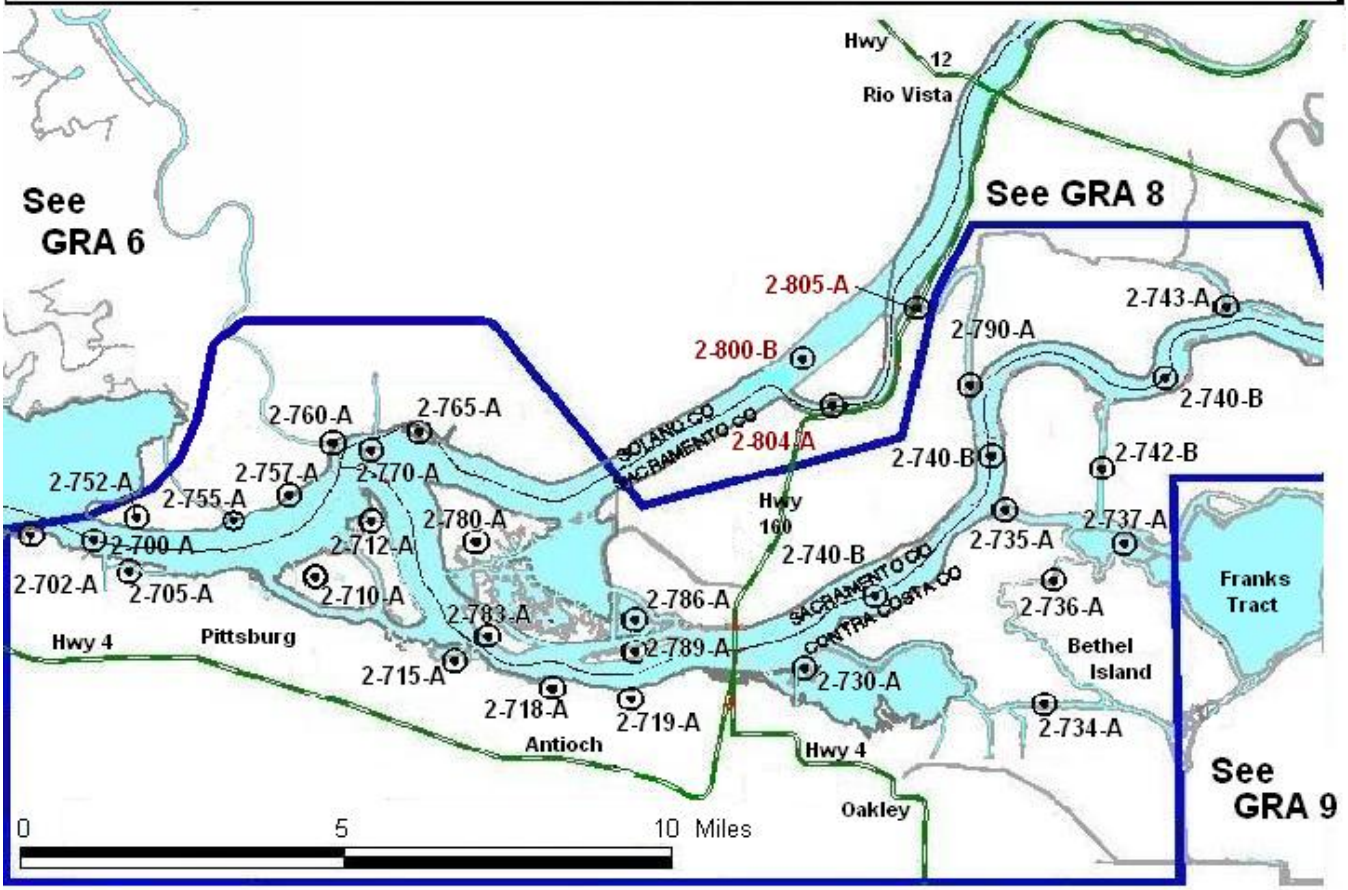
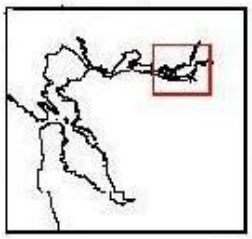
SF Geographic Response Area 7
West Delta - Pittsburg to Old River
Sensitive Sites and Resources at Risk





Note: Site markers [⊙] are only site references and do not indicate full extent of sites.

Section 9847 – GRA 7 West Delta

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Section 9847.2 Cultural and Other Resources at Risk

Section 9847.3 Economic Sites

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GRP 7 Site Index/Response Actions

Site ID	Priority	Site Description	Assignment	Date/Time Required	Date/Time Completed
2-700		Entrapment Zone			
2-702		Stake Point Marshes			
2-705		Mallard Island			
2-710		Brown's Island			
2-712		Winter Island			
2-715		Pittsburg-Antioch Marsh			
2-718		Antioch Dunes National Wildlife Refuge			
2-719		Antioch Dunes and Quarry Canyon			
2-730		Big Break Complex			
2-734		Dutch Slough East			
2-735		False River West			
2-736		Taylor Slough and West Piper Slough			
2-737		Little Franks Tract			
2-740		San Joaquin R: Sherman-Webb Reach			
2-742		Fishermans Cut			
2-743		Sevenmile Slough			
2-752		Chipps Island, Southern Side			
2-755		Spoonbill Creek			
2-757		Van Sickle Island			
2-760		Montezuma Slough - East Mouth			
2-765		Montezuma Island and Collinsville			
2-770		Chain Island			
2-780		Lower Sherman Isl-Sherman Lake			
2-783		Kimball Island - Cabin Slough			
2-786		Mayberry Slough - Donlon Island			
2-789		West Island			
2-790		Threemile Slough East			

Summary of GRA 7 West Delta Response Resources by Site and Sub-Strategy

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 to tend
2-700	**Entrapment Zone**															
.1	-	**skimming diversion collection - minimize the oil on the surface of the bay.**														
	0									TSA & S						
2-702	**Stake Point Marshes**															
.1	-	**Exclusion at mouths of 6 tidal channels to inner marshes.**														
	2000			600	22	4/22+ & 6/12+/danforths, 12 st	2	2							10	
.2	-	**Protective booming of bayfront emergent marsh margin from oil penetration**														
	0	10000			25	15/25lb/danforth anchor	4	2							25	
2-705	**Mallard Island**															
.1	-	**Exclude oil from entering inner sloughs using exclusion booming of slough mouths.**														
	2200			400	12	8/25 & 4/15lb/danforth	3	2							14	
.2	-	**Collection strategy for oil from east after implement the primary protection/exclusion strategy.**														
	300		50 OS	200	2	2/25lbs/danforth	1	1	1	SSS					2	
.3	-	**Protective booming of emergent marsh frontage on Suisun Bay side of Mallard Island by deploying one or more layers of b**														
	0	3200			8	8/25lb/danforth	3	2							15	
2-710	**Brown's Island**															
.1	-	**Exclusion Booming if oil is moving from east or south side toward site: Deploy exclusion booming at Middle Slough, small**														
	2400	2000	50 OS	1100	12	12/22+ ./danforths	4	2							12	
.2	-	**Exclusion Booming: if oil is moving from west toward site: Deploy exclusion booming from Pt. Emmet to the creek mouth**														
	600	2000	50 OS	600	6	6/22+ lbs./danforths	2	2						Bboat: very shallow draft	10	
.3	-	**Oil Recovery by Shoreside skimming**														
	0	0	0	0	0		0	0	2	SPS	0					
2-712	**Winter Island**															
.1	-	**Extend exclusion-deflection chevron to fend past Pt. San Joaquin Marsh and Mudflats from oil threats from the west**														
	6000				13	13/50lb/danforth anchors	6	4							26	
.2	-	**Exclusion for oil threats from east- exclude oil entry to north cross channel and easterly barrow channel with small boom**														
	0	700			8	8/15lb/danforths	1	3						Bboat: shallow draft	9	
2-715	**Pittsburg-Antioch Marsh (Dow Wetlands)**															
.1	-	**Exclude oil from entering the marshes: booming levee breeches at Antioch Pt. & and small openings, mouth of Contra Cos**														
	900	350		800	5	5/22+/danforths with chain & st	2	1						Bboat: 1 very shallow	8	
.2	-	**Deflect oil away from sensitive areas on Flood tide**														
	1000				6	6/22+/danforths + chain	2	1							8	
.3	-	**Deflection on Ebb tide: deflect oil away from and past sensitive areas.**														
	600				6	6/22+/danforths + chain	1	0							3	
.4	-	**Protective booming of shoreline of marsh to the east of Antioch Marina.**														
	0	800			3	3/12+/danforths & stakes	1	1							5	
2-718	**Antioch Dunes National Wildlife Refuge**															
.1	-	**On water skimming using mobile skimmers and towed skimming arrays.**														
	0															
.2	-	**Deflect oil away from this shoreline**														
	100				2	2/22+/danforths with chain	0	1							2	
.3	-	**Diversion to collection when heavy amounts of oil are moving along shore, deploy nearshore containment just outside the**														
	100	50	50 OS	100			0	1	1	SSS					2	
2-719	**Antioch Dunes and Quarry Canyon**															
.1	-	**NEAR SHORE CONTAINMENT AND RECOVERY - Shoreside skimming**														
	100	50	50 OS	100			0	1							2	
2-730	**Big Break Complex**															
.1	-	**Exclude oil from entering open waters of Dutch Slough, Big Break and west flooded area by exclusion/diversion boom ope**														
	4800			200	14	14/22+lbs/danforth & stakes	4	4						Bboat: very shallow draft	25	
.2	-	**Deflection on ebb: Deflect oil away from entrance to Dutch Slough and Big Break into main channel to deter oil from enteri**														
	2500				10	10/22+/danforth	4	2							14	
.3	-	**Protective booming of marsh front: west side marshes**														
	0	3600			8	8/12+/danforths and stakes	2	8						Bboat: very shallow draft	26	
.4	-	**Deflection On Flood: deflection to past site and keep it in the main channel**														
	2500				16	16/22+/danforths	4	2							14	
2-734	**Dutch Slough east**															
.1	-	**For product originating within this site, diversion to collection as close to source as possible.**														
	0	1500			2	2/22+/danforths & Stakes	1	1		SPS					7	

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 to tend
.2 -	For oil threats from Big Break side, deploy multiply collection/exclusion booming to collect at Jersey Isl land skimming sit															
	0	600	50	OS	100	5	5/25lbs/danforth anchors	1	0						5	
.3 -	Exclusion at east end for oil threats from Sand Mound Slough.															
	0	700				3	3/25lbs/anchor	1	1						5	
.4 -	Oil Recovery with Shoreside skimming															
	0	0	0		0	0		0	0	1	SSS	0				
2-735	False River															
.1 -	deflection/exclusion booming at the mouth False River from the San Joaquin.															
	3400		50	OS	100	11	1/50 & 10/25lbs/danforth + cha	4	4					extra anchor line.	24	
.2 -	Back-up deflection to collection of oil which has entered False River.															
	3000		50	OS	100	12	6/50lbs& 6/25lbs/danforths	4	2					1000'anchor lines	14	
.3 -	Oil recovery with shoreside skimming															
	0	0	0		0	0		0	0	3	SSS	0				
2-736	Taylor Slough and west Piper Slough															
.1 -	For local spills, halt oil movement at the source and recover as close to source as possible. Prevent further spread in slou															
	0	400	50	OS	100	4	4/15lbs/anchors	0	1						3	
.2 -	Exclusion boom mouth of Taylor (but only if False River deployments fully supplied) for threats from False River.															
	0	1300				4	4/25lbs/danforths & stakes	1	1						5	
.3 -	Oil Recovery by Shoreside skimming															
	0	0	0		0	0		0	0	1	SSS	0				
2-737	Little Franks Tract															
.1 -	deflection-collection boom to strand oil on Bradford Tract shore for collection, if exclusions at False River faulter.															
	1000					4	4/25lb/danforth + chain & stak	2	1	1					8	
.2 -	Oil Recovery by Shoreside skimming															
	0	0	0		0	0		0	0	1	SSS	0				
2-740	San Joaquin River - Sherman/Webb Reach															
.1 -	Diversion to confinement/collection at windfall locations along shore to reduce degree of spread and oiling.															
	2000		50	OS	100	8	8/12+/danforths	1	1						5	
.1 -	Exclude/protect berm islands & barrow channels															
	0	16100			4000	30	30/22+/danforths & stakes & li								36	
.3 -	Oil Recovery by Shoreside skimming															
	0	0	0		0	0		0	0	4	SSS	0				
2-742	Fishermans Cut															
.1 -	Exclude oil from entering from San Joaquin and protect berm islands.															
	2000					8	8/22+/danforths + chain + line	2	1						8	
.2 -	Divert to confinement within cut any oil entering form either end - do not allow escape to Frank's Tract.															
	0	750	50	OS	100	5	5/20lb/danforth + chain + line	1	1						6	
.3 -	Oil Recovery by Shoreside skimming															
	0	0	0		0	0		0	0	1	SSS	0				
2-743	Sevenmile Slough															
.1 -	Exclude oil from moving into protected channels inside channel islands which front the slough mouth and protect the isla															
	0	3600				8	8/15lb/danforth	2	2					Bboat: very shallow draft	14	
.2 -	Deflection to collection/confinement on Andus Island shore if substantial oil patches are threatening the Andrus or Twitch															
	0	1200	50	OS	100	4	4/25lb/danforth	1	1						5	
.3 -	Oil Recovery with shoreside skimming															
	0	0	0		0	0		0	0	2	SSS	0				
2-752	Chips Island, Southern Side															
.1 -	Exclude oil from entering inner channels and marshes by exclusion booming of the openings of the outer levee.															
	300		1200		300	30	12/12+/danforths & 18 stakes	2	1					Bboat: shallow draft	8	
.2 -	Protect emergent marsh at east tip and pocket cove near west tip against oil penetration															
	0	3100				5	5/22+/anchors & stakes	3	2					Bboats: shallow draft	13	
2-755	Spoonbill Creek															
.1 -	Exclude oil from entering the southern end of Spoonbill Creek by deploying deflection boom in the Sacramento-San Joaqu															
	3000					3	3 - 25 lb danforth, 30' chain, 10	5	1						11	
.2 -	Back-up to exclusion, diversion to shore-side collection out of current (usually Chipps shore) to prevent movemnt toward															
	0	1500			500	2	2	2	1						6	
.3 -	An alternative to the previous collection strategy is to collect oil entering Spoonbill Creek with a vessel mounted skimmin															
	1000				500	2	2	2	1	1	self pro					
2-757	Van Sickle Island															
.1 -	Exclude oil from small sloughs and from slough behind berm island at mouth and deploy protective boom to along emerg															
	0	3500				8	8/25lb/danforths	2	1						16	

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 to tend
2-760	***Montezuma Slough - East Mouth***														
.1	**-**	**Stop oil entrainment into slough by stopping through current.**													
	0												contact DWR		
.2	**-**	**Exclude oil from entering mouth by configuring exclusion boom to fend oil away from mouth as to exclude.**													
	3000				8	8/25lb/danforth + chain + line	3	2						13	
.3	**-**	**Backup strategy to above exclusion if oil circumvents exclusion.**													
	0	500		500	6	4/25lb & 2/10lb/danforths	1	1						5	
2-765	***Montezuma Island and Collinsville***														
.1	**-**	**At the east end of Montezuma Island, deflect oil away from mouth and exclude it from entry to north side of channel.**													
	2000				8	8/25lb/danforths	4	2					extra line	14	
.2	**-**	**deflect oil away from shoreline and close north side channel mouth at the west end of Montezuma Island,**													
	1500				8	8/25lb/danforths + chain + line	3	2						13	
2-770	***Chain Island***														
.1	**-**	**Deflect oil away from the emergent marshes at each end and away from the Island.**													
	6000	4500			12	2/50 & 10/12+danforths	6	5					Bboats: very shallow draft	28	
2-780	***Lower Sherman Island - Sherman Lake Complex***														
.1	**-**	**Primary: Exclusion by chevron boom for oil threat from San Joaquin River side: deflection-exclusion booming on outside**													
	500				4	3/22+ & 1/12+/danforths	1							3	
.2	**-**	**Primary for Sacto oil threat: exclude and deflect oil away at Sacto River openings to Sherman Lake**													
	3800				12	12/22+/danforths & stakes	4	4					Bboat: very Shallow draft	25	
.3	**-**	**Backup to San Joaquin exclusion (2-780.1) - when oil entrains past primary exclusion.**													
	0	1500	100	OS 500	8	12#+/danforths	1	0	0	SPS	0			3	2
2-783	***Kimball Island - Cabin Slough***														
.1	**-**	**Exclude oil entry at westerly end of Cabin Slough - wind chop is a problem here.**													
	1500			500	4	4/50lb/danforths & stakes	3	3					Bboats: very shallow draft	15	
.2	**-**	**Deflection/Exclusion booming of marsh at west end of Kimball Island and fend oil past.**													
	0	6000			8	8/25lb/danforth & stakes	6	6						30	
.3	**-**	**Exclude oil at east end of Kimball Island, from penetrating marshes, channels, pockets and Cabin Slough**													
	3500			600	8	8/25lb/danforths & stakes			6/6				bboat: very shallow draft	35	
2-786	***Mayberry Slough - Donlon Island***														
.1	**-**	**On the EBB: Exclude / deflect oil at Mayberry Slough and Mayberry Cut mouths and at three large openings into Donlon Isl**													
	3000			1000	21	13/22+ & 8/12+lb/danforths	3	1						11	
.2	**-**	**Exclude oil entry to interior of Donlon Island through porus southern levee**													
		4500		1000	30	5 small anchors 25 stakes	2	1						8	
.3	**-**	**On the EBB at Mayberry Slough mouth : Backup deflection/exclude to shoreside collection/confinement by deflection on o**													
		1000	50	OS 100	13	5/22+ & 8/12lb/danforths		1					Bboats: shallow water	2	
.4	**-**	**Oil recovery with shoreside skimming when heavy oil or other skimmable quanties of oil occur**													
	0	0	0	0	0		0	0	2	SSS	0				
2-789	***West Island***														
.1	**-**	**Exclude oil from entering interior island marshes and from penetrating marshes along western tip.**													
	4500				11	11/25lb/danforths			4/4				Bboat: very shallow draft	6	
2-790	***Three Mile Slough - San Joaquin River***														
.1	**-**	**Primary exclude at mouth on San Joaquin to prevent spreading to Sacramento River side. Oil can move through slough on**													
	3500				9	8/50lb/danforths + chain + line	2							6	
.2	**-**	**Diversion to shoreside confinement for collection**													
	3000	0	50	100	8	8/50lb/danforths + chain + line	2	0	0		0			6	
.3	**-**	**Oil Recovery when heavy oil threatens and skimmable oil accumulates**													
	0	0	0	0	0		0	0	2	SPS/SS	0				

Site Summary- Entrapment Zone

2-700 -A

County:	Contra Costa, Solano, Sacramento	Thomas Guide Location	Latitude N	Longitude W
			3 8 02	121 49
USGS Quad:	Honker Bay, Antioch North	NOAA Chart: 18656 Suisun Bay		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

The location of this site moves back and forth with the tide and also with the seasonal river outflow. Although it is not a discrete physical location, it is a very precise water column - salinity locale. The entrapment zone is an open water zone where the fresh waters of the Sacramento and San Joaquin rivers meet and mix with the saline bay waters. Its location is variable depending upon seasonal outflow and tides and tends to be between Honker Bay and Antioch but during times of high outflow has been as far west as Carquinas Straits. In this mixing zone, suspended organics and nutrients tend to accumulate, creating a highly biologically-productive area. This them becomes an important feeding area for all manner of creatures from zooplankton, to fish larva, fry and smolts, to adults Delta and longfin smelt to striped bass. There is no strategy to protect this area except open water skimming to minimize degree of product contact and dissolution.

SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority year-round

RESOURCES OF PRIMARY CONCERN

The area is of major importance to juvenile fish, adult fish and migratory waterfowl. It is the most important nursery area for most migratory species and other important fish and invertebrate stocks in the Delta and river system.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is open water and not likely to include historic or cultural resources. 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
	Chuck Armor	CA Dept. of Fish & Game, Bay/Delta	(209) 944-7800
	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:

2-700 -A Site Strategy - Entrapment Zone

2-700 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa, Solano, Sacramento	18656 Suisun Bay	3 8 02	121 49

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concern for this site is water column toxicity. Most of the larval invertebrates and juvenile fish of the Delta depend on this salinity zone.

HAZARDS and RESTRICTIONS:

none identified

SITE STRATEGIES

Strategy 2-700.1 Objective: minimize the oil on the surface of the bay.

ACP DATE 10/1/1997

There is no protective strategy for this site because the site traverses with the tide. Only on-water collection can mitegate the oil presence or threat.

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
2-700.1	0									TSA & S				

LOGISTICS

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

The entrapment zone is the mixing zone of river and bay waters. It is only approachable by water. The location of this site moves back and forth with the tide and also with the seasonal river outflow. Although it is not a discrete physical location, it is a very precise water column - salinity locale.

LAND ACCESS:

WATER LOGISTICS: N/A

Limitations: depth, obstruction

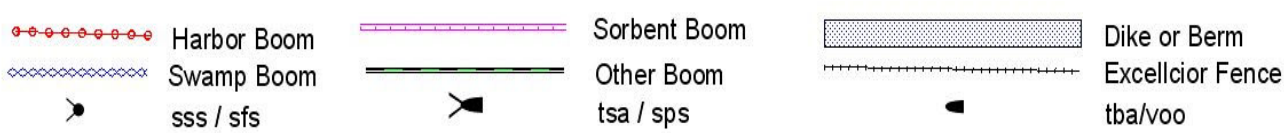
Launching, Loading, Docking and Services Available: Pittsburg, McAvoy's, Martinez.

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

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

There is NO Strategy Diagram for This Site



Site Summary- Stake Point Marshes

2-702 -A

County:	Contra Costa	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Honker Bay	NOAA Chart: 18656 Suisun Bay	3 8 03	121 57

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This marshy area on the Contra Costa shore of east Suisun Bay extends from the entrance to McAvoy's Marina east to the water intake slough at Mallard Island. It is an extensive marsh system with multiple small channels fingering channels. Most of the channels are small but three are extensive including two dead-end channels which run straight south for over a quarter mile into the land. The third channel is in the east end and winds extensively and has inlets to the levied interior marshes. The front marsh is saline tule with some pickle weed. Marshes inland are fresh with some large expanses of cattail. Thought the marshes are grazed by cattle, there is extensive wildlife habitation by mammals and birds. The Bay front is alternating eroding and accreting.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including the following special status species: California black rail, saltmarsh harvest mouse.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
	Steve Gallo	Pacific Gas & Electric Company	(510) 801-5384
	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:

2-702 -A Site Strategy - Stake Point Marshes

2-702 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	3 8 03	121 57

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Inner channels and marshes as well as waterfront marshes are vulnerable to oil penetration - primary concern is to exclude tidal channels. Responders should minimize trampling of vegetation and tracking oil into marshes and sediments. Tiny endangered plants and animals are present and may be underfoot.

HAZARDS and RESTRICTIONS:

Shallows.

SITE STRATEGIES

Strategy 2-702.1 Objective: Exclusion at mouths of 6 tidal channels to inner marshes.

ACP DATE 10/1/1997

Set 8x8+ Cboom across all six openings in diagonals or chevron formations. Anchor near shore and leave a trailing boom end to insure tidal seal. Back with sorbent.

Strategy 2-702.2 Objective: Protective booming of bayfront emergent marsh margin from oil penetration

ACP DATE 10/1/1997

Anchor 6X2+ protection boom anchored off marsh margin. If windchop is likely to wash oil over the boom, then double boom: deploy a second layer of boom. Smaller boom or sorbent boom my be used for the second layer only if it is deployed between the 6x2+ and the marsh. Provide for oil skimming/collection if oil is likely to be collecting between the booms.

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
2-702.1	2000			600	8	4/22+ & 6/12+/danforths, stakes	3	2					13	
2-702.2	0	10000			25	15/25lb/danforth anchor	4	2					25	

LOGISTICS

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

There is no vehicle access to this site. By water, the site is immediately upstream from McAvoy's Marinas. This marshy area on the Contra Costa shore of east Suisun Bay extends from the entrance to McAvoy's Marina east to the water intake slough at Mallard Island.

LAND ACCESS: NO VEHICLE ACCESS TO WATERFRONT

WATER LOGISTICS: GOOD AT MED TO HI TIDE

Limitations: depth, obstruction

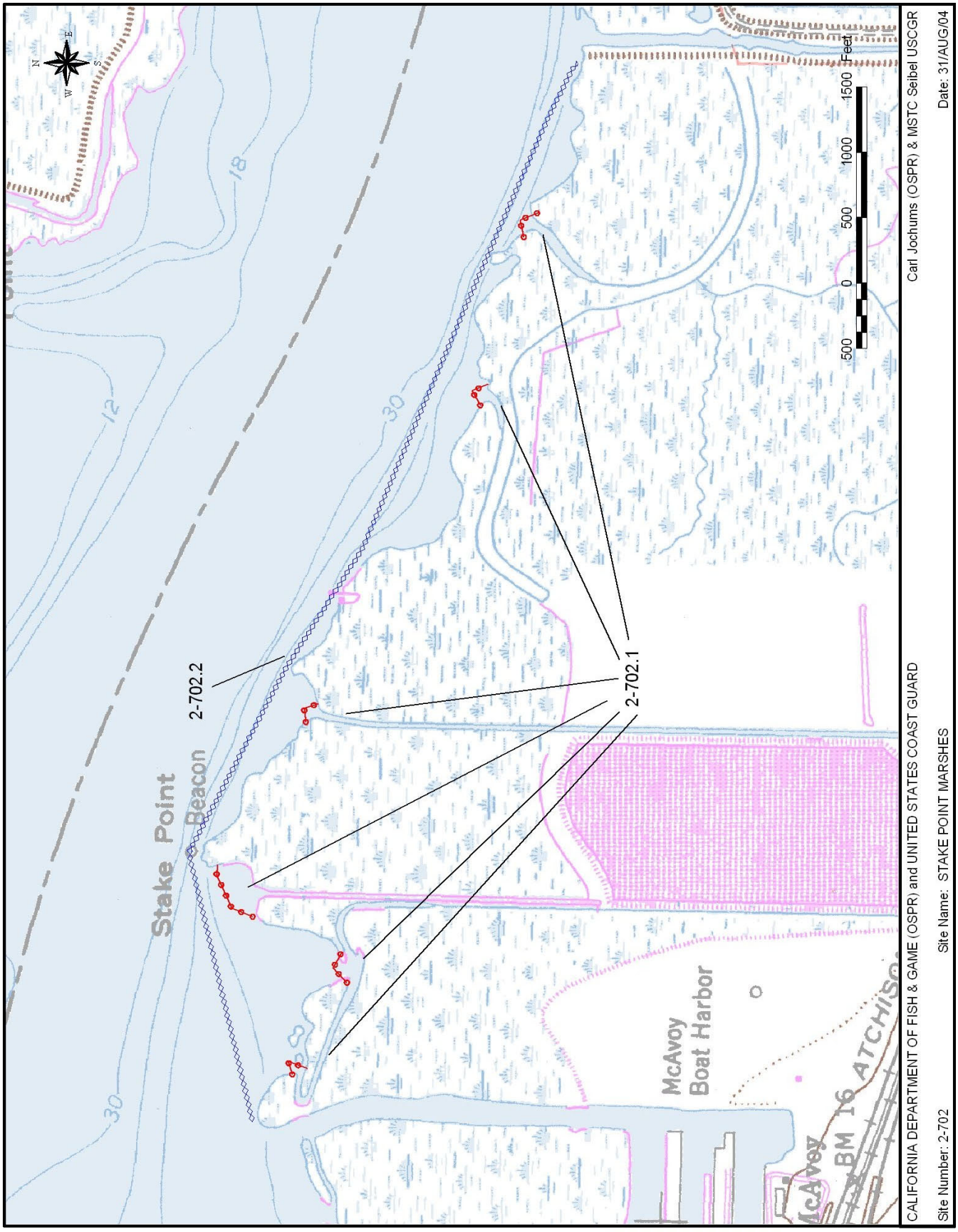
Launching, Loading, Docking and Services Available: Launch and complete marina facilities are available at McAvoys Marinas at west boundryt, and at Pittsburg Marina and public ramp to 3 miles east.

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

Both Pittsburg and McAvoys provide excellent staging or deployment sites. Diverse facilities are available at both. Security is more an issue at Pittsburg.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Mallard Island

2-705 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 02	Longitude W 121 55
USGS Quad:	Honker Bay	NOAA Chart: 18656 Suisun Bay		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

All of Mallard Island and Slough on the Contra Costa shore of Suisun Bay, including the slough at the west edge of Mallard Island and the emergent marshy islands east of Mallard island. The site has emergent marsh along most margins. The mainland marsh to the south of Mallard Slough is protected behind a riprap levee and is isolated from spills providing that the flood gate just east of Mallard Island is closed. Mallard Island is partially protected by levees along the north shore and some banks are eroding, but is open on the south shore. One of the sloughs deadends at the "pump house, " a local landmark for the area. The area has both cattail and tule marsh.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including the following special status species: California black rail, saltmarsh harvest mouse.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
	Steve Gallo	Pacific Gas & Electric Company	(510) 801-5384
	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000
	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:

2-705 -A Site Strategy - Mallard Island

2-705 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	3 8 02	121 55

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Inner channels and marshes as well as waterfront marshes are vulnerable to oil penetration. Responders should minimize trampling of vegetation and tracking oil into marshes and sediments. Tiny endangered plants and animals are present.

HAZARDS and RESTRICTIONS:

Shallow in inner sloughs.

SITE STRATEGIES

Waters are deep along river frontage of site.

Strategy 2-705.1 **Objective: Exclude oil from entering inner sloughs using exclusion booming of slough mouths.** ACP DATE 10/1/1997

Lay 8x8+ curtain boom across slough openings - 3 openings. Deploy a shallow chevron configuration using mid-boom anchor. The east Mallard Slough mouth requires about 2000' of curtain boom at a long diagonal to the riprap point to the east. Anchor near shore and leave a trailing length to achieve a tidal seal. Double boom or back with sorbent boom.

Strategy 2-705.2 **Objective: Collection strategy for oil from east after implement the primary protection/exclusion strategy.** ACP DATE 10/1/1997

Set 8x8+ curtain boom from riprap levee point east of Mallard Island at an acute to the east. To collect oil that may accumulate use 50ft of Oil Snare (OS), 100ft of sorbent boom. Contact IC if oil accumulates in skimmable quantities. Deploy Shoreside Skimming from shoreline - Access though Power plant.

Strategy 2-705.3 **Objective: Protective booming of emergent marsh frontage on Suisun Bay side of Mallard Island by deploying one or more layers of boom.** ACP DATE 10/1/1997

Set 3200 ft of 6x6+ Cboom along entire north margin of Mallard Island. If wind chop is likely to exceed boom floatation a second lay of boom will be necessary: if two layers are necessary, the inner layer may be 4X4+. Keep boom layers at least 6' apart and prepare for skimming oil which will collect between them.

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
2-705.1	2200			400	12	8/25 & 4/15lb/danforth	3	2				14	
2-705.2	300		50 OS	200	2	2/25lbs/danforth	1	1	1	SSS		2	
2-705.3	0	3200			8	8/25lb/danforth	3	2				15	

LOGISTICS

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

Access by vehicle is through PG&E power plant off Willow Pass Road in Pittsburg. By water, the site is about two miles east of McAvoys and a mile west of Pittsburg. All of Mallard Island and Slough on the Contra Costa shore of Suisun Bay, including the slough at the west edge of Mallard Island and the emergent marshy islands east of Mallard island.

LAND ACCESS: ALL WEATHER/TRAFFIC LEVEE ROAD

WATER LOGISTICS: GOOD DRAFT AT MED TO HI TIDE
Limitations: depth, obstruction

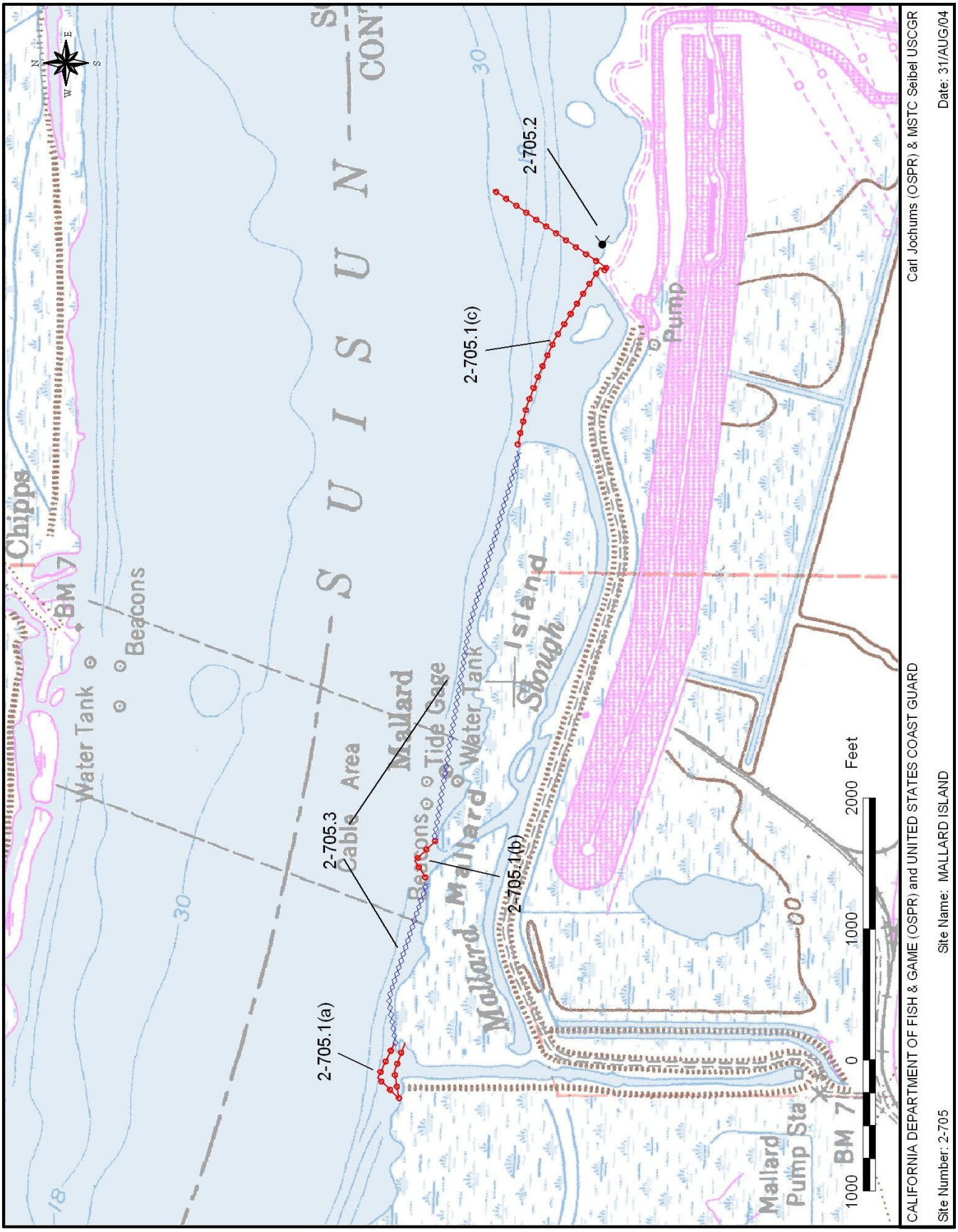
Launching, Loading, Docking and Services Available: Launch and complete marine facilities are available at McAvoys Marina 2 miles west and at Pittsburg Marina's public ramp to the east.

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

Both Pittsburg or McAvoys provide excellent staging or deployment sites. Diverse facilities are available at both. Security can be an issue at Pittsburg.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Brown's Island

2-710 -A

County:	Contra Costa	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Antioch North	NOAA Chart: 18656 Suisun Bay	3 8 03	121 05

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes all of Brown's island and Middle Slough just to the east. This island at the eastern end of Suisun Bay is surrounded by channels more than one quarter mile wide. It is part of the East Bay Regional Parks land. It is covered with marshes, lagoons, and waterways. The island has three plant communities including freshwater marsh, willow scrub, and riparian forest. It is not diked

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

The site contains the rare plant species Suisun Marsh aster, Aster chilensis ssp. Lengths, delta tule pea, Lathyras jepsonii var. Jepsonii, and Mason's lilaeopsis masonii. Also, the area is of major importance to migratory waterfowl.

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
	Joseph Didonato Stewardship Manager	East Bay Regional Park District	(510) 544-2346
	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
	Bill Nichols	East Bay Regional Park District	(925) 228-0112
	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752
	Mark Ragatz Shoreline Parks Manager	East Bay Regional Park District	(510) 715-7784

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Brown's Island

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	3 8 03	121 05

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concern is that the entire Island is a marsh with marshy margins which are vulnerable to oil. Of greater concern are the slough openings which would more than double the exposure. Closing sloughs and keeping oil off shorelines are the objectives. Responders should minimize disturbance of vegetation and avoid tracking oil into marsh and sediments.

HAZARDS and RESTRICTIONS:

Shallows, particularly on the north side.

SITE STRATEGIES

Strategy 2-710.1 **Objective: Exclusion Booming if oil is moving from east or south side toward site: Deploy exclusion booming at Middle Slough, small openings and channels, and marshy southeast corner.** ACP DATE 10/1/1997

Establish boom to capture oil at the mouth of Middle Slough using 8X8 + boom anchored to channel islands on each side. Deploy 1500 ft. of 4X4 + boom from the skimming boom along the emergent marsh at the southwest corner of the island. Block the mouth of Winter Island channel with 4X4 + boom with sorbant backing. Boom the slough mouth between G3 and G5 with 4X4 boom with sorbant backing. Place sorbant blocking in any other openings to interior sloughs. To collect oil in case of accumulation, use 50ft of oil Snare (OS), 100ft of sorbent boom. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-710.2 **Objective: Exclusion Booming: if oil is moving from west toward site: Deploy exclusion booming from Pt. Emmet to the creek mouth on the northwest shore of Brown's Island, and at all inlets on the remaining shoreline.** ACP DATE 10/1/1997

Deploy 2000 ft of 4X4 + boom from Pt. Emmet to the creek mouth, a backup 4X4 and sorbant across creek mouth, and boom the mouth of slough opening halfway to Middle Slough (back with sorbant boom). Set 600' of 8X8 + boom across the northerly mouth of Middle Slough. Set up boom anchored to channel levee in the "pocket" just east of Middle Slough mouth and place sorbant booms on the channels inside the pocket. To collect oil in case of accumulation, use 50ft of oil Snare (OS), 100ft of sorbent boom. Contact IC if oil accumulates in skimmable quantities

Strategy 2-710.3 **Objective: Oil collection** ACP DATE

If oil accumulates in skimmable quantites use skimmer to collect the oil. Establish skimmer at the mouth of middle slough if oil is moving from east or south side toward site. If oil is moving from west toward site, set up skimmer just east of Middle Slough mouth. Consult with IC prior to initiating 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
2-710.1	2400	2000	50 OS	1100	12	12/22+ ./danforths	4	2					12	
2-710.2	600	2000	50 OS	600	6	6/22+ lbs./danforths	2	2				Bboat: very shallow draft	10	
2-710.3	0	0	0	0	0		0	0	2	SPS	0			

LOGISTICS

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

access by water only: Browns Island is immediately upstream (east) of Pittsburg Marina. This site includes all of Brown's island and Middle Slough just to the east.

LAND ACCESS: NONE

WATER LOGISTICS:
Limitations: depth, obstruction — Shallows, particularly on north side

Launching, Loading, Docking and Services Available: — Pittsburg and Antioch Marinas.

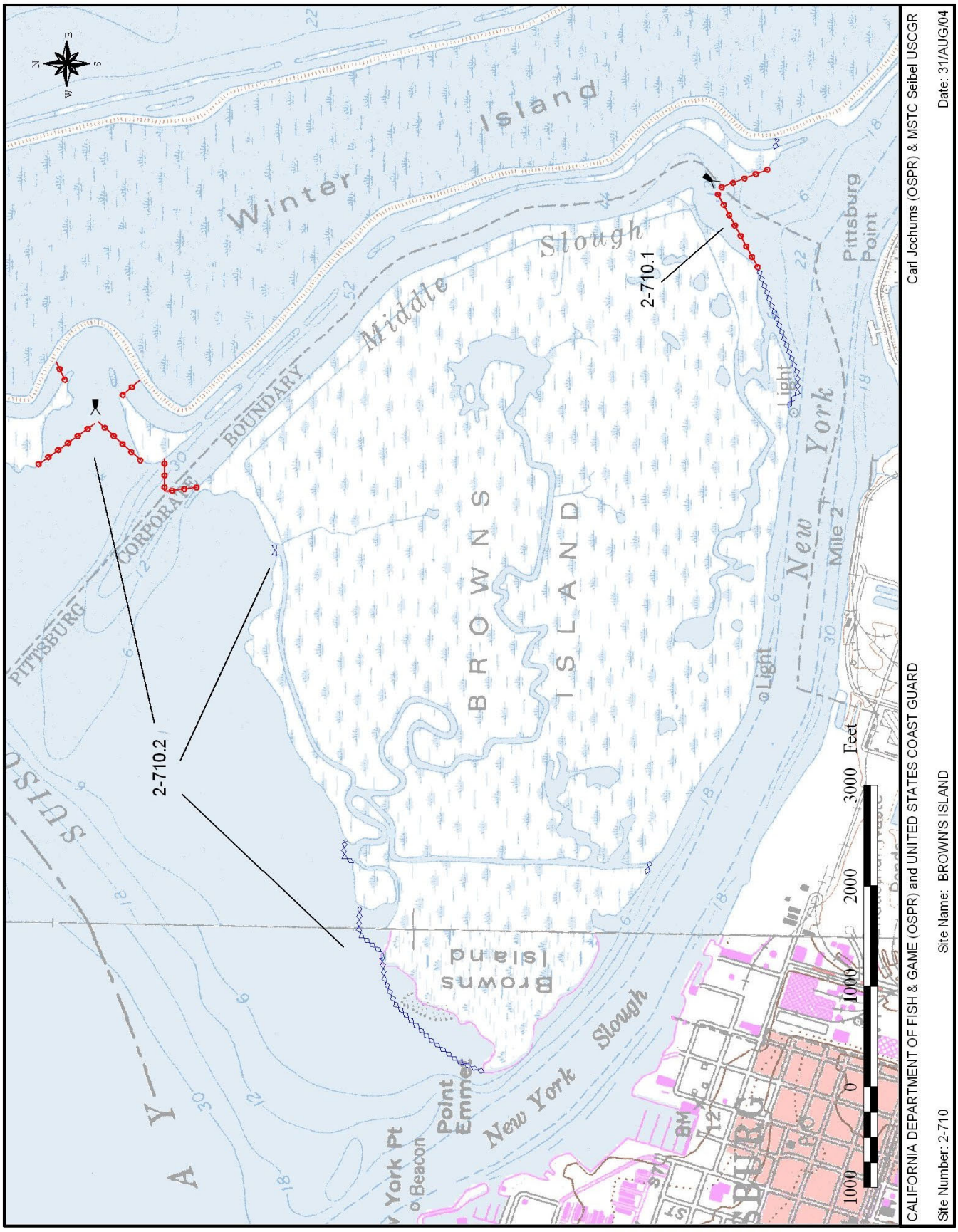
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Pittsburg and Pittsburg Marina or Antioch has full range marine and other facilities. Pittsburg launch ramp is a good deployment site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Access: By water, Brown's Island is easily accessible from the Pittsburg Marina.



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

Site Summary- Winter Island

2-712 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 03	Longitude W 121 51
USGS Quad:	Antioch North	NOAA Chart: 18656 Suisun Bay		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This site includes the leveed island, surrounding berm and channel islands and the accreting, unleveed marsh at the north tip (Point San Joaquin) and the mudflats to the west of the tip. This island is flooded in the interior and has unregulated exchange though a tide gate. The interior of the island is emergent tule marsh. The levees and surrounding berm and channel islands are vegetated with shrub-scrub and emergent marsh; most are suffering from wave erosion. The north tip is an accreting emergent marsh. This tip and the pocket at the northwest end of the main island are natural wind catchment sites.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including the following special status species: California black rail, saltmarsh harvest mouse.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
EL	Robert Calone	Winter Island Duck Club/Delta Pro Com	(510) 473-9660
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
TB	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:

2-712 -A Site Strategy - Winter Island

2-712 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	3 8 03	121 51

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Emergent wetlands are extremely vulnerable to oil with poor hope for cleanup. Potential for penetration of mudflats and berms via animal burrows.

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

Strategy 2-712.1 **Objective: Extend exclusion-deflection chevron to fend past Pt. San Joaquin Marsh and Mudflats from oil threats from the west** ACP DATE 7/1/1996

Deploy 3500 ft. of 8x8+ boom from the tip of Pt. San Joaquin westerly along the 4 ft. depth contour at the north westerly margin of the mudflat. Deploy a second 2500 ft. of 8x8+ boom leg from the collection pocket east of the mouth of middle slough (2-710 see Browns Island) northwest to connect with the first boom leg.

Strategy 2-712.2 **Objective: For oil threats from east exclude oil entry to north cross channel and easterly barrow channel with small boom segments.** ACP DATE 7/1/1996

Block openings to small channels with exclusion boom segments.

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
2-712.1	6000				13	13/50lb/danforth anchors	6	4					26	
2-712.2	0	700			8	8/15lb/danforths	1	3				Bboat: shallow draft	9	

LOGISTICS

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

No land Access. Water access: Winter Island is a mile east of Pittsburg Marina and a mile west from Antioch Marina. This site includes the leveed island, surrounding berm and channel islands and the accreting, unleveed marsh at the north tip (Point San Joaquin) and the mudflats to the west of the tip.

LAND ACCESS: NO LAND ACCESS

WATER LOGISTICS: VERY SHALLOW WATER AND OBSTRUCTIONS
Limitations: depth, obstruction

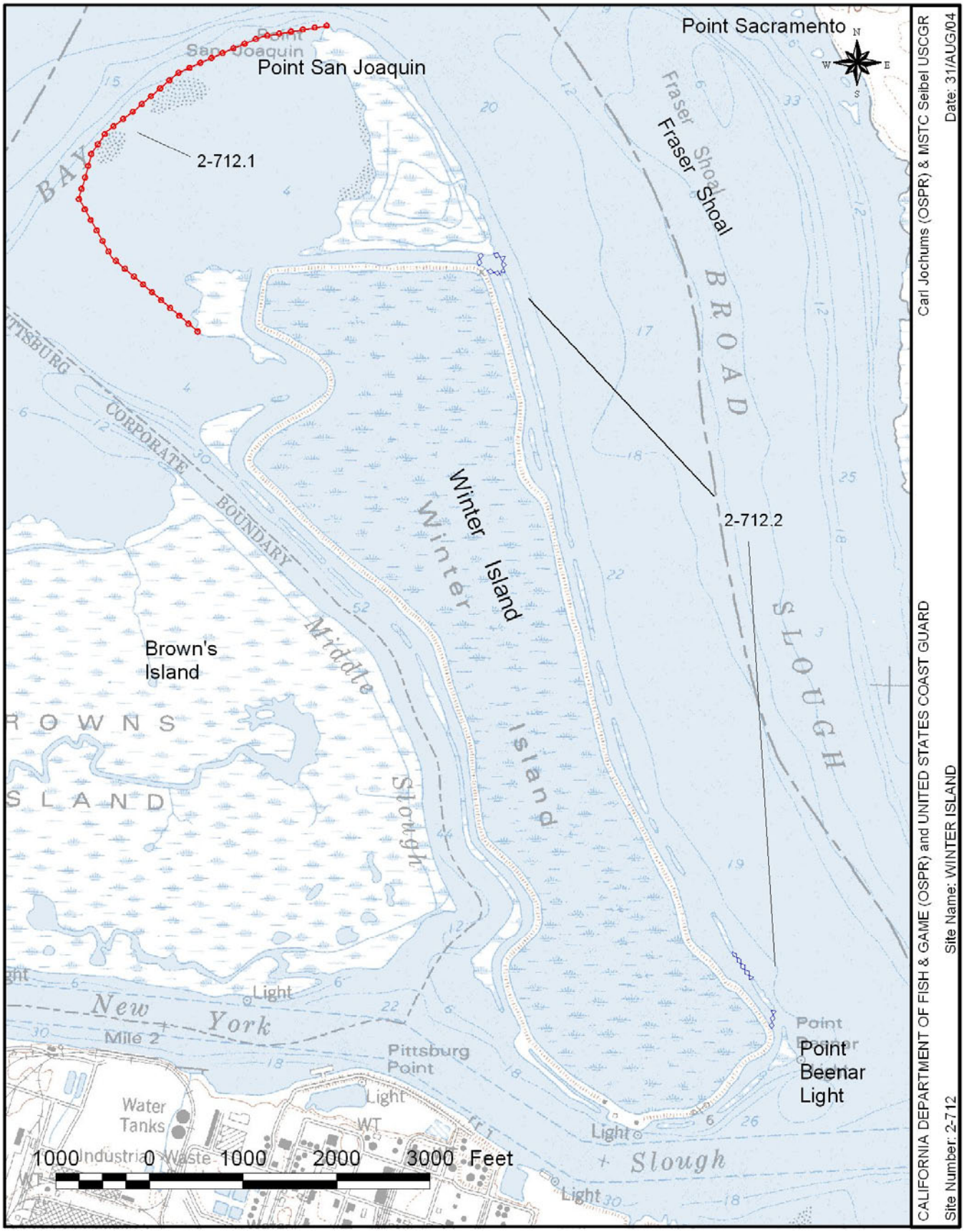
Launching, Loading, Docking and Services Available: Boat launch nearby at Pittsburg and Antioch Marinas, and at public ramps.

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

Good staging and facilities at both Antioch and Pittsburg waterfronts.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Pittsburg-Antioch Marsh (Dow Wetlands)

2-715 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 38 01.4	Longitude W 121 05
USGS Quad:	Antioch North	NOAA Chart: 18656 Suisun Bay		

Last Page Update : 1/1/2000

SITE DESCRIPTION:

The site is located on the south side of the San Joaquin River at Antioch and extends from Dowest Slough to the pier east of the Antioch Marina (at the end of I Street). This freshwater marsh has a large leveed marsh enclosure and unenclosed emergent marsh. The leveed marsh has been named Dow Wetlands and extends from the Antioch Marina to Contra Costa Canal at the west levee. This interior marsh is mostly cattail-tule-pickleweed marsh, and there is a freshwater marsh at the west end. There are breeches in the levee at Antioch Point, which allows a significant tidal exchange. The levee has a growth of willow. Outside the levees are additional marshes. Along the river side of the levee there are emergent growths, but the more remarkable emergent marshes are those at the mouth of Contra Costa Canal to the west, the shoreline east of the marina, Dowest Slough and the emergent growth on the offshore bar in the San Joaquin River.

SEASONAL and SPECIAL RESOURCE CONCERN

Marsh is A-priority year-round. There are Special Status Species abiding here.

RESOURCES OF PRIMARY CONCERN

The habitats sensitive to oil are marshes and riparian growth along the levee and the bank. The marshes are distinctive. The interior marsh was traditionally freshwater or brackish, there has always been pickleweed and saltgrass, particularly with the more saline influence from the breech, but the freshwater marsh at the east corner is well buffered from oil. This marsh can be protected from oil by excluding entry at the breeches. The marshes outside the levee are of several types. The emergent vegetation on the shoal in the San Joaquin River is almost exclusively tules and difficult to protect. The marsh to the east of the marina, though small, is freshwater type vegetated ranging from high marsh to emergent and can be protected by protective and deflective booming. The marsh at the mouth of Contra Costa Canal is expanding; this pocket has little flow, and the accreting margin is an increasing band of emergent species at the toe of the aged revetments. The two pocket sloughs to the west (Dowest and unnamed) are eurihaline marshes and vulnerable to oil unless boomed.

This is suitable habitat for a variety of marsh bird species and is of importance to wintering migratory waterfowl.

The full range of marsh mammals occur here, including beaver and river otter. Salt marsh harvest mouse may occur here.

The rich marsh vegetation includes several rare species: Suisun marsh aster and Mason's lilaeopsis.

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
B/T	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
A/L	Robert Calone	Winter Island Duck Club/Delta Pro Com	(510) 473-9660
E/L	Dow Chemical 24 hr	Dow Chemical Co., Pittsburg	(925) 432-5278
L/B	Steve Gallo	Pacific Gas & Electric Company	(510) 801-5384
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
B	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
T/B	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
T/B	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Pittsburg-Antioch Marsh (Dow Wetlands)

2-715 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	38 01.4	121 05

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Marsh always has a high protection priority. First concern is to exclude oil from entering the interior marsh by booming the breeches in the levee. Secondary concerns are to keep oil off of marshes to the east, west and north of Dow Wetlands by deflection and protection booming. Responders should avoid trampling vegetation and trampling oil into soft muds. There are very small rare plants and endangered mammals present.

HAZARDS and RESTRICTIONS:

There are obstructions and shallows in these waters.

SITE STRATEGIES

Strategy 2-715.1 **Objective: Exclude oil from entering the marshes: booming levee breeches at Antioch Pt. & and small openings, mouth of Contra Costa Canal, Dowest Slough, & unnamed slough.** ACP DATE 1/1/2000

a) At Antioch Pt (just west of the marina), deploy an extended chevron which encompases both breeches using 800' 6X6+ (9X9+ Hboom with heavy anchors when there are winds). Back with sorbent. (This may alternatively be accomplished by by deploying 800' of 8X8+ from Antioch Pt as in strategy -.2 and attaching 500' from mid boom to the shoreline west of the breech. To do this add 400' to the amount shown below.)
b) At the mouth of Contra Costa Cannal (which is just west of the unnamed point between Antioch Point and Dowest Slough), exclude oil from channel and cove. Boom creek mouth with 20' 4X4+ (and if time an resources permit, boom across cove with 800' 4X4+ stake and anchor in place).
c) Exclude oil from Dowest Slough (200' 4X4+) and pocket cove east of Dowest Slough (100' 4X4+).

Strategy 2-715.2 **Objective: Deflect oil away from sensitive areas on Flood tide** ACP DATE 1/1/2000

For oil on the Flood tide, set 800' 9X9+ Hboom cascading off the point west of Antioch Pt and just east of the Contra Costa Canal mouth to deflect oil back into the channel and past the emergent growth in the San Joaquin. Also, set a 200' 9X9+ deflection just west of Antioch Marina entrance to deflect away from marsh east of the Marina. SSW of G13 R2

Strategy 2-715.3 **Objective: Ebb tide: deflect oil away from and past sensitive areas.** ACP DATE 1/1/2000

For oil on the ebb tide, set 400' 9X9+ Hboom cascading off the tip of the chevron to deflect oil past the emergent growth in the San Joaquin River.

If oil is massed and moving along the Antioch waterfront, delfect oil away from east marsh at the pier to deflect it away from the east marsh, marina, and sensitive areas further to the west of the marina. Deploy 200' deflection boom as necessary.

Strategy 2-715.4 **Objective: Protective booming of shoreline of marsh to the east of Antioch Marina.** ACP DATE 1/1/2000

Deploy 800' 4X4+ boom along the shoreline from the fishing pier at the Antioch Marina east to the pier to the east (at I street).

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
2-715.1	900	350		800	5	5/22+/danforths with chain & stakes	2	1			Bboat: 1 very shallow	8	
2-715.2	1000				6	6/22+/danforths + chain	2	1				8	
2-715.3	600				6	6/22+/danforths + chain	1	0				3	
2-715.4	0	800			3	3/12+/danforths & stakes	1	1				5	

LOGISTICS

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

From Hwy 4, exit on Summersville Road and go north. Summersville becomes 4th Street (after a right curve). Turn north (left) on L Street. Marsh and marina are across railroad tracks. There is also access to shoreline at the west end via private roads (contact DOW Chemical or Winter Island Duck Club.) Site is most easily addressed via water; Antioch Marina is included in the site. The site is located on the south side of the San Joaquin River at Antioch and extends from Dowest Slough to the pier east of the Antioch Marina (at the end of I Street).

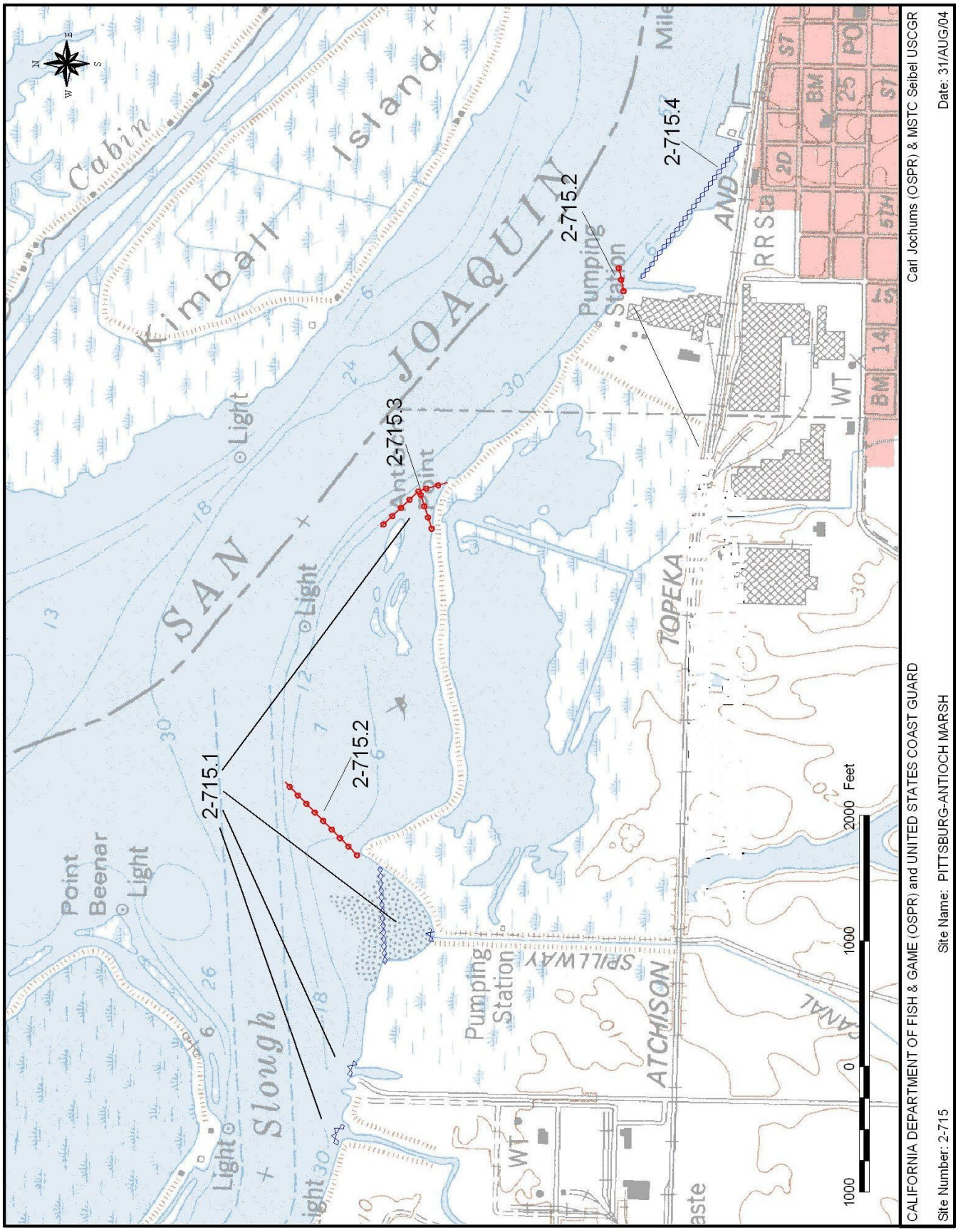
LAND ACCESS: variable depending on shore segment: ft to large truck.

WATER LOGISTICS: shallows and obstructed at ends. Long-shore channel at levee
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: boat launch & fuel on site - Antioch Marina. Also private launch -Winter Isl. Duck Club - near Dowess Slough. Full services at Pittsburg and Antioch Bridge marinas.

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

There are many options for local and regional staging and field outposts depending on the scope of the spill impacts. Local staging at Antioch Marina and Pittsburg Marina. To the east, public access at Antioch Bridge, marinas, and PE&G park.



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

Site Summary- Antioch Dunes National Wildlife Refuge

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 01	Longitude W 121 46
USGS Quad:	Antioch North	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 1/1/2000

SITE DESCRIPTION:

The water front exposure of this site is from the Fiberboard factory west to the parking yard at Fultons boat works and includes a scenic revegetated remnant of the Antioch Dunes which is now part of the Antioch Dunes National Wildlife Refuge. Enter only with Trustee approval. The site is notable for its remnant dunes which supports a unique dune ecosystem. The dunes were an extensive historic habitat throughout this portion of Contra Costa County from Antioch to Oakley. The dunes had a characteristic flora and fauna some of which were unique to this habitat. Now only these tow sites 718 and 719 remain. Marshes, riverine dunes, and former dunes along the south bank of the San Joaquin River. Although this dunes habitat is high in elevation and, consequently, not very vulnerable to oiling the sensitive dune ecosystem, there is danger of encroachment and disturbance during response. The waterfront margin is sandy beach and emergent marsh.

SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority year-round. Several Special Status Species occur here. No one may enter this area without accompaniment of USFWS representative.

RESOURCES OF PRIMARY CONCERN

The site is notable for its remnant dunes which supports a unique dune ecosystem with its characteristic flora and fauna some of which were unique to this habitat. The waterfront margin is sandy beach and emergent marsh. Although this dunes habitat is high in elevation and, consequently, not very vulnerable to oiling the sensitive dune ecosystem, there is danger of encroachment and disturbance during response to the shoreline oiling.

The rare flora supports a community of rare insect life (12 rare species) and one endangered butterfly: Lang's Metalmark. Silvery Legless Lizard also resides here.

A number of rare plant occur here including Antioch dunes evening primrose, Mason's lileopsis, Contra Costa wallflower, Suisun aster, Delta tule pea, Contra Costa goldfields, diamond petalled California poppy.

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
TBE		Empty	
TBE	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
TBE	E. Fernandez	US Fish Wildlife Service	(510) 792-0222
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	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 - Antioch Dunes National Wildlife Refuge

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 01	121 46

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

No one may enter this site without the accompaniment or direction of the US Fish & Wildlife Service Representative in charge of this refuge. The main concern is that response personnel will accidentally damage the endangered plant or animal living in this dune site. If this site is oiled, no entry or cleanup should be attempted with out USFWS concurrence. Oil impacts will be limited to a narrow band along the waterfront. Shoreline is steep and easily accessed from water.

HAZARDS and RESTRICTIONS:

none identified

SITE STRATEGIES

Strategy 2-718.1 Objective: On water skimming using mobile skimmers and towed skimming arrays.

ACP DATE 1/1/2000

The first line of protection is to remove as much oil as possible before the oil can impact shorelines. At this site this can be accomplished through the deployment of several selfcontained skimming vessels, or mini skimmers. Recommendation is that each skimming vessel should be supported by two boats operated in V towed booming configuration.

Strategy 2-718.2 Objective: Deflect oil away from this shoreline

ACP DATE 1/1/2000

DEFLECTION BOOMING: Deflect oil away from the shoreline and toward the main channel where it is accessible to the skimmers. Deploy 100 feet of deflection boom at the up current end of this property to divert oil from the shoreline to the center of the channel.

Strategy 2-718.3 Objective: If heavy amounts of oil are moving along shore, deploy nearshore containment just outside the site.

ACP DATE 1/1/2000

NEAR SHORE CONTAINMENT AND RECOVERY: Oil containment and recovery is possible at Fulton's Shipyard. Deploy 100 feet of deflection boom extending into the current from the shoreline so as to direct oil onto the shoreline. Back the recovery boom with a half length of swamp boom and sorbent boom to insure recovery. To collect any oil that may accumulate, use 50ft of Oil Snare (OS), 100ft of sorbent boom. Deploy Shoreside skimming If oil accumulates in skimmable quantities, contact IC.

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
2-718.1	0												
2-718.2	100				2	2/22+/danforths with chain	0	1				2	
2-718.3	100	50	50 OS	100			0	1	1	SSS		2	

LOGISTICS

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

From Highway 4 go north on A Street thence east on Wilbur Ave. about 1 miles. Turn north on Shipyard Road. Antioch San Dunes National Wildlife Refuge is on the north side and is posted, fenced and gated. (You can also access Wilber Road from the Antioch Bridge toll plaza area and drive westerly.) When approaching by water, use Fulton Ship Yard and Fiberboard for orientation. The water front exposure of this site is from the Fiberboard factory west to the parking yard at Fultons boat works and includes a scenic revegetated remnant of the Antioch Dunes which is now part of the Antioch Dunes National Wildlife Refuge. Enter only with Trustee approval.

LAND ACCESS: All types are possible but none are permitted. Nearby is good.

WATER LOGISTICS: Limitations: depth, obstruction — good access. Beware of obstructions.

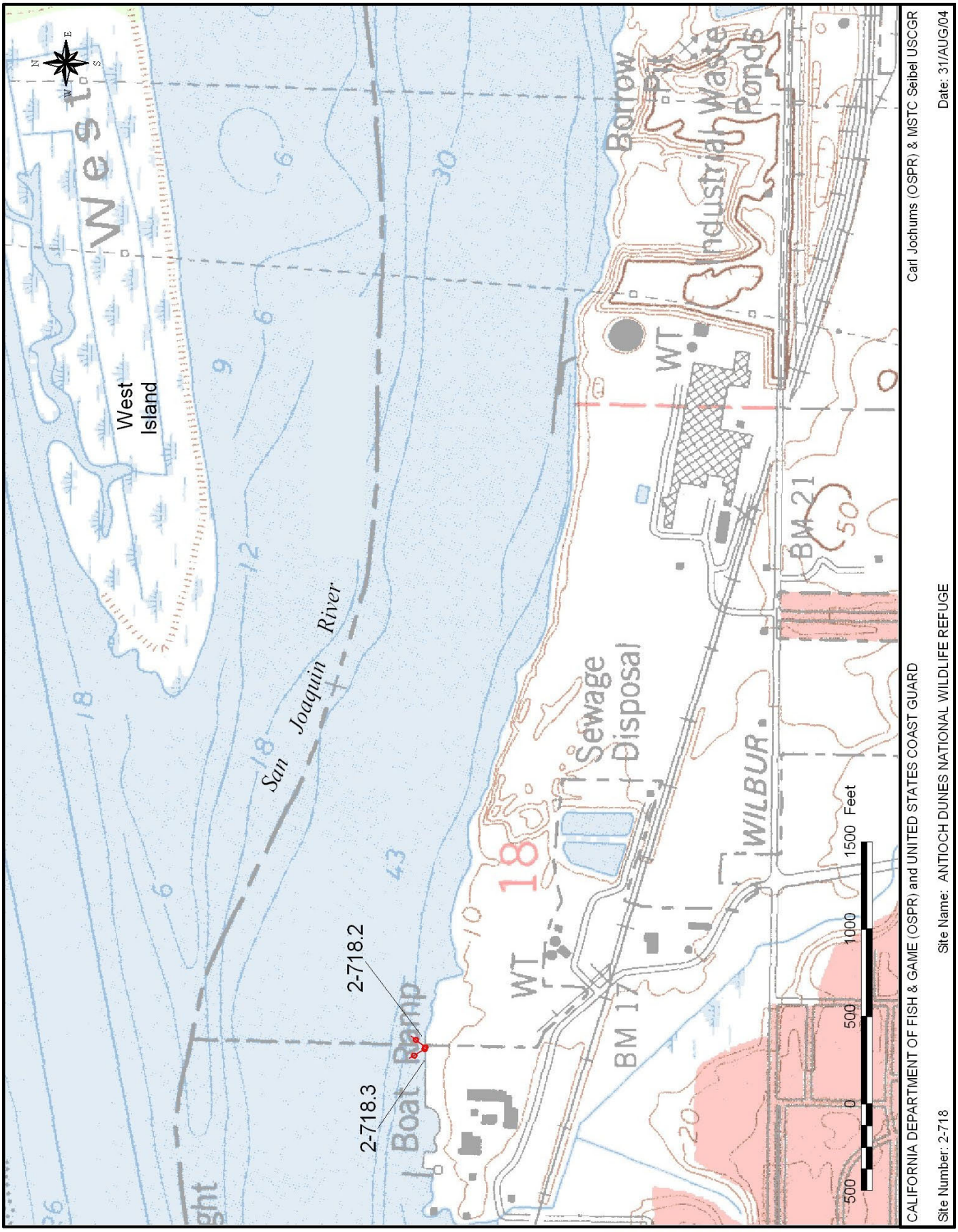
Launching, Loading, Docking and Services Available: Launching at Antioch public launch, Bridge Head Marina, Lawrenson's Marina, Antioch Marina. Full services are at marinas.

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

All access to this site should be from the water only. Boats may be launched at Antioch Marina or Fulton's Shipyard which is the property immediately to the west of Antioch Dunes. Staging for this site may be at marina's or neighboring Fulton's Shipyard.

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- Antioch Dunes and Quarry Canyon

2-719 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 01	Longitude W 121 46
USGS Quad:	Antioch North	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

The water front exposure of this site is from the Fiberboard factory east to the PG&E plant and includes a revegetated remnant of the Antioch Dunes which was a sand quarry and is now part of the Antioch Dunes National Wildlife Refuge. The site is notable for its remnant dunes which, though degraded, supports a unique dune ecosystem. The dunes were an extensive historic habitat throughout this portion of Contra Costa County from Antioch to Oakley. The dunes had a characteristic flora and fauna some of which were unique to this habitat. Now only these two sites, 718 and 719, remain: marshes, riverine dunes, and former dunes along the south bank of the San Joaquin River. Although this dunes habitat is high in elevation and, consequently, not very vulnerable to oiling the sensitive dune ecosystem, there is danger of encroachment and disturbance during response. The waterfront margin is sandy beach which rises steeply and has a narrow emergent marsh at the shoreline.

SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority year-round. Several Special Status Species occur here. No one may enter this area without accompaniment of USFWS representative.

RESOURCES OF PRIMARY CONCERN

The site is notable for its remnant dunes which supports a unique dune ecosystem with its characteristic flora and fauna some of which were unique to this habitat. The waterfront margin is sandy beach and emergent marsh. Although this dunes habitat is high in elevation and, consequently, not very vulnerable to oiling the sensitive dune ecosystem, there is danger of encroachment and disturbance during response to the shoreline oiling.

The rare flora supports a community of rare insect life (12 rare species) and one endangered butterfly: Lang's Metalmark. Silvery Legless Lizard also resides here.

A number of rare plant occur here including Antioch dunes evening primrose, Mason's lileopsis, Contra Costa wallflower, Suisun aster, Delta tule pea, Contra Costa goldfields, diamond petalled California poppy.

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
TBE		Empty	
	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
TBE	E. Fernandez	US Fish Wildlife Service	(510) 792-0222
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	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 - Antioch Dunes and Quarry Canyon

2-719 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 01	121 46

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

No one may enter this site without the accompaniment or direction of the US Fish & Wildlife Service Representative in charge of this refuge. The main concern is that response personnel will accidentally damage the endangered plant or animal living in this dune site. If this site is oiled, no entry or cleanup should be attempted with out USFWS concurrence. Oil impacts will be limited to a narrow band along the waterfront. Shoreline is steep and easily accessed from water.

HAZARDS and RESTRICTIONS:

Air traffic should be attentive to high power wires and smoke stacks.

SITE STRATEGIES

Strategy 2-719.1 Objective: NEAR SHORE CONTAINMENT AND RECOVERY - Shoreside skimming

ACP DATE 1/1/2000

Deploy 100 feet of deflection boom extending into the current from the shoreline so as to direct oil onto the shoreline. Back the recovery boom with a half length of swamp boom and sorbent boom to insure recovery. To collect oil that may accumulate, use 50ft of Oil Snare (OS), 100ft of sorbent boom. If oil accumulates in skimmable quantities, activate Shoreside Skimmer.

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
2-719.1	100	50	50 OS	100			0	1					2	

LOGISTICS

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

From Highway 4 go north on A Street thence east on Wilbur Ave. about 2.5 miles. Antioch San Dunes National Wildlife Refuge - Quary Canyon is on the north side between the Fiberboard Plant and the PE&G plant and is posted, fenced and gated. (You can also access Wilber Road from the Antioch Bridge toll plaza area and drive westerly.) When approaching by water use the factories as orientation. The water front exposure of this site is from the Fiberboard factory east to the PG&E plant and includes a revegetated remnant of the Antioch Dunes which was a sand quarry and is now part of the Antioch Dunes National Wildlife Refuge.

LAND ACCESS: All types are possible but none are permitted. Nearby is good.

WATER LOGISTICS: Limitations: depth, obstruction — good access. Beware of obstructions.

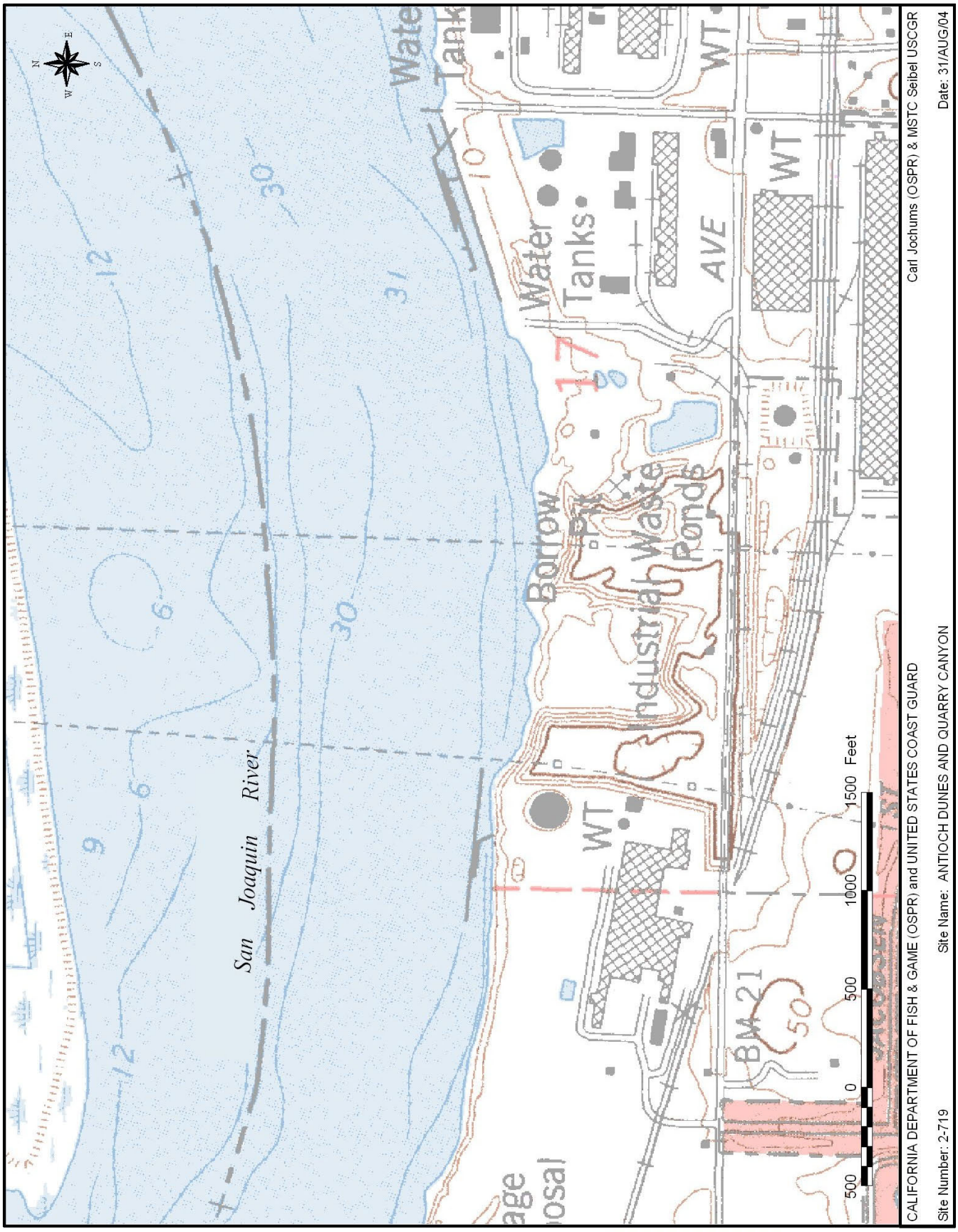
Launching, Loading, Docking and Services Available: Launching at Antioch public launch, Bridge Head Marina, Lawrenson's Marina, Antioch Marina. Full services are at marinas.

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

All access to this site should be from the water only. Boats may be launched at Antioch Marina or Fulton's Shipyard which is the property immediately to the west of Antioch Dunes. Staging for this site may be at marina's or nearby Fulton's Shipyard.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Big Break Complex

2-730 -A

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 01	Longitude W 121 43
USGS Quad:	Jersey Island	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes emergent marshes in the San Joaquin River, unnamed flooded/marshy areas east of Antioch Bridge, and Big Break including the adjacent portion of Dutch Slough up to and including lower Marsh Creek. The marshes in the River are recently colonized bars. The west side marsh is a formerly diked area which is now marshy within and without. It is separated from Big Break by a dike and access channel to Big Break Marina. Big Break is a large, flooded area. The perimeter islands and shoreline are emergent marsh, particularly on the southern and eastern edges. It is separated from the San Joaquin and Dutch Slough by an intermittent series of berm islands, the remnants of the old levee.

SEASONAL and SPECIAL RESOURCE CONCERN

RESOURCES OF PRIMARY CONCERN

Highly productive marshes on east and south shore. T & E species present in this area.

Threatened: California Black Rail (S)
Migratory waterfowl

Sensitive plants found here include the rare: Mason's Lilaeopsis (S) and Suisun Marsh Aster (F)

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There are cultural and historic resources in the area. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880), and Rick Parmer (East Bay Regional Parks District) (510) 544-2551 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
	Joseph Didonato Stewardship Manager	East Bay Regional Park District	(510) 544-2346
	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Sergio Huerta	East Bay Regional Park District	(925) 625-5479
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924
TB	Bob Pine	US Fish & Wildlife Service, Endangered Species	(916) 979-2752
	Anne Rockwell	East Bay Regional Park District	(510) 544-3234

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Big Break Complex

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 01	121 43

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

This is an extensive marshland complex with sensitive shorelines and sensitive species. Once oil enters these embayments, it will be nearly impossible to collect, cleanup or rehabilitate. The strategies are aimed at keeping oil out of the marshes. Responders should be aware that rare species are present and should avoid damaging marsh vegetation and tracking oil into marshes and sediments.

HAZARDS and RESTRICTIONS:

Numerous uncharted snags and uncertain water depths exist in this area. Aerial traffic beware of high wires in vicinity.

SITE STRATEGIES

Strategy 2-730.1 **Objective: Exclude oil from entering open waters of Dutch Slough, Big Break and west flooded area by exclusion/diversion boom openings.** ACP DATE 7/1/1996

Close the three openings to the extended site:
1. Boom the mouth of the west side marsh with 400'8X8+ exclusion/deflection boom configured in a shallow chevron "V' using a mid-boom anchorage.
2. Boom the opening to Big Break with 3000'8X8+ exclusion boom from the mouth of Big Break Marina channel to the islands at the mouth of Dutch Slough.
3. From the island at the mouth of Dutch Slough, deploy 1500'8X8+ collection/exclusion boom at a long diagonal to the Jersey Island shore. Use 2 to 4 mid-boom anchors to keep the boom from relaxing into a catenary curve. Establish a land-based skimming operation at the Jersey Island levee. Back this collection with second layer of boom, sorbent and/or water-based skimmers, if first collection boom fails to intercept the oil.

Strategy 2-730.2 **Objective: On ebb: Deflect oil away from entrance to Dutch Slough and Big Break into main channel to deter oil from entering.** ACP DATE 7/1/1996

Above the entrance to Dutch Slough, Cascade enough 200'- 500' segments of harbor boom from Jersey Island to deflect oil into deep channel and away from Dutch Slough mouth.

Strategy 2-730.3 **Objective: Protective booming of marsh front: west side marshes** ACP DATE 7/1/1996

Deploy 3600'6X6+ boom along the marshy shoreline east of marinas at the toe of the Antioch Bridge. Link this boom with the 8X8+ exclusion boom at the opening to the west flooded area.

Strategy 2-730.4 **Objective: Deflection On Flood: deflection to past site and keep it in the main channel** ACP DATE 7/1/1996

For oil approaching site from west, cascade 200'- 500' segments of harbor boom beginning near the Antioch Bridge out toward and in front of shallow water and marsh islands. Keep oil deflected into main channel of 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 and kinds	staff deploy	Staff tend
2-730.1	4800			200	14	14/22+lbs/danforth & stakes	4	4			Bboat: very shallow draft	25	
2-730.2	2500				10	10/22+/danforth	4	2				14	
2-730.3	0	3600			8	8/12+/danforths and stakes	2	8			Bboat: very shallow draft	26	
2-730.4	2500				16	16/22+/danforths	4	2				14	

LOGISTICS

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

Access primarily by water from the San Joaquin River, Dutch Slough or Big Break Marina. Limited land access via a few roadways on the southerly margin: Take hwy 4 toward Oakley, turn N on Big Break Road to Big Break Marina. This site includes emergent marshes in the San Joaquin River, unnamed flooded/marshy areas east of Antioch Bridge, and Big Break including the adjacent portion of Dutch Slough up to and including lower Marsh Creek.

LAND ACCESS: POOR ACCESS EXCEPT JERSEY ISL. WHEN DRY

WATER LOGISTICS: GOOD CHANNELS/MANY SHALLOWS OBSTRUCTIONS
Limitations: depth, obstruction

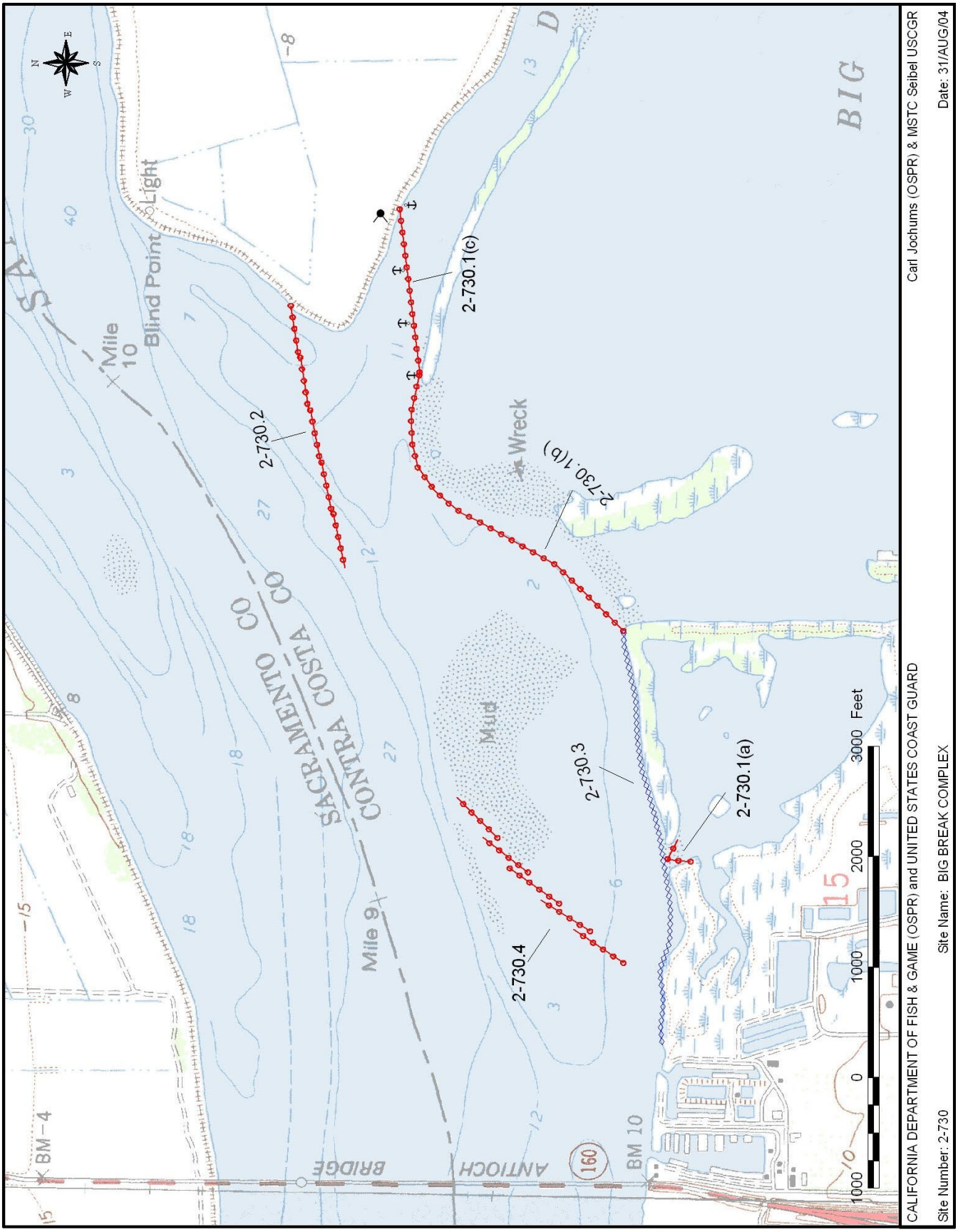
Launching, Loading, Docking and Services Available: Launch is available at all marinas near Antioch Bridge and PG&E ǵ park. Also at Big Break Marina.

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

There are several good sites for staging: Dutra Dredge at Big Break Marina, area marinas, PG&E park. Marine and other facilities are abundant nearby.

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- Dutch Slough East

2-734 -A

County:	Contra Costa	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Jersey Island	NOAA Chart: 18661 Sacramento / San Joaquin River	3 8 01	121 38

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Dutch Slough from east of Marsh Creek to Sand Mound Slough including the berm island at the mouth of Taylor Slough, Emerson Slough, and the south fork of Dutch Slough. Rip-rapped channel with many berm islands. Portions are very developed with private docks.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshy-riparian areas in this site are "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

There is emergent marsh on numerous channel islands in this stretch. Some of the levees, though heavily ripped, have well developed shrub-scrub riparian habitat.

migratory waterfowl in marsh areas

Rare: Mason's Lilaeopsis (S0
Category 2: Suisun Marsh aster (F)

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
E		Empty	
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
TB	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 - Dutch Slough East

2-734 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 01	121 38

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concern is stopping oil from spreading through the channel to other Delta areas. Secondary concerns are oiling of emergent marshes along margins and on channel islands and penetration of oil into riprap and into levees via animal burrows. Small endangered plants are common on Delta Islands. Minimize trampling of vegetation and oil into sediments.

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

Strategy 2-734.1 **Objective: For product originating within this site, diversion to collection as close to source as possible.** ACP DATE 7/1/1996

Use skimmers with sufficient harbor boom in V formation (estimate 1500'6X6+) to recover oil as close to source as possible, most likely at the bridge or on either side of the tule island at the confluence of Taylor Slough and Dutch Slough. Use more than one skimmer if necessary on both sides of island or bridge. Wrap channel islands with protective boom (additional 4000' swpboom).

Strategy 2-734.2 **Objective: For oil threats from Big Break side, deploy multiply collection/exclusion booming to collect at Jersey Isl land skimming sites.** ACP DATE 7/1/1996

Deploy 600'6X6+ exclusion/collection boom from south bank to north bank (Jersey Isl levee) for land-based 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. Use 2-3 mid boom anchors to keep boom from lapsing into a catenary curve and encouraging entrainment. Back with sorbent boom if there is oil entrainment. Repeat as necessary.

Strategy 2-734.3 **Objective: Exclusion at east end for oil threats from Sand Mound Slough.** ACP DATE 7/1/1996

Deploy 700'6X6+ exclusion boom across mouth at Sand Mound Slough. If oil is escaping, back with second layer of boom at a more favorable angle or back with sorbent boom.

Strategy 2-734.4 **Objective: Oil Recovery with Shoreside skimming** ACP DATE 7/1/1996

Deploy skimmer when oil accumulates in skimmable quantities. Consult with IC prior to initiate this strategy. Identify best locations for skimming under prevailing 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
2-734.1	0	1500			2	2/22+/danforths & Stakes	1	1		SPS			7	
2-734.2	0	600	50 OS	100	5	5/25lbs/danforth anchors	1	0					5	
2-734.3	0	700			3	3/25lbs/anchor	1	1					5	
2-734.4	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.)

Several private levee roads provide limited access to island margins. Access is primarily by boat from marinas on Bethel Island or Antioch. Dutch Slough from east of Marsh Creek to Sand Mound Slough including the berm island at the mouth of Taylor Slough, Emerson Slough, and the south fork of Dutch Slough.

LAND ACCESS: LEVEE ROAD ARE MOSTLY ALL WEATHER/VEHICLE

WATER LOGISTICS: WATERS ARE GOOD EXCEPT AT MARGINS

Limitations: depth, obstruction

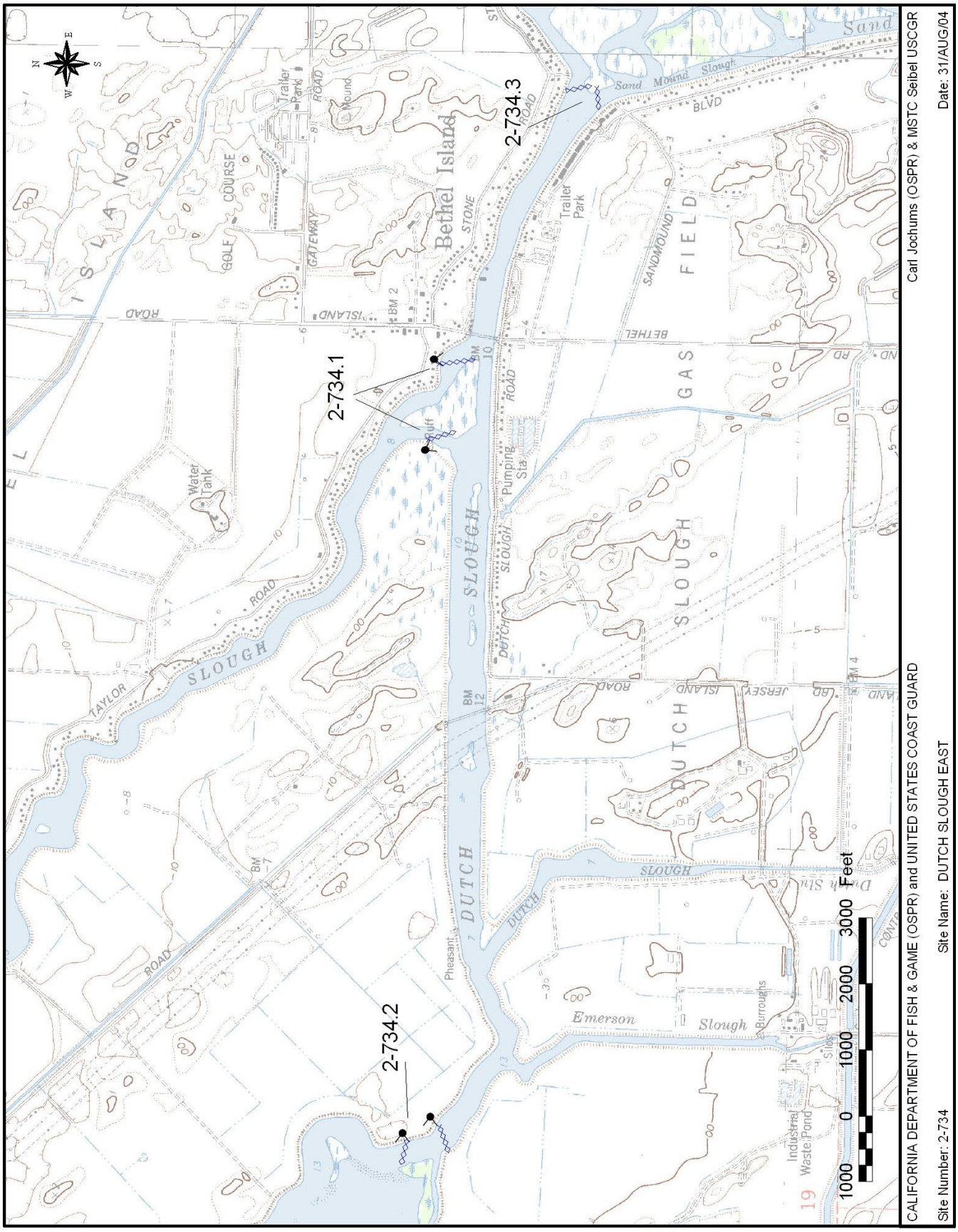
Launching, Loading, Docking and Services Available: Many boat launch and marine support facilities are available on Bethel Island or in Antioch.

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

There are complete facilities/though limited facilities on Bethel Island. Brentwood, Oakley and Antioch have complete range of facilities. The Delta Sportsmen's Club house on Bethel Island may be adequate for a small IC Center.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- False River

2-735 -C

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 03	Longitude W 121 40
USGS Quad:	Jersey Island	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This waterway is bounded by Bradford Island on the north bank and Jersey Island on the south bank. This site begins at its confluence with the San Joaquin River and ends at the mouth of Piper Slough. The main focus at this site is that the channel is a main conduit to the central-south Delta. Channel is steep and deep, and flows are strong and tidal and bare a large volume from the San Joaquin to Frank's Tract and places south. The channel itself is rip-rapped and within site resources are aquatic.

SEASONAL and SPECIAL RESOURCE CONCERN

RESOURCES OF PRIMARY CONCERN

This channel has some marshy habitat along shore. The water column is habitat for fish.

Endangered: Winter-run Chinook salmon smolts (09-05)(F,S); Threatened: Delta smelt juveniles (F,S); Striped Bass may use area to spawn but not yearly.

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
TB	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 - False River

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 03	121 40

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concern is to prevent oil spread throuh this channel to interior Delta from the San Joaquin by the strong tidal currents and large volume flow. The key is to keep oil from entering the channel mouth. Within site oil control will be challenging. Concern for oiling of levees and banks is secondary.

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

False River is the primary tidal exchange channel for the south Delta and currents are significant and oil diversion to collect within the Channel is challenging. Operations on Jersey Island shore (south shore) is perferable because it is easier to support than the north shore (because access to Bradford Island is available only by boat and ferry.) Jersey Island is owned by Contra Costa County Sanitary District.

Strategy 2-735.1 Objective: deflection/exclusion booming at the mouth False River from the San Joaquin.

ACP DATE 7/1/1996

Deploy deflection/exclusion boom at the mouth by setting 2400'8x8+ boom in a shallow chevron "V" configuration. Anchor at apex and mid-boom legs to minimize entrainment. Set 500'8X8 deflection boom upstream from mouth to redirect oil into main channel away from mouth. Deploy 400'8X8+ collection boom downstream to intercept oil moving toward the mouth near the banks of Jersey Island. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmible quantities.

Strategy 2-735.2 Objective: Back-up deflection to collection of oil which has entered False River.

ACP DATE 7/1/1996

When oil is likely to enter False River, deploy 2 or more collection-exclusion booms inside the channel using a long diagonal (1500'8x8+) to the most favorable location for land-based recovery (Jersey shore has best land access and current seems to eddy a little at southeast margin); these deployments will require 2-4 mid-boom anchors to counter catenary tendency and resultant entrainment. Use 50ft of Oil Snare (OS) and 100 ft of sorbent boom to collect oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-735.3 Objective: Oil recovery with shoreside skimming

ACP DATE

Deploy shoreside skimmers if oil accumulates in skimmable quantities. Oil recovery as a result of strategy 735 .1: intercept/collect oil moving toward the mouth near the banks San Joaquin River of Jersey Island with land-based skimming. Oil recovery as a result of strategy 735.2: set shoreside skimmers on Jersey Island shore (Bradford Island shore is more difficult to support because of access.)

If these interception fail, deploy two layers of sorbent boom or Oil Snare, and evaluate self propelled skimmer(s) deployment in False River intercepts to catch by-pass.

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
2-735.1	3400		50 OS	100	11	1/50 & 10/25lbs/danforth + chain	4	4				extra anchor line.	24	
2-735.2	3000		50 OS	100	12	6/50lbs& 6/25lbs/danforths	4	2				1000'anchor lines	14	
2-735.3	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.)

Land access is by Jersey Island Road (Hwy 4 to E Cypress Rd left (N) on J I Rd) and then gated levee roads provide limited access to island margins (contact Contra Costa County Sanitary District). Access by boat from marinas on Bethel Island and at Antioch. The north levees (Bradford Island and Webb Tract) are accessible only by ferry. This waterway is bounded by Bradford Island on the north bank and Jersey Island on the south bank. This site begins at its confluence with the San Joaquin River and ends at the mouth of Piper Slough.

LAND ACCESS: LEVEE ROADS GOOD WHEN DRY

WATER LOGISTICS: GOOD WATER THROUGHOUT

Limitations: depth, obstruction

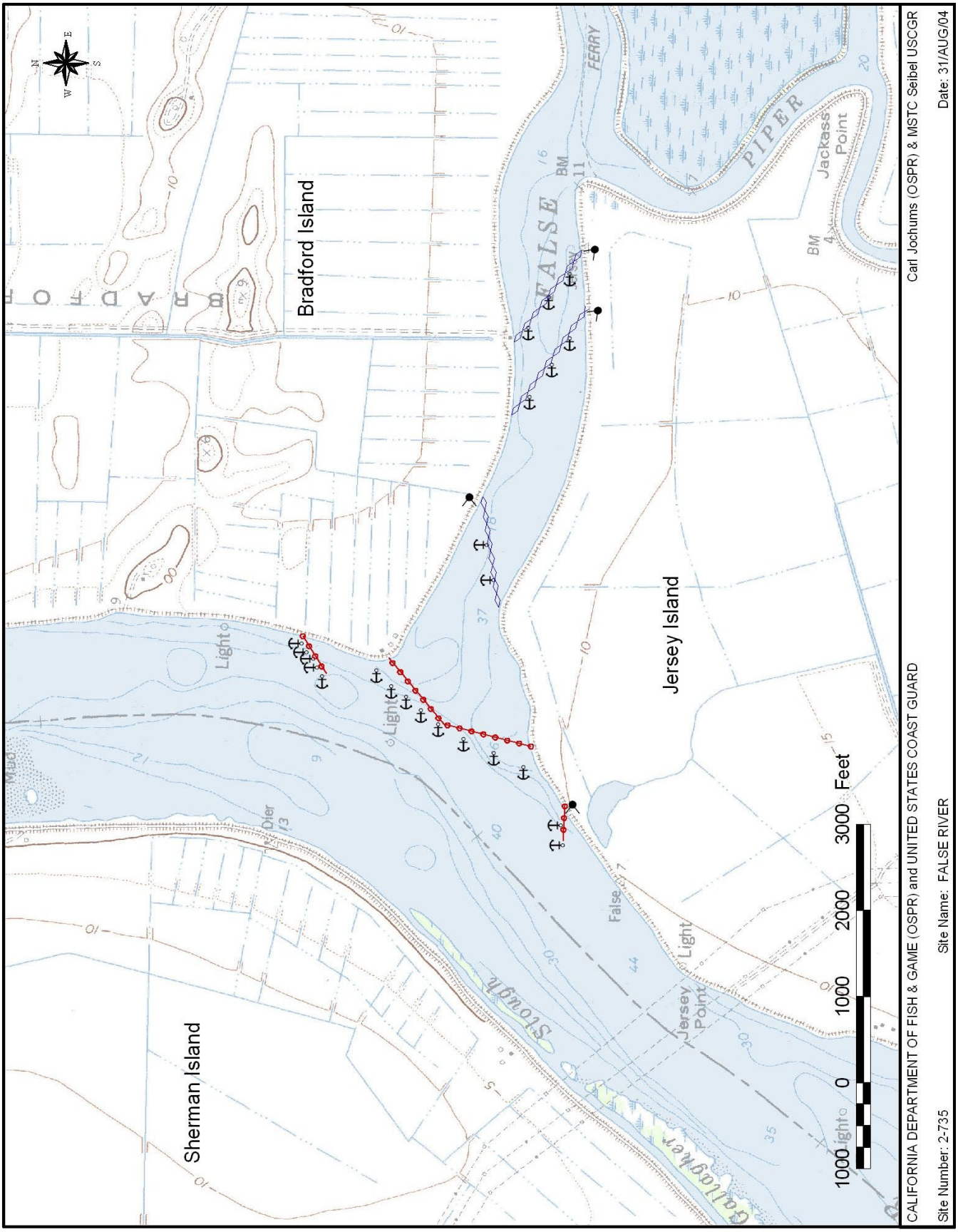
Launching, Loading, Docking and Services Available: Boat launch and marine support at Antioch, Bethel Island and mouth of Mokelumne. Launch at Brannon Island State Park.

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

Complete support facilities at Antioch and Brentwood. Lessor degree at Bethel Island and Oakley. Also support facilities at Mokelumne River. Staging is possible at Brannon Island, Mokelumne, Bethel Island, and Antioch.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Taylor Slough and West Piper Slough

2-736 -B

Thomas Guide Location	Latitude N	Longitude W
	3 8 02	121 40

County: Contra Costa

USGS Quad: Jersey Island

NOAA Chart: 18661 Sacramento / San Joaquin River

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes Taylor Slough from its confluence with Dutch Slough (not including the berm island at the confluence) to Piper Slough confluence with False River to southeasterly tip of Little Franks Tract. This is a winding, relatively narrow, ripped channel with agriculture on Jersey Island bank, rural residential and private docks on Bethel Island bank, and marshy berm islands scattered along its length. Remnant levee of Little Frank's Tract is in natural marsh and shrub-scrub.

SEASONAL and SPECIAL RESOURCE CONCERN

RESOURCES OF PRIMARY CONCERN

highly productive marsh areas

Rare: Mason's Lilaeopsis (S) and Category 2: Suisun Marsh aster (F)

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
E		Empty	
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
TB	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 - Taylor Slough and West Piper Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 02	121 40

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Primary concerns are oiling of marshy margins and penetration into levees though riprap and animal burrows.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards.

SITE STRATEGIES

Strategy 2-736.1 **Objective: For local spills, halt oil movement at the source and recover as close to source as possible. Prevent further spread in slough.** ACP DATE 7/1/1996

Use containment boom to close off uncontaminated part of Taylor Slough. Recover with use 50ft of oil Snare (OS), 100ft of sorbent boom. Contact IC if oil accumulates in skiimmable quantities.

Strategy 2-736.2 **Objective: Exclusion boom mouth of Taylor (but only if False River deployments fully supplied) for threats from False River.** ACP DATE 7/1/1996

Deploy 700'6X6+ boom in a shallow chevron (inverted "v") across mouth to exclude oil entry and deflect it past the mouth. This configuration requires mid-boom anchoring to maintain an apex. Place 4X4 or sorbent boom across channels at Piper mouth on Frank's Tract and across both channels at intersection of Taylor and Piper Sloughs.

Strategy 2-736.3 **Objective: Oil Recovery** ACP DATE

Deploy skimmer if oilaccumulates in skimmable quantities. Contact IC prior to initiating 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
2-736.1	0	400	50 OS	100	4	4/15lbs/anchors	0	1					3	
2-736.2	0	1300			4	4/25lbs/danforths & stakes	1	1					5	
2-736.3	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.)

Private and public levee roads of Bethel and Jersey Islands provide access to island margins. There is ready access by boats from marinas on Bethel Island, Mokelumne River, Brannon-Andrus Island and Antioch. This site includes Taylor Slough from its confluence with Dutch Slough (not including the berm island at the confluence) to Piper Slough confluence with False River to southeasterly tip of Little Franks Tract.

LAND ACCESS: PAVED LEVEE TO MOUTH, GOOD DRY LEVEE RD

WATER LOGISTICS: GENERALLY GOOD WATER

Limitations: depth, obstruction

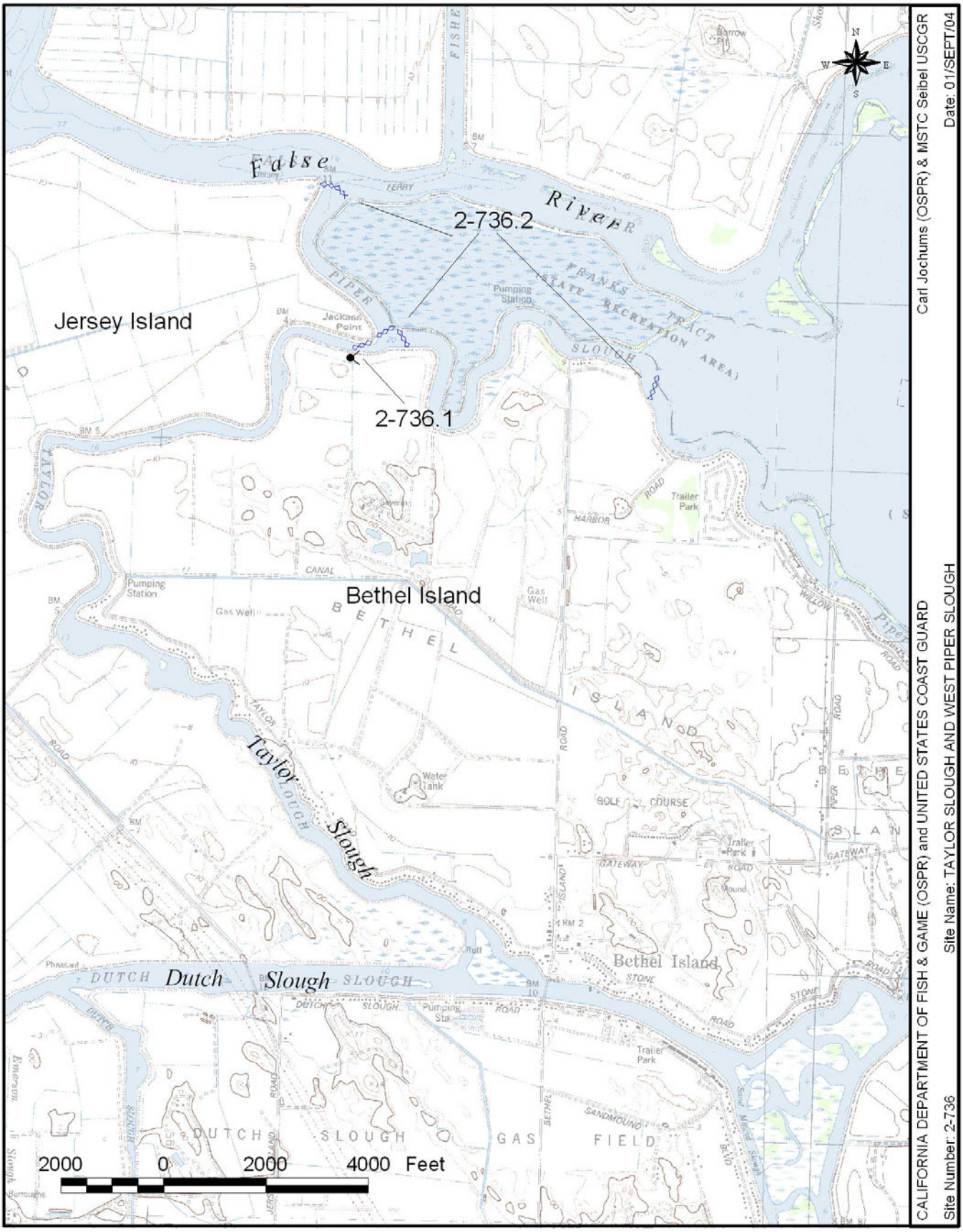
Launching, Loading, Docking and Services Available: Boat launch and marine support at Antioch, Bethel Island and mouth of Mokelumne. Launch at Brannon Island State Park.

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

Complete support facilities at Antioch and Brentwood. Lessor degree at Bethel Island and Oakley. Also support facilities at Mokelumne River. Staging is possible at Brannon Island, Mokelumne, Bethel Island, and Antioch.

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- Little Franks Tract

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 03	Longitude W 121 39
USGS Quad:	Jersey Island	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is bounded on its west and south side by Piper Slough. False River bounds the north side. The water of Franks Tract is on the east side. This island is a wildlife sanctuary. This is a freshwater marsh in a drowned island protected by a levee. The levees are heavily vegetated and also support wildlife.

SEASONAL and SPECIAL RESOURCE CONCERN

RESOURCES OF PRIMARY CONCERN

Freshwater marsh and riparian shrub on levees

Black-crowned Night heron rookery in riparian shrub-brush on levees. Migratory waterfowl

Rare: Mason's Lilaeopsis (S) and Category 2: Suisun Marsh aster and Delta Tule-pea

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
TB	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 - Little Franks Tract

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 03	121 39

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Primary concern is escapement of oil through the site to central Delta and oiling of berm island marshes at this and neighboring sites.

HAZARDS and RESTRICTIONS:

Use care on the north side of Jersey Island Levee Road. It has sand traps.

SITE STRATEGIES

Strategy 2-737.1 Objective: deflection-collection boom to strand oil on Bradford Tract shore for collection, if exclusions at False River faulter.

ACP DATE 7/1/1996

Execute False River and Fishermans Cut strategies. Deploy 1000+'of 8X8+ collection-deflection boom from tip of Jersey Island at Taylor Slough or other advantageous site to divert oil to Webb Tract shore for collection. To collect accumulated oil use 50ft of Oil Snare (OS), 100ft of sorbent boom. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-737.2 Objective: Oil Recovery

ACP DATE

Deploy skimmer if oil accumulates in skimmable quantities. Consult IC prior to 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
2-737.1	1000				4	4/25lb/danforth + chain & stakes	2	1	1				8	
2-737.2	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.)

Take hwy 4 to Bethel Island for boat launching access. Little Franks Tract can be seen from Bethel Island Levee Road; however Bethel Island Fire Department (510-684-2211) should be contacted for access through gates. Jersey Island Levee Road has public access, and Little Franks Tract can be seen from this road as well. This road ends at the Bradford/Webb Tract ferry system. See hazard section regarding this road. This site is bounded on its west and south side by Piper Slough. False River bounds the north side. The water of Franks Tract is on the east side.

LAND ACCESS: GOOD LEVEE ROADS WHEN DRY

WATER LOGISTICS: GENERALLY GOOD WATER IN CHANNELS
Limitations: depth, obstruction

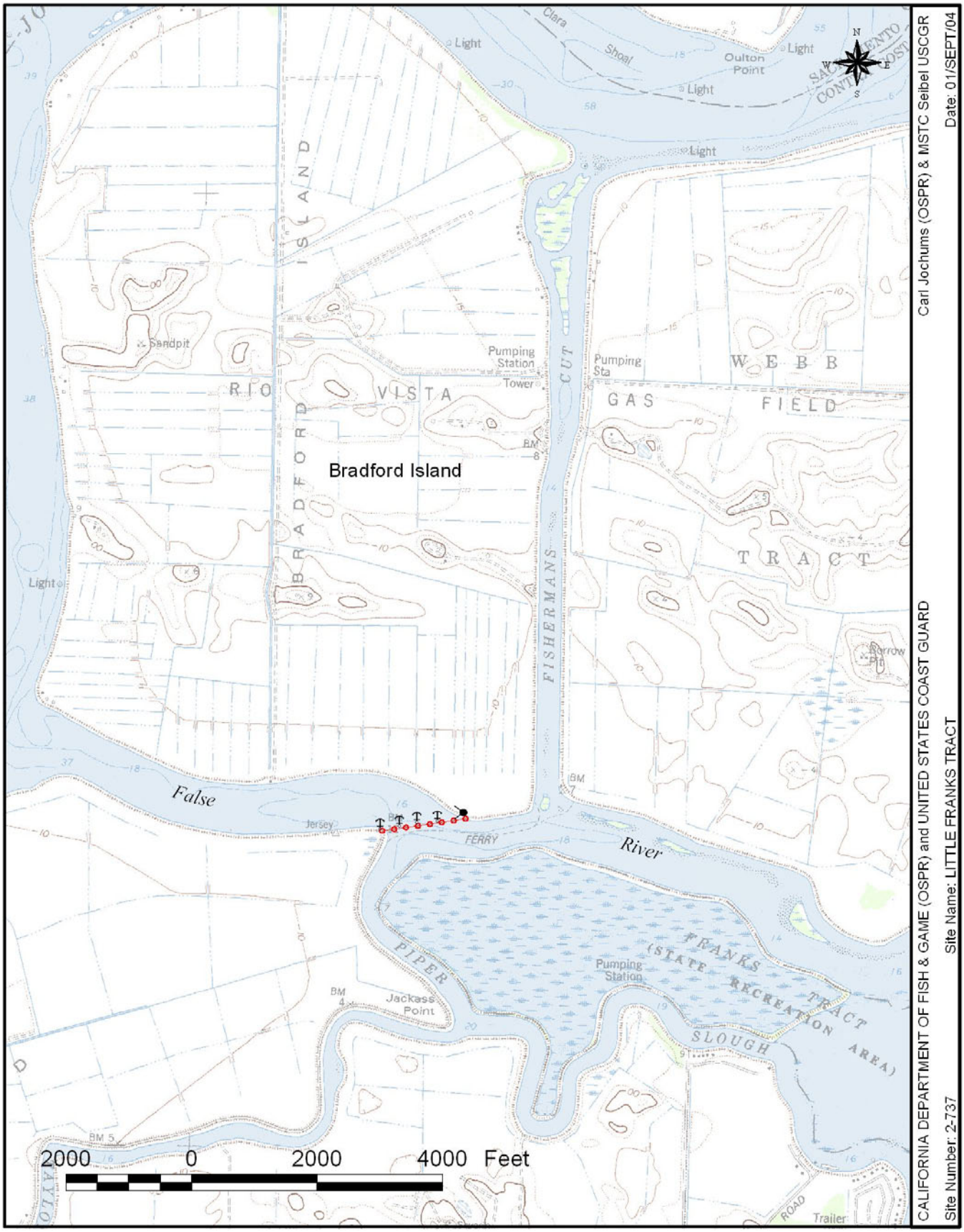
Launching, Loading, Docking and Services Available: Boat launch and marine support at Antioch, Bethel Island and mouth of Mokelumne. Launch at Brannon Island State Park.

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

Complete support facilities at Antioch and Brentwood. Lessor degree at Bethel Island and Oakley. Also support facilities at Mokelumne River. Staging is possible at Brannon Island, Mokelumne, Bethel Island, and Antioch.

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- San Joaquin River, Sherman-Webb Reach

County:	Sacramento, Contra Costa County	Thomas Guide Location	Latitude N 3 8 04	Longitude W 121 43
USGS Quad:	Jersey Island, Bouldin Island	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

River and berm islands from Old River to Antioch Bridge. Includes San Joaquin margins of Sherman, Twitchell, Jersey, Bradford, Bouldin, Webb, and Andrus Islands downstream from the mouth of the Mokelumne River to Sevenmile Slough berms (site 2-743). This is a broad section of the San Joaquin River with heavily rip-rapped shoreline and occasional occasional berm and emergent patches particularly along Sherman Island and Webb Tract. This is deep, open water. Shores are wave-washed. Barrow channel islands are throughout the river reach and those on the windward shores are suffering from wave erosion. DWR has invested significant effort and dollars to protect and restore these berm islands. From a response stand-point, there are resources at risk within the site, of particular concern are riparian/marshy islands, but even more significantly, this channel is a conduit for delta-wide spreading of oil though various side channels. The main side channels for delta spreading in addition to the upper San Joaquin are Threemile Slough (2-790), False River (2-735), Old River (2-900), Potato Slough (2-070) and to a lessor degree Fishermans Cut (2-742), Mokelumne River mouth (2-870) and Sevenmile Slough.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshy/riparian berm islands are "A" habitat at all times.

RESOURCES OF PRIMARY CONCERN

The berm islands occasioned along the heavily rip-rapped shoreline, particularly along Sherman Island and Webb Tract are vulnerable marshy riparian habitat. Windward shores are wave-washed. This is deep, open water.

Endangered: Winter-run Chinook salmon (F,S) smolts (in area 09-05); Threatened: Delta smelt (F,S) juveniles; Proposed Threatened: Sacramento Splittail (F) juveniles; Striped Bass spawn in area most years

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
E	Gilbert Labrie	Brannan-Andrus Reclamation District	(707) 374-6111
E	Henry Matsunaga	Sherman Reclamation District	(916) 448-2821
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
E	Chris Neudeck	Mandeville Island Reclamation District	(290) 946-0268
TB	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 - San Joaquin River, Sherman-Webb Reach

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento, Contra Costa County	18661 Sacramento / San Joaquin River	3 8 04	121 43

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

General Primary concern is oil spreading throughout the Delta along this stem channel and the many branching channels. Also of concern is oiling the barrow sloughs and islands where live lots of wildlife; State agencies have invested money in an effort to preserve the islands for wave damage.

HAZARDS and RESTRICTIONS:

obstructions and shallows at margins. Aircraft beware of high power wires.

SITE STRATEGIES

This stem channel of the San Joaquin is broad and fairly deep. Water movement is strongly tidal. Currents are significant and wind fetch can build whitecaps. Wind may move oil against the windward shore.

Strategy 2-740.1 Objective: Diversion to confinement/collection at windfall locations along shore to reduce degree of spread and oiling.

ACP DATE 7/1/1996

Where ever oil is tending to collect at the shoreline as a result of wind and eddies, enhance collection by deploying collection booms and skimming operations. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect any oil that may accumulate. Contact IC if oil begins to accumulate in skimmable quantities.

Strategy 2-740.12 Objective: Exclude/protect berm islands & barrow channels

ACP DATE 7/1/1996

Deflect oil into main channels and away from vegetated islands, side channels and shorelines by deploying deflection booms from levee out into channel using deflection booms. Also, exclude oil from entering protected barrow channels between channel islands and levees by blocking (and backing with sorbent) openings and mouths which would admit oil. If oil is eminent threat to channel exposures of islands, then the exposed margins will need protective booming with small skirted boom or sorbent boom or both. Here are the four channel island groups in this reach and their boom requirements:
(a) islands along the Sherman Island shore (G21-G25) - 300'6X6+deflection at each end, 900'4X4+ to close two mouths and one large opening, 9000'of 4x4+ or sorbent for shore protection;
(b) island at north end of Bradford Island (G29-G33) - 300'6X6+ deflection boom at each end, 400'4X4+ for mouth closures, shore protection 3300'6X6+;
(c) islands at the northeast corner of Webb Tract (R38-G39) - 1000'6X6+ to close mouths and opening, 2400'6X6+ shore protection;
(d) island string around northeast corner of Webb Tract (G43-R52) - deflection at west end 500'6X6, mouth closures 1000'6X6+, shore protection 6000'6X6+ and 1000'sorbent.

Strategy 2-740.3 Objective: Oil Recovery by Shoreside skimming

ACP DATE

Deploy skimmers if oil accumulates in skimmable quantities at collection booms (2-740.1). Most levees provide good access in all but very wet weather, for land-based skimming (alternatively shallow water skimmers could visit collection pockets).

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
2-740.1	2000		50 OS	100	8	8/12+/danforths	1	1					5	
2-740.12	0	16100		4000	30	30/22+/danforths & stakes & line							36	
2-740.3	0	0	0	0	0		0	0	4	SSS	0			

LOGISTICS

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

Public access roads to island margins available on Sherman and Andrus Islands. Webb Tract, Jersey, Bradford, Twitchell, Bouldin, and Venice Islands have private access levee roads to island margins. Access by boat from launch points at Brannon Island State Park, Antioch, and mouth of Mokelumne River. River and berm islands from Old River to Antioch Bridge. Includes San Joaquin margins of Sherman, Twitchell, Jersey, Bradford, Bouldin, Webb, and Andrus Islands downstream from the mouth of the Mokelumne River to Sevenmile Slough berms (site 2-743).

LAND ACCESS: GOOD LEVEE RDS EXCEPT WHEN WET

WATER LOGISTICS: GOOD EXCEPT NEAR SHORE SHALLOW/OBSTRUCT.
Limitations: depth, obstruction

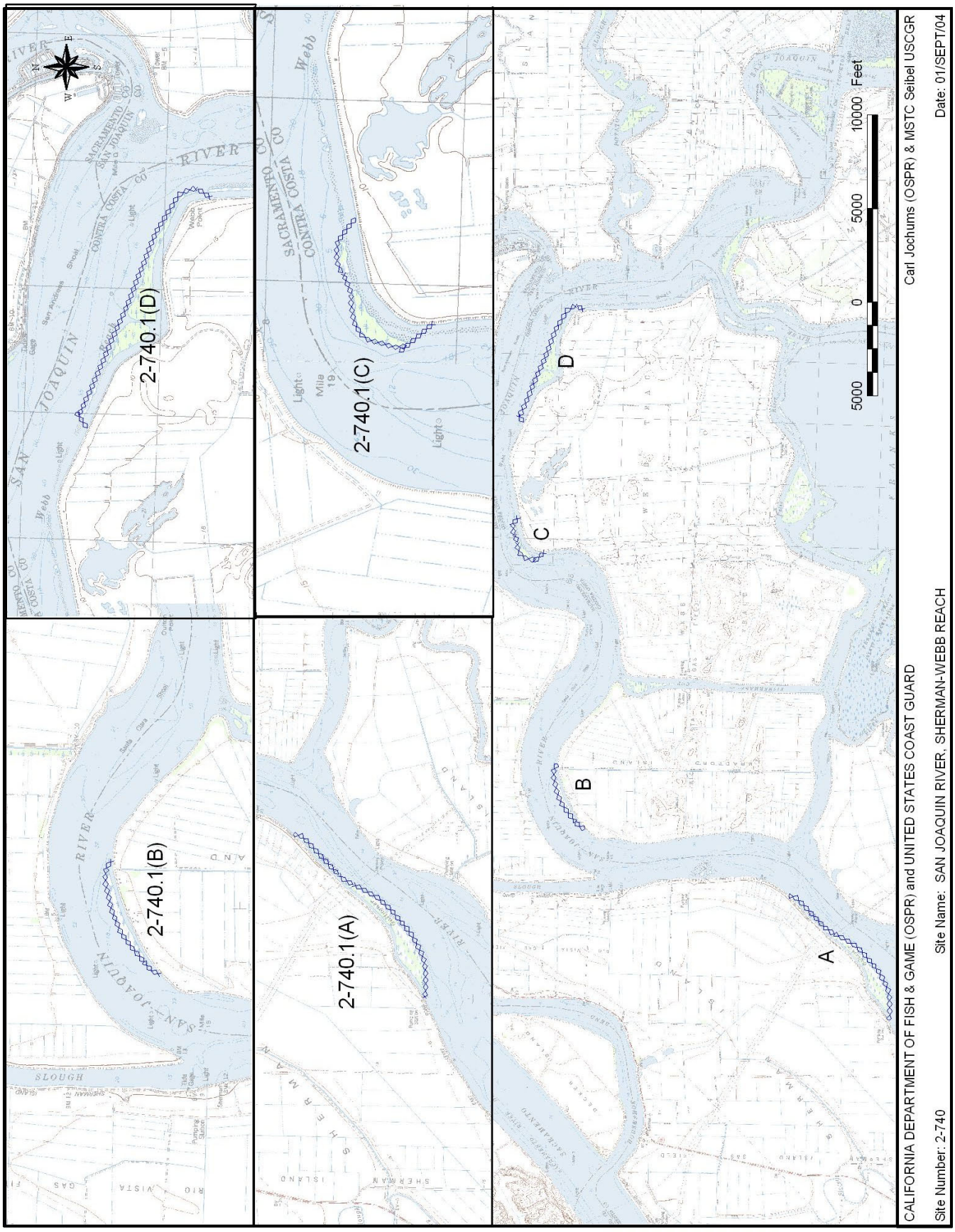
Launching, Loading, Docking and Services Available: Brannon Island State Park, Antioch, Sevenmile Slough marinas, marinas at mouth of Mokelumne River.

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

Staging sites are available on adjacent islands and levees. Services and facilities (water, lodging, marine service, food..) on Andrus Island near mouth of Mokelumne make that locale desirable staging area. Brannon Island State Park may serve as a C command post for this 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- Fishermans Cut

2-742 -B

County:	Contra Costa	Thomas Guide Location	Latitude N 3 8 05	Longitude W 121 39
USGS Quad:	Jersey Island	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

A north-south running channel connecting the San Joaquin River on its north end to the False River on its south end. This site is a rip-rapped channel with berm island and emergent vegetation particularly at the north end of the cut.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshy island and channels in this site are "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

Marsh pockets at the riprap channel margins. Berm islands, particularly at north mouth.

Endangered: Winter-run Chinook salmon (F,S) smolts (09-05); Threatened: Delta smelt (F,S) juveniles; Proposed Threatened: Sacramento Splittail (F) juveniles; Striped Bass spawn in area some years.

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
TB	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 - Fishermans Cut

2-742 -B

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18661 Sacramento / San Joaquin River	3 8 05	121 39

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concern is oil transport/spreading to central Delta from San Joaquin River. Marshy Island at mouth and along margins are also a concern. Small rare plants occur here and throughout the Delta; minimize vegetation trampling and trampling oil into sediments.

HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards.

SITE STRATEGIES

Strategy 2-742.1 **Objective: Exclude oil from entering from San Joaquin and protect berm islands.** ACP DATE 7/1/1996

Deploy exclusion-deflection boom a shallow chevron (inverted V) formation outside the north mouth to exclude oil and deflect past mouth.

Strategy 2-742.2 **Objective: Divert to confinement within cut any oil entering form either end - do not allow escape to Frank's Tract.** ACP DATE 7/1/1996

Deploy collection/containment boom diagonally across cut to collect at most favorable shorefall under prevailing winds. Use 750' 6X6+ boom to land-based collection. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect oil that may accumualte. Use 3-4 mid-boom anchors to maintain non-catenary configuration. Make multiple sets as necessary and back with sorbent if escapement persists. Contact IC if oil accumulates in skimmable quantities.

Strategy 2-742.3 **Objective: Oil Recovery** ACP DATE

Deploy skimmers 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
2-742.1	2000				8	8/22+/danforths + chain + line	2	1					8	
2-742.2	0	750	50 OS	100	5	5/20lb/danforth + chain + line	1	1					6	
2-742.3	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.)

Several private levee roads accessible from the private ferry on Jersey Island Road, provide levee road access to island margins. Access is primarily by boat from marina/launches on Bethel Island, Antioch, mouth of Mokelumne, and Brannon Island State Park. A north-south running channel connecting the San Joaquin River on its north end to the False River on its south end.

LAND ACCESS: PRIVATE LEVEE ROADS GOOD WHEN DRY

WATER LOGISTICS: FAIRLY DEEP EXCEPT AT MARGINS
Limitations: depth, obstruction

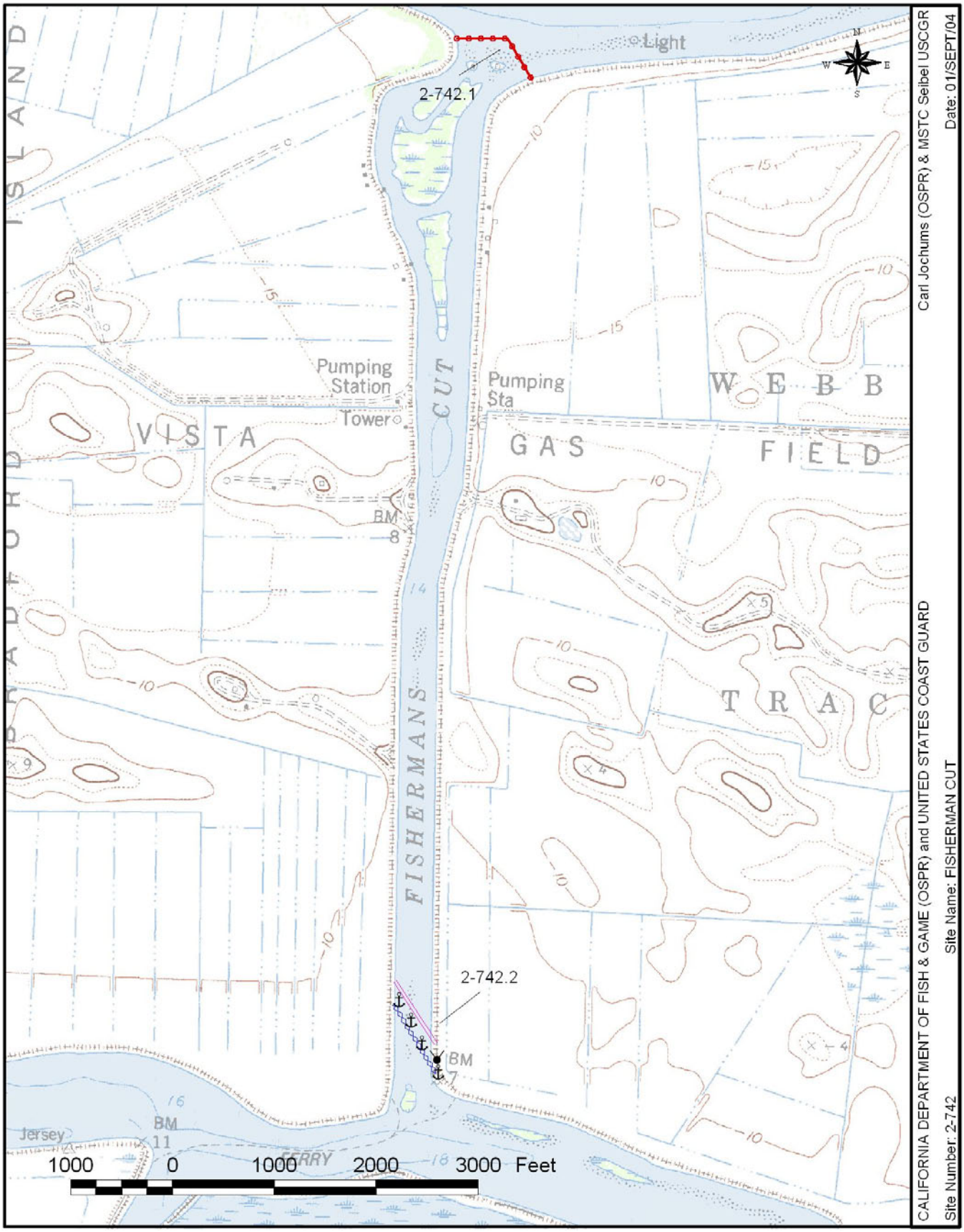
Launching, Loading, Docking and Services Available: Boat launch and marine support at Antioch, Bethel Island and mouth of Mokelumne (Korth's Marina). Launch at Brannon Island State Park.

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

Complete support facilities at Antioch and Brentwood. Lessor degree at Bethel Island and Oakley. Also support facilities at Mokelumne River and 7-mile Slough. Staging is possible at Brannon Island, Mokelumne River mouth, Bethel Island, and Antioch.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Sevenmile Slough

2-743 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Sacramento		3 8 07	121 39
USGS Quad:	Bouldin Island, Jersey Island	NOAA Chart:	18661 Sacramento / San Joaquin River	

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This site includes the shallow slough between Twitchell and Andrus Islands from the Twithchell Island bridge east of Hwy 160 to the confluence with the San Joaquin River and the tule islands at the mouth of the slough on the San Joaquin River. This site is designated a natural area by Delta Master Recreational Plan. The first 1.5 miles are continuous with the San Joaquin River, while the central 3 miles is behind at flood gate. This site includes marsh along the length of the slough, particularly the eastern end. Riparian trees and shrub-brush occur on banks and berm islands. Tule islands exist at the mouth of the slough in the San Joaquin River. Area has extensive marina development.

SEASONAL and SPECIAL RESOURCE CONCERN

This marshy-riparian area is "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

Marsh and shrub-scrub line most of the channel and channel Islands. This is excellent habitat for all manner of riverine animals and fish and is good spawning habitat for Delta smelt and various warmwater fish.

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

The marsh also supports a wide diversity of marsh mammals and other riparian 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
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
TB	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:

2-743 -A Site Strategy - Sevenmile Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	18661 Sacramento / San Joaquin River	3 8 07	121 39

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

The major concern is spread of oil into the inner reaches of the slough behind river front islands and behind the flood gates: oiling of extensive emergent marshes of islands and margins. Many marinas and boats are vulnerable as well.

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

Winds and currents tend to keep oil away from this shoreline. However, unusual winds plus a large eddie just to the north near the mouth of the Mokelumne River (San Andreas Shoal) can accumulate oil immediately upstream.

Strategy 2-743.1 **Objective: Exclude oil from moving into protected channels inside channel islands which front the slough mouth and protect the islands also.** ACP DATE 7/1/1996

Use 6X6+ exclusion boom to close all openings between channel islands and mouths to inside channel (600') and back with sorbent boom. Front the channel islands with 4X4+ protective boom or sorbent boom (3000'). Ensure a tidal seal at shore closures. Good levee roads enable shore deployments.
Close tide gate to stop flow to western portion of slough (cross road to Twitchell Island).

Strategy 2-743.2 **Objective: Deflection to collection/confinement on Andus Island shore if substantial oil patches are threatening the Andrus or Twitchell Island shoreline.** ACP DATE 7/1/1996

If oil is moving along this east shoreline, then set 200' collection booms. Such booming will probably be needed at each end to deal with both ebb and slack tide movement. If a lot of oil is bypassing the collection, then deflect oil away from Sevenmile Slough and islands: 600'8X8+ boom anchored from shore out into channel. Good levee roads enable shore deployments. Use 50ft of Oil Snare (OS), 100ft of sorbent boom to collect any oil that may accumulate. If oil accumulates in skimmable quantities contact the IC for shoreside skimming deployments per 2-743.3 per IC direction.

Strategy 2-743.3 **Objective: Oil Recovery with shoreside skimming** ACP DATE

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
2-743.1	0	3600			8	8/15lb/danforth	2	2				Bboat: very shallow draft	14	
2-743.2	0	1200	50 OS	100	4	4/25lb/danforth	1	1					5	
2-743.3	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.)

Take Hwy 160 to Twitchell Island levee roads (about 5 mi south of Hwy 12) or levee roads from Hwy 12 at Mokelumne River. By water, the site is accessible from local marinas. This site includes the shallow slough between Twitchell and Andrus Islands from the Twithchell Island bridge east of Hwy 160 to the confluence with the San Joaquin River and the tule islands at the mouth of the slough on the San Joaquin River.

LAND ACCESS: ALL SEASON/ALL TRAFFIC ROADS ON LEVEES

WATER LOGISTICS: GOOD EXCEPT SHORE SHALLOW & OBSTRUCTIONS
Limitations: depth, obstruction

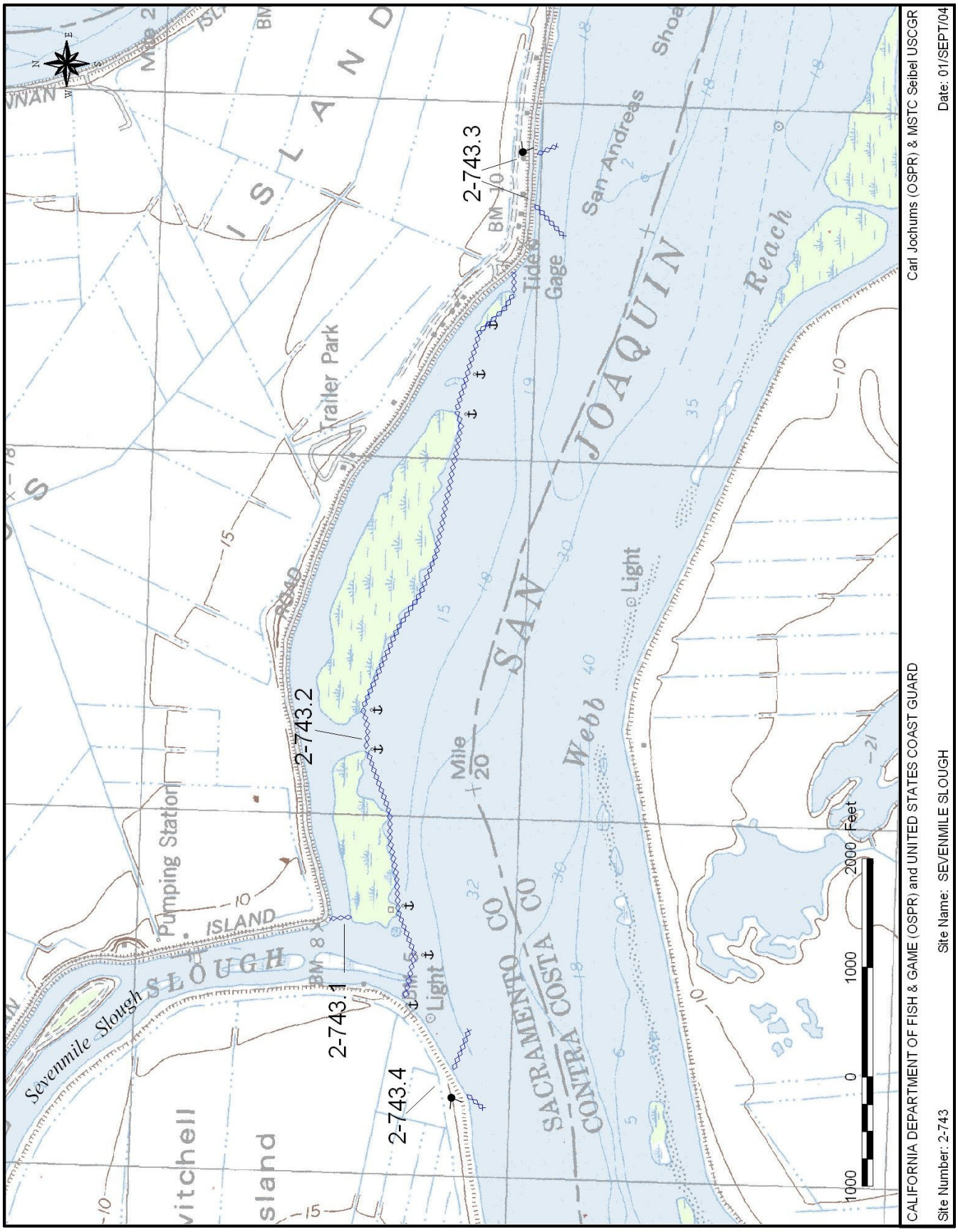
Launching, Loading, Docking and Services Available: Boat launch available at Brannon Island State Park and marinas at Sevenmile Slough and mouth of Mokelumne.

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

Brannon Island State Park is a possible IC or staging area. Diverse facilities (including space, water, power, marine support, food, sewage and some camping) at mouth of Mokelumne would support a staging area or an IC. Delta levees at site provide ready local land-water deployment.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Chips Island, Southern Side

2-752 -A

County:	Solano	Thomas Guide Location	Latitude N 3 8 04	Longitude W 121 55
USGS Quad:	Honker Bay	NOAA Chart: SUISUN BAY 18652/18656		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This site is the southerly exposure of Chips Island to Suisun Bay and all the associated interior island channels. The entire margin of the island is emergent saline marsh. Some exposed portions are eroding but most margins are accreting. There are about a dozen pockets and inlets along this two mile length. Some of these openings lead to extensive inner channels or to interiors of marshes. These are paths which, if left open, would permit widespread impacts. This is excellent marsh habitat for a wide variety of marsh species including several Special Status Species.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh 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 including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
TB	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 - Chips Island, Southern Side

2-752 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Solano	SUISUN BAY 18652/18656	3 8 04	121 55

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concern is oil entering the interior marsh channels (which parallels the island margin) and interior marshes. Oiling of emergent marshes and banks on outer margins is secondary concern. Avoid trampling vegetation: small endangered plants and animals are present.

HAZARDS and RESTRICTIONS:

Vessels beware of submerged objects and shallows at margins.

SITE STRATEGIES

There are many pilings and shallows along this margin: watercraft should be very shallow draft and capable of grounding.

Strategy 2-752.1 Objective: Exclude oil from entering inner channels and marshes by exclusion booming of the openings of the outer levee.

ACP DATE 7/1/1996

Place 8x8+ curtain boom across each of the 9 openings. Anchor near shore but leave a trailing end to maintain tidal seal. Double boom or back with sorbent to catch escaping oil especially for exposures where wind chop is likely to lift oil over the boom flotation (such as west tip). 1500 ft of boom needed per NRC exercise of strategy.

Strategy 2-752.2 Objective: Protect emergent marsh at east tip and pocket cove near west tip against oil penetration

ACP DATE 7/1/1996

This strategy is based on the predominant winds which blow waves away from this shore rather than onto it: if waves are from the south or southwest, larger boom (8X8+) and double booming will be necessary. Under mild wind exposures, lay 600 ft of 4x4 harbor boom across pocket cove mouth which is 1000 ft east of west end. Lay 2500 ft of 4x4 boom from east tip to west along the edge of the emergent vegetation and shore: (this protective boom should be linked to protective strategy for Spoonbill Creek east mouth). Run boom ends landward to complete a tidal seal.

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
2-752.1	1500				20	20/12+/danforths & stakes	2	1			Bboat: shallow draft	8	
2-752.2	0	3100			5	5/22+/anchors & stakes	3	2			Bboats: shallow draft	13	

LOGISTICS

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

Site has only water access. Water access is one mile west from Pittsburg or 2 miles east of McAvoy's. This site is the southerly exposure of Chips Island to Suisun Bay and all the associated interior island channels.

LAND ACCESS: NO VEHICLE ACCESS

WATER LOGISTICS: SHALLOW AND PILINGS
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Launch and complete marina facilities are available at Harris' or McAvoys Marinas 2 miles west, and at Pittsburg Marina and public ramp to east.

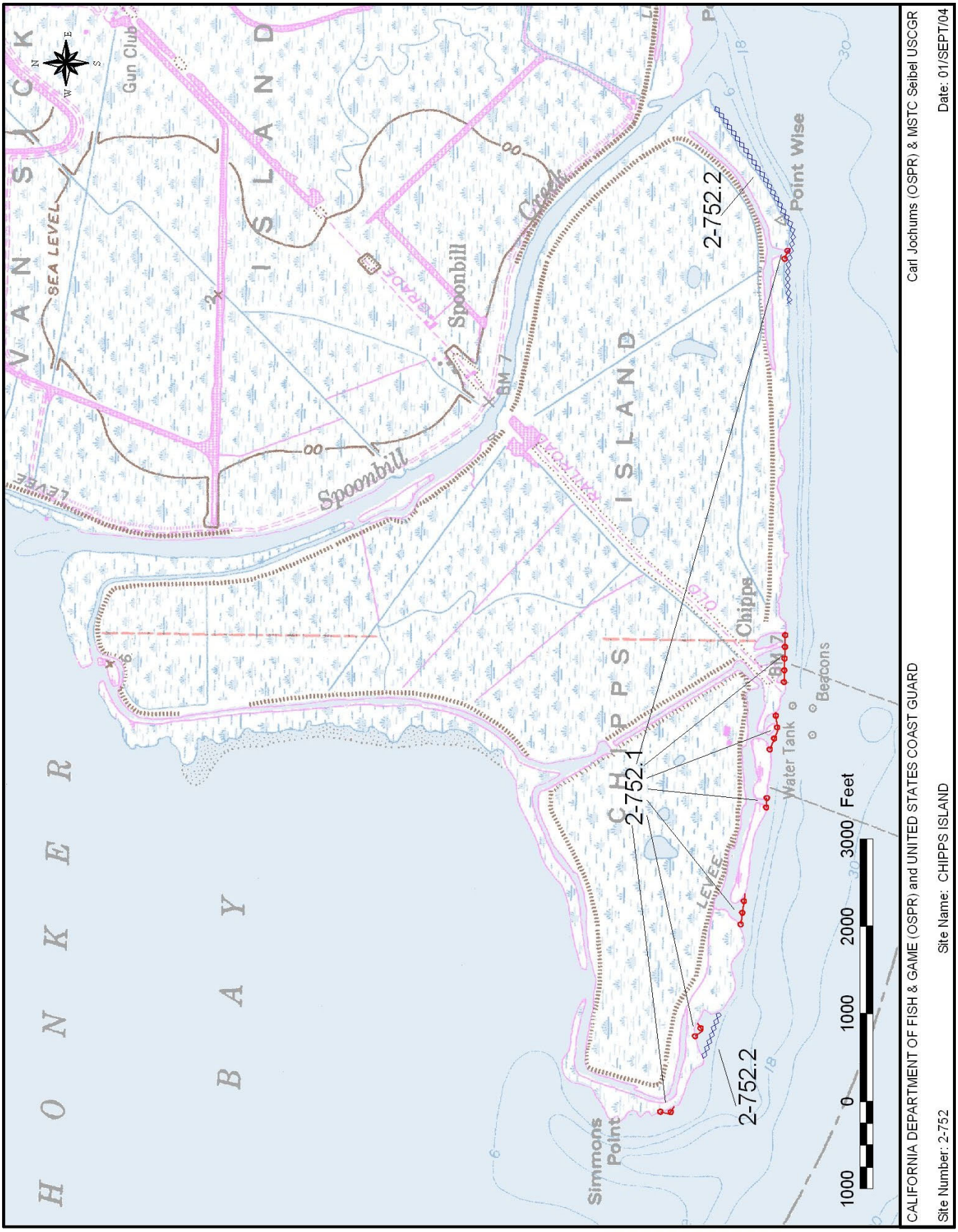
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Both Pittsburg and Harris' or McAvoys provide excellent staging or deployment sites. Diverse facilities are available at both. Security can be an issue at Pittsburg.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

Strategy Diagram- Chips Island, Southern Side



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

Site Summary- Spoonbill Creek

2-755 -A

County:	Solano County	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Honker Bay	Solano County	38 02.0	121 49.0
		NOAA Chart: Suisun Bay		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

Site extends from its easterly mouth on Suisun Bay to about mid-point and includes openings to pocket sloughs and adjacent borrow channels. This tidal channel lies between Chips Island and Van Sickle Island. It connects Honker Bay with eastern Suisun Bay. The Creek has a strong tidal current on both ebb and flood. Expect the water to flow to the northwest, toward Honker Bay, on the ebb tide and to the southeast, toward Suisun Bay on the flood tide. The levee on the east side, Van Sickle Island, is well maintained and has a narrow dirt road on top. It may support vac trucks, although a turn around has not been identified. There are also Eucalyptus trees on this levee that can be used to anchor boom. The easterly mouth of Spoonbill Creek is an extensive marshy area. The waterway has marshy margins with openings to a borrow channel that is separated from Suisun Bay by low marshy islands.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including the following special status species: California black rail, saltmarsh harvest mouse.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
EL	Les Jacobson	Van Sickle Island Reclamation District	(510) 620-0813
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	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:

2-755 -A Site Strategy - Spoonbill Creek

2-755 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Solano County Solano County	Suisun Bay	38 02.0	121 49.0

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Major concern is transport and spread of oil to sensitive areas including Honker Bay and marshes within Spoonbill Creek as well as oil penetration of the marshes at the mouth of Spoonbill Creek.

HAZARDS and RESTRICTIONS:

Shallow water at entrance into Spoonbill Creek, submerged obstructions likely. Wind chop to three feet possible in Suisun Bay. Strong currents in Spoonbill Creek, but no chop.

SITE STRATEGIES

Strategy 2-755.1 **Objective: Exclude oil from entering the southern end of Spoonbill Creek by deploying deflection boom in the Sacramento-San Joaquin River channel just south of the creek mouth.** ACP DATE 7/1/1996

Deploy 3000 feet of harbor boom (boom having a freeboard of not less than 8 inches and a draft of not less than 6 inches) across the mouth of Spoonbill Creek and along the north shore of the Sacramento-San Joaquin river not less than 1000 feet either side of the creek mouth. Anchor the ends of the boom well up onto the shoreline, above the high tide line if possible. Fasten an anchor to the boom near the middle of the creek mouth pull the anchor south into the river until the boom forms a shallow, taunt "V" and set the anchor.

Strategy 2-755.2 **Objective: Back-up to exclusion, diversion to shore-side collection out of current (usually Chipps shore) to prevent movemnt toward Honker Bay.** ACP DATE 7/1/1996

Deploy 1,500 feet of swamp boom (less than 6 inches of freeboard and less than 4 inches of draft) at a shallow angle across the creek. Anchor one end of the boom on the west side of the creek at or just outside the creek mouth. Anchor the other end of the boom 1,000 to 1,500 feet inside the creek mouth on the east bank of the creek. This is the oil collection and recovery point. The east bank of the creek is a levee with a graded road on top. Vehicle access may be possible. The shoreline should be lined with hard boom and backed with sorbent at this point, and there must be a means of placing tension on the boom (a winch or block and tackle) so it remains taught and straight. If any portion of the boom approaches an angle perpendicular to the current, oil will entrain and an second boom must then be deployed down current from the first.

Strategy 2-755.3 **Objective: An alternative to the previous collection strategy is to collect oil entering Spoonbill Creek with a vessel mounted skimming system.** ACP DATE

Deploy a vessel mounted, self propelled skimming system in the middle of Spoonbill creek with 500 feet of boom deployed between each bank and the skimmer in such a way as to increase the encounter rate of the skimmer and prevent oil from getting around the skimmer.

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
2-755.1	3000				3	3 - 25 lb danforth, 30' chain, 100'	5	1					11	
2-755.2	0	1500		500	2	2	2	1					6	
2-755.3	1000			500	2	2	2	1	1	self pro				

LOGISTICS

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

Water access from west Pittsburg. Some levee access from Van Sickle Island. Take hwy 12 to Grizzly Island Road to Van Sickle Island. Local Fish and Game warden can arrange for access over graded private roads. Site extends from its easterly mouth on Suisun Bay to about mid-point and includes openings to pocket sloughs and adjacent borrow channels.

LAND ACCESS: Van Sickle Island LEVEE ROAD

WATER LOGISTICS: DEEP EXCEPT BAR AT MOUTH
Limitations: depth, obstruction

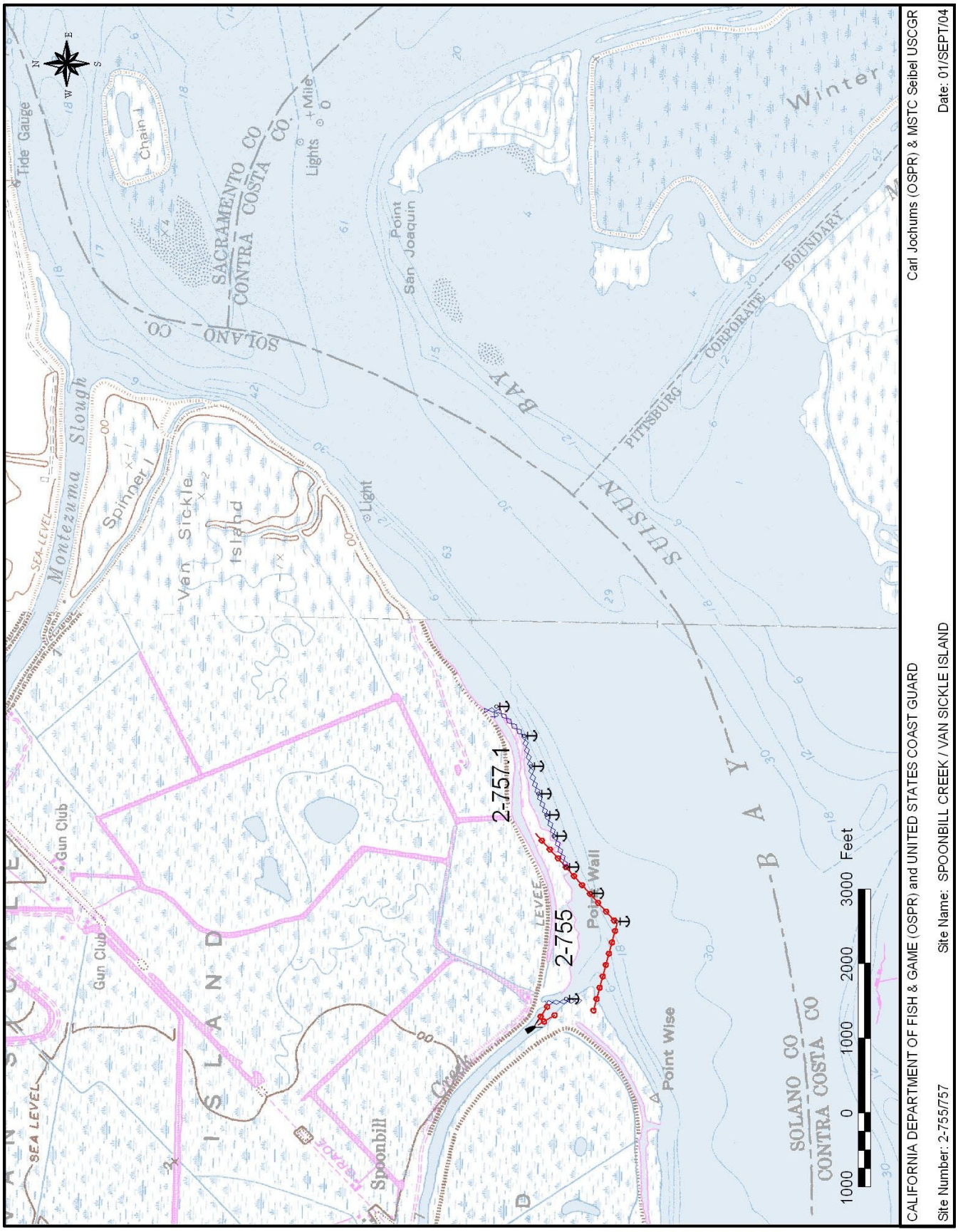
Launching, Loading, Docking and Services Available: Boat launching and other vessel services are available at several locations along the south shore of the river and Suisun Bay (northeastern Contra Costa County) including Pittsburg, Antioch, and Bay Point marinas.

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

There are several locations along the south shore of Suisun Bay that may be suitable for staging areas and field posts, including Pittsburg, Antioch, and Bay Point marinas. On the north shore, Collinsville has limited facilities but equipment can be loaded onto vessels there. There are moorage and docks and small amounts of support including water, phones, power and food.

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- Van Sickle Island

2-757 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Solano		38 03.5	121 53
USGS Quad:	Honker Bay, Antioch North	NOAA Chart:	SUISUN BAY 18652/18656	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site is the south margin of Van Sickle Island which fronts on Suisun Bay between Spoonbill Creek and Montezuma Slough. This Island margin is a levee with emergent marsh on the Suisun Bay side. On the Spoonbill end there is a barrow channel behind the front marsh which is about one third the length of the exposure (which is an important path to close to oil spread).

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including special status species.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
EL	Les Jacobson	Van Sickle Island Reclamation District	(510) 620-0813
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	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:

2-757 -A Site Strategy - Van Sickle Island

2-757 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Solano	SUISUN BAY 18652/18656	38 03.5	121 53

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Potential impacts of concern include oiling of emergent marsh, oil entering small sloughs, penetration of levees via animal burrows.

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

Strategy 2-757.1 **Objective: Exclude oil from small sloughs and from slough behind berm island at mouth and deploy protective boom to along emergent marshes.**

ACP DATE 7/1/1996

At the east tip of the berm island (about a half mile east of Spoonbill Creek) close the inside channel with 100 ft. 6x6+ exclusion boom. Deploy 4x4+ boom from the tip along the front of the berm island to the mouth of Spoonbill Creek. If wind chop is likely to lift oil over this boom use double booming and use larger boom. Anchor near shore and leave trailing boom ends to make a tidal seal.

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
2-757.1	0	3500			8	8/25lb/danforths	2	1					16	

LOGISTICS

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

Levee and private roads provide land access from Collinsville. By water, the site is a mile northwest from the Pittsburg Marina. This site is the south margin of Van Sickle Island which fronts on Suisun Bay between Spoonbill Creek and Montezuma Slough.

LAND ACCESS: NO LAND ACCESS

WATER LOGISTICS: SHALLOWS AND OBSTRUCTIONS COMMON
Limitations: depth, obstruction

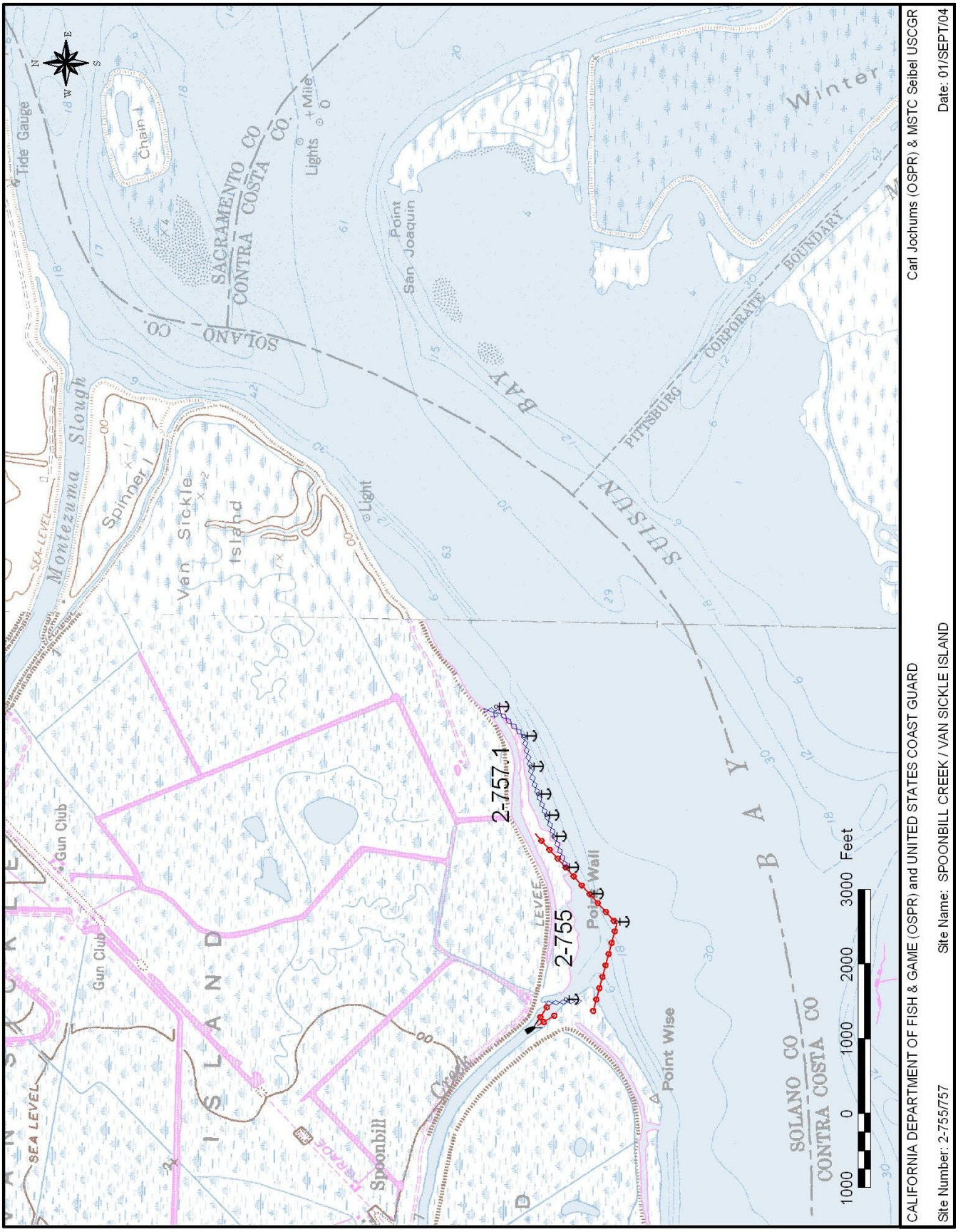
Launching, Loading, Docking and Services Available: Boat launch is available at South Shore (Contra Costs) locations including Pittsburg, Antioch, and Bay Point Marinas.

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

There are various staging and facilities along the south shore. Collinsville has limited facilities but would be a good local deployment site. There are moorage and docks and small amounts of support including water, phones, power, and food.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


2-757.1
2-755
Point Wall
Point Wise
Spoonbill
Gun Club
Gun Club
Van Sickle Island
Spinner I
Chain I
Tide Gauge
Lights
Light
Point San Joaquin
Winter
Monteznma Slough
SACRAMENTO CO
CONTRA COSTA CO
SOLANO CO
SUISUN BAY
PITTSBURG CORPORATE BOUNDARY
LEVEE
SEA LEVEL
1000 0 1000 2000 3000 Feet
Carl Jochums (OSPR) & MSTC Seibel USCGR
Date: 01/SEPT/04
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: SPOONBILL CREEK / VAN SICKLE ISLAND
Site Number: 2-755/757
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Montezuma Slough - East Mouth

2-760 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Solano		38 04.3	121 52
USGS Quad:	Antioch North	NOAA Chart:	SUISUN BAY 18652/18656	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site extends from the easterly mouth of Montezuma Slough about one mile to the DWR flow control structures. The Slough connects Grizzley Bay with eastern Suisun Bay and runs along the northeaster margin Van Sickle Island. There is a well developed emergent marsh at it easterly mouth, and the channel is lined with emergent marsh. There are pocket sloughs along part of its length with additional marshy habitat.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including special status species.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
OL	State Water Project Ops C	CA Dept. of Water Resources	(916) 574-2714
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
EL	Les Jacobson	Van Sickle Island Reclamation District	(510) 620-0813
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
TB	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:

2-760 -A Site Strategy - Montezuma Slough - East Mouth

2-760 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Solano	SUISUN BAY 18652/18656	38 04.3	121 52

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Major concerns are spreading of oil to other sites and to extensive marsh margins throughout length. Penetration of oil into levees via animal burrows is also a concern.

HAZARDS and RESTRICTIONS:

Shallows at margins.

SITE STRATEGIES

Strategy 2-760.1 **Objective: Stop oil entrainment into slough by stopping through current.** ACP DATE 7/1/1996

Contact Dept. Water Resource Control of the water check dam and request complete closure to stop through flow.

Strategy 2-760.2 **Objective: Exclude oil from entering mouth by configuring exclusion boom to fend oil away from mouth as to exclude.** ACP DATE 7/1/1996

Deploy 8x8+ exclusion boom well out from the mouth in a shallow chevron "V" to encourage oil to slide past mouth as well as to exclude entry. Run an extended boom length along the wetland to the east of the mouth. Anchor west end near the Spinner Island shore 200 yards west of mouth. Put sorbent boom across the mouth.

Strategy 2-760.3 **Objective: Backup strategy to above exclusion if oil circumvents exclusion.** ACP DATE 7/1/1996

1) Close mouth of inside slough at Van Sickle margin with 100' 4x4+ boom backed with sorbent. 2) Set 400 ft 6x6+ exclusion boom across channel near the mouth in a manner most favorable (a diagonal) to conditions on incoming tide. Back with sorbent boom.

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
2-760.1	0											contact DWR		
2-760.2	3000				8	8/25lb/danforth + chain + line	3	2					13	
2-760.3	0	500		500	6	4/25lb & 2/10lb/danforths	1	1					5	

LOGISTICS

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

Access from the Van Sickle Island shore on private roads from Collinsville. By water, the site is a mile north of Pittsburg. This site extends from the easterly mouth of Montezuma Slough about one mile to the DWR flow control structures.

LAND ACCESS: levee roads when dry

WATER LOGISTICS: GOOD AT MARGINS
Limitations: depth, obstruction

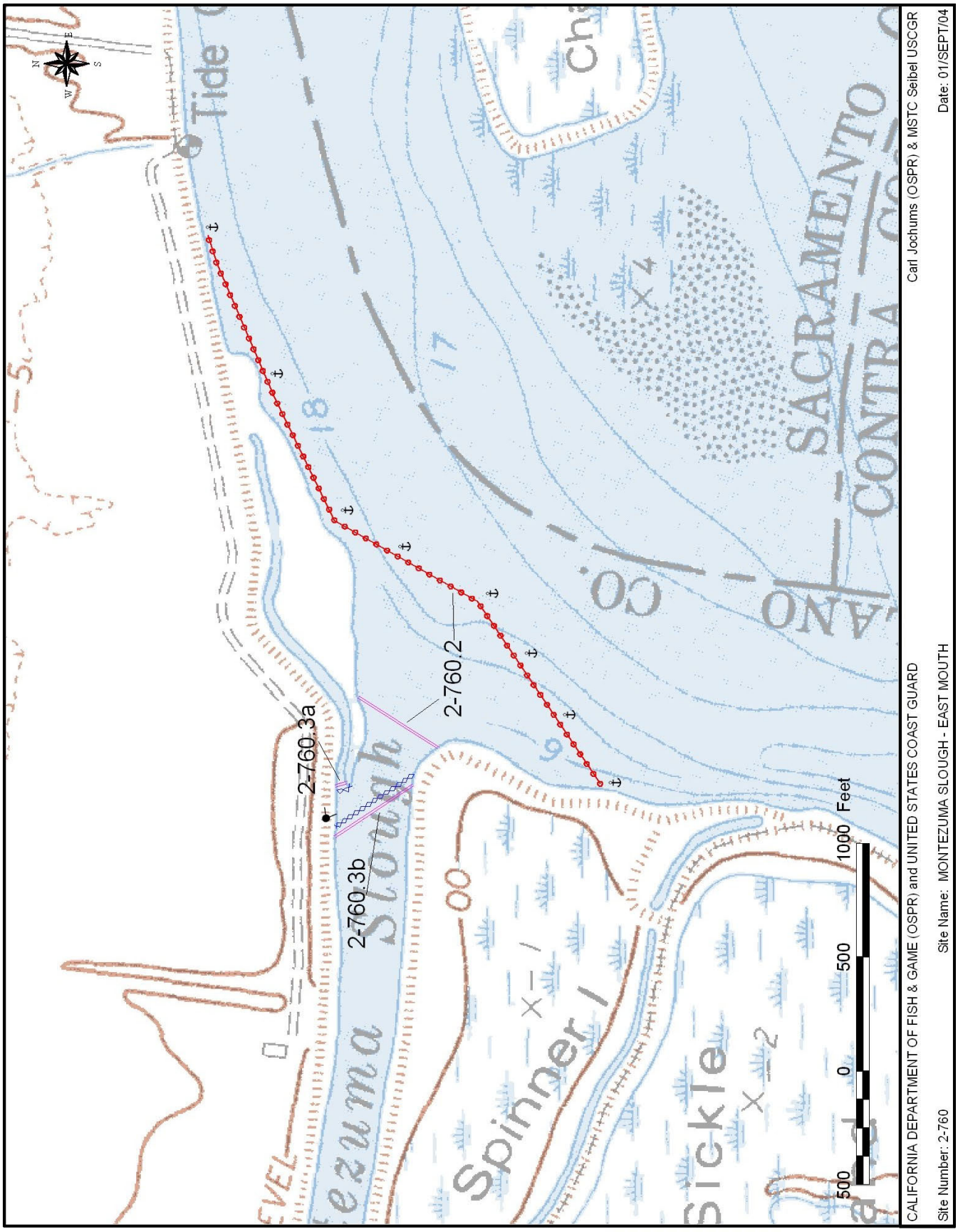
Launching, Loading, Docking and Services Available: Boat launch is available at South Shore (Contra Costs) locations including Pittsburg, Antioch, and Bay Point Marinas.

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

There are various staging and facilities along the south shore. Collinsville has limited facilities but would be a good local deployment site. There are moorage and docks and small amounts of support including water, phones, power, and food.

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- Montezuma Island and Collinsville

2-765 -A

County:	Sacramento, Solano	Thomas Guide Location	Latitude N 38 04.5	Longitude W 121 50.5
USGS Quad:	Antioch North	NOAA Chart: SUISUN BAY 18652/18656		

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes Montezuma Island and marsh margins on the Collinsville shore including Marshall Cut. Montezuma Island is high ground and unleveed. However, the margin, particularly the north margin is a wide expanse of emergent marsh. Also there are several emergent channel marshes and a well developed marsh around Marshell Cut. The westerly part of the mainland shore is ripped. West of Montezuma Island there is a long cut which runs inland to some commercial facilities and at and inside the mouth there is emergent marsh.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including special status species.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
TB	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 - Montezuma Island and Collinsville

2-765 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento, Solano	SUISUN BAY 18652/18656	38 04.5	121 50.5

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Concern is for oiling of emergent marshes at margins of Montezuma Island and shore line northeast of Collinsville. Also be aware of penetration of oil into riprap or onto levees via animal burrows.

HAZARDS and RESTRICTIONS:

shallows at margins. Rip rap has slip, trip, & fall hazards.

SITE STRATEGIES

Strategy 2-765.1 **Objective: At the east end of Montezuma Island, deflect oil away from mouth and exclude it from entry to north side of channel.** ACP DATE 7/1/1996

Set exclusion boom from the east tip of Montezuma Island due east to Montezuma Island (1200 ft. 8x8+). Anchor near shore leaving trailing ends for tidal seal. At Montezuma Landing, set 2 cascading deflection booms to deflect oil away from the mouth of the channel towards the main channel.

Strategy 2-765.2 **Objective: deflect oil away from shoreline and close north side channel mouth at the west end of Montezuma Island,** ACP DATE 7/1/1996

Deploy 1000' of 8x8+ exclusion boom from the west tip of Montezuma Island due west to the opposite shore. Anchor near shore leaving a trailing boom length to ensure tidal seal. Just west of dead-end channel set deflection booms west of Collinsville (2) cascading from the shore to divert easterly moving oil back into the channel.

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
2-765.1	2000				8	8/25lb/danforths	4	2				extra line	14	
2-765.2	1500				8	8/25lb/danforths + chain + line	3	2					13	

LOGISTICS

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

Land access by Collinsville Road from Hwy 12. Only water access to Montezuma Island, from Collinsville or, 1 mile North of Pittsburg. This site includes Montezuma Island and marsh margins on the Collinsville shore including Marshall Cut.

LAND ACCESS: NO LAND ACCESS

WATER LOGISTICS: MARGINS ARE SHALLOW CHANNELS ARE DEEP

Limitations: depth, obstruction

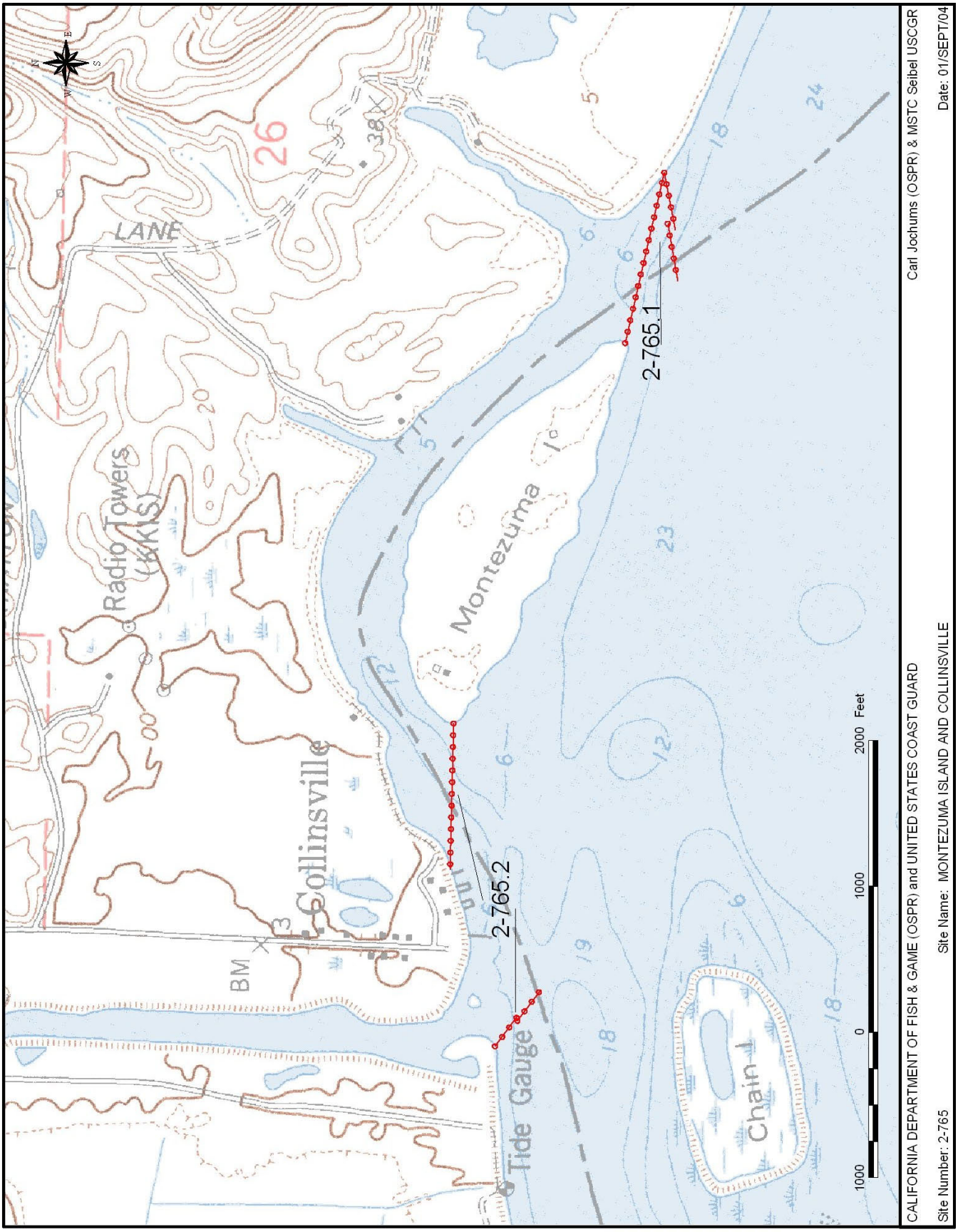
Launching, Loading, Docking and Services Available: Boat launch is available at South Shore (Contra Costa) location including Pittsburg, Antioch, and Bay Point marinas.

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

There are various staging and facilities along the south shore. Collinsville has limited facilities but would be a good local deployment site. There are moorage and docks and small amounts of support including water, phones, power, and food.

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- Chain Island

2-770 -A

Thomas Guide Location	Latitude N	Longitude W
	38 04.3	121 51

County: Sacramento

USGS Quad: Antioch North

NOAA Chart: SUISUN BAY 18652/18656

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This small marshy island is located at the mouth of Montezuma Slough near the confluence of the Sacramento and San Joaquin Rivers. The island has low levees around its perimeter. However, the site is a silt accreting site and extensive mud flats surround the island and emergent marsh has extended well beyond the original margin of the island. The surrounding water is extremely shallow.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including special status species.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
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:

2-770 -A Site Strategy - Chain Island

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	SUISUN BAY 18652/18656	38 04.3	121 51

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

There are extensive tidal marshes at each end of the island. The objective is to protect marsh from oil penetration into emergent marshes AT EACH END and perimeter. Endangered species occur here: responders should minimize disturbance of marsh vegetation and avoid tracking oil into marshes and sediments.

HAZARDS and RESTRICTIONS:

Extreme shallows.

SITE STRATEGIES

Strategy 2-770.1 **Objective: Deflect oil away from the emergent marshes at each end and away from the Island.**

ACP DATE 7/1/1996

Deploy chevrons of curtain boom at each end of the island at about the 5 ft. depth contours to fend oil past the island. Chevrons should be 1500' on each leg and well anchored at each apex. Run sorbent or swamp boom from the tips of the chevron to shore to stop oil from getting behind the boom. Boom remaining exposed island flanks with sorbent or swamp boom.

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
2-770.1	6000	4500			12	2/50 & 10/12+danforths	6	5			Bboats: very shallow draft	28	

LOGISTICS

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

Water access only: site is one mile north of Pittsburg. This small marshy island is located at the mouth of Montezuma Slough near the confluence of the Sacramento and San Joaquin Rivers.

LAND ACCESS: NO LAND ACCESS

WATER LOGISTICS: WATER IS EXTREMELY SHALLOW

Limitations: depth, obstruction

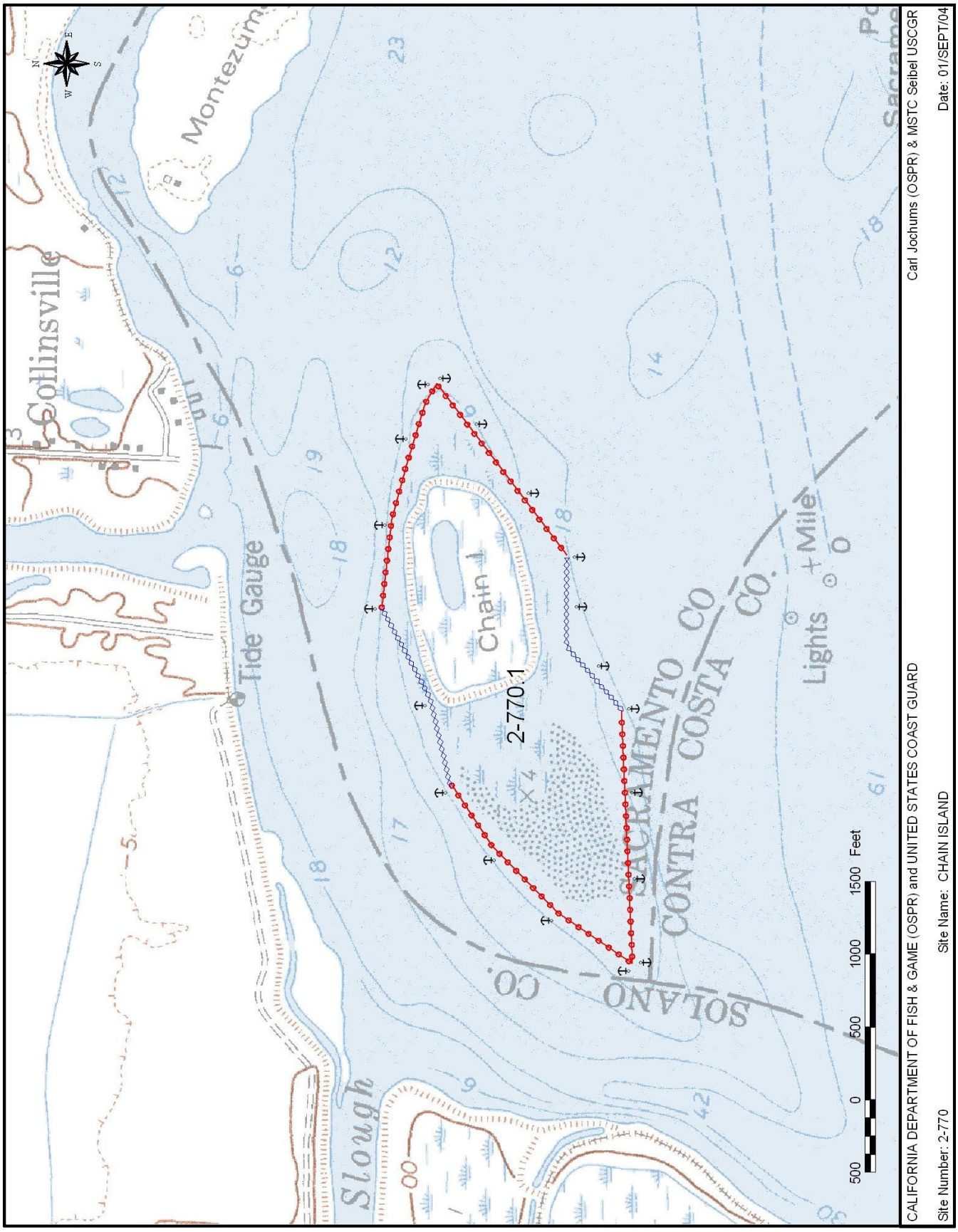
Launching, Loading, Docking and Services Available: Boat launch is available at South Shore (Contra Costs) locations including Pittsburg, Antioch, and Bay Point Marinas.

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

There are various staging and facilities along the south shore. Collinsville has limited facilities but would be a good local deployment site. There are moorage and docks and small amounts of support including water, phones, power, and food.

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- Lower Sherman Island - Sherman Lake Complex

County:	Sacramento	Thomas Guide Location	Latitude N 38 02.5	Longitude W 121 49
USGS Quad:	Antioch North	NOAA Chart: 18661 Sacramento / San Joaquin River		

Last Page Update : 7/1/2005

SITE DESCRIPTION:

Lower Sherman Island is a 3000 acre Dept of Fish & Game Wildlife Area which is bounded by the Sacramento River, Mayberry Slough, Mayberry Cut, Cabin Slough and the San Joaquin River. This flooded island is a network of waterways and emergent vegetation with some well developed riparian growth on the high ground. There is high ground at the west tip, and old levees along the sloughs. There are cabins on the levee along Cabin Slough (south eastern margin). On flood tides flow tends to come from the Sacramento River side and flow across the site to the San Joaquin and the opposite on the ebb.

SEASONAL and SPECIAL RESOURCE CONCERN

This extensive wetland is "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

This extensive wetland supports all manner of marsh life and is important spawning, rearing and foraging habitat for fish and invertebrates.

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
TB	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 - Lower Sherman Island - Sherman Lake Complex

2-780 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	18661 Sacramento / San Joaquin River	38 02.5	121 49

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concern is spread of oil from main channels of Sacramento and San Joaquin Rivers to interior of area with subsequent broad scale oiling of extensive marshes. Minimize collateral impacts from cleanup: trampling of vegetation and trampling oil into sediments.

HAZARDS and RESTRICTIONS:

shallows and obstructions. Aircraft beware of highpower wires in the vicinity.

SITE STRATEGIES

On flood, currents tend to move across the site from Sacramento River to San Joaquin, and on ebb, from San Joaquin River to Sacramento.

Strategy 2-780.1 Objective: Primary: Exclusion by chevron boom for oil threat from San Joaquin River side: deflection-exclusion booming on outside

ACP DATE 7/1/2005

Set a shallow deflection-exclusion in a chevron "V" configuration to encourage oil to slide past the mouth. Use 500 ft. 10x10+ exclusion boom with large anchor at peak.

Strategy 2-780.2 Objective: Primary for Sacto oil threat: exclude and deflect oil away at Sacto River openings to Sherman Lake

ACP DATE 7/1/1996

For oil moving from the west, set two 400' 8x8+ cascading deflection booms 30 yards west of the opening. Then deploy 3000' of 8x8+ exclusion boom across the opening. A secondary layer of sorbent boom or smaller skirted boom may be necessary depending on conditions: if wind chop is likely to lift oil over boom, then the second layer will be necessary.

Also, if oil is moving down the Sacramento along the Sherman Island shore, set collection booms and skimmers along the Sherman levee upstream from Lower Sherman.

Strategy 2-780.3 Objective: Backup to San Joaquin exclusion (2-780.1) - when oil entrains past primary exclusion.

ACP DATE 7/1/2005

Deploy a collection boom inside: make a continuous pocket on the inside by lining the margins and islands with 1500' of 4x4+ boom. A skimmer may be permanently assigned to collection or occasionally sweep the pocket. Back with oil snare and sorbents.

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
2-780.1	500				4	3/22+ & 1/12+/danforths	1						3	
2-780.2	3800				12	12/22+/danforths & stakes	4	4				Bboat: very Shallow draft	25	
2-780.3	0	1500	100 OS	500	8	12#+/danforths	1	0	1	SPS	0		3	2

LOGISTICS

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

Land access to the north margin of the site via levee road west off of Hwy 160 and private levee maintenance roads. By boat either use Serman Lake WL Area launch ramp at end of levee road or launch from Antioch across San Joaquin River. There is a small marina on Mayberry Slough. Lower Sherman Island is a 3000 acre Dept of Fish & Game Wildlife Area which is bounded by the Sacramento River, Mayberry Slough, Mayberry Cut, Cabin Slough and the San Joaquin River.

LAND ACCESS: GOOD AT NORTH

WATER LOGISTICS: SHALLOW AND OBSTRUCTIONS

Limitations: depth, obstruction

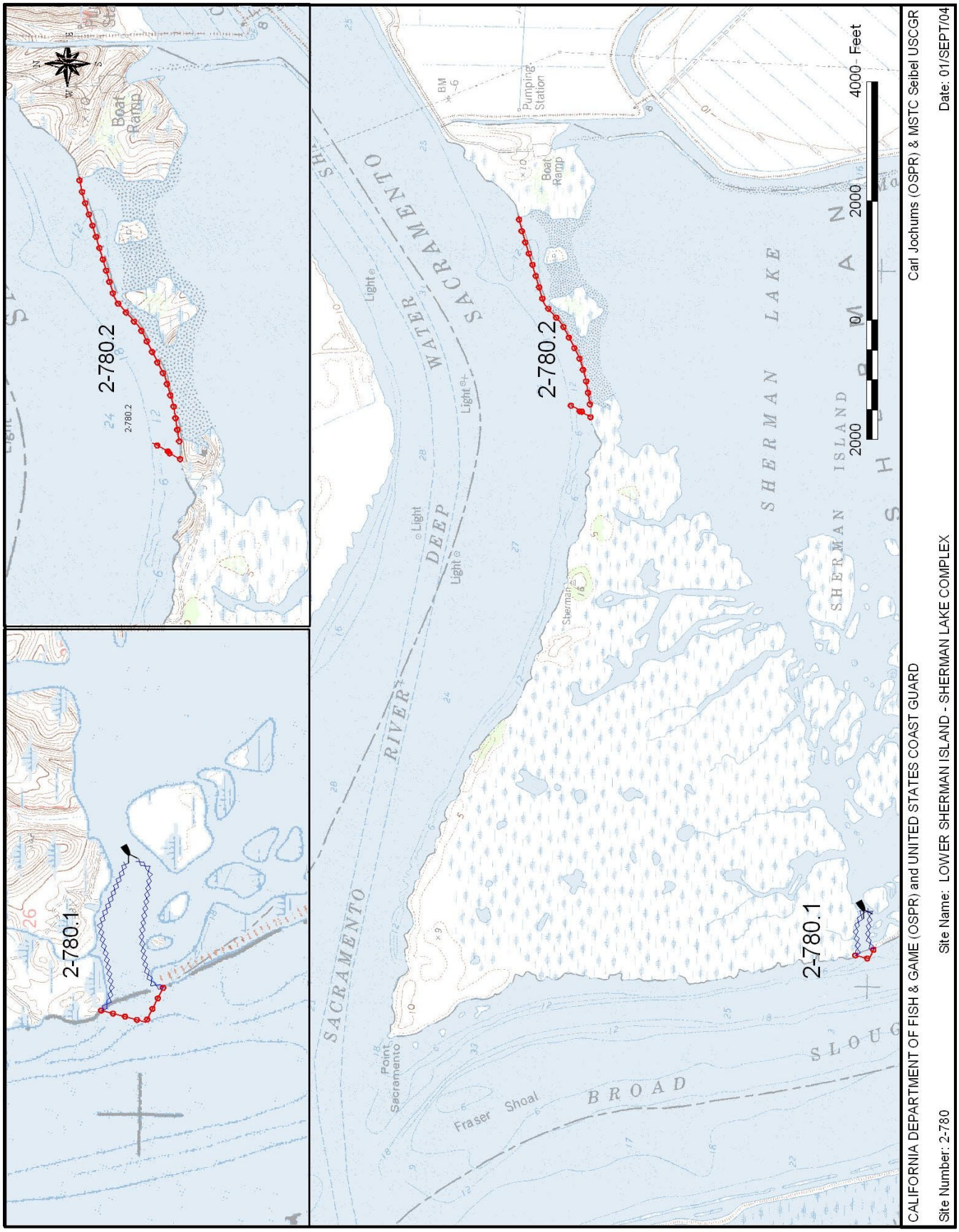
Launching, Loading, Docking and Services Available: Boat launching is available from south shore at Antioch or at north corner of Sherman Lake public ramp.

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

Good staging/deployment site to south is Antioch Marina. To the north, the Lower Sherman Island Wildlife Area launch ramp is an excellent staging/deployment area. Limited facilities including some camping are available there. Full facilities are available at Antioch.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:



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

Site Summary- Kimball Island - Cabin Slough

2-783 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Sacramento		38 01.5	121 50
USGS Quad:	Antioch North	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes Kimball Island, Cabin Slough, and channel and berm islands at each end of Cabin Slough. Kimball Island has low levees, but over half its area is unleveed and has finger channels into its emergent marshy margin. Cabin Slough has channel islands throughout its length and particularly at its east mouth. The water in Cabin Slough is relatively navigable but only the north channel has a safe east exit. Both ends of Kimball island are very shallow.

SEASONAL and SPECIAL RESOURCE CONCERN

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

RESOURCES OF PRIMARY CONCERN

This extensive saline-fresh marsh system is good habitat for marsh birds and mammals of all kinds including special status species.

This is nesting and foraging habitat for all manner of waterfowl and marsh birds including the Special Status Species: California black rail (FSC/CT).

The marsh also supports a wide diversity of marsh mammals and other vertebrates including Special Status Species: saltmarsh harvest mouse (F/CE).

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
TB	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 - Kimball Island - Cabin Slough

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	18661 Sacramento & San Joaquin River	38 01.5	121 50

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Major concerns are spreading of oil to marshes of Cabin Slough and penetration of oil into emergent marshes and channels at each end of Kimball Island.

HAZARDS and RESTRICTIONS:

Shallows, obstructions, sunken craft.

SITE STRATEGIES

Strategy 2-783.1 Objective: Exclude oil entry at westerly end of Cabin Slough - wind chop is a problem here.

ACP DATE 7/1/1996

Deploy exclusion boom at a very acute angle to wind across the westerly mouths. Deploy 1500' 8x8+ exclusion boom from the west tip of Kimball Island northwesterly to the Sherman Island shore. Mid-reach anchoring will be necessary for effective configuration. Be sure to provide a near shore seal. Back with sorbent.

Strategy 2-783.2 Objective: Deflection/Exclusion booming of marsh at west end of Kimball Island and fend oil past.

ACP DATE 7/1/1996

From the mid-length anchor of the above boom, deploy a double boom (one 6x6+ with a second layer of 4x4+) on a 3000' perimeter of the west tip marsh. Ensure a tidal seal a east boom ends.

Strategy 2-783.3 Objective: Exclude oil at east end of Kimball Island, from penetrating marshes, channels, pockets and Cabin Slough

ACP DATE 7/1/1996

Deploy a 8x8+ exclusion boom from the east tip of Kimball Island near Old Levee, 3500' easterly following the 10 ft. depth contour to the Sherman Island Bank. As oil impacts site watch carefully to assess need for backup exclusion booming across slough mouths. Put sorbent boom across slough mouths.

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
2-783.1	1500			500	4	4/50lb/danforths & stakes	3	3			Bboats: very shallow draft	15	
2-783.2	0	6000			8	8/25lb/danforth & stakes	6	6				30	
2-783.3	3500			600	8	8/25lb/danforths & stakes			6/6		bboat: very shallow draft	35	

LOGISTICS

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

There is no land access. The site is across the river from Antioch. This site includes Kimball Island, Cabin Slough, and channel and berm islands at each end of Cabin Slough.

LAND ACCESS: NO LAND ACCESS

WATER LOGISTICS: SHALLOWS AND OBSTRUCTION
Limitations: depth, obstruction

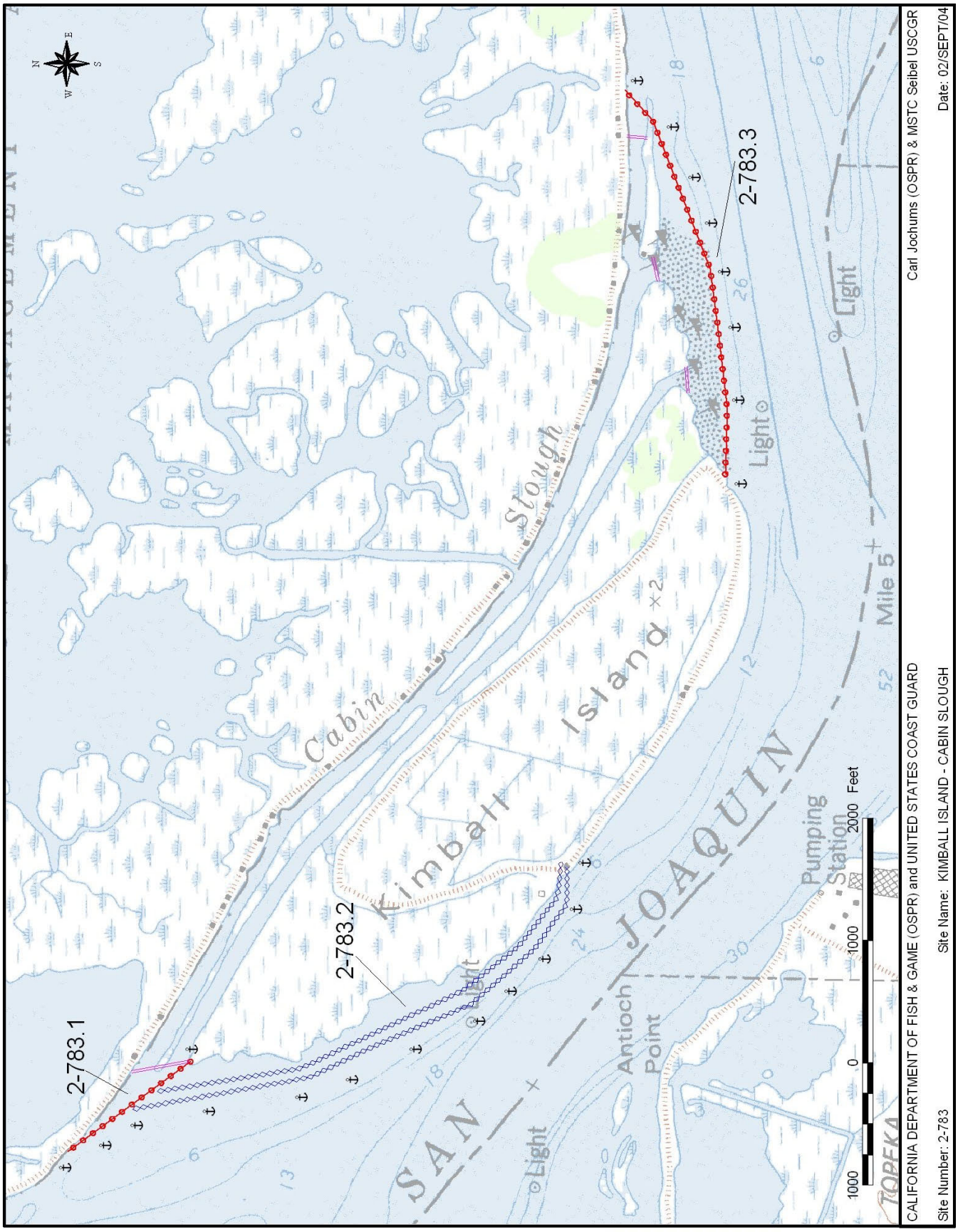
Launching, Loading, Docking and Services Available: Launch at Antioch marina and public launch.

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

Staging and facilities are available at Antioch Marina or Pittsburg waterfront.

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- Mayberry Slough - Donlon Island

2-786 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	Sacramento		3 8 02	121 46.5
USGS Quad:	Antioch North	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This site is located a mile west of the Antioch Bridge and includes Donlon Island, Mayberry Slough and Mayberry Cut. This 400 acre submerged Island is part of DFG Lower Sherman Wildlife Area. Donlon Island is a flooded island which has emergent marshes mingled with many meandering channels. It has three major openings to the main channel which it borders on the south side. Mayberry Slough separates this island from Sherman Island to the north and Mayberry Cut is a parallel channel which separates Donlon Island from Lower Sherman Island (Sherman Lake). Both channels are fringed with emergent marsh and have channel islands. The margin on the San Joaquin is very porus. Currents here tend to be from the San Joaquin into these waterbodies on the ebb only.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshes are "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

Extensive wetlands and channels communicate with external channels.

This is a waterfowl rearing area.

Many semi-aquatic species of mammals thrive here.

Mason's Liliopsis occurs 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
TB	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 - Mayberry Slough - Donlon Island

2-786 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	18661 Sacramento & San Joaquin River	3 8 02	121 46.5

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

The major concern is spreading of oil from the San Joaquin to interior marshes of Donlon Island and Lower Sherman Island (Sherman Lake). This is of great concern on the ebb tide when strong currents are induced into Donlon's Mayberry.

HAZARDS and RESTRICTIONS:

Shallows and obstructions at the margins and interior of the island.

SITE STRATEGIES

On ebb, tide water flows through this site toward the Sacramento River and out from it on flood tide. Strong currents result in Mayberry Slough. San Joaquin River side levee is very eroded and porus having little ability to stop oil entry. Boom can be delivered to Mayberry Slough on Sherman Island levee road.

Strategy 2-786.1 Objective: On the EBB: Exclude / deflect oil at Mayberry Slough and Mayberry Cut mouths and at three large openings into Donlon Isl.

ACP DATE 7/1/1996

a) at Mayberry Slough deploy 1200 ft. of deflection boom outside mouth from east side of mouth.
b) at Mayberry Cut deploy 2 300 ft. 8x8 deflection booms in series to the east of Mayberry Cut. Run a 200 ft. exclusion boom from the west side of Mayberry Cut (just west of levee break) to connect with the nearest deflection boom to form a chevron exclusion.
c) There are three major openings into Donlon Isl. Each should be protected by exclusion-deflection shallow chevron "V" boom configurations. Openings will require about 550, 100 and 350 ft; each configuration will require a secure anchor at apex to form the chevron. Each must have a backup of sorbent.

Strategy 2-786.2 Objective: Exclude oil entry to interior of Donlon Island through porus southern levee

ACP DATE 7/1/1996

deploy 4x4+ boom along San Joaquin River margin of Island to stop oil from moving into island with ebb flow. Use stakes and anchors to position boom.

Strategy 2-786.3 Objective: On the EBB at Mayberry Slough mouth : Backup deflection/exclude to shoreside collection/confinement by deflection on outside and exclusion collection inside.

ACP DATE 7/1/1996

Inside mouth, divert to containment/collection at the Sherman Island shore. Use 50ft of Oil Snare (OS), 100 ft of sorbent boom to collect any oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.
a) inside mouth where channel turns to northwest, 400 ft diagonal 4x4 collection exclusion boom and line shoreline collection area.
b) to the west of this catchment deploy a second 400 ft diagonal 4x4 collection exclusion boom. Back with sorbent.

Strategy 2-786.4 Objective: Oil recovery with shoreside skimming when heavy oil or other skimmable quanties of oil occur

ACP DATE 7/1/1996

Set up a land-based skimmer on the Sherman Island levee at collections points esulting from strategy 786.3.

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
2-786.1	3000			1000	21	13/22+ & 8/12+lb/danforths	3	1					11	
2-786.2		4500		1000	30	5 small anchors 25 stakes	2	1					8	
2-786.3		1000	50 OS	100	13	5/22+ & 8/12lb/danforths		1				Bboats: shallow water	2	
2-786.4	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.)

There is land access to the northerly margin of this site on the adjacent levee of Sherman Island. By water, the site is northeast of Antioch about a mile from the public launch ramp. This site is located a mile west of the Antioch Bridge and includes Donlon Island, Mayberry Slough and Mayberry Cut. This 400 acre submerged Island is part of DFG Lower Sherman Wildlife Area.

LAND ACCESS: DRY LEVEE ROAD NORTH

WATER LOGISTICS: MARGINS OBSTRUCTIONS & SHALLOWS, DEEP CH
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Boat launch and marine facilities are readily available at Antioch Marinas. There is also the public ramp at Lower Sherman Island Wildlife Area.

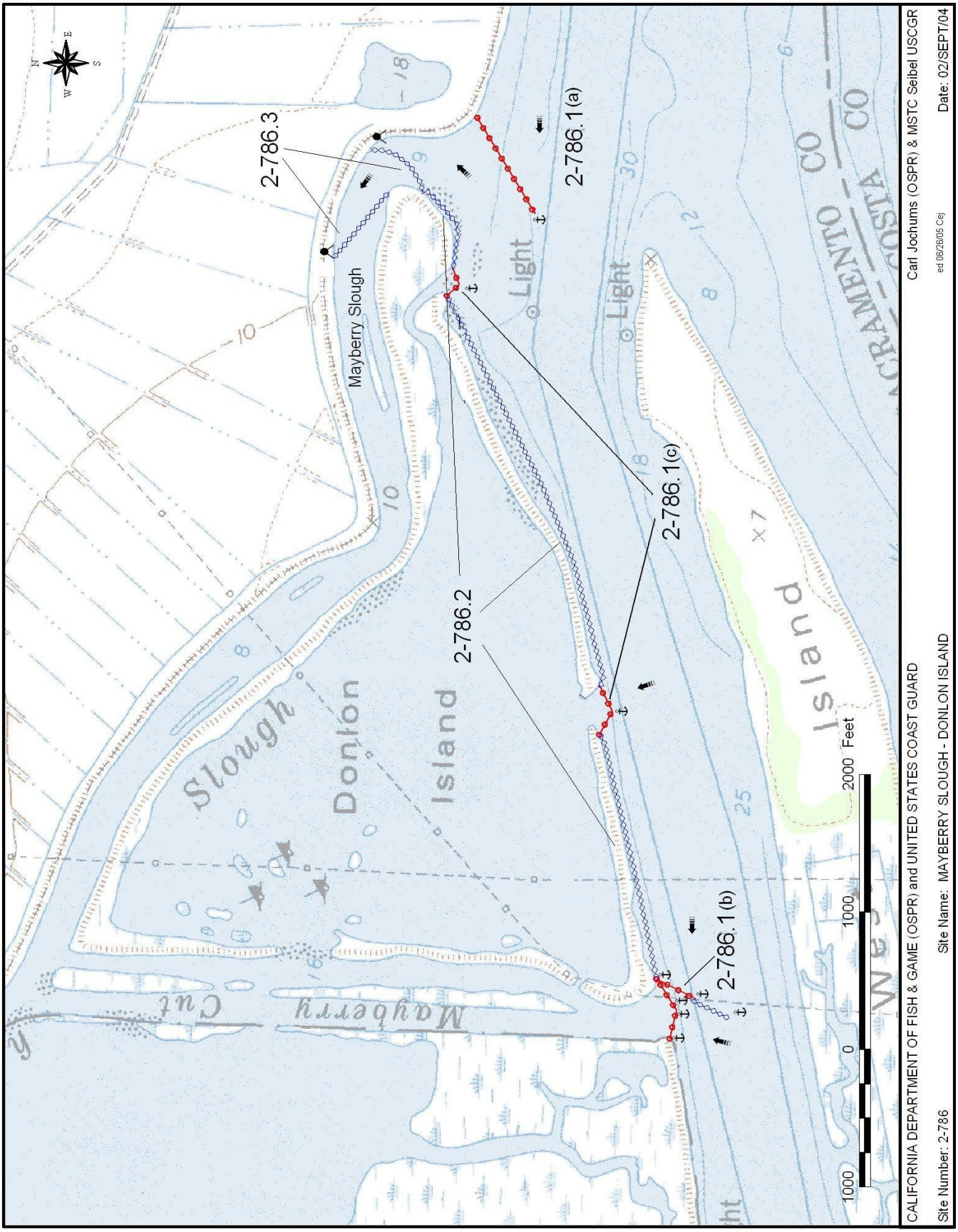
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

There are limited facilities and camping at Lower Sherman Wildlife Area. All manner of services are available at Antioch. Good deployment sites include Sherman Island Levee, Antioch Marina, Antioch Public Ramp, and PG&E Park.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-786 -A Strategy Diagram- Mayberry Slough - Donlon Island 2-786 -A



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- West Island

2-789 -A

Thomas Guide Location	Latitude N	Longitude W
	3 8 02	121 49

County: Sacramento

USGS Quad: Antioch North

NOAA Chart: 18661 Sacramento & San Joaquin River

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This island is east of the Antioch Bridge and across the San Joaquin River shipping channel from Donlon Island. This is a partially leveed island. The west end of the island is marshy, and the perimeter of the island is tule marsh. Some riparian shrub growth exists on the island.

SEASONAL and SPECIAL RESOURCE CONCERN

This marshy area is "A" priority at all times.

RESOURCES OF PRIMARY CONCERN

Extensive marshy margins and interior marsh on western half of island.

Migratory waterfowl.

Submergent and emergent vegetation are spawning habitat for Delta smelt, Longfin smelt, and Sacramento Splittail. Proposed Threatened: Longfin smelt, Sacramento Splittail (F), Delta smelt (F,S)

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
TB	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:

2-789 -A Site Strategy - West Island

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

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Primary concern is oil spread to interior channels of west part of island and oiling of interior marsh and marshes of west tip and margins.

HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power wires.

SITE STRATEGIES

Strategy 2-789.1 **Objective: Exclude oil from entering interior island marshes and from penetrating marshes along western tip.**

ACP DATE 7/1/1996

Deploy 4000' 6x6+ exclusion boom along the northwest side of West Island from an anchorage point about 200' west of western tip. From that same anchorage deploy 500 ft 6x6+ boom along the south western tip. Ensure a tidal seal at shorefall of boom ends. Anchor a deflection peak in the boom across the mouth of the slough and back that 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 and kinds	staff deploy	Staff tend
2-789.1	4500				11	11/25lb/danforths			4/4		Bboat: very shallow draft	6	

LOGISTICS

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

Access by water only from the San Joaquin River. Launch across the river at Antioch. This island is east of the Antioch Bridge and across the San Joaquin River shipping channel from Donlon Island.

LAND ACCESS: None. North bank across channel has good levee road.

WATER LOGISTICS: SHALLOW AND OBSTRUCTIONS
Limitations: depth, obstruction

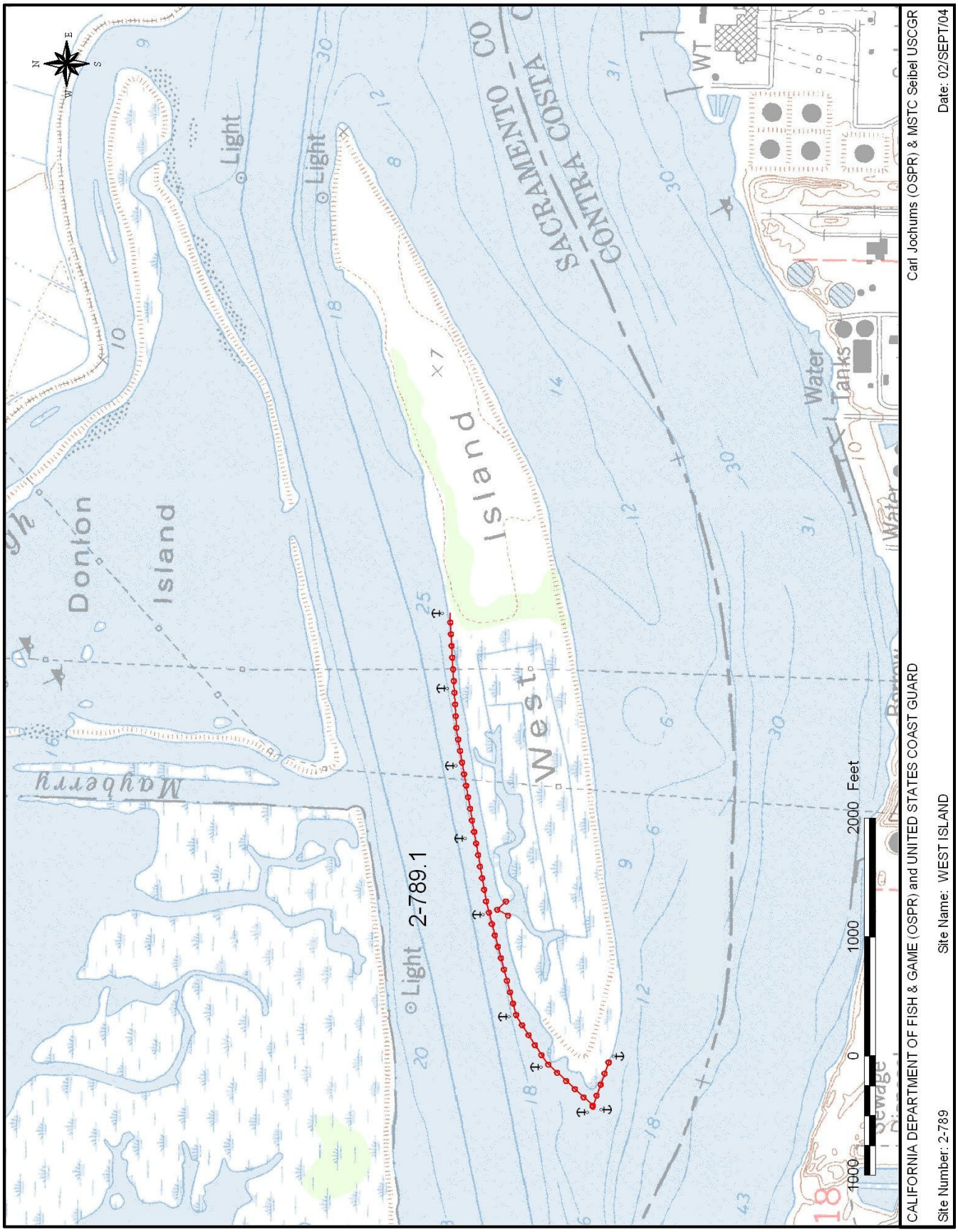
Launching, Loading, Docking and Services Available: Boat launching is available from south shore at Antioch or at north corner of Sherman Lake public ramp.

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

Good staging/deployment site to south is Antioch Marina. To the north, the Lower Sherman Island Wildlife Area Launch ramp is an excellent staging/deployment area. Limited facilities, including some camping, are available there. Full facilities are available at Antioch.

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- Three Mile Slough - San Joaquin River

County:	Sacramento	Thomas Guide Location	Latitude N 38 06.5	Longitude W 121 41.2
USGS Quad:	Jersey Island	NOAA Chart:	18661 Sacramento & San Joaquin River	

Last Page Update : 7/1/2005

SITE DESCRIPTION:

This Slough is about 3.5 mile long from its mouth on the Sacramento River to its mouth on the San Joaquin River. Site also includes the westerly end of Sevenmile Slough. This swift flowing channel is riprapped on most of its steep banks. There are pockets of riparian vegetation. Brannon Island State Park borders its northwestern edge. There are pockets of emergent growth along its length, particularly in the Sevenmile Slough channel at the Park. More significant than within reach resources is the role this reach plays in Delt circulation: it is a key control point to prevent oil spread from one side of the Delta (Sacramento River vs San Joaquin) to the other.

SEASONAL and SPECIAL RESOURCE CONCERN

This is a key site in containing the spread of oil. There are significant resource here all year but overwhelming concern is to prevent oil movement between Sacramento and San Joaquin River systems.

RESOURCES OF PRIMARY CONCERN

Riparian and wetland habitat is prominent in Brannon Island State recreation Area. This Slough is also a key location for habitats in general since it permits flow (and spread of oil) between central and northwest Delta.

Riverine bird life here is typical and unremarkable for the area. Greater sandhill cranes (CT) winter in the nearby interior of Sherman Island.

Emergent vegetation is spawning habitat for Delta smelt (F/CT), and their fry are commonly present in moderate to high densities. This waterway is also within the zone of highest concern for winter-run chinook salmon (F/CE) smolts from September though May.

Sensitive plant species found here include Suisun marsh aster, Delta tule pea, Mason's lilaeopsis (all F/CSC), and Antioch dunes evening primrose (F/CE).

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
TL	Ron Breen	CA Dept. of Parks & Recreation	(916) 445-7373
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
O	Robert Clark	North Delta Water Agency	(916) 446-0197
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
BL	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
BT	Bob Orcutt	CA Dept. of Fish & Game	(916) 358-2924

ADDITIONAL SITE SUMMARY COMMENTS:

Site Strategy - Three Mile Slough - San Joaquin River

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sacramento	18661 Sacramento & San Joaquin River	38 06.5	121 41.2

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

The big concern here is oil movement from San Joaquin to Sacramento: there is a big cross-flow which this strategy attempts to confront by exclusion at mouth and diversion to collection for any entraining oil.

HAZARDS and RESTRICTIONS:

Steep eroded banks and areas of thick vegetation. Narrow road and narrow shoulders creates a hazardous situation. Traffic control should be implemented at this site.

SITE STRATEGIES

Once oil enters channel, it will be difficult to control, confine, and collect: currents are strong and channel is deep. Primary exclusion is best opportunity to prevent oil spreading to Sacramento River system.

Strategy 2-790.1 Objective: Primary exclude at mouth on San Joaquin to prevent spreading to Sacramento River side. Oil can move through slough on ebb or flood

ACP DATE 7/1/2005

Deploy 3000' 8X8+ exclusion boom across the San Joaquin River mouth of 3-mile Slough. Anchor in a shallow chevron configuration to encourage oil to slide past the mouth. Boom can be delivered to site from shore from Sherman Island Levee Road.

Strategy 2-790.2 Objective: Diversion to shoreside confinement for collection

ACP DATE 7/1/2005

Backup the capture system with collection boom(s) (3000' 8X8+) diagonally across the slough to favorable collection points for land-based collection. Both levees (west on Sherman Isl has paved road and east side on Twitchell Island is all werather) will support a skimming operation - use the favorable shore based on wind and current. Boom can be deployed from the levee.

Use 50ft of Oil Snare (OS), 100ft sorbent boom to collect any oil that may accumulate. If oil accumulates in skimmable quantities, contact IC to activate skimmers as directed per 790.3 .

Strategy 2-790.3 Objective: Oil Recovery when heavy oil threatens and skimmable oil accumulates

ACP DATE 7/1/2005

Deploy self-propelled skimmers (SPS) near the San Joaquin River mouth of Three Mile Slough if oil is threatening in skimmable quantities. Deploy shore-side skimming at diagonally deployed booms; both levees will support a skimming operation - use the favorable shore based on wind and current.

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
2-790.1	3500				9	8/50lb/danforths + chain + line	2						6	
2-790.2	3000	0	50	100	8	8/50lb/danforths + chain + line	2	0	0		0		6	
2-790.3	0	0	0	0	0		0	0	2	SPS/SS	0			

LOGISTICS

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

This site is easily accessible from either Sacramento or San Joaquin Rivers since it is a major cross link. Also, the boat ramp at Brannon Island State Park is on the Slough. Levee Roads and Hwy 160 provide vehicle access: Sherman Island Road is an all weather/all traffic paved road; Twitchell Island levee roads are private (DWR). This Slough is about 3.5 mile long from its mouth on the Sacramento River to its mouth on the San Joaquin River. Site also includes the westerly end of Sevenmile Slough.

LAND ACCESS: ALL WEATHER/TRAFFIC

WATER LOGISTICS: GENERALLY VERY GOOD WATER

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Launching facilities available at Brannan Island State Recreational Area.

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

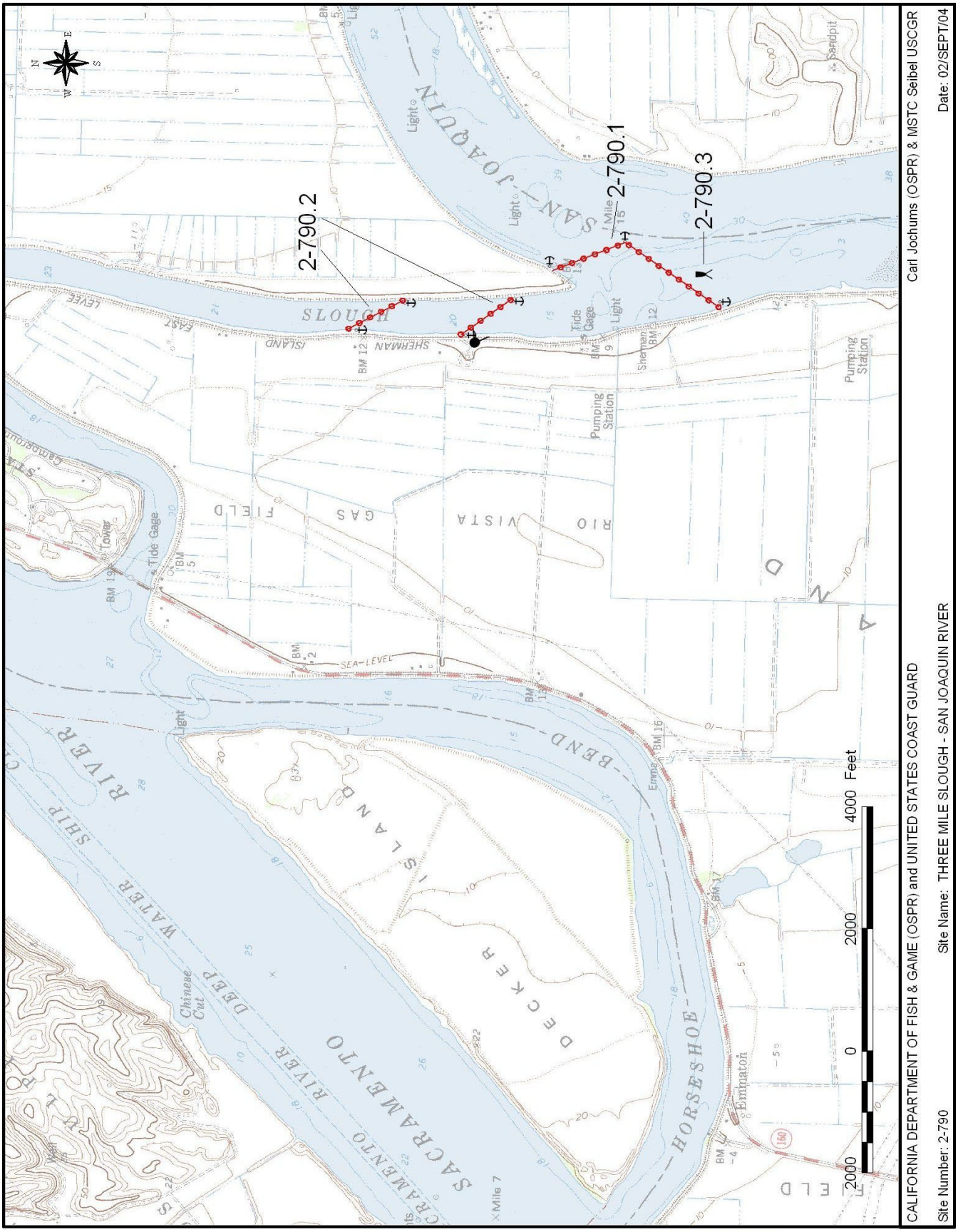
Staging area available on river side and slough side at Brannan Island Recreational Area. Facilities including restrooms, electricity, and phone available.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

Strategy Diagram- Three Mile Slough - San Joaquin River

2-790 -B



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

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9847.2 Cultural and Other Resources at Risk

9847.21 Cultural Resources, Historic and Archeological Resources – see Section 9802.1,
Section 9840 for contact table, and individual Site Summaries
9847.22 Essential Fish Habitat – see Section 9802.2
9847.23 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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9847.3 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.

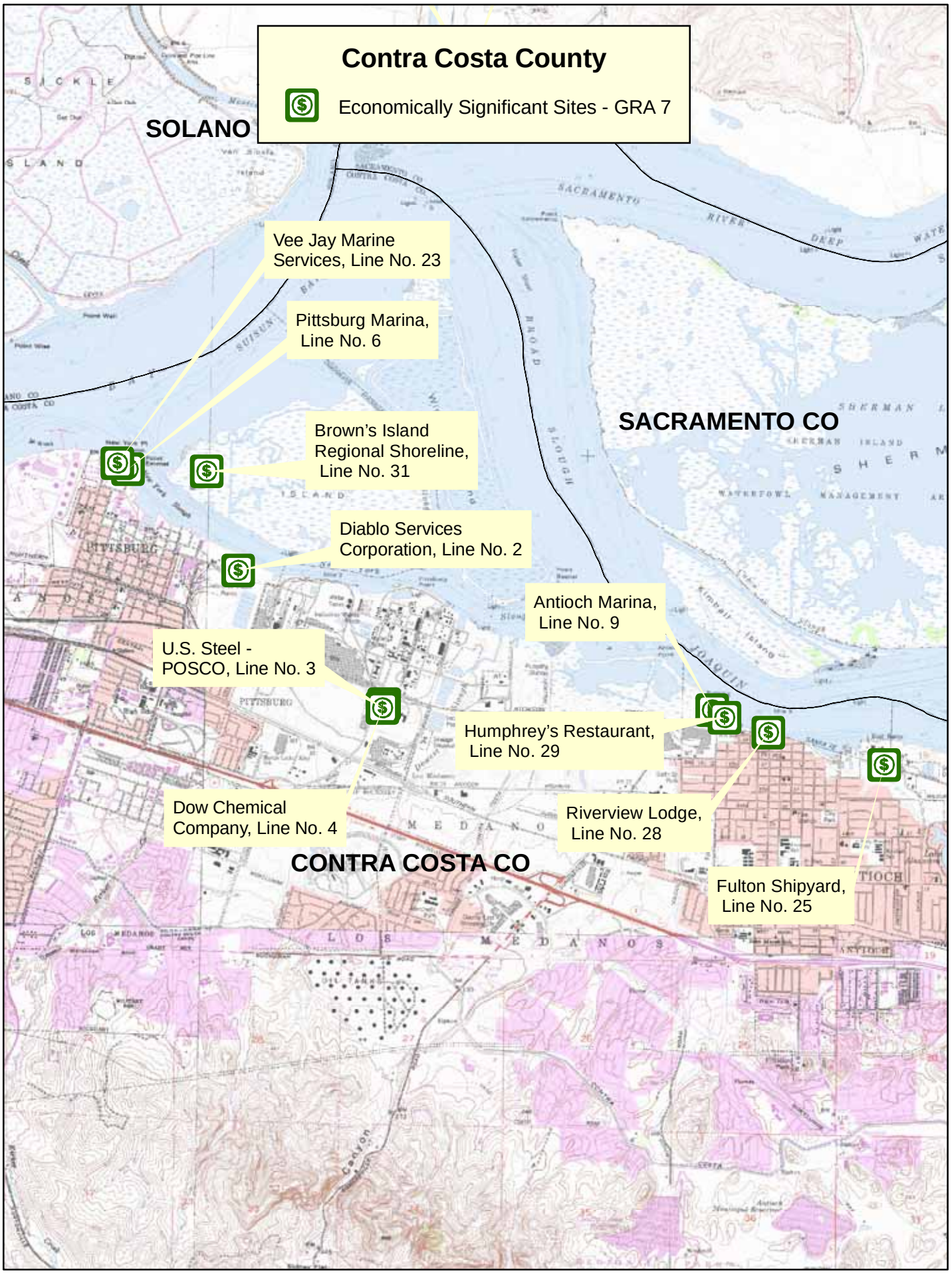
F = This category contains marine associated facilities, businesses and resources. These resources would face economic impacts from a marine spill, but do not depend directly on marine water for their economic base. Resources in this category will tend to face less severe damages than those identified 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 7

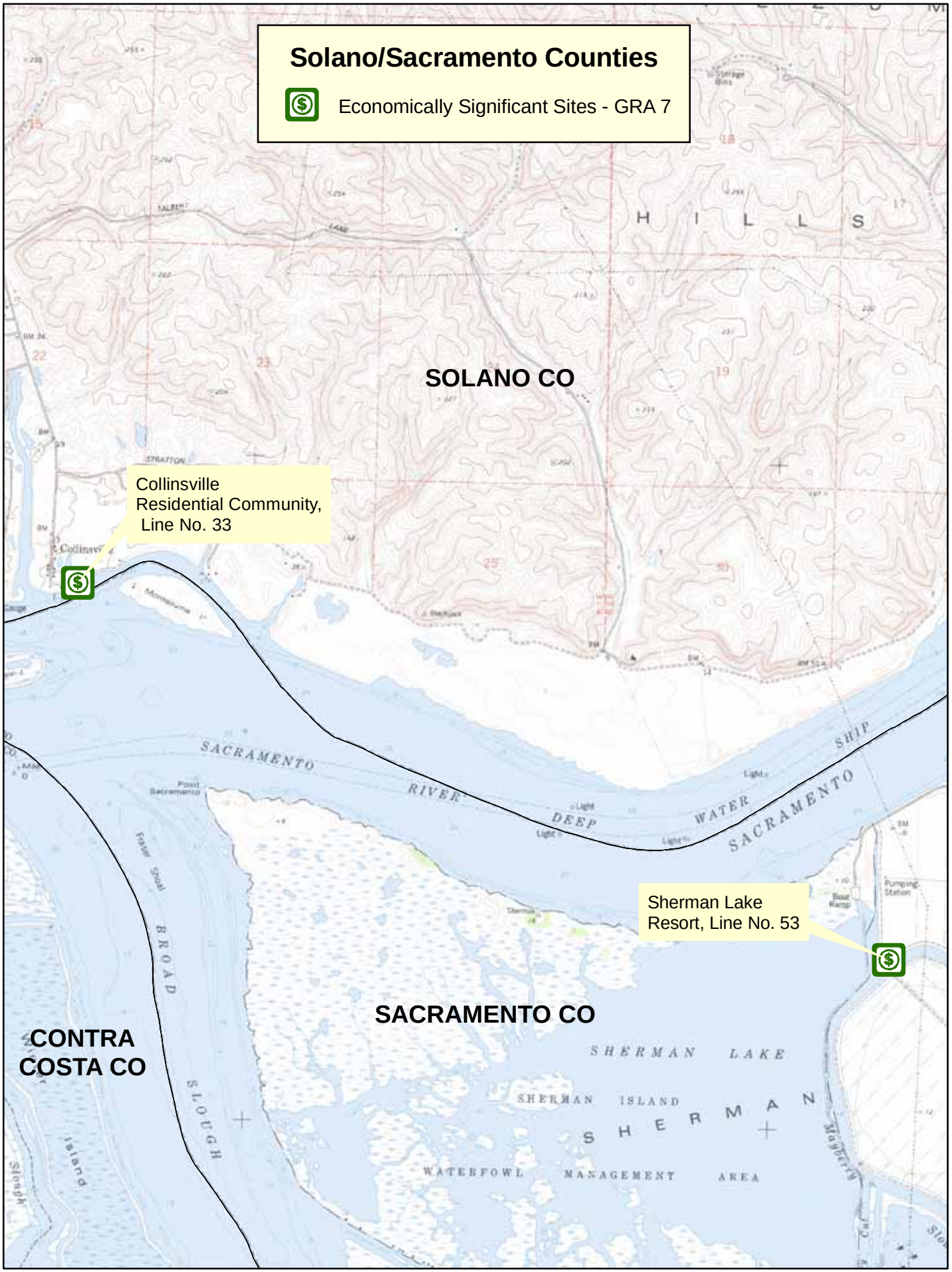
Line No.	County	Site Name	Site Description	Latitude	Longitude	Economic Sensitivity	Site Function	Site Address
1	Contra Costa	Pacific Gas & Electric		38.01	-121.76	E	Regional Electric Power, Contra Costa Power Plan, 3201 Wilbur Avenue, Antioch	3201 Wilbur Avenue, Antioch
2	Contra Costa	Diablo Services Corporation		38.03	-121.87	E	Caustic Soda/Petroleum	595 E. Third Street, Pittsburg
3	Contra Costa	U.S. Steel - POSCO		38.02	-121.86	E	Builk Steel Trans-Shipment	900 Loveridge Road, Pittsburg
4	Contra Costa	Dow Chemical Company		38.02	-121.86	E	Chemical Products, 901 Loveridge Road, Pittsburg	901 Loveridge Road, Pittsburg
5	Contra Costa	Gaylord Container		38.01	-121.77	E	Paper Mill	1779 Wilbur Avenue, Antioch
6	Contra Costa	Pittsburg Marina	Sacramento-San Joaquin Delta (New York Slough)	38.04	-121.89	E	Small Craft Harbor	340 Marina Blvd, Pittsburg
7	Contra Costa	New Bridge Marina	Sacramento-San Joaquin Delta (San Joaquin River)	38.02	-121.75	E	Small Craft Harbor	6325 Bridgehead Road, Antioch
8	Contra Costa	San Joaquin Yacht Harbor	(description does not match location)	38.02	-121.76	E	Small Craft Harbor	2075 Wilbur Ave., Antioch
8	Contra Costa	The Rusty Porthole Restaurant		38.04	-121.62	F	Restaurant	3895 Willow Road, Bethel Island
9	Contra Costa	Antioch Marina	(description does not match location)	38.02	-121.82	E	Small Craft Harbor	5 Marina Plaza, Antioch
10	Contra Costa	Lauritzen Yacht Harbor	Sacramento-San Joaquin Delta (San Joaquin River)	38.02	-121.75	E	Small Craft Harbor	115 Lauritzen Lane, Antioch
11	Contra Costa	Driftwood Marina		38.02	-121.75	E	Small Craft Harbor	6338 Bridgehead Road, Antioch
12	Contra Costa	Lloyds Holiday Harbor	(description does not match location)	38.02	-121.75	E	Small Craft Harbor	553 Wilbur Avenue
13	Contra Costa	Bartons Edgewater Harbor		38.01	-121.63	E	Small Craft Harbor	5656 Sandmound Blvd., Oakley
14	Contra Costa	Big Break Marina		38.01	-121.73	E	Small Craft Harbor	100 Big Break Road, Oakley
15	Contra Costa	Park Marina		38.01	-121.64	E	Small Craft Harbor	2550 Dutch Slough Road, Bethel Island
16	Contra Costa	Sea Horse Marina	Location approx.	38.01	-121.64	E	Small Craft Harbor	2712 Dutch Slough Road, Bethel Island
17	Contra Costa	Dock Mirza Marina		38.01	-121.64	E	Small Craft Harbor	5998 Bethel Island Road, Bethel Island
18	Contra Costa	Farrar Park Harbor		38.01	-121.64	E	Small Craft Harbor	10 Riverview Place, Bethel Island
19	Contra Costa	Jack Gilbert Marina		38.01	-121.64	E	Small Craft Harbor	4124 Stone Road, Bethel Island
20	Contra Costa	Leisure Landing	End of Taylor Road, Bethel Island	38.01	-121.64	E	Small Craft Harbor	
21	Contra Costa	Hennis Marina	Sacramento-San Joaquin Delta (Dutch Slough)	38.01	-121.63	E	Small Craft Harbor	3255 Wells Road, Bethel Island
22	Contra Costa	Woods Yacht Harbor	Sacramento-San Joaquin Delta (Dutch Slough)	38.01	-121.63	E	Small Craft Harbor	3307 Wells Road, Bethel Island
23	Contra Costa	Vee Jay Marine Services		38.04	-121.89	E	Small Craft Repair	6 Bayside Drive, Pittsburg
24	Contra Costa	Bridgehead Dry Dock	Foot of Antioch Bridge, Antioch	38.01	-121.75	E	Small Craft Repair	
25	Contra Costa	Fulton Shipyard	Small Craft Repair, 307 Fulton Shipyard Road, Antioch	38.02	-121.80	E	Small Craft Repair	307 Fulton Shipyard Road, Antioch
28	Contra Costa	Riverview Lodge	Foot of H Street, Antioch	38.02	-121.81	F	Restaurant	
29	Contra Costa	Humphrey's Restaurant		38.02	-121.82	F	Restaurant	1 Marina Plaza, Antioch
30	Contra Costa	The Boathouse Restaurant		38.01	-121.64	F	Restaurant	6210 Bethel Island Road, Bethel Island
31	Contra Costa	Brown's Island Regional Shoreline	c/o East Bay Regional Park District	38.04	-121.88	D	Park/Recreation Area	2950 Peralta Oaks Ct., Oakland
32	Contra Costa	Frank's Tract State Recreational Area	c/o CA State Parks & Recreation Dept., Diablo District HQ	38.05	-121.64	D	Park/Recreation Area	4180 Treat Blvd. Concord
39	Contra Costa	Bethel Harbor	Sacramento-San Joaquin Delta (Pepper Slough)	38.04	-121.63	E		3405 Harbor Road, Bethel Island 94511
40	Contra Costa	Willowest Marina	Sacramento-San Joaquin Delta (Pepper Slough)	38.05	-121.64	E		3215 West Willow Road, Bethel Island 94511
41	Contra Costa	The Rusty Porthole Marina (Former Boyd's Harbor)	Sacramento-San Joaquin Delta (Pepper Slough)	38.05	-121.64	E		3893 Willow Road, Bethel Island 94511
42	Contra Costa	Russo's Harbor	Sacramento-San Joaquin Delta (Pepper Slough)	38.05	-121.64	E		3995 Willow Road, Bethel Island 94511
43	Contra Costa	Mazikeens Landing	Sacramento-San Joaquin Delta (Pepper Slough)	38.05	-121.64	E		4485 Willow Road, Bethel Island 94511
44	Contra Costa	Bethel Island Marina Resort	Sacramento-San Joaquin Delta (Dutch Slough)	38.01	-121.64	E		6050 Bethel Island Road, Bethel Island 94511
47	Contra Costa	Mariner Cove Marina (former Leisure Landing Marina)	Sacramento-San Joaquin Delta (Taylor Slough)	38.01	-121.64	E	Small Craft Harbor	1200 Taylor Road, Bethel Island 94511
48	Contra Costa	New Anchor Marina	Sacramento-San Joaquin Delta (Taylor Slough)	38.03	-121.66	E		1970 Taylor Road, Bethel Island 94511
52	Sacramento	Eddo's Harbor & RV Park	Sacramento-San Joaquin Delta (San Joaquin River)	38.05	-121.70	E/F		19530 Sherman Island Road, Rio Vista 94571
53	Sacramento	Sherman Lake Resort	Sacramento-San Joaquin Detla (Sacramento River/Sherman Lake)	38.05	-121.78	F		5140 West Sherman Island Road, Rio Vista 94571
33	Solano	Collinsville Residential Community	Collinsville Road along Sacramento River	38.08	-121.85	F	Unincorporated Waterfront Residential Area	

California Department of Fish and Game
Office of Spill Prevention and Response
Contra Costa Co, Layout 003



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

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



0 0.25 0.5 1 Miles

California Department of Fish and Game
Office of Spill Prevention and Response
Solano/Sacramento Co, Layout 001

9847.4 Shoreline Operational Divisions

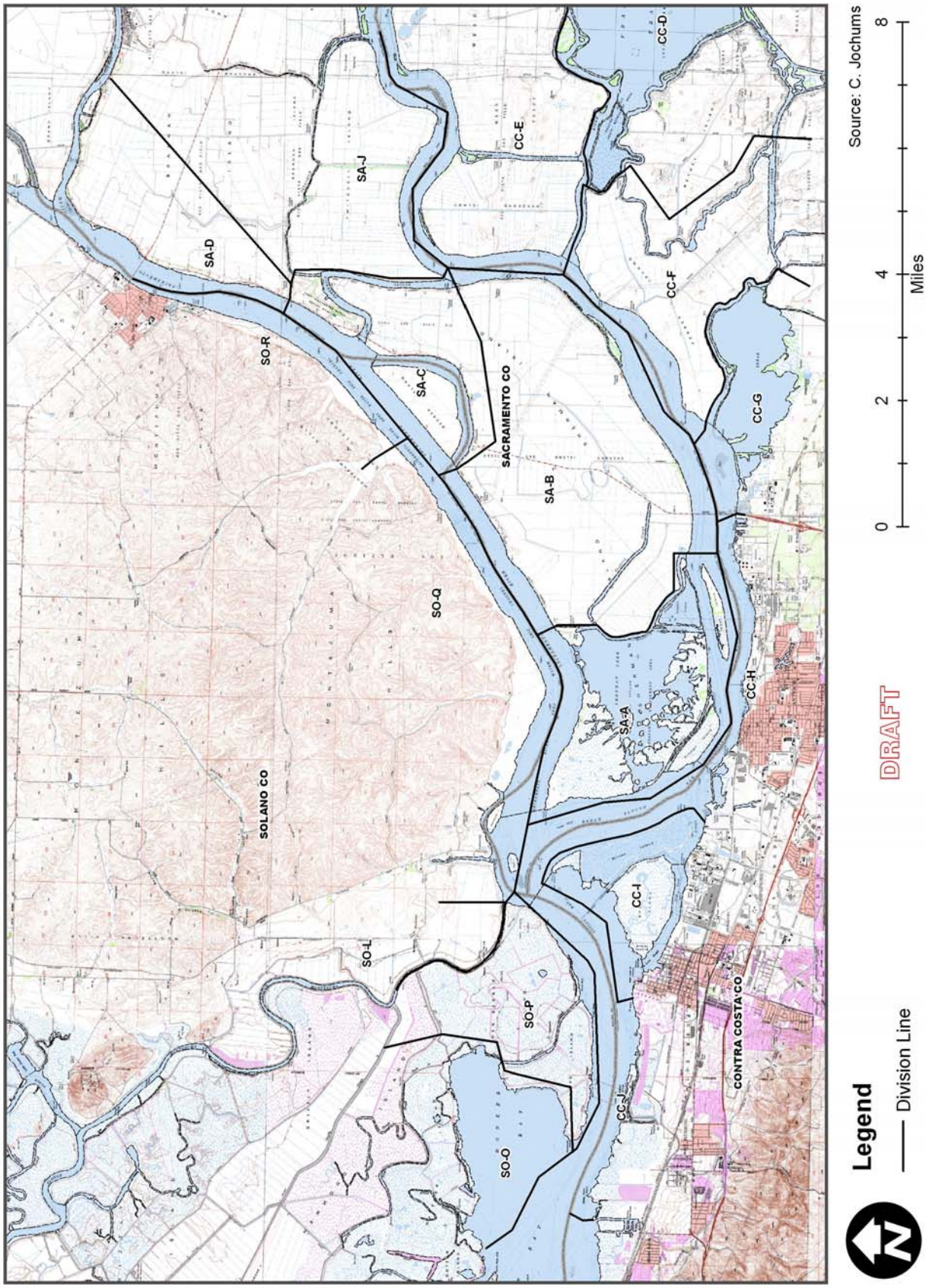
Shoreline Operational Divisions are presented in the ACP as front-loaded information to assist in rapid response planning to provide for quickly organized operational objectives and assignments along affected shorelines. The operational divisions have been developed in conjunction with the US Coast Guard, 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 Angles 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 - 7 Shoreline Operational Divisions



9847.5 Shoreline Access

Detailed shoreline access information is provided in this section to aid Planning and Operations Section managers in rapid placement of field response personnel and equipment on coastal beaches during the emergency phase of spill response. Coastal access points were examined, mapped and photographed at virtually every location along the respective ACP coastline where personnel and equipment can gain access to specific coastal segments. Used in conjunction with Environmentally Sensitive Sites and Operational Divisions, shoreline access information enables responders to be directed to the most convenient or appropriate coastal access point for their response effort. Knowing which access point to use and the nature of any access limitation will reduce time delays in finding these locations and eliminate uncertainties about the type of equipment that can gain access. Information provided in this section includes:

a) descriptive information about the respective operational division with boundaries defined by landmark features and latitude/longitude (GPS), and a general description of recognized cultural resource issues, sensitive sites within divisions; and

b) access point specific *Thomas Bros Maps*® page and coordinates, written directions from major streets and roads, a general site description, photographs of entry points and associated shoreline, land ownership matters, and occurrence of Sensitive Sites. Descriptions may also include the length of accessed coastal segment and limitations of access where physical constraints may be a factor.

The access point identification label is a seven character alpha-numeric code describing (in order) the County (2-alpha characters) and Operational Division (1-alpha character) where the access point is located, along with a four digit number that relates to its relative physical location in the operational division. Thus, in each operational division the unit digit component will increase from north to south as access points are encountered that provide access to a discrete (partial) coastal segment of the operational division (i.e. 1110, 1115, 1120, etc.). The access point alpha-numeric code will be followed by a name the site is commonly known by (i.e. Nicholas Canyon County Beach).

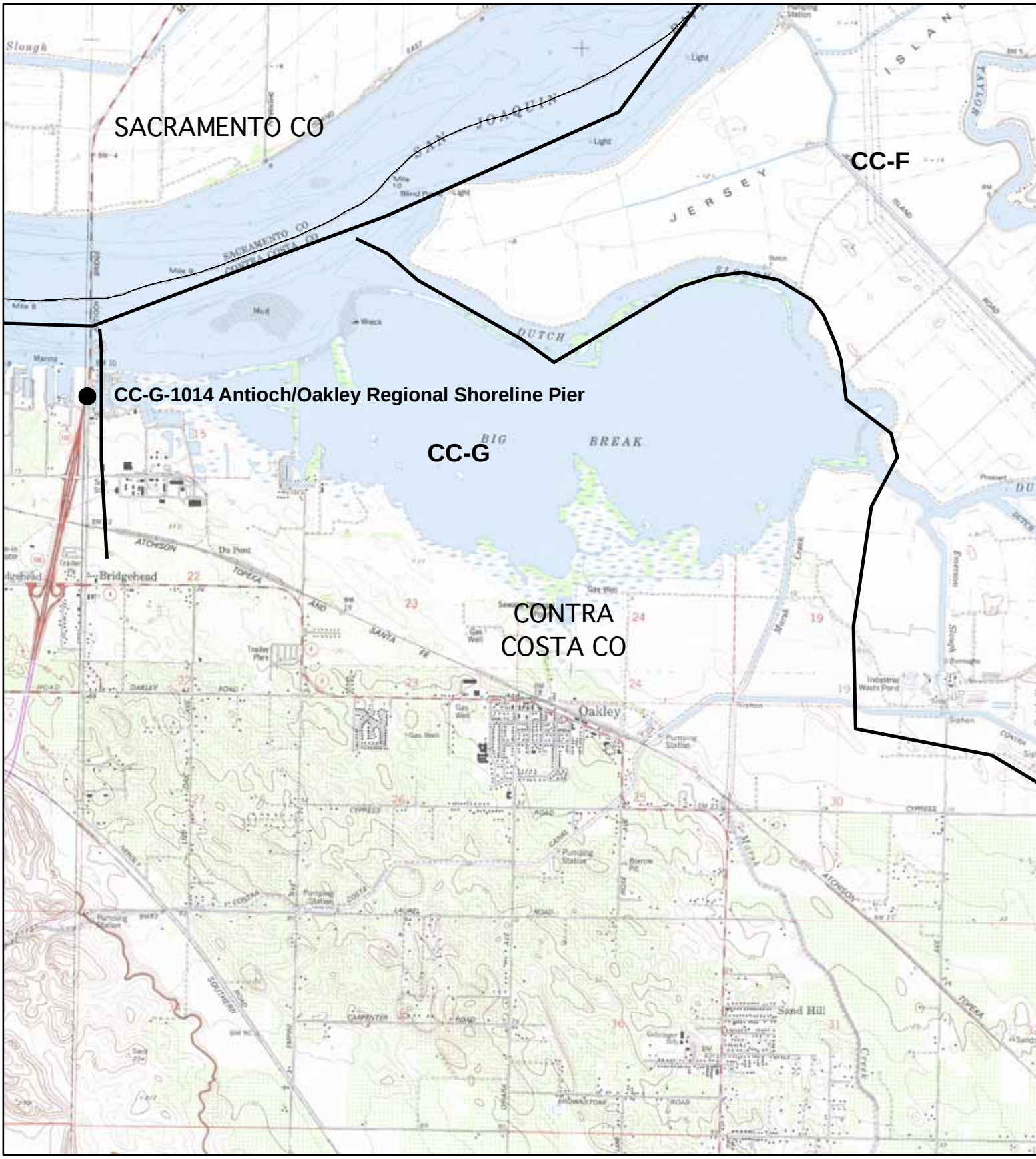
Access points are labeled from north to south within an operational division. Where segments occur within an operational division they are designated by the thousands digit of the code (i.e. 1000, 2000, 3000, etc.). An access point within a segment is identified by the tenths digit (i.e. 1010, 1020, and 1030), in this example segment one has three access points. Or, there can be multiple isolated shorelines (segments) each with only one access point (i.e. 1010, 2010, 3010, etc).

In contrast, an operational division with clear, unimpeded access for its entire length may have several access points identified by the hundreds digit (i.e.1100, 1200, 1300, 1400). In this example the operational division (1000 – which can be thought of as one large segment) is accessible from four access points with no physical barriers preventing movement along its entire length. Responders can enter at any access point, and exit again at any other (providing the pathway will accommodate the equipment). In any given operational division shoreline ownership/management may change. The unit digit of the four digit code reflects that condition (i.e. 1108, 4016, 3011, etc). Higher numbers indicate more difficult access issues. Military lands are identified by the number 9,

Federal lands such as National Parks, National Monuments, National Wildlife Refuges, etc. are identified by the number 8, Tribal lands are identified with the number 7, State Lands such as State Parks, State Beaches, etc. are identified by the number 6, and County lands are identified by the number 5. Properties of cities are labeled with 4. The number 1 identifies private property, while 0 indicates that the ownership is not known. The numbers 3 and 2 are currently not assigned.

(Shoreline access pages that follow pp 9847.5 -3 to 22 are not included in printed copies but are available on web files and other digital copies. These pages have detailed directions for shoreline access including photos but are too voluminous to include in printed copies.)

Contra Costa County, Division G - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

Operational Divisions and Access Points in GRA 7

CC Division G **County** Contra Costa

Division Boundaries

North	Jersey Island (along Dutch Slough	**Latitude: N**	38.02274	**Longitude: W**	121.71161
South	Antioch Bridge	**Latitude: N**	38.01971	**Longitude: W**	121.75076

Division Description

Division is primarily made up of the Big Break Complex shoreline, east of the Antioch Bridge. Big Break is a large, flooded area. The perimeter islands and shoreline are emergent marsh, particularly on the southern and eastern edges. It is separated from the San Joaquin and Dutch Slough by an intermittent series of berm islands, the remnants of the old levee.

Cultural Information

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.

Sensitive Sites Within Division: 2-730-A Big Break Complex

Individual Access Points in: CC Division G

Access Point: CC - G - 1014 Antioch/Oakley Regional Shoreline Pier

Thomas Guide Page: 248 ***Grid:*** D4 ***City:*** Oakley

GPS Coordinates: N 38.01765 W 121.75092 ***USGS Quad:*** Jersey Island

Directions:

From Hwy 4/160: take the Wilbur Avenue off ramp. Left on Bridgehead Road and follow it to the park entrance.

Site Description:

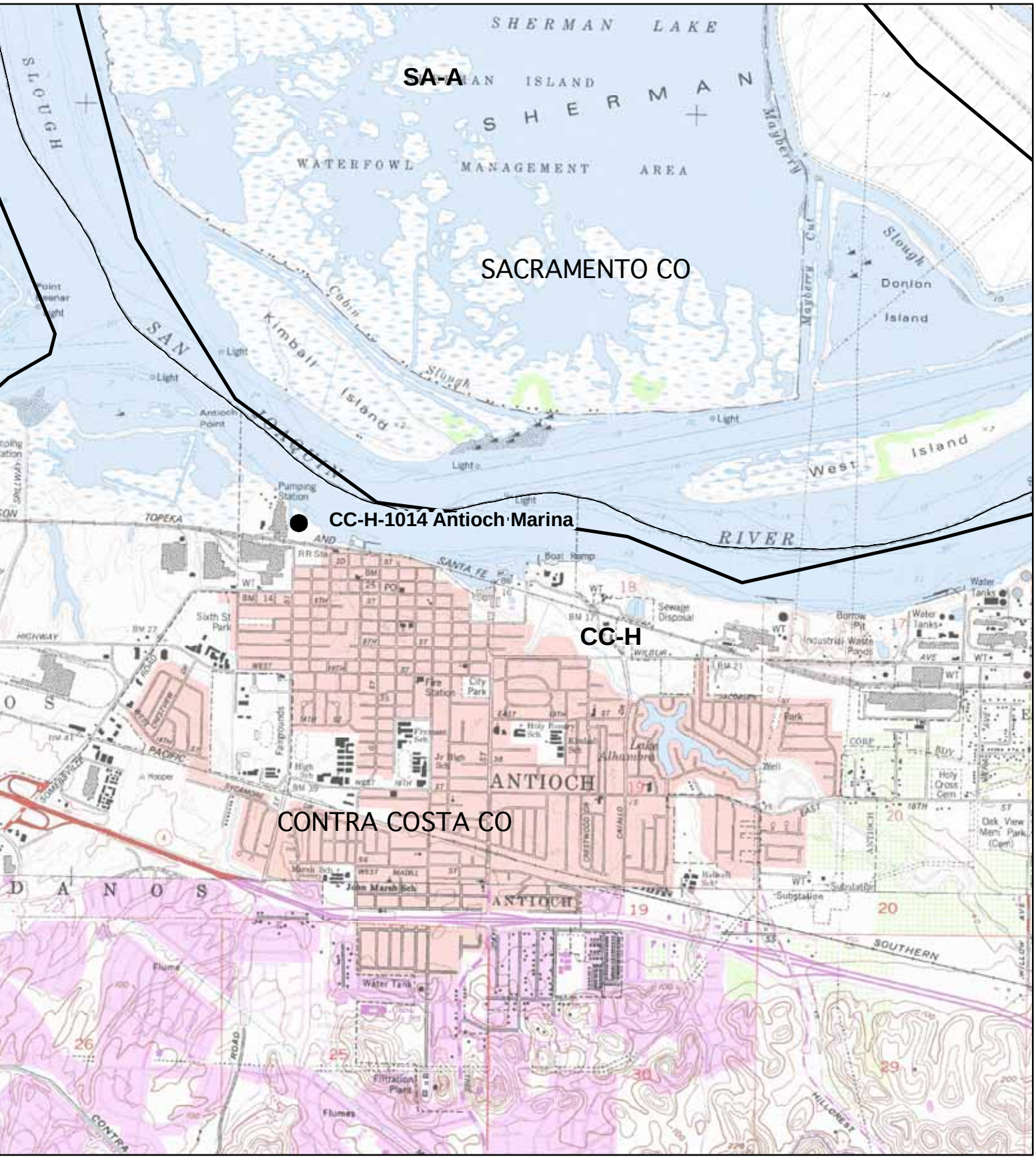
Rip-rapped shoreline interspersed with tules. Private marine just east of site. Boat launch at Marina. Antioch Regional Shoreline (925) 754-8720.

Sensitive Sites:

CC-G-1014 Antioch/Oakley Regional Shoreline Pier. Looking west.

CC-G-1014 Antioch/Oakley Regional Shoreline Pier. Looking east.

Contra Costa County, Division H - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

Operational Divisions and Access Points in GRA 7

CC Division H **County** Contra Costa

Division Boundaries

North	Antioch Bridge	**Latitude: N**	38.01971	**Longitude: W**	121.75076
South	Mouth of Dowest Slough	**Latitude: N**	38.02562	**Longitude: W**	121.84153

Division Description

An ~ 5 mile stretch of shoreline in Antioch that runs along the San Joaquin River. A mostly industrialized shoreline interspersed with marshy fringes and a couple of public marinas.

Cultural Information

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.

Sensitive Sites Within Division:

2-715-A	Pittsburg - Antioch Marsh (DOW Wetlands)
2-718-A	Antioch Dunes National Wildlife Refuge
2-719-A	Antioch Dunes and Quarry Canyon

Individual Access Points in: CC Division H

Access Point: CC - H - 1014 Antioch Marina

Thomas Guide Page: 248 ***Grid:*** C4 ***City:*** Antioch

GPS Coordinates: N 38.0192 W 121.81934 ***USGS Quad:*** Antioch North

Directions:

From Hwy 4: take L Street/Contra Loma exit. Proceed N to park entrance.

Site Description:

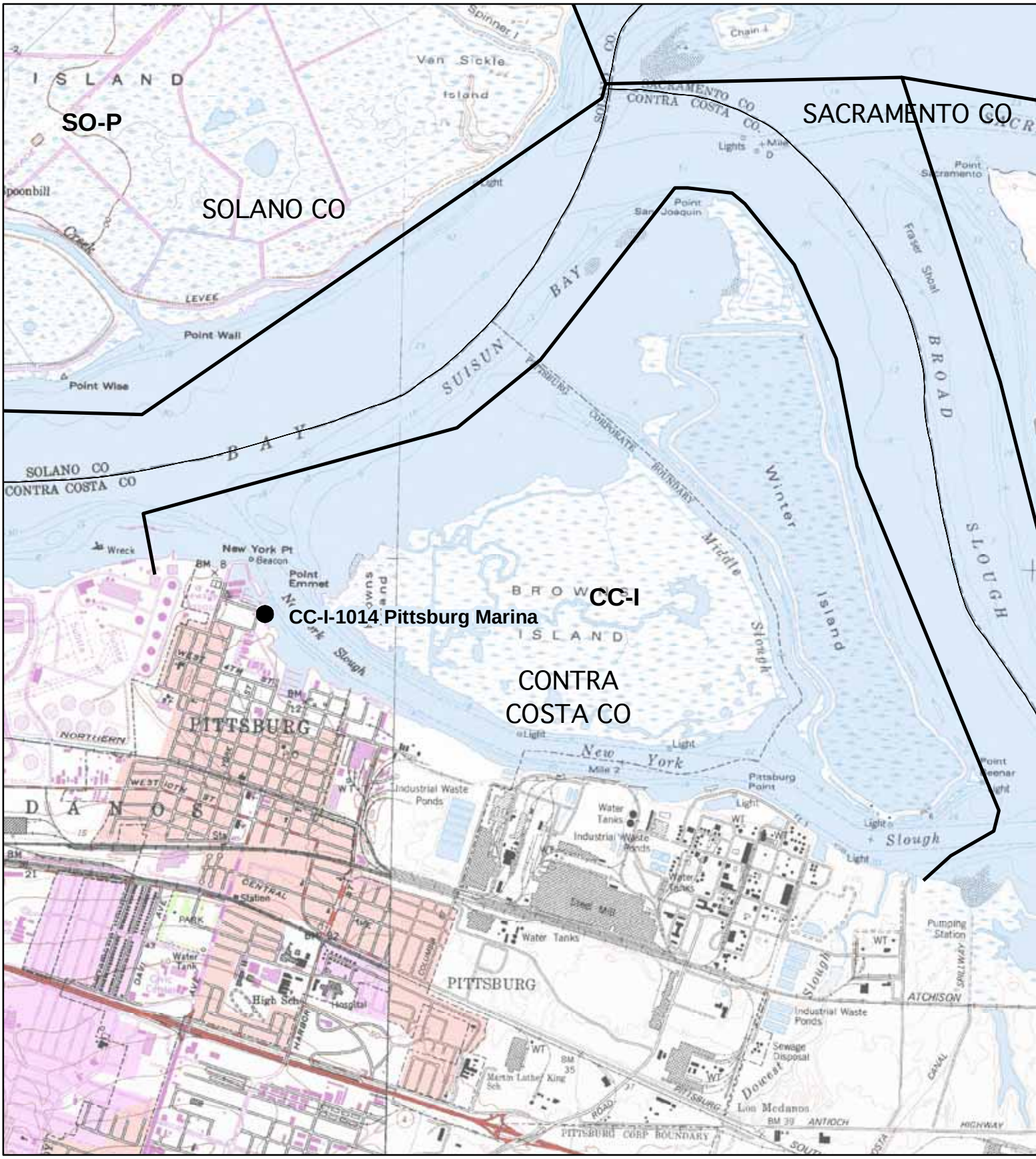
Marina entrance is rip-rapped. Shoreline is lined with cattails mixed with some exotic vegetation. Area has fishing pier and large parking area.

Sensitive Sites:

CC-H-1014 Antioch Marina. View of western shoreline.

CC-H-1014 Antioch Marina. View of eastern shoreline.

Contra Costa County, Division I - Access Names



Operational Divisions and Access Points in GRA 7

CC Division I **County** Contra Costa

Division Boundaries

North	Pier	**Latitude: N**	38.04293	**Longitude: W**	121.89247
South	Mouth of Dowest Slough	**Latitude: N**	38.02562	**Longitude: W**	121.84153

Division Description

Division includes Brown's and Winter Island and an ~3.5 mile stretch of industrialized shoreline in Pittsburg.

Cultural Information

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.

Sensitive Sites Within Division: 2-710-A Brown's Island
2-712-A Winter Island

Individual Access Points in: CC Division I

Access Point: CC - I - 1014 Pittsburg Marina

Thomas Guide Page: 248 ***Grid:*** B3 ***City:*** Pittsburg

GPS Coordinates: N 38.03857 W 121.88469 ***USGS Quad:*** Honker Bay

Directions:

From Hwy 4 East: exit Railroad. Head north to end of the road. Left to marina entrance.

Site Description:

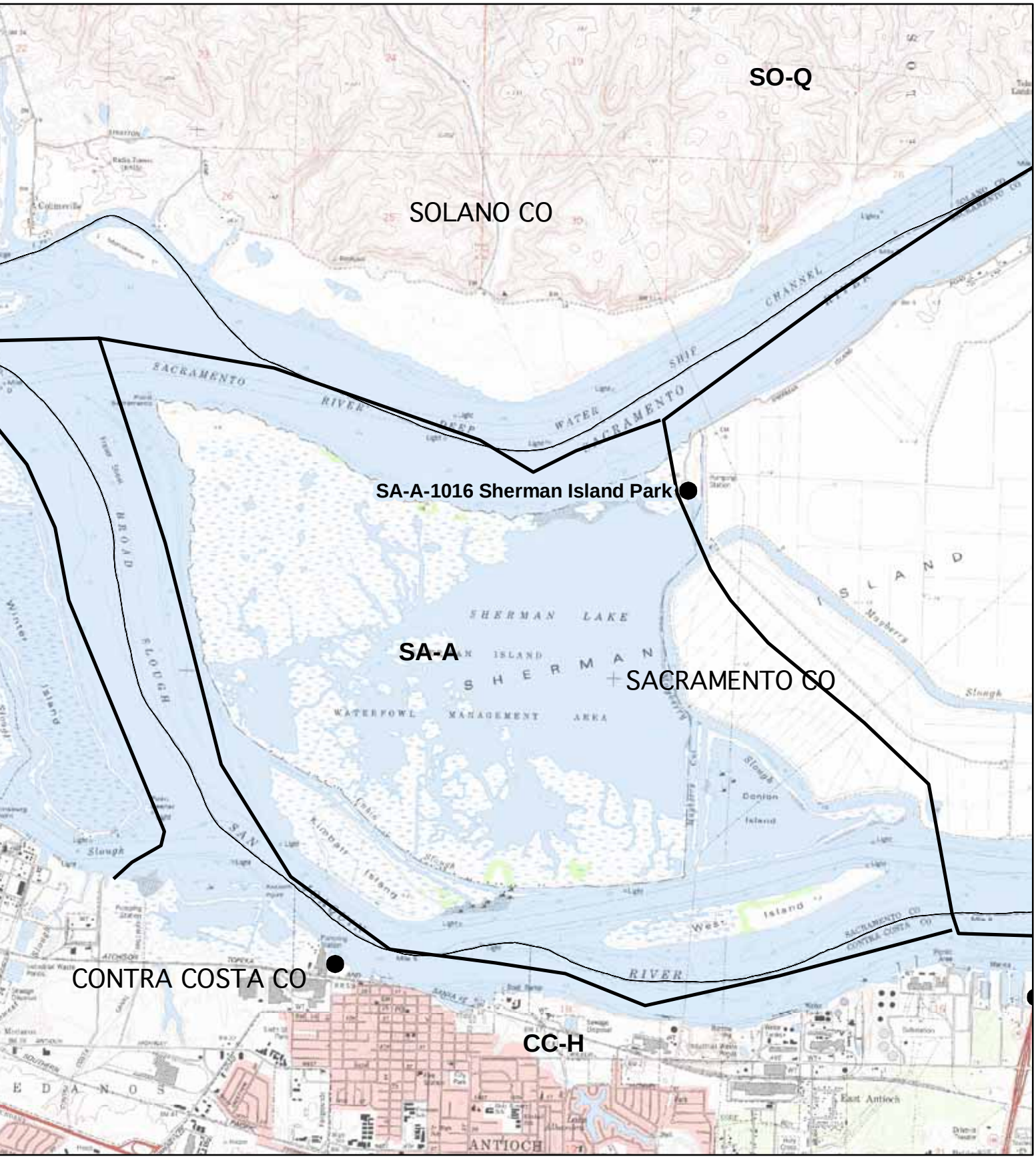
Rip-rapped shoreline with intermediate vegetation (Spartina, Saltgrass, Rush sp.). Tules along marina shoreline. Breakwall at marina entrance. Large parking area.

Sensitive Sites:

CC-I-1014 Pittsburg Marina. Shoreline looking west.

CC-I-1014 Pittsburg Marina. Shoreline looking east.

Sacramento County, Division A - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

Operational Divisions and Access Points in GRA 7

SA Division A **County** Sacramento

Division Boundaries

North	Mayberry Cut	**Latitude: N**	38.06086	**Longitude: W**	121.78478
South	Kimball Island	**Latitude: N**	38.02279	**Longitude: W**	121.81343

Division Description

This division is primarily made up of the Sherman Island Waterfowl Management Area. Kimball and West Islands make up the southern portion of the division. Except for the boat launch in the northwest corner, access to the shoreline of the rest of the division is by boat only.

Cultural Information

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.

Sensitive Sites Within Division:

2-780-A	Lower Sherman Island - Sherman Lake Complex
2-783-A	Kimball Island - Cabin Slough
2-786-A	Mayberry Slough - Donlon Island
2-789-A	West Island

Individual Access Points in: SA Division A

Access Point: SA - A - 1016 Sherman Island Park

Thomas Guide Page: 248 ***Grid:*** C3 ***City:*** n/a

GPS Coordinates: N 38.05614 W 121.78575 ***USGS Quad:*** Antioch North

Directions:

From Hwy 160 North: Left on Sherman Island Rd. Travel SW. Proceed to the end.

Site Description:

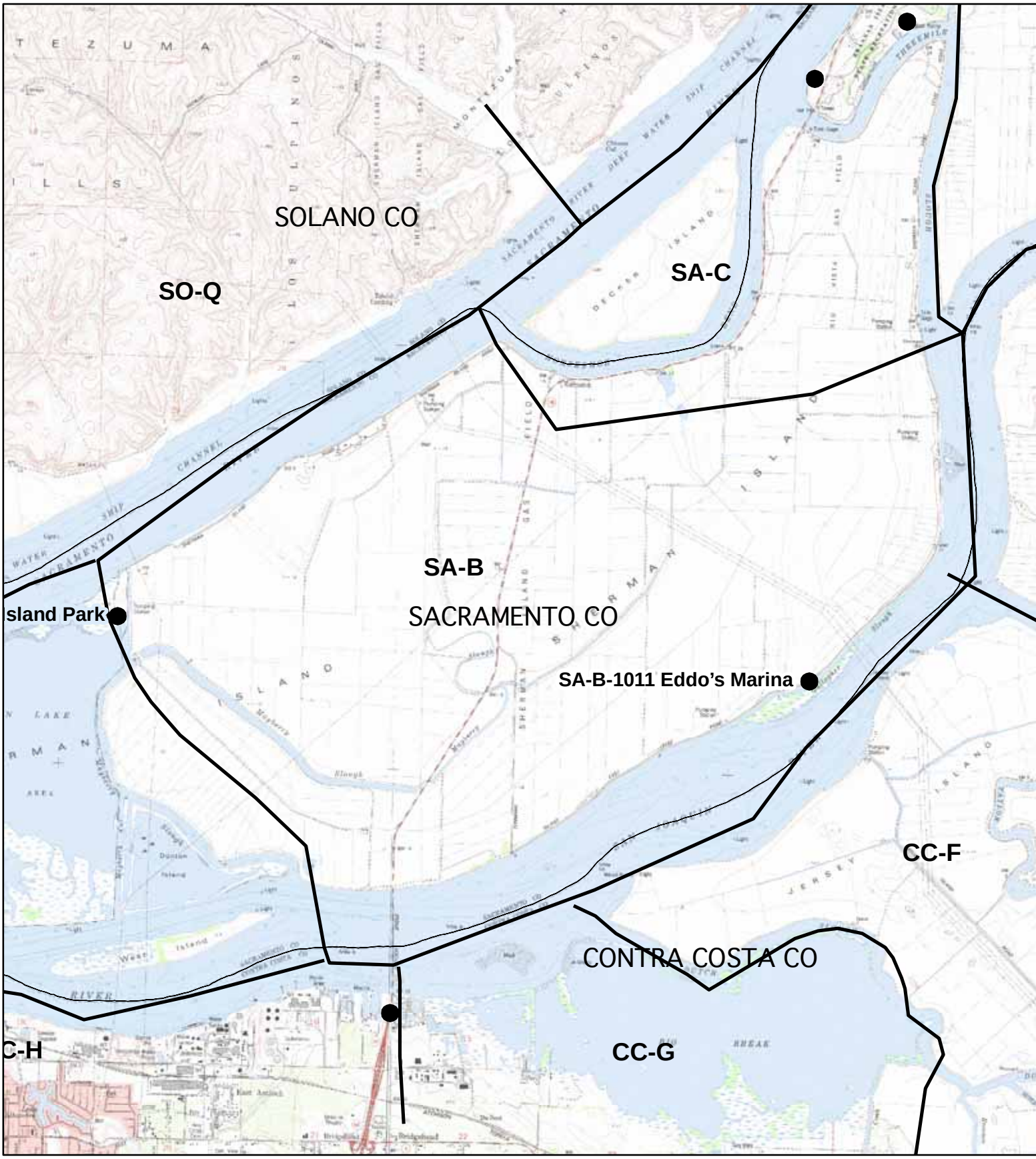
Shoreline varies from rip-rap to vegetation. Vegetation consists of tules, willows, and various exotics. Short stretches of medium-grain sandy beaches are interspersed along shoreline. Large parking area.

Sensitive Sites: 2-780-A

SA-A-1016 Sherman Island Park. Looking southeast.

SA-A-1016 Sherman Island Park. Looking southwest.

Sacramento County, Division B - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 1.5 Miles

Operational Divisions and Access Points in GRA 7

SA Division B **County** Sacramento

Division Boundaries

North	Horseshoe Bend	**Latitude: N**	38.08379	**Longitude: W**	121.73828
South	Mayberry Cut	**Latitude: N**	38.06086	**Longitude: W**	121.78478

Division Description

Upper Sherman Island makes up the entire division. Shoreline is typically lined by rip-rap. The western portion of the northern part of the division is located in GRA 8.

Cultural Information

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.

Sensitive Sites Within Division:

Individual Access Points in: SA Division B

Access Point: SA - B - 1011 Eddo's Marina

Thomas Guide Page: 248 ***Grid:*** D33 ***City:*** n/a

GPS Coordinates: N 38.05097 W 121.69952 ***USGS Quad:*** Jersey Island

Directions:

From Hwy 160: Proceed east on Sherman Island Rd to levee. Proceed to marina.

Site Description:

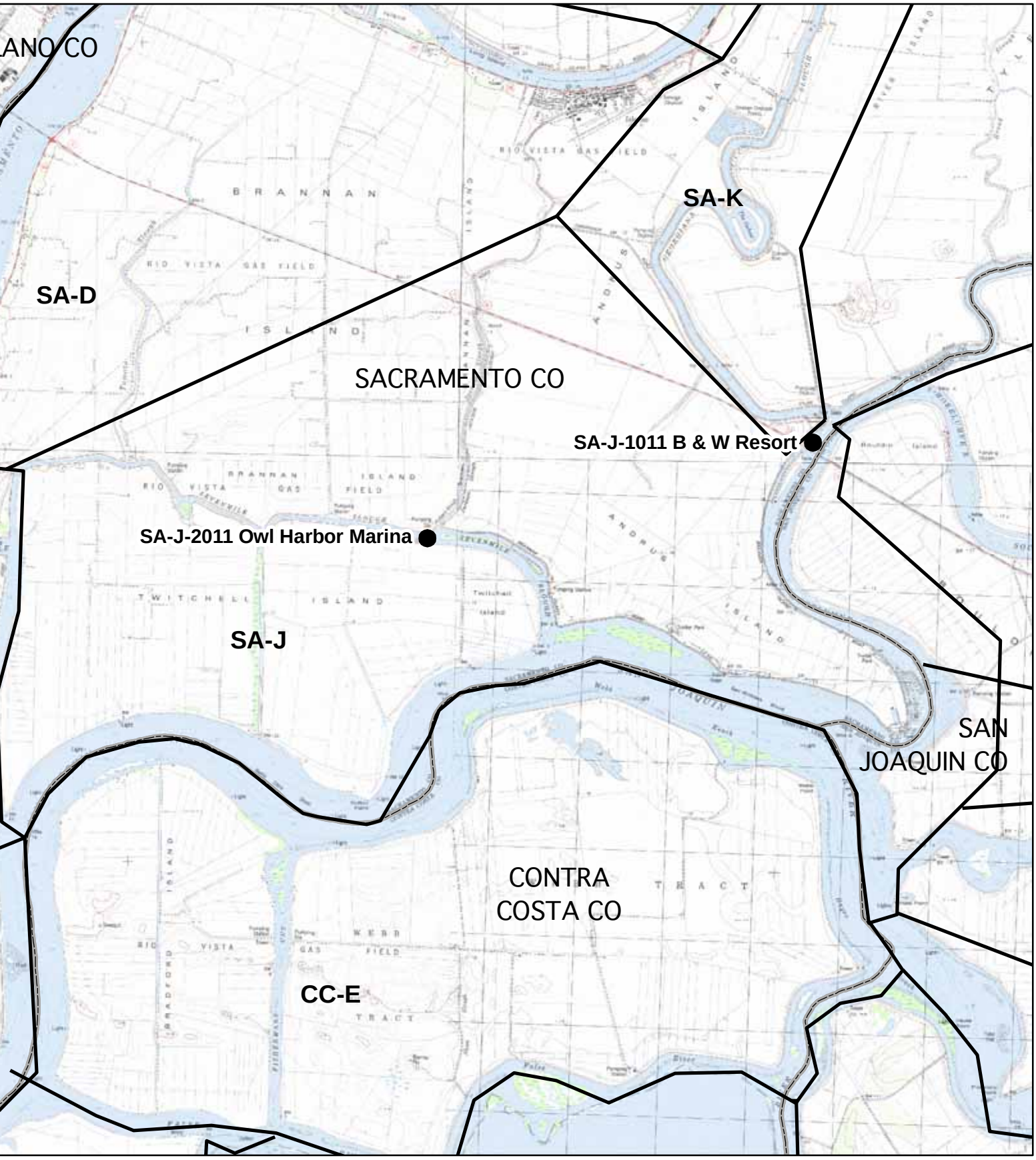
Marina is along San Joaquin River. Shoreline is lined with vegetation (i.e. Willows, cattails, tules) and some rip-rap. Minimal parking.

Sensitive Sites:

SA-B-1011 Eddo's Marina. Shoreline north of marina.

SA-B-1011 Eddo's Marina. Shoreline south of marina.

Sacramento County, Division J - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 1.5 Miles

Operational Divisions and Access Points in GRA 7

SA Division J **County** Sacramento

Division Boundaries

North	Terminous Road	**Latitude: N**	38.14864	**Longitude: W**	121.61434
South	Southern tip of Twitchell Island	**Latitude: N**	38.08755	**Longitude: W**	121.6837

Division Description

Twitchell, Andrus and the western section of Brannan Island are included. Shoreline borders the San Joaquin and Mokelumne Rivers and several small sloughs. Shoreline is rip-rapped. Several marshy islands lay right off the shoreline. Division is within GRA's 7 and 8.

Cultural Information

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.

Sensitive Sites Within Division:

2-743-A Sevenmile Slough

2-790-B Threemile Slough - San Joaquin River

Individual Access Points in: SA Division J

Access Point: SA - J - 1011 B & W Resort

Thomas Guide Page: 174 ***Grid:*** C2 ***City:*** n/a

GPS Coordinates: N 38.12703 W 121.58031 ***USGS Quad:*** Isleton

Directions:

From Hwy 12: Left on Brannan Island Rd.

Site Description:

Shoreline line by rip-rap interspersed with vegetation. Large parking area. In GRA 8.

Sensitive Sites:

Access Point: SA - J - 2011 Owl Harbor Marina

Thomas Guide Page: 174 ***Grid:*** C2 ***City:*** n/a

GPS Coordinates: N 38.11661 W 121.62986 ***USGS Quad:*** Jersey Island

Directions:

From Hwy 160: Proceed east on Twitchell Island Rd. to marina entrance.

Site Description:

Marina on Sevenmile Slough. Shoreline lined by tules and cattails.

Sensitive Sites:

SA-J-1011 B&W Resort. Boat launch area.

SA-J-1011 B&W Resort. View across North Mokelumne River.

SA-J-2011 Owl Harbor Marina. Looking west.

SA-J-2011 Owl Harbor Marina. Looking north of marina.

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