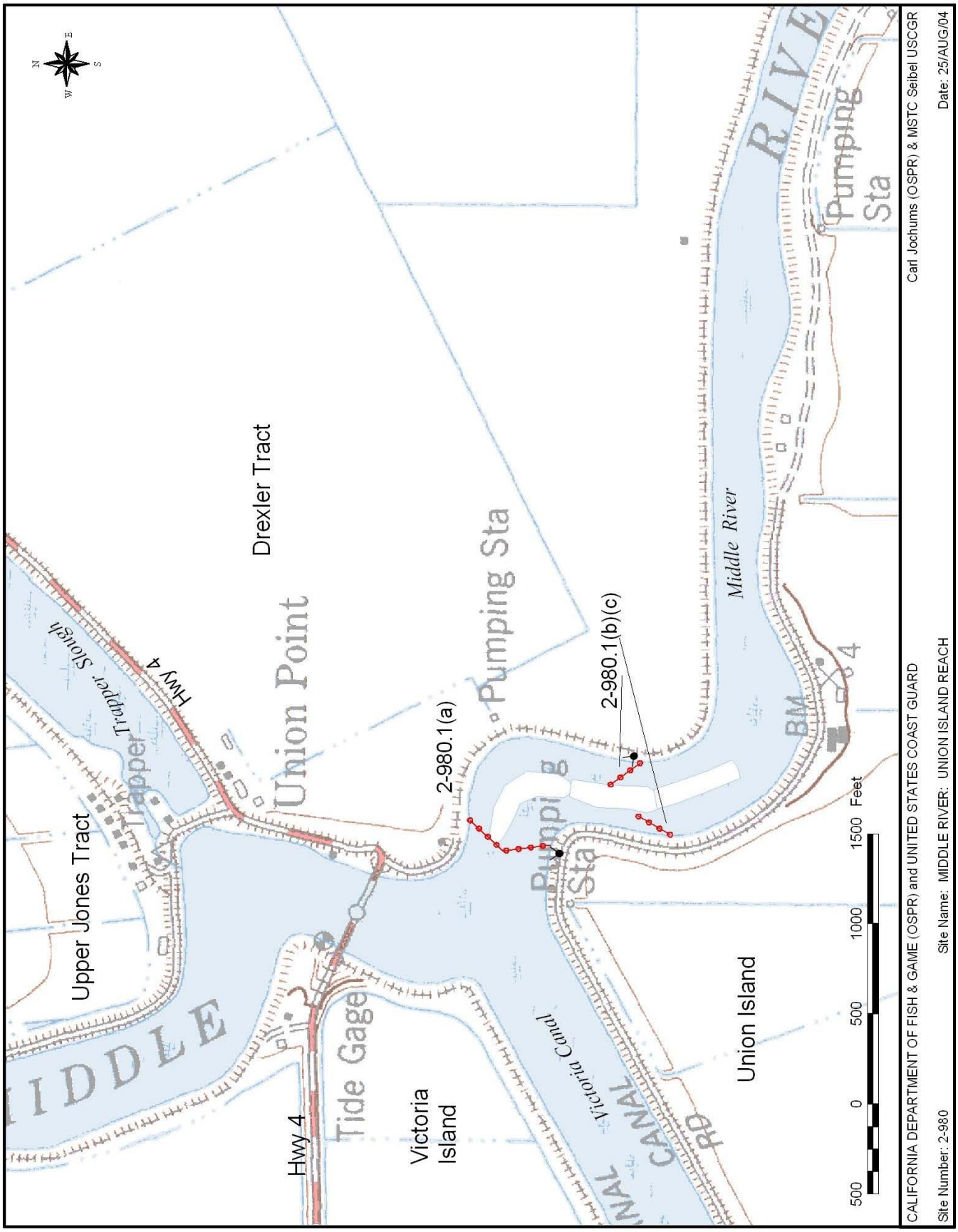
Launching, Loading, Docking and Services Available: Launch skiffs from levees and larger boats from Discovery Bay

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging along levees or at Union Point Resort

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

9849.2 Cultural and Other Resources at Risk

9849.21 Cultural Resources, Historic and Archeological Resources

See Section 9802.1 and individual Site Summaries
See Section 9840 for contact table

9849.22 Essential Fish Habitat – see Section 9802.2

9849.23 Other Resources at Risk - This section is reserved for specialized information regarding natural resources that occur in this particular geographic area; such as: seasonal migratory waterfowl and shorebird locations and densities; salmonid fish migration periods; or special considerations for eelgrass beds.

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9849.3 Economic Sites

Strictly economic resources are designated as the third priority for dedication of oil spill response resources, following human health and safety and environmental resources. The economic sites are ranked using a continuation of the environmental scale with D, E, and F categories. Economic resources that have a greater potential for long-term damages receive a higher rank or priority for emergency response.

The following criteria or definitions are used to categorize economic resources in terms of priority for response:

D = Economic activities and resources which require high water quality for their operations or existence. Resources that fall into this category would face severe, long-term economic impacts from a spill.

E = Facilities, businesses, or resources which directly use coastal or bay waters within their economic activity and which are at risk of oiling from a spill in marine waters. There sources falling into this category would face significant disruption of their activity, but shorter term potential damages from oiling that resources “D” category.

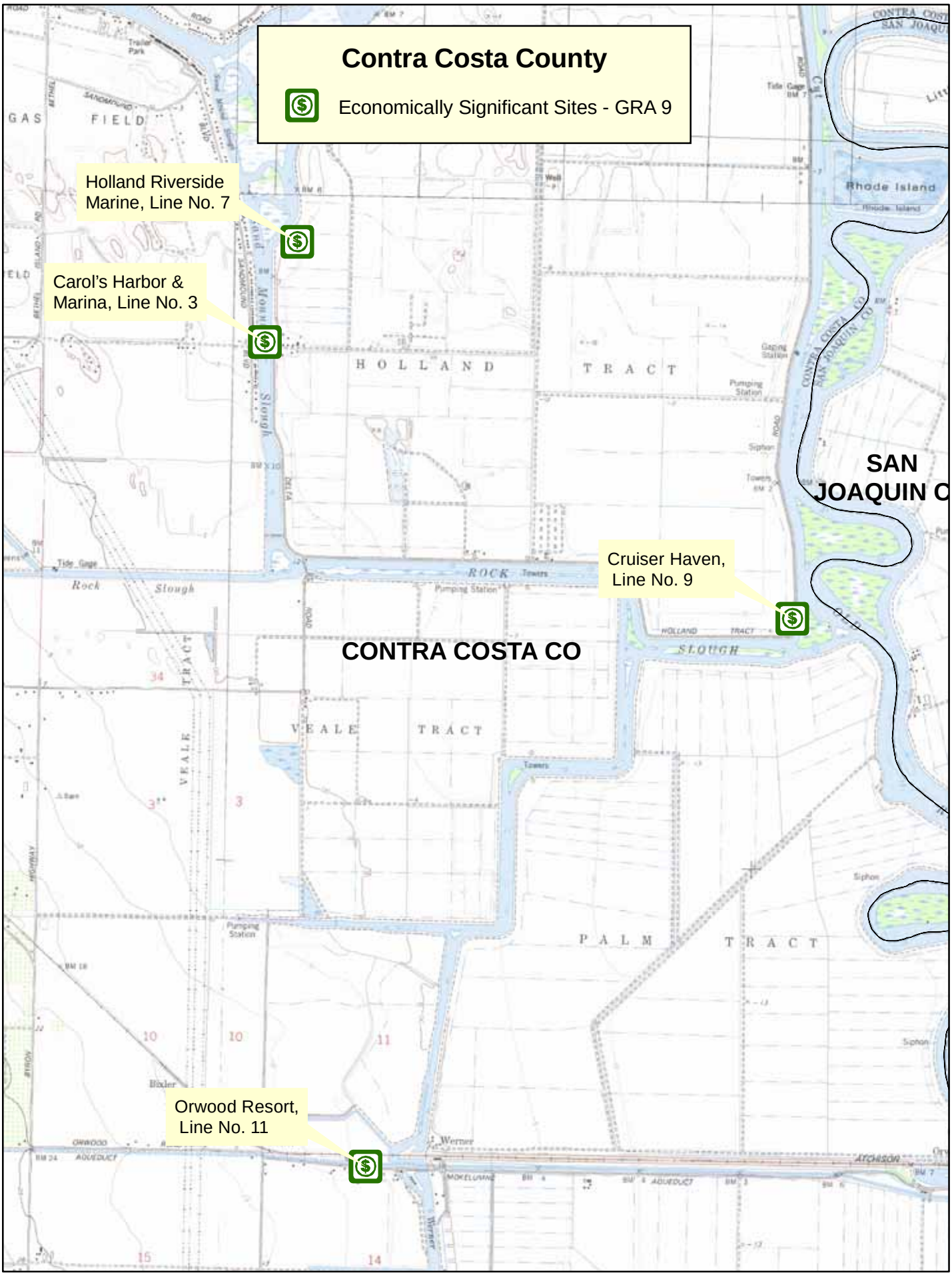
F = This category contains marine associated facilities, businesses and resources. These resources would face economic impacts from a marine spill, but do not depend directly on marine water for their economic base. Resources in this category will tend to face less severe damages than those identified in categories D or E.

In the following section, economic sites found within the GRA are listed in table format, which contain information such as latitude, longitude, economic sensitivity, etc. Following the table are diagrams denoting the location of an economically sensitive site(s). Diagrams are organized alphabetically by county, then numerically by map and site number.

Economic Sites in GRA 9								
Line No.	**County**	**Site Name**	**Site Description**	**Latitude**	**Longitude**	**Economic Sensitivity**	**Site Function**	**Site Address**
1	Contra Costa	Ann & Chuck's Boat Harbor		38.01	-121.62	E	Small Craft Harbor	4230 Stone Road, Bethel Island
2	Contra Costa	Beacon Harbor		38.03	-121.62	E	Small Craft Harbor	3861 Willow Road, Bethel Island
3	Contra Costa	Carol's Harbor & Marina		37.99	-121.62	E	Small Craft Harbor	4850 Sandmound Blvd., Bethel Island
4	Contra Costa	Delta Resort		38.02	-121.61	E	Small Craft Harbor	6777 Riverview Road, Bethel Island
5	Contra Costa	Franks Marina		38.02	-121.61	E	Small Craft Harbor	7050 Riverview Dr, Bethel Island
6	Contra Costa	Sugar Barge Marina		38.03	-121.61	E	Small Craft Harbor	1440 Sugarbarge Road, Bethel Island
7	Contra Costa	Holland Riverside Marine	(combined with #76 owners)	38.00	-121.62	E	Small Craft Harbor	4500 Holland Tract Road, Knightsen
9	Contra Costa	Cruiser Haven	Sacramento-San Joaquin Delta (Old River/Rock Slough)	37.97	-121.58	E	148 berths	7000 Holland Track Road Brentwood 94513
11	Contra Costa	Orwood Resort	Sacramento-San Joaquin Delta (Werner Dredger Cut)	37.94	-121.61	E	camping, boat launching and berthing facilities	4451 Orwood Road, Brentwood 94513
12	Contra Costa	Discovery Bay Yacht Harbor	Sacramento-San Joaquin Delta (South of Indian Slough)	37.90	-121.59	E	266 berths	5901 Marina Road, Byron 94514
13	Contra Costa	Lazy M Marina	Sacramento-San Joaquin Delta (Italian Slough)	37.84	-121.61	E		5050 Clifton Court Road #C, Byron 94514
18	Contra Costa	Lundborgh Landing	Sacramento-San Joaquin Delta (Frank's Tract)	38.02	-121.61	E	30 berths	6777 Riverview Road, Bethel Island 94511
49	Contra Costa	Sugar Barge Marina	Sacramento-San Joaquin Delta (False River)	38.03	-121.62	E		1415 Willow Road, Bethel Island 94511
14	San Joaquin	Whiskey Slough Harbor	Sacramento-San Joaquin Delta (Whiskey Slough)	37.93	-121.43	E		3401 South Whiskey Slough Road, Holt 95234
20	San Joaquin	Tiki Lagun Resort & Marina	Sacramento-San Joaquin Delta (Turner Cut)	37.98	-121.47	E	240 berths	12988 West McDonald Road, Stockton 95206
21	San Joaquin	Turner Cut Resort	Sacramento-San Joaquin Delta (Turner Cut)	37.98	-121.47	F	138 berths	12888 Neugebauer Road , Stockton 95206
22	San Joaquin	Bull Frog Bar & Grill	Sacramento-San Joaquin Delta (Middle River)	37.94	-121.53	F		17251 Bacon Island Road, Stockton 95219

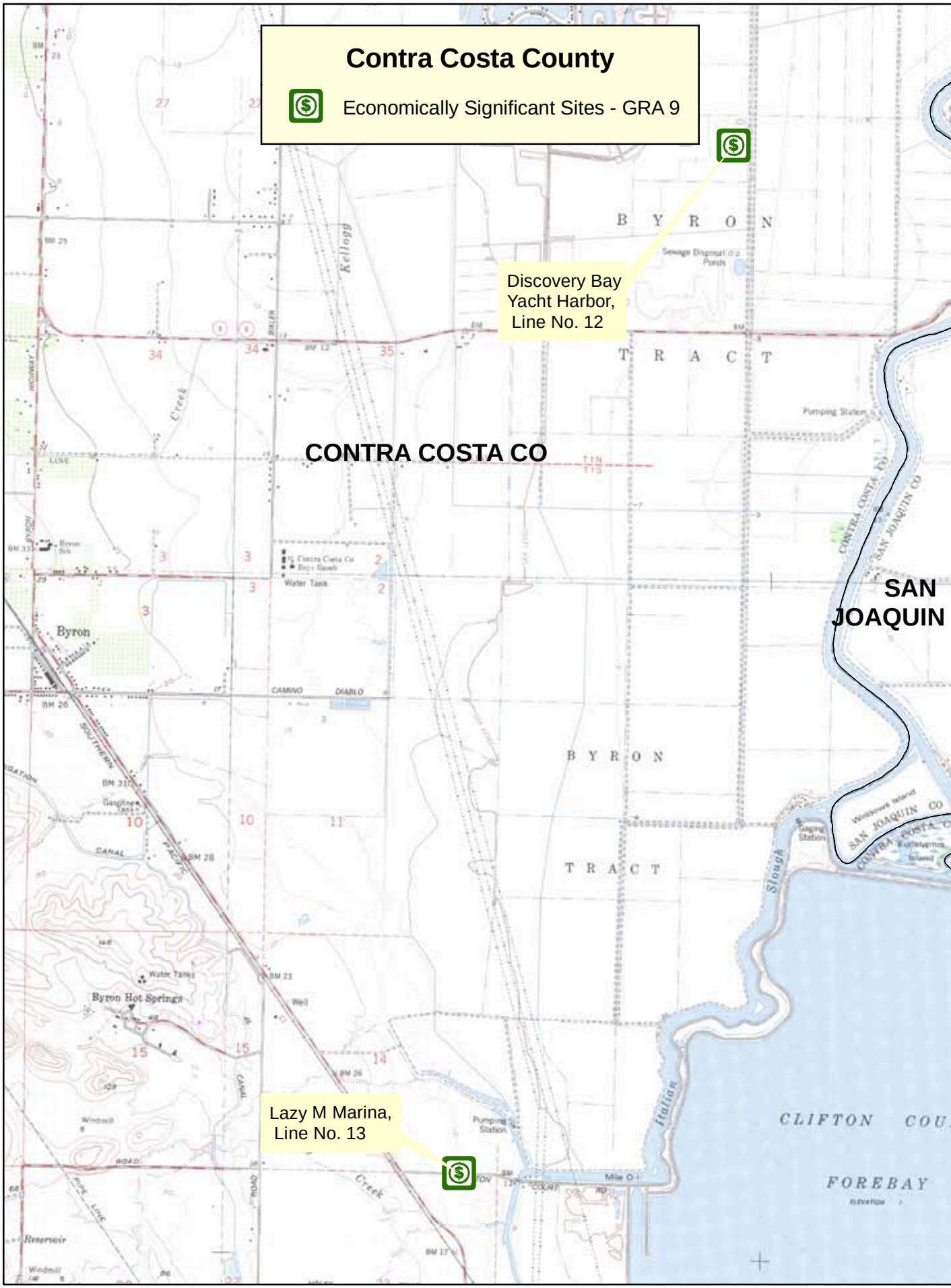
0 0.125 0.25 Miles

California Department of Fish and Game
Office of Spill Prevention and Response
Contra Costa Co, Layout 001



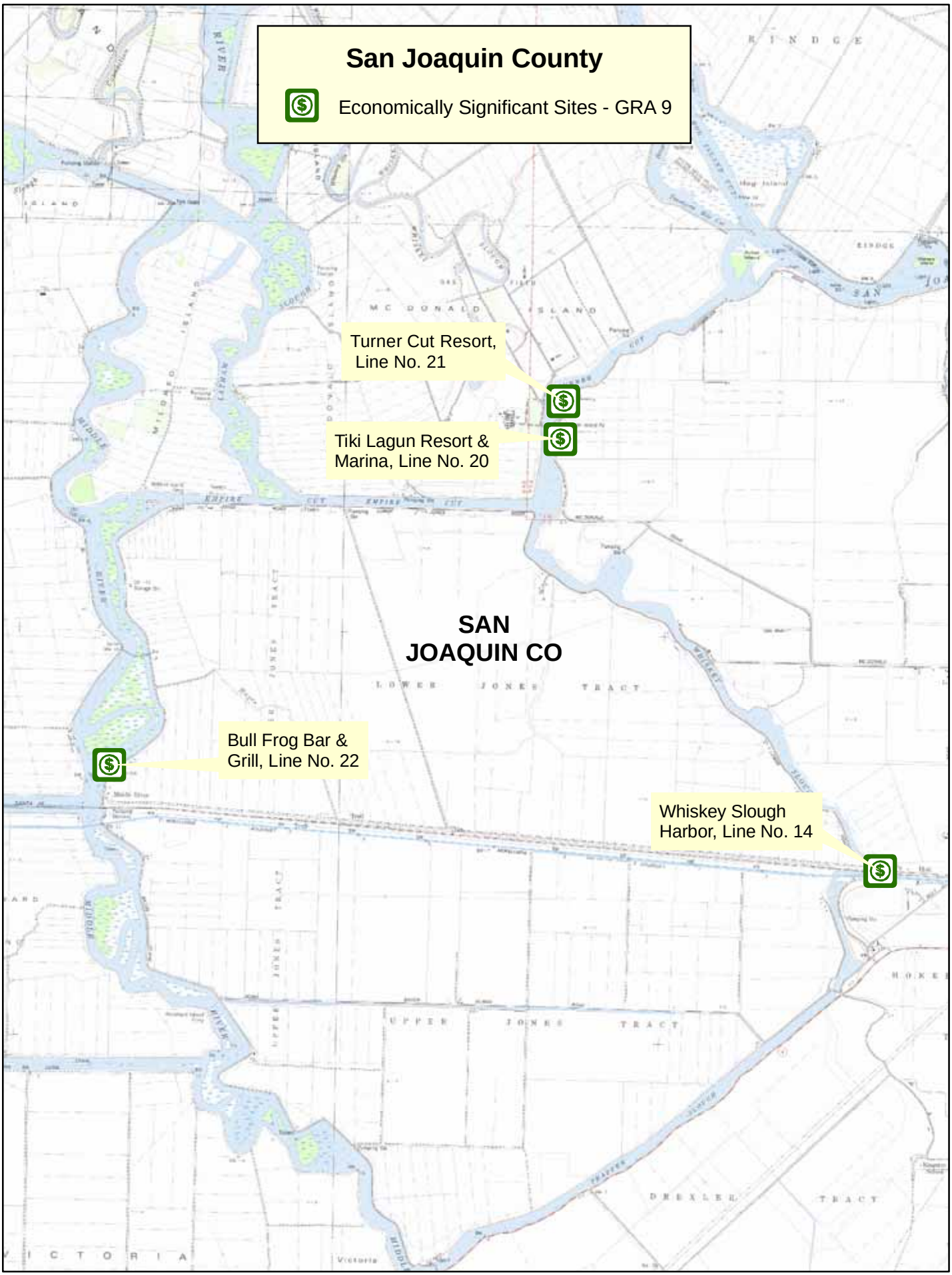
0 0.25 0.5 1 Miles

California Department of Fish and Game
Office of Spill Prevention and Response
Contra Costa Co, Layout 002



0 0.25 0.5 1 Miles

California Department of Fish and Game
Office of Spill Prevention and Response
Contra Costa Co, Layout 004



0 0.25 0.5 1 1.5 Miles

California Department of Fish and Game
Office of Spill Prevention and Response
San Joaquin Co, Layout 003

9849.4 Shoreline Operational Divisions

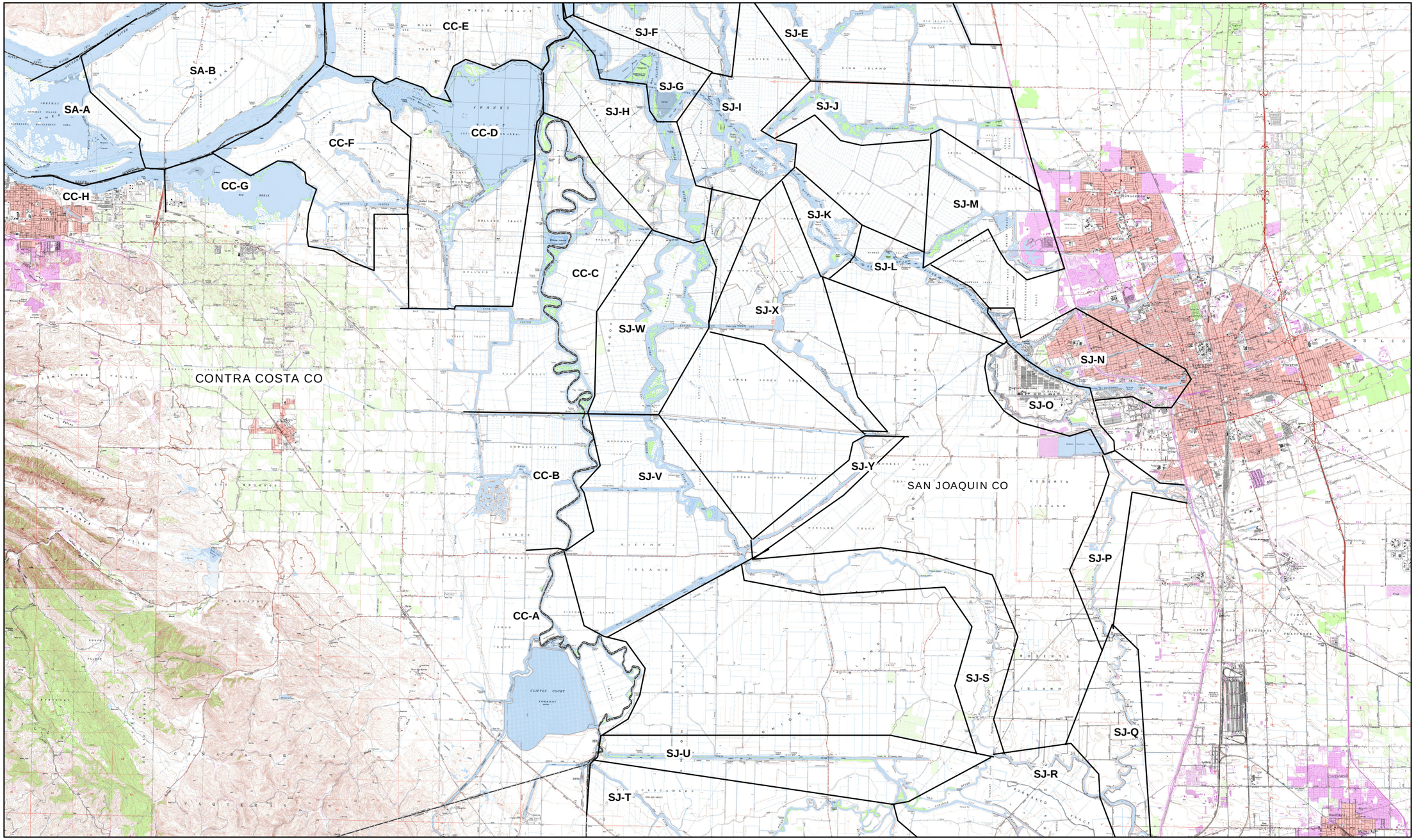
Shoreline Operational Divisions are presented in the ACP as front-loaded information to assist in rapid response planning to provide for quickly organized operational objectives and assignments along affected shorelines. The operational divisions have been developed in conjunction with the US Coast Guard, California Fish and Game OSPR, and various Oil Spill Response Organizations. Experience has demonstrated that in the earliest stages of spill response having organizational issues such as this prepared in advance is very useful to the response team.

The shoreline operational divisions are organized and named according to County boundaries. Within county domains, divisions are boundaries are guided by logical geo-political features such as coastal physical characteristics and land ownership/management issues, shoreline cleanup logistical considerations, and manageable sized coastline segments (generally not longer than about ten miles although some variation occurs.) Logistics, access, and manageability were driving considerations in this effort, particularly as it relates to types of cleanup operations required and problems likely to be present.

In ACP areas having more than one county, Shoreline Operational Divisions will utilize county codes followed by a single alpha character (A to Z). Shoreline operational divisions are labeled from north to south in each county. For example, the north-most operational division in Los Angeles County is “LA-A.” In large bays (i.e. San Diego), the labeling will progress in a clockwise direction to accommodate changing coastline angles. Divisions can be easily subdivided (as necessary) by the Operations Section management to provide for appropriate work assignment effort.

Double digit alpha characters (AA to ZZ) will be used for all offshore operational areas and any other special operational areas needed during response.

GRA - 9 Shoreline Operational Divisions



Source: C. Jochums

Legend

Division Line

DRAFT

0 2.5 5 10 Miles

ACP 2 - SF Bay & Delta - GRA 9

9849.4 - 2

October 1, 2008