

Figure 1: GRA Environmental Sites and Operational Divisions

ACP 2 – Introduction with Sonoma and North Marin Coast

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9814 Sonoma and North Marin Coast (GRA 1)

9814.1 Geographic Response Strategies for Environmental Sensitive Sites

9814.1.1 GRA 1 Site Index

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County: Sonoma ACP Division/Segment: SN - A - S001 SN - A - S003

NOAA Chart: 18640 Map Book: Sonoma County Decimal Degrees: 38.768183 -123.533462

Site Description:

The beach extends from the Gualala River mouth south to the first rocky headland. Site is associated with BLM Ca Coastal National Monument resources. A sandspit closes the mouth of this river when freshwater flow stops during the summer and early fall. The sand spit is a relatively steep coarse-grained sand beach, backed by small vegetated sand dunes. Beach extends from the Gualala River south to the first rocky headland. A lagoon develops behind the sand spit with extensive freshwater wetlands on the south shore. The north bank of the river is a steep rocky bluff with fringing salt-marsh and rip-rap of broken concrete below the town.

Resources at Risk:

ESI and Habitat: 3A Fine- to medium-grained sand beaches
1A Exposed Rocky Shore

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Jan-Apr
Birds	migratory waterfowl	FP	Sep-Apr	
Fish	nightsmelt		Year-round	Feb-Jul
Fish	surf smelt		Year-round	Feb-Jul
Fish	salmonids		Year-round	
Mammals	North American river otter	SSC	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-Jun
Plants	Roderick's fritillary	SE	Year-round	Mar-May

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Anchor Bay Campground	(707) 884-4222
E	/Office	Sonoma County Regional Park, Gualala Point	(707) 785-2377
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish & Wildlife, Eureka	(707) 445-6493
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A large assortment of sensitive plants occur in the area.

Concerns and Advice to Responders:

Contamination and injury to marsh and riparian habitat, waterfowl, shorebirds, harbor seals and fish. Dune vegetation may also be at risk from cleanup activities and traffic. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

High waves, wind, swift river currents.

Site Strategies:

Site Validation Level: II

Strategy: 2-100.1 Objective: Exclusion not necessary when a berm is blocking mouth.

Strategy: If sand berm is blocking lagoon entrance, no action needed unless it appears that surf will over-top the berm. If so, employ method "2."

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Strategy: 2-100.2 Objective: Exclude oil when there is tidal exchange at lagoon mouth or when waves are overtopping berm. Protect riprap and fringing marsh on town side of river.

Strategy: If surf is over-topping beach berm into lagoon, use bulldozers and front-end loaders to build up barrier berm by skimming sand from neighboring flat beach (not dunes). Use plastic and sand bags as necessary to create a temporary non-erodible barrier. Deploy boom as follows: line northern shoreline with sorbent boom. Use deflection boom to either divert oil away from northeastern shore -a) to backside of spit or, b) to possible skimmer(s) stationed between island and southwest shore. All containment boom backed by sorbent boom. To collect oil in case of accumulation, use 50ft of oil snare, 100 ft of sorbent boom. Contact IC if oil accumulates and skimmers become necessary.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			3100	feet	
Anchor	Danforth	25 lb		12		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-100.3 Objective: Exclusion when there are heavy river outflows

Strategy: If heavy outflow due to run-off prevents entry of oil from the sea to the lagoon, no immediate action may be necessary. Maintain watch on lagoon outflow and implement booms when flow begins to diminish enough that outflow no longer repels surf-borne oil and erect barrier as necessary and feasible (see strategy 2).

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Strategy: 2-100.4 Objective: Oil Recovery by skimming

Strategy: If skimmer is deemed necessary by IC, station between island and southwest shore

Table of Response Resources

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

Logistics:

Directions: Hwy 101 to Santa Rosa, west on Hwy 12 to Hwy 116; proceed on 116 west to Hwy1 at Jenner; proceed north on Hwy 1 to Gualala. Access is from south Gualala Point County Park - south side of river is primary access. Can also access from Tree Farm Rd at north end of Hwy 1 bridge crossing Gualala River.

Land Access: Gualala Pt access south side of river, also at Tree Farm Rd on north

On-Water Limitations: Large surf oceanside, shallow water in river. Small skiffs hand launch in river

Facilities, Staging Areas, Command Posts, Available Equipment: Gualala Point County Park. Decon could be done at beach parking lot.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Communications via two-way radio and landline only



County: Sonoma**ACP Division/Segment:** SN - A - S004 SN - A - S005**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.74058 -123.510378**Site Description:**

Site located at Del Mar Point a mile south of the Gualala River at the northern end of the Sea Ranch Housing Community. Site is within the following State Marine Protected Area: Del Mar Landing State Marine Reserve. Site is associated with BLM Ca Coastal National Monument resources. Shoreline of exposed rocky cliffs fronted by rocky intertidal wave cut platforms, boulders and offshore rocks. This is a California Dept. of Fish and Wildlife Ecological Reserve.

Resources at Risk:*ESI and Habitat:* 2A Exposed wave-cut platforms in bedrock, mud, or clay

1A Exposed Rocky Shore

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Invertebrates	Tahitian clam		Year-round	
Invertebrates	black abalone	FE	Year-round	
Invertebrates	mussels		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-Jun

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Security	Sea Ranch Association	(707) 785-2701
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish & Wildlife, Eureka	(707) 445-6493
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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Additional Site Summary Comments:

This is a cultural/historic/archaeologically sensitive site.

Concerns and Advice to Responders:

Avoid contamination, trampling and further injury to rocky intertidal plants and animals, shorebirds, and harbor seals. Tidepools may trap and retain oil.

Hazard and Restrictions:

Beware of the dangerous surf conditions. Also slippery rocky shoreline and steep bluffs pose slip and fall hazards. Private property.

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

Strategy: 2-103.1 Objective: Alternatives to mechanical protection

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersants and In-situ burning).
- b) Inspect beach for possible pre-cleaning.

Table of Response Resources

Last Page Update**Logistics:**

Directions: Hwy 1 north of Jenner and Fort Ross towards Gualala. This site is adjacent to Sea Ranch property at northern end. Access is at the end of Helm Rd (a private Sea Ranch road - get a pass from Sea Ranch Security). Emergency access to the site from the bluffs which parallel the beach.

Land Access: Vehicle access limited. Mostly foot access from parking area on bluff.

On-Water Limitations: Potentially large surf and offshore rocky reefs. None available locally

Facilities, Staging Areas, Command Posts, Available Equipment: Nearest town is Gualala. No boat or harbor services nearby. Staging for shoreline cleanup in possible parking areas and roads on bluffs above site.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Communication via two-way radio and landline only.



2-104-B Site Summary - Sea Ranch**2-104-B****County:** Sonoma**ACP Division/Segment:** SN - A - S002 SN - A - S008**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.714464 -123.454706**Site Description:**

Site includes the rocky intertidal wave cut platforms and sandy beaches within the Sea Ranch community boundary, approximately from Gualala Point on the north end to Black Point on the south end. Site is associated with BLM Ca Coastal National Monument resources. About 10 linear miles of rocky intertidal wave cut platforms and offshore wash rocks. Many medium to fine grained sand beaches are interspersed between rocky reefs. This reach of ocean front includes 3 marine reserves, including: Del Mar Landing, Walk-on Beach, and the offshore rocks north of Smuggler's Cove.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Invertebrates	black abalone	FE	Year-round	
Invertebrates	Tahitian clam		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May
Mammals	whales	FP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Security	Sea Ranch Association	(707) 785-2701
E	/Office	Sonoma County Regional Park, Gualala Point	(707) 785-2377
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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Additional Site Summary Comments:

There is a major seal haulout and pupping area on Shell Beach and at the point of Green Cove. Whales are frequently seen off the coast. Several sensitive plant species grow in this area.

Concerns and Advice to Responders:

Contamination and injury to harbor seals, rocky intertidal plants and animals, and shorebirds. Oil may be trapped and contained in tidepools and boulder areas during periods of low wave energy. Saturation of coarse grain sand beaches is possible.

Hazard and Restrictions:

High wave energy and dangerous surf, slippery rocks, high bluffs.

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

Strategy: 2-104.1 Objective: Deflection: Channel oil to finer grain sand beaches where possible.

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy.

When water conditions do permit, deploy deflection boom offshore to protect rocky reefs and coarse grain pocket beaches; direct oil toward fine grain sand beaches for collection.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Anchor	Danforth	40 lb		16		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-104.2 Objective: Shoreline cleaning and pre-cleaning

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. Since on-water containment and recovery efforts are not totally effective, shoreline cleanup may be necessary.

- a) Inspect shoreline for possible pre-cleaning.
- b) Use sorbents and flushing of pooled oil to nearshore collection.

Table of Response Resources

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Strategy: 2-104.3 Objective: Alternative technologies to mechanical protection: Skimming, off shore ART, nearshore ART

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy. Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) or even nearshore dispersal.

Table of Response Resources

Last Page Update**Logistics:**

Directions: Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, Sea Ranch is a long section of coast (ca. 10 miles) between Fort Ross and Gualala.

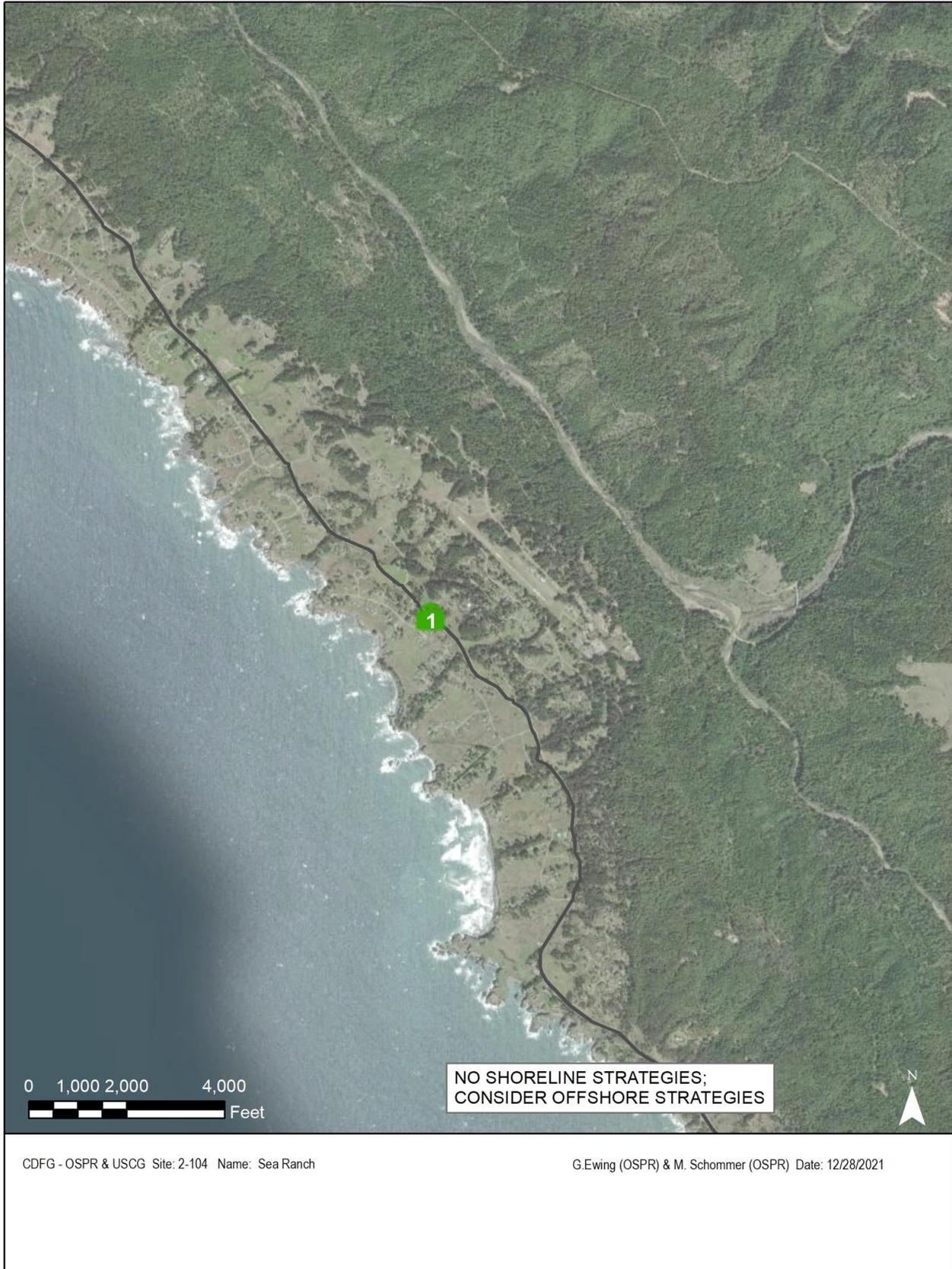
Land Access: Vehicle access limited. Primarily foot access. Private property.

On-Water Limitations: Dangerous surf; submerged rocks. None available locally. Hand launch skiffs across beach.

Facilities, Staging Areas, Command Posts, Available Equipment: Satellite staging areas at parking areas at Helm St. (Del Mar Beach) and Shell Beach.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Communications via two-way radio and landline only.



County: Sonoma*ACP Division/Segment:* SN - A - S008*NOAA Chart:* 18640*Map Book:* Sonoma County*Decimal Degrees:* 38.682961 -123.431769**Site Description:**

Within Sea Ranch property at southern end at Black Point Landing. Site is associated with BLM Ca Coastal National Monument resources. Exposed rocky cliffs at headland with many small rock islands nearshore. A long crescent shaped beach spans northerly for about one mile to another rocky headland. Between headlands, the beach is a deeply recessed pocket cove surrounded by steep cliffs.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

Resource Name		Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Invertebrates	black abalone	FE	Year-round	
Invertebrates	Tahitian clam		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Security	Sea Ranch Association	(707) 785-2701
E	/Office	Sonoma County Regional Park, Gualala Point	(707) 785-2377
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Contamination and injury to harbor seals, rocky intertidal plants and animals and shorebirds. Pooling of oil under rocks and in tidepools is possible, especially during periods of low wave energy. Oil may penetrate coarse grain beaches.

Hazard and Restrictions:

Extreme sea and surf conditions possible, rocky intertidal areas slippery and uneven, eroding bluffs may be unstable.

Site Strategies:

Site Validation Level: II

Strategy: 2-107.1 Objective: Deflection, under calm conditions, away from seal haulout

Strategy: As water conditions permit, divert oil away from haulout areas and deep cove south of Black Point. Direct oil toward fine grain sand beaches for collection. Deploy deflection boom, use manual sorbents, flush pooled oil where appropriate and possible.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Anchor	Danforth	40 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-107.2 Objective: Alternatives to mechanical protection

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
- c) Inspect shoreline for possible pre-cleaning

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, this site is at the southern end of the Sea Ranch community. A road proceeds out towards the point.

Land Access: Vehicle access limited. Foot access mostly.

On-Water Limitations: Potentially dangerous surf, submerged rocky reefs. None available locally. May hand launch skiffs across beach.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging at parking areas on bluffs above site. Sonoma County Parks and Sea Ranch have keys to locked gates on roads out to shore.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Strategy Page in Additional Comments section- Communication via two-way radio and landline only.



County: Sonoma*ACP Division/Segment:* SN - B - S002*NOAA Chart:* 18640*Map Book:* Sonoma County*Decimal Degrees:* 38.654697 -123.406865**Site Description:**

Site includes the wave-cut rocky platforms around the headland at Stewart's Point and the large offshore rock, aka Stewart's Point Island. Site is within the following State Marine Protected Area: Stewarts Point State Marine Conservation Area. Exposed rocky cliffs with wave cut platforms at headlands. One large rocky island (Stewarts Point Island) with additional wash rocks and a gravel tombolo off the point and a few small islands north of point. Fine to medium-grain pocket beaches followed by 10 feet of cobble which are backed by steep cliffs between headlands.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California giant salamander	SSC	Year-round	
Birds	shorebirds		Year-round	Mar-Nov
Invertebrates	black abalone	FE	Year-round	
Invertebrates	Tahitian clam		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May
Mammals	American badger	SSC	Year-round	
Mammals	Sonoma tree vole	SSC	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	California State Parks, Sonoma Coast	(707) 875-3483
E	/Owner	Stewart's Point Stores/Ranch	(707) 367-0312
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and staging equipment in this location.

Concerns and Advice to Responders:

Contamination and injury to harbor seals, rocky intertidal plants and animals, and shorebirds. Pooling of oil under rocks and in tidepools is possible during low energy periods. Saturation of coarse grain sand beaches.

Hazard and Restrictions:

High wave energy, eroding bluffs, slippery and uneven rocky intertidal areas.

Site Strategies:

Site Validation Level: II

Strategy: 2-110.1 Objective: Divert oil away from rocky reefs and harbor seal haulout areas and towards less sensitive areas for collection.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site. When water conditions do permit, divert oil away from haulout areas to fine grain sand beaches for collection. Tombolo not suitable for stranding oil because of sheer access.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Anchor	Danforth	40 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-110.2 Objective: Alternative techniques

Strategy: Alternative should be carefully considered since this site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Deploy a large offshore skimming effort. Use of large vessels for deployment of ocean boom to divert oil past pocket coves and tombolo.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
- c) Pre-clean debris from shoreline.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, site is between Fort Ross and Sea Ranch. Site is approximately two miles south of Sea Ranch.

Land Access: Private locked access for vehicles - contact Stewarts Pt store.

On-Water Limitations: Dangerous surf possible; submerged rocks. Beach launching possible across beach under calm conditions with heavy 4WD vehicle.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging areas would be on private land at access road (contact Stewarts Pt Store) to Stewarts Pt. Access road is just north of Stewarts Pt store.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Communication via two-way radio and landline only.



County: Sonoma*ACP Division/Segment:* SN - B - S010*NOAA Chart:* 18640*Map Book:* Sonoma County*Decimal Degrees:* 38.566594 -123.331425**Site Description:**

A small cove within Salt Point State Park. Site is within the following State Marine Protected Areas: Gerstle Cove state Marine Reserve and Salt Point State Marine Conservation Area. Site is associated with BLM Ca Coastal National Monument resources. This site is primarily a rocky boulder intertidal habitat with a pocket beach of mixed sand, cobbles, and boulders at the base of the public access ramp. It is located within Salt Point State Park and is a designated State Ecological Reserve.

Resources at Risk:*ESI and Habitat:* 2A Exposed wave-cut platforms in bedrock, mud, or clay

1A Exposed Rocky Shore

3A Fine- to medium-grained sand beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Invertebrates	black abalone	FE	Year-round	
Invertebrates	Tahitian clam		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May
Mammals	Sonoma tree vole	SSC	Year-round	
Mammals	Steller sea lion	FP	Year-round	Aug-Apr
Mammals	California sea lion	FP	Year-round	Aug-Mar

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

Contamination and injury to rocky intertidal plants and animals, and shorebirds. Pooling of oil under rocks during low energy periods. Saturation of coarse grain sand beaches.

Hazard and Restrictions:

Potentially dangerous surf, vertical bluffs, slippery and uneven walking surface on rocky intertidal areas. High winds on bluffs.

Site Strategies:

Site Validation Level: II

Strategy: 2-113.1 Objective: Deflection under favorable conditions to sandy beach areas

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible, and booming is generally unfeasible due to wave energy in a boulder strewn area. When water conditions do permit, divert oil away from haulout areas toward fine grain sand beaches for collection.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Anchor	Danforth	40 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-113.2 Objective: Alternatives to mechanical protection and cleanup

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy. Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)

Table of Response Resources

Last Page Update

Strategy: 2-113.3 Objective: Shoreline Cleanup possibilities

Strategy: Inspect shoreline for possible precleaning, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1 to Salt Point State Park, north of Fort Ross. Exit at park entrance and proceed to Gerstle Cove parking area.

Land Access: Asphalt one-lane road to beach; no turnaround.

On-Water Limitations: Dangerous surf possible, submerged rocks. Carry-in boats can be launched at beach.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging can be done on Park grounds. There is a paved area at beach headquarters. Sanitation and water available at this site.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Communications via two-way radio and landline only.



County: Sonoma**ACP Division/Segment:** SN - B - S005**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.547269 -123.297057**Site Description:**

Site includes the rocky shoreline of this small cove and the stream which flows into the cove. Site is associated with BLM Ca Coastal National Monument resources. Primarily rocky boulder intertidal habitat with a pocket beach (70' long x 30' wide) of mixed sand, cobbles & boulders at the base of the public access path. Stockoff Creek flows seasonally into the cove.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Insects	Monarch butterfly	FP		Oct-Feb
Invertebrates	black abalone	FE	Year-round	
Invertebrates	mussels		Year-round	
Invertebrates	Tahitian clam		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Sonoma County Regional Park Department	(707) 565-2041
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

Burial of oil from accreting sand in protected cove could occur.

Hazard and Restrictions:

Submerged rocks, extreme surf everywhere except at apex (beach) of crescent shaped cove.

Site Strategies:

Site Validation Level: I

Strategy: 2-116.1 Objective: Alternatives to mechanical means.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
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Strategy: 2-116.2 Objective: Exclusion by berming

Strategy: Sediment berm with culvert to allow outflow if needed.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
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Heavy Equip	Backhoe			1		
culvert				3		
Staff	Staff to Deploy			5		

Strategy: 2-116.3 Objective: Shoreline Cleanup: remove oil from rocky intertidal areas.

Strategy: Medium to high pressure wash with ambient temperature flush on rocks depending on type and weathering of oil.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
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pressure washer				3		
Boom	Oil Snare (pom-pom)			300	feet	
Anchor	Danforth	40 lb		7		
Staff	Staff to Deploy			7		

Logistics:

Directions: Located approximately 2-3 miles south of Salt Point State Park off Hwy 1

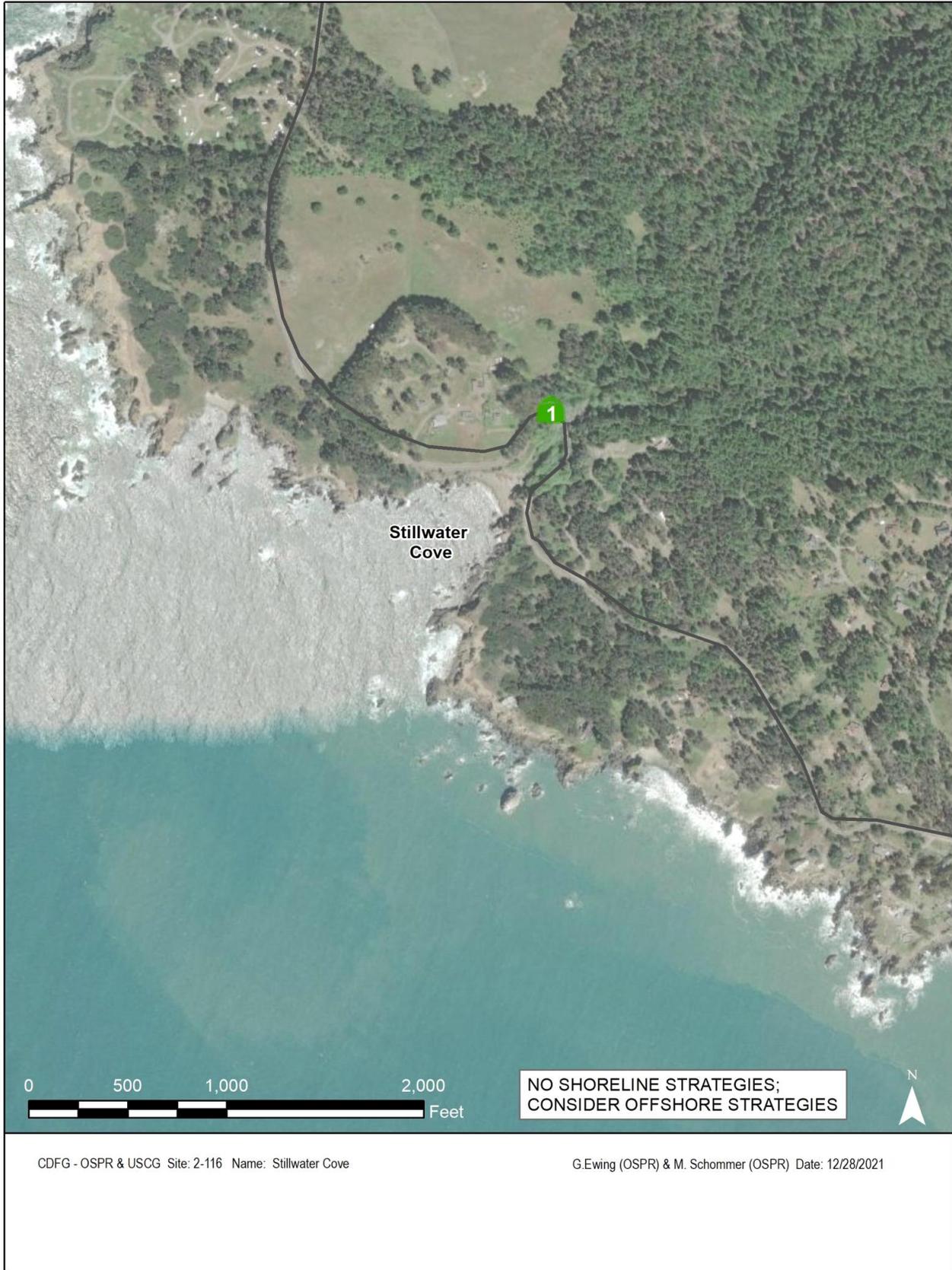
Land Access: Truck access to beach at Hwy 1 marker 37.17

On-Water Limitations: Submerged wash rocks, large waves. Small boats can be hand launched from the beach.

Facilities, Staging Areas, Command Posts, Available Equipment: Main staging area would be a County Park. Limited at the beach for decon, etc. Park ranger can open gate to beach.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Landline only for communications



County: Sonoma*ACP Division/Segment:* SN - D - S001*NOAA Chart:* 18640*Map Book:* Sonoma County*Decimal Degrees:* 38.467056 -123.1557**Site Description:**

Sand beach between headlands and creek/lagoon which flows seasonally across the beach. Russian Gulch is located within the Sonoma Coast State Park and is managed by California State Parks. Site is associated with BLM Ca Coastal National Monument resources. Small seasonal stream flows across coarse-grained sand beach. Stream can run strong at times. A thick riparian corridor is present along the creek between the parking lot and the beach. Beach is occasionally washed over by large waves or tides. A lagoon is often present behind beach berm. Area is within Russian Gulch County park.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

3B Scarps and steep slopes in sand

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Birds	seabirds		Year-round	
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Mammals	Sonoma tree vole	SSC	Year-round	
Mammals	harbor seal	FP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

Burial of oil in coarse sediments.

Hazard and Restrictions:

Heavy surf. Subject to large waves.

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

Strategy: 2-119.1 Objective: Exclude oil from entering stream. Contain oil at lower part of stream.

Strategy: a) Construct sediment dike using heavy equipment small bulldozer or bobcat. Construct an underflow dam. Depending on tides and waves conditions, the beach berm may have to be built up to prevent washover into lagoon.

b) Protect marsh vegetation with sorbent boom trailing along shoreline (north side of river).

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert				3		
Staff	Staff to Deploy			5		

Logistics:

Directions: Hwy 1 just north of the Russian River exit at Jenner-Russian Gulch Park.

Land Access: Russian Gulch parking is adjacent to Hwy 1. Access by foot trail.

On-Water Limitations: Possible submerged rocks, heavy surf.

Facilities, Staging Areas, Command Posts, Available Equipment: Parking lot at Russian Gulch State Park.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: May have to construct access road with heavy equipment.



County: Sonoma**ACP Division/Segment:** SN - D - S003**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.450308 -123.124233**Site Description:**

This large coastal river has a mouth that may vary from a few yards wide in summer to more than 100 yards wide in winter. Tidal influence reaches several miles upriver. Principal area of concern is the reach between the beach and Hwy 1 bridge which includes the Russian River State Marine Recreational Management Area. Beyond the mouth exists the Russian River State Marine Conservation Area. This is a large river inlet with sandy beaches to either side of the rivermouth. Opening may close during the drier summer months, although large waves will wash over sandbar spit. Salt-marshes exist on both sides of the river. The town of Jenner is located along the northern river bank.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	bank swallow	ST	Mar-Aug	
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	chinook salmon - California coastal	FT	Year-round	Oct-May
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Operations Center	Sonoma County Water Agency	(707) 523-1010
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location. A large group of harbor seals utilize this area as well as a diversity of birds.

Concerns and Advice to Responders:

Prevent penetration of coarse sediments along riprap on north side of river. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Extreme surf and swift current. Location and size of river mouth varies throughout the year.

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

Strategy: 2-122.1 Objective: Exclude oil from entering river.

Strategy: a) Under low flow conditions, neap tides, non-stormy seas: Construct sediment dike (coarse-grained sand) across river mouth. Build up berm.

b) Under other conditions (more typical): Deploy a line of deflection booms to divert oil to coarse-grained sand catchment area on south shore of river channel. Use 50ft oil snares, 100ft sorbent boom to collect oil that may accumulate. If skimmable oil accumulates contact IC.

Table of Response Resources

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

Strategy: 2-122.2 Objective: Prevent spread of oil to river and beach area.

Strategy: If catchment area is too limited, extend deflection booms from both sides of channel and divert oil to 50ft oil snares, 100ft sorbent boom. If skimmable oil accumulates contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1200	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-122.3 Objective: Oil Recovery by skimming

Strategy: Use skimmer to collect oil when it accumulates in skimmable quantities. Get authorization from IC prior to using this collection strategy.

Table of Response Resources

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

Logistics:

Directions: The inlet is located along Hwy 1 at Jenner. Access from Santa Rosa through Guernville or from Bodega Bay. Take Hwy 1 to Goat Rock Rd to reach the peninsula on the south side of the river mouth.

Land Access: Goat Rock Rd; Rivers End Resort, County Ramp - off Hwy 1

2-122-A Site Strategy - Russian River Inlet - Mouth and Estuary

2-122-A

On-Water Limitations: River shallow in areas, large surf offshore. Rivers End launch ramp on north side of river - Hwy marker 19 County ramp near Jenner Post Office, also north side of river.

Facilities, Staging Areas, Command Posts, Available Equipment: Main staging area would be at Goat Rock State Park. Satellite staging area at River's End Resort.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Access is difficult under adverse conditions.



County: Sonoma**ACP Division/Segment:** SN - D - S003**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.445933 -123.126031**Site Description:**

Goat Rock Beach is located within the Sonoma Coast State Park and is managed by California State Parks. The Beach extends from the mouth of the Russian River south to Goat Rock, a linear distance of 0.7 mile. Site is associated with the following BLM Ca Coastal National Monument Site: Halfmile Rock. Medium-grained sand beach backed by large vegetated dunes. Goat Rock Beach is relatively wide and flat.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Fish	surf smelt		Year-round	May-Jul
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	nightsmelt		Year-round	May-Jul
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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

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E	/Operations Center	Sonoma County Water Agency	(707) 523-1010
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O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

Hazard and Restrictions:

Extreme surf and strong currents.

Site Strategies:

Site Validation Level: 0

Strategy: 2-125.1 Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Strategy: Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
- b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
- c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

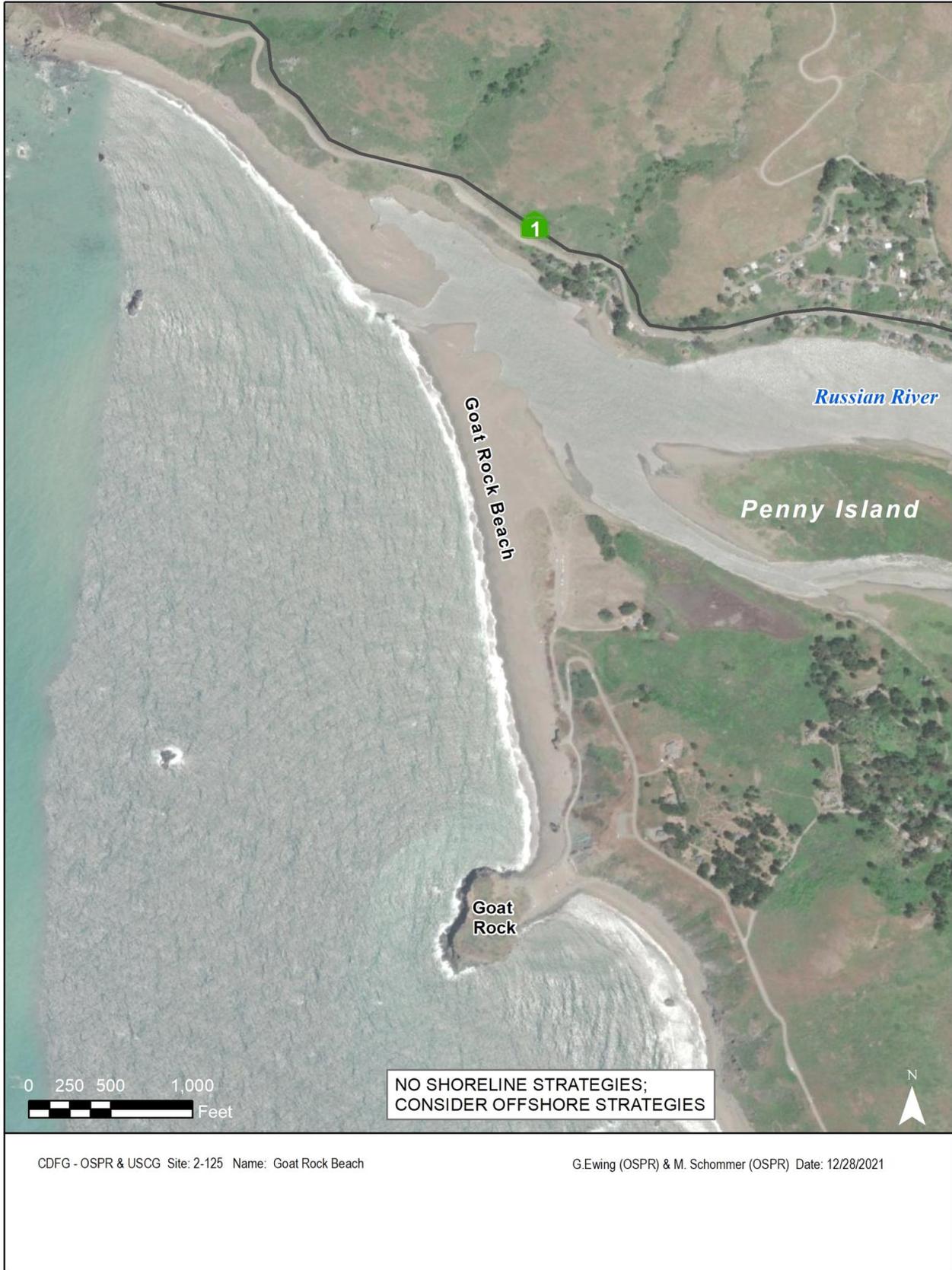
Directions: Off Hwy 1 south of Jenner, north of Bodega Bay. Access via Goat Rock Road.

Land Access: Large truck access okay.

On-Water Limitations: Large surf and breakers. Bodega Bay is closest launch.

Facilities, Staging Areas, Command Posts, Available Equipment: County Park parking areas available at ends of beach. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma**ACP Division/Segment:** SN - D - S004**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.43556 -123.120617**Site Description:**

Blind Beach (Fine to medium-grained sand beach) is located within the Sonoma Coast State Park and is managed by California State Parks. Blind Beach extends from Goat Rock south to next rocky headland at Peaked Hill. Site is associated with the following BLM Ca Coastal National Monument Site: Arched Rock.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

3B Scarps and steps slopes in sand

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Fish	surf smelt		Year-round	May-Jul
Fish	nightsmelt		Year-round	May-Jul
Insects	Myrtle's silverspot butterfly	FE	Year-round	

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

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T	/Office	California State Parks, Russian River District	(707) 865-2394
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T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

Hazard and Restrictions:

Extreme surf and strong currents.

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

Strategy: 2-128.1 Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Strategy: Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
- b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
- c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update**Logistics:**

Directions: Off Hwy 1 south of Goat Rock State Park, north of Bodega Bay.

Land Access: Large trucks okay

On-Water Limitations: Large surf and breakers. Bodega Bay is closest launch.

Facilities, Staging Areas, Command Posts, Available Equipment: County Park parking areas available at ends of beach. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma**ACP Division/Segment:** SN - D - S007**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.435526 -123.120617**Site Description:**

Wright's Beach (fine to medium-grained sand beach) extends approximately one mile northward up the coast from Death Rock. Wright's Beach is located within the Sonoma Coast State Park and is under jurisdiction of California State Parks. Site is associated with BLM Ca Coastal National Monument resources.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

2B Exposed scarps and steep slopes in clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Fish	surf smelt		Year-round	May-Jul
Fish	nightsmelt		Year-round	May-Jul
Insects	Western bumble bee	SP	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May

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

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O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
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T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

Hazard and Restrictions:

Extreme surf and strong currents.

Site Strategies:

Site Validation Level: 0

Strategy: 2-131.1 Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Strategy: Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
- b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
- c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 1 a few miles north of Bodega Bay.

Land Access: Large truck access okay.

On-Water Limitations: Large surf and breakers. Bodega Bay is closest launch.

Facilities, Staging Areas, Command Posts, Available Equipment: Parking lot at beach level for staging and access to beach. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma**ACP Division/Segment:** SN - D - S009**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.391174 -123.085783**Site Description:**

Gleason Beach (fine to medium-grained sand beach) is located within the Sonoma Coast State Park and is under jurisdiction of California State Parks. The County Beach lies north of Salmon Creek. Site is associated with BLM Ca Coastal National Monument resources.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	shorebirds		Year-round	Mar-Nov
Fish	surf smelt		Year-round	May-Jul
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Western bumble bee	SP	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-May

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

Hazard and Restrictions:

Extreme surf and strong currents.

Site Strategies:

Site Validation Level: 0

Strategy: 2-134.1 Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Strategy: Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
- b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
- c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 1 north of Bodega Bay and Salmon Creek.

Land Access: Large trucks okay

On-Water Limitations: Large surf and breakers. Bodega Bay is closest launch.

Facilities, Staging Areas, Command Posts, Available Equipment: Parking lot along Hwy 1 above beach will provide a small staging area. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma**ACP Division/Segment:** SN - D - S011**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.380407 -123.080219**Site Description:**

Portuguese Beach is located within the Sonoma Coast State Park and is managed by California State Parks. Portuguese Beach consists of fine-medium grain sandy beach surrounded by rocky headlands. This Beach is located three miles north of Bodega Bay along Hwy 1. Site is associated with BLM Ca Coastal National Monument resources.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

2A Exposed wave-cut platforms in bedrock, mud, or clay

2B Exposed scarps and steep slopes in clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	Mar-Nov
Fish	surf smelt		Year-round	May-Jul
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	coho salmon - north of Punta Gorda	FT, ST	Year-round	Nov-Apr
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Western bumble bee	SP	Year-round	
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

Hazard and Restrictions:

Extreme surf and strong currents.

Site Strategies:

Site Validation Level: 0

Strategy: 2-137.1 Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Strategy: Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

- a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
- b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
- c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy1 north of Bodega Bay and Salmon Creek.

Land Access: Large truck access okay.

On-Water Limitations: Large surf and breakers. Bodega Bay is closest launch.

Facilities, Staging Areas, Command Posts, Available Equipment: Large parking lot above beach for staging. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma**ACP Division/Segment:** SN - D - S015**NOAA Chart:** 18640**Map Book:** Sonoma County**Decimal Degrees:** 38.35545 -123.066135**Site Description:**

Salmon Creek mouth is located within the Sonoma Coast State Park and is under jurisdiction of California State Parks. Nearly two miles of fine to medium sandy beach. During low flow periods the mouth may be closed off from the ocean by a sandbar. Site is associated with BLM Ca Coastal National Monument resources. A sandbar closes the mouth of this river during the summer and early fall when freshwater flow stops and a lagoon develops behind the bar. There are extensive freshwater wetlands on the north shore near the Hwy 1 bridge.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

1C Exposed rocky cliffs with boulder talus base

2A Exposed wave-cut platforms in bedrock, mud, or clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	peregrine falcon	FP, SP		Mar-May
Birds	migratory waterfowl	FP		Nov-Jan
Birds	shorebirds		Year-round	Mar-Nov
Fish	tidewater goby	FE, SSC	Year-round	
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Plants	yellow larkspur	FE, SR	Year-round	Mar-May

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location.

Concerns and Advice to Responders:

If oil gets into creek it may impact sensitive marsh habitat , anadromous fishes and other sensitive species. Snowy plovers (an endangered shorebird) nest along the foredune above the high tide line from March through August. All traffic must be kept out of this area when birds are present. Prevent and minimize foot and vehicle traffic through the sand dunes.

Hazard and Restrictions:

Steep cliff area - access is by steep trail.

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

Strategy: 2-140.1 Objective: Exclude oil from entering the creek and oiling marshes.

Strategy: In addition to on-water recovery efforts, the following site specific protection measures should also be carried out:

For situations of low-flow or no-flow river conditions:

- Construct a sediment dike if the river is isolated from the ocean by a sand berm. Sediment should be taken from the beach face south of the river mouth (not the sand dunes). The washover terrace requiring reinforcement maybe 300 meters (1000 feet) wide. It is recommended that a shallow ditch (a runnel) be constructed on the backside of the dike to catch any oil that washes over the top.

Snowy plovers (an endangered shorebird) nest along the foredune above the high tide line from March through August. All traffic must be kept out of this area when birds are present.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert				3		
Staff	Staff to Deploy			5		

Strategy: 2-140.2 Objective: Exclude oil from entering and moving upstream in the creek and from oiling marshes.

Strategy: In addition to on-water recovery efforts, the following site specific protection measures should also be carried out:

For situations when river is open to the ocean and tidal exchange occurs:

- Boom across the river will be necessary when tidal flows into the river may occur during flood tides. Deploy 2000 ft. of boom having at least 8 inches of freeboard/floatation and 6 inches of draft/skirt. Backup the primary boom with a second deployment to catch entrained oil.

The preferred oil collection location (north or south river bank) may vary depending on conditions. The south shore is sand beach yet more remote; while the north shore is mixed sand and gravel, but provides better logistical access below the parking area along Hwy 1. In all cases, responders must consider the wind direction and expected current velocity when determining boom deployment angles and shoreline recovery areas.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Take Hwy 1 north of Bodega Bay. Turn into parking lot at north end of Salmon Creek mouth.

Land Access: Good access to parking areas north and south of creek.

On-Water Limitations: Shallow creek, skiffs only. Hand launch skiffs over south creek bank beach. Bodega Bay is nearest

launch.

Facilities, Staging Areas, Command Posts, Available Equipment: State Park parking areas available on north and south sides of creek. Nearest facilities at Bodega Bay and Jenner.

Communications Problems: Cell reception varies on outer coast.



County: Sonoma **ACP Division/Segment:** SN - E - S003**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Sonoma County **Decimal Degrees:** 38.302814 -123.058333
18643**Site Description:**

Bodega Head is located within the Sonoma Coast State Park and is managed by California State Parks. Rocky headland extends 1+ miles from Mussel Point in the north to the tip opposite Bodega Rock in the south. Wave-cut rock platforms and exposed cliffs. Coarse sand beach in Horseshoe Cove. Site is within the following State Marine Protected Areas: Bodega Head State Marine Reserve and Bodega Head State Marine Conservation Area. The site also overlaps into the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources.

Resources at Risk:**ESI and Habitat:** 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	eulachon	FT	Year-round	
Fishery	Dungeness crab - Commercial & Sport		Year-round	
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Monarch butterfly	FP		Oct-Feb
Invertebrates	black abalone	FE	Year-round	
Mammals	California sea lion	FP		Aug-Apr
Mammals	harbor seal	FP	Year-round	Mar-May
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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

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C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

A number of sensitive plants occur in the area. Proceed with caution when conducting reconnaissance and when staging equipment in this location. A diversity of bird species populate this location as well.

Concerns and Advice to Responders:

Prevent heavy oiling of the intertidal zone. Oil may smother intertidal organisms and pose detrimental effects to shorebirds.

Hazard and Restrictions:

Extremely dangerous surf, rocky headland and submerged rocks. High potential for fog.

Site Strategies:

Site Validation Level: 0

Strategy: 2-143.1 Objective: Prevent oil from contaminating the intertidal zone of the headland.

Strategy: In addition to on-water recovery efforts the following site-specific protection measures should also be carried out:

a) Booming is unlikely to be effective in the heavy surf generally present along this shoreline. In-situ burning, dispersants, and other alternative response technologies should be given strong consideration as methods for reducing the volume of oil reaching the near-shore areas.

b) Where it is safe to do so it may be necessary to clean with hand labor the gravel beaches protected from the full force of the surf. It may be possible to use heavy equipment (graders, scrapers, loaders, and dump trucks) to clean the sand beach in Horseshoe Cove.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 1 to Bodega Bay. Take Bay Flat Road at north end of bay around to west side of bay and Bodega Head. Access shorelines along the head from parking areas and trails at the end of Bay Flat Road, Campbell's Cove, and Bodega Marine Lab.

Land Access: Large trucks okay on Bay Flat Road.

On-Water Limitations: submerged rocks and outcroppings, heavy surf. Nearest boat launch inside Bodega Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: Bodega Marine Lab and the parking lots on top of Bodega Head may serve as staging areas

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Strategy has not been deployed or tested



County: Sonoma **ACP Division/Segment:** SN - E - S003**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Sonoma County 18643 **Decimal Degrees:** 38.296101 -123.048465**Site Description:**

Located approximately one-half kilometer SE of Bodega Head, outside the Bodega Harbor entrance. This site is located within the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources. Four offshore rock islands surrounded by several washrocks. Steep rock cliffs and rocky intertidal zones are typical habitats.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	seabirds		Year-round	Mar-Aug
Birds	Brandt's cormorant	FP	Year-round	Mar-Aug
Mammals	California sea lion	FP	Year-round	Aug-Mar
Mammals	harbor seal	FP	Year-round	Mar-May
Mammals	Steller sea lion	FP	Year-round	Aug-Apr

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

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O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

This is a large seabird rookery and pinniped haulout year-round.

Concerns and Advice to Responders:

Oil on this site would cause injury to seabirds and marine mammals.

Hazard and Restrictions:

Steep rock cliffs. Pounding surf. Wild animals (sea lions, harbor seals).

Site Strategies:

Site Validation Level: 0

Strategy: 2-146.1 Objective: Prevent oiling of largest island and largest rocks used for marine mammal haul outs.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

Last Page Update

Logistics:

Directions: Hwy 1 to Bodega Bay. Via boat from the bay proceed to the islands immediately south of Bodega Head.

Land Access: Boat only, unsafe to access.

On-Water Limitations: Submerged rocks, heavy surf. Boat launch from Bodega Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: Bodega Harbor will be the staging area for vessels responding to this site.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Strategy has not been deployed or tested.



CDFG - OSPR & USCG Site: 2-146 Name: Bodega Rock

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 12/28/2021

County: Sonoma**ACP Division/Segment:** SN - E - S004 SN - E - S015**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Sonoma County **Decimal Degrees:** 38.311899 -123.051622
18643**Site Description:**

Site includes the marshes, mudflats, beaches, piers and marinas within the confines of the harbor. The entrance to Bodega Harbor is open all year and is stabilized by rip-rap jetties on either side. Strong tidal currents are present near the harbor entrance. Within the harbor, there are extensive tidal flats, saltmarshes and eelgrass beds. The harbor provides habitat for threatened and endangered species as well as thousands of birds (shorebirds, wading birds, waterfowl). Two major marinas, with hundreds of vessels, are present in the upper bay. Bodega Harbor is located on the San Andreas rift zone.

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

5 Mixed sand and gravel beaches

10A Salt - and brackish-water marshes

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	Pacific herring		Year-round	Nov-Apr
Fish	eulachon	FT	Year-round	
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Monarch butterfly	FP		Apr-Jun
Plants	eelgrass		Year-round	
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Sonoma County Regional Park Department	(707) 565-2041
E	/Ranger	Sonoma County Regional Park, Doran Regional Par	(707) 875-3540
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Office	California State Parks, Russian River District	(707) 865-2394
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

This area host a high diversity of wildlife. It is a Dungeness crab nursery, has substantial clam beds, many birds including raptors, migratory seabirds and waterfowl in the fall and winter, and shore birds wading birds and waterfowl year-round. There is a large number of sensitive plant species, as well as bats and beetles of special concern, California sea lions and harbor seals, etc.

Concerns and Advice to Responders:

An oil spill in or reaching Bodega Harbor could have tremendous impacts on birds, wetland and eelgrass habitat, and clam beds. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Shallow waters and mudflats exist throughout the bay outside of the main channels. Expect moderately strong flood currents near the harbor entrance. As of 1991, no quantitative data were available on the harbor's tidal currents.

Site Strategies:

Site Validation Level: II

Strategy: 2-150.1 Objective: Exclude oil from entering the harbor.

Strategy: Responders must consider wind direction and expected current velocity when deciding which shoreline to deflect the oil to. They should select an angle of the boom to wind and current that will maximize the effectiveness of the boom to deflect oil. Although the prevailing northwest wind may reduce the risk of oil entering the Bodega Harbor, local winds and currents may be very different from the prevailing offshore wind. These local conditions may work to pull oil into the harbor when least expected.

BODEGA HARBOR ENTRANCE

- Deploy deflection boom outside the jetties to direct oil away from the harbor entrance and toward Doran County Beach. Avoid "venturi effect" at harbor entrance by deploying away from the mouth of the harbor. Use up to 5,000 feet of (harbor or ocean) boom. Oil recovery and storage equipment should be staged at Doran Beach if surf conditions and oil concentration permit.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		5000	feet	
Anchor	Danforth	40 lb		15		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-150.2 Objective: Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.

Strategy: BODEGA HARBOR ENTRANCE

- Deflect oil coming through the entrance channel to Campbell beach. Cascade six 300 foot sections of curtain (harbor) boom from the west end of the north jetty to Campbell beach. This is the beach location to strand oil. Two boom boats and a skiff will be needed. A shoreside skimmer and a portable storage device must be located at Campbell beach if significant amount of oil can be accumulated there.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1800	feet	
Anchor	Danforth	40 lb		10		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-150.3 Objective: Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.

Strategy: BODEGA HARBOR ENTRANCE

- Prevent oil from passing through the jetties and oiling the the interior surfaces of the jetties. Consider the use of 2,000 feet of boom, fabric or some other material to protect the south side of the south jetty. The jetties are very porous, oil will readily pass through them and they will be difficult to impossible to clean. There is also a low spot near the base of the southern jetty where water flows over at high tide. Fill this gap with sandbags or use large quarry stone.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-150.4 Objective: Prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.

Strategy: INSIDE BODEGA HARBOR (alternative to #150.3 above)

- Oil may also be deflected to the northwest side of Doran spit inside the harbor by cascading several (300-500 ft.) sections of (harbor or swamp) boom from the north end of Campbell Beach to the northwest side of Doran spit. The beach here is narrow and backed by riprap. Almost no sand beach exists at high tide.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-150.5 Objective: prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.

Strategy: INSIDE BODEGA HARBOR

- The last line of defense of the tidal flats and eelgrass beds is to line both natural and dredged channels with 6,000 feet of curtain (harbor) boom and recover oil with skimmers strategically located in the channels. This hard boom should be backed by an equal amount of absorbent boom.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		6000	feet	
Boom	Sorbent			6000	feet	
Anchor	Danforth	40 lb		15		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			7		

Logistics:

Directions: From Hwy 101 in Petaluma, take Bodega Avenue west. Continue onto Petaluma Valley Road and Hwy 1 and proceed to Bodega Bay. Doran County Park and Bay Flat Road can be accessed from Hwy 1.

Land Access: Semi-truck, no restrictions.

On-Water Limitations: Shallow water outside main channel. Boat ramp on the NW shore Doran Spit and Westshore Park. Several docks and marinas for mooring. Fuel and marine hardware available locally

Facilities, Staging Areas, Command Posts, Available Equipment: There is a good access and a staging area at Doran County Beach and Westshore County Park. The first and third choices for containment and recovery share this access and staging area. Access to Campbell cove containment and recovery sites is from Bay Flat Road on the eastern shore of Bodega Head. A parking lot there could provide a small staging area.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Excellent access to all areas. Major natural and human resources.



County: Sonoma **ACP Division/Segment:** SN - E - S017**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Sonoma County **Decimal Degrees:** 38.306549 -123.018353
18643**Site Description:**

Large near-shore rock island between Bodega Harbor and the Sonoma-Marin County line. Site is associated with BLM Ca Coastal National Monument resources. Large near-shore rock island with nesting seabirds.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	
Birds	seabirds		Year-round	Mar-Jul
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Plants	pink sand verbena		Year-round	Jun-Oct

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Sonoma County Sheriffs	(707) 565-2231
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Dispatch, 24-hr	California State Parks (Dispatch)	(916) 358-1300
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Oil may kill a majority of the algae and invertebrates in the rocky intertidal as well as breeding birds.

Hazard and Restrictions:

Potentially large surf in shallow water around rock. Other submerged rocks.

Site Strategies:

Site Validation Level: 0

Strategy: 2-152.1 Objective: Prevent oil from contacting the shoreline around the rocks. Avoid disturbing seabirds on the rocks.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
- c) As water conditions permit, deploy deflection boom offshore to protect rocky shore; direct oil toward fine grain sand beaches for collection.

Use large off-shore skimming effort.

Table of Response Resources

Last Page Update

Logistics:

Directions: Access by boat from Bodega Harbor. Located between Bodega Harbor and the Sonoma-Marin County line.

Land Access: Boat only from Bodega or Tomales Bay

On-Water Limitations: Potential heavy surf and shallow waters. Boat ramps in Bodega Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: Bodega Harbor will be the staging area for vessels responding to this site.

Communications Problems: Cell reception varies on outer coast.



County: Marin **ACP Division/Segment:** SN - E - S017**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Marin County
18643**Decimal Degrees:** 38.296462 -123.001801**Site Description:**

Located within Greater Farallones National Marine Sanctuary on the Marin-Sonoma County line. Site is within the following State Marine Protected Area: Estero Americano State Marine Recreation Management Area from the mouth extending approx two miles upstream. Site is associated with BLM Ca Coastal National Monument resources. Site is a large estuary, open to the ocean seasonally. Very strong flood currents are present at the mouth of the Estero. Coarse-grained sand is found on the south spit and southern shoreline. Gravel is on the north bank. The inlet currently opens on the north side of the canyon.

Resources at Risk:**ESI and Habitat:** 3A Fine- to medium-grained sand beaches

1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	brown pelican	FP, SP	Year-round	
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	tidewater goby	FE, SSC	Year-round	
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	Pacific herring		Year-round	Nov-Apr
Mammals	North American river otter	SSC	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

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C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

An array of shorebirds and waterfowl frequent this site year-round. Western pond turtles and California red-legged frogs may be present in the freshwater marsh habitat, in the inland portion of this location.

Concerns and Advice to Responders:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Shallow water areas inside the Estero and heavy surf conditions are possible outside the mouth of the Estero.

Site Strategies:

Site Validation Level: II

Strategy: 2-155.1 Objective: Exclude oil from entering the estuary.

Strategy: In addition to on-water recovery efforts, the following site-specific protection measures should be taken:

Under conditions where the estuary is isolated from the ocean by a sand berm but potential exists for tidal washover into the estuary exists, construct a sediment dike. Sediment should be taken from the beach face south of the river mouth. There may be washover terraces requiring reinforcement at both the north and south sides of the estuary mouth. Each may be 100 meters (300 feet) wide. It is recommended that a shallow ditch be constructed on the backside of the dike (a runnel) near the top to catch any oil that washes over the top of the dike.

Heavy equipment can be safely driven to the beach from road on north shore of Estero or if seas are calm enough use a landing craft to land heavy equipment on beach.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert				3		
Staff	Staff to Deploy			5		

Strategy: 2-155.2 Objective: Exclude oil from entering the estuary. Prevent oil from entering seawater intake to aquaculture facility.

Strategy: a) Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard/floatation of 6" and a minimum draft/skirt of 6" may be needed. Consider wind direction, expected current velocity and oil recovery logistics when selecting which shoreline to deflect oil to.

Deploy 500 feet of boom from the north end of the vegetated high berm to a large rock on the north shore of the estuary at the bottom of the road to the water intake for the aquaculture facility, and another 600 feet from the back (east) side of the high berm to a large rock on the north shore of the estuary about 600 feet east of the road. Six skiffs capable of towing boom and setting anchors will be needed to deploy the boom. Two must be left to tend the boom. Use 50ft of Oil Snare, 100ft of sorbent boom to clean up oil that may accumulate. If skimmer is deemed necessary, contact IC prior for possible deployment.

b) Place 200 feet of sorbent boom around the seawater intake for the aquaculture facility. Keep the manager of the aquaculture facility informed of the location of the oil so he may store seawater in tanks at his facility and otherwise prepare to shut down his pumps.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			300	feet	
Anchor	Danforth	25 lb		10		
Staff	Staff to Deploy			5		

Strategy: 2-155.3 Objective: Minimize shoreline cleanup and restoration.

Strategy: Place 300 feet of fabric or other material along the north shoreline of the estuary to prevent oil penetration into the sediments and minimize the amount of shoreline cleanup required.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Plastic sheeting	visqueen			300	feet	
Anchor				24		
Staff	Staff to Deploy			5		

Strategy: 2-155.4 Objective: Oil Recovery by skimming

Strategy: If oil accumulates in skimmable quantities as a result of strategy .2, deploy skimmers in appropriate area. Contact IC prior to initiation of this strategy.

Table of Response Resources

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

Logistics:

Directions: The best access to this site is through an aquaculture facility on the north shore of the Estero. To get there from Hwy 1, take Estero Lane between Valley Ford and Bodega. The aquaculture facility can be reached via 3.2 miles of unpaved road.

Land Access: The road is 3.2 miles long, and is unpaved.

On-Water Limitations: Skiffs must be able to tow boom and set anchors in 2 ft. Hand launch skiffs across shore on north bank.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging area could be established at the aquaculture facility.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Sandy shore south of estuary behind spit is alternate containment & recovery site. Not preferred because access for support equipment is difficult at best. Preferred site has good shoreline access there for support of oil recovery equipment.



County: Marin **ACP Division/Segment:** MR - A - S003**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.269321 -122.977282**Site Description:**

Located within Greater Farallones National Marine Sanctuary near the Marin-Sonoma County line. The waterway from the rivermouth and approximately two miles upstream is the Estero de San Antonio State Marine Recreational Management Area. Site is associated with BLM Ca Coastal National Monument resources. Estuary is open to the ocean seasonally. Subject to strong flood currents near the mouth. South spit is wide and sparsely vegetated with a moderately steep coarse-grained beach. The inlet has been deflected to the north side of the canyon. Gravel beaches and cliffs are present along the north bank. Brackish water marshes are present along banks inside estuary.

Resources at Risk:*ESI and Habitat:* 4 Coarse-grained sand beaches

1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	California brown pelican	FP, SP	Year-round	
Birds	Northern harrier	FP, SSC	Year-round	Jun-Jul
Fish	tidewater goby	FE, SSC	Year-round	
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

An array of shorebirds, seabirds and waterfowl utilize this site year-round.

Concerns and Advice to Responders:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Shallow water in the estuary and heavy surf along the coastal beach.

Site Strategies:

Site Validation Level: II

Strategy: 2-158.1 Objective: Exclude oil from entering the estuary.

Strategy: In addition to on-water recovery efforts, the following site-specific protection measures should be taken:

Under conditions where the estuary is isolated from the ocean by a small sand berm but a potential for overwash into the estuary exists, construct a sediment dike. Sediment should be taken from the beach face south of the river mouth. The washover terrace may be 100 meters (300 feet) wide. It is recommended that a ditch be constructed on the backside of the dike (a runnel) near the top to catch any oil that washes over the top of the dike.

Options for getting heavy equipment to the estuary mouth: a) drive to beach from the road on south shore of estero, or b) transport via shallow draft vessel from a ranch up the estuary, or c) using landing craft when seas are calm, land heavy equipment on beach.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert				3		
Staff	Staff to Deploy			5		

Strategy: 2-158.2 Objective: Exclude oil from entering the estuary.

Strategy: Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard/floatation of 6" and a minimum draft/skirt of 6" may be needed. Consider wind direction, expected current velocity and oil recovery logistics when selecting which shoreline to deflect oil to. There is a mixed sand and gravel beach on the north shore and a sand beach on the south shore of the estuary.

a) Deploy 1,500 feet of boom from the north end of the high berm on the south side of the estuary mouth to a gravel beach on the north shore of the estuary stranding oil along the north bank. Alternatively, deploy boom from the bluff on the north side of the estuary mouth to the sand beach on the back (east) side of the spit, stranding oil along the south bank.

Two skiffs capable of towing boom & setting anchors will be needed to deploy and tend the boom. It is recommended that a small shallow draft barge be launched at the Pozzi or Fanning ranches up the estero. Such a barge could be towed out to the ranch when the water reaches maximum depth in the fall. The other option is to repair the dirt road leading to the estero mouth from the south. Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard of 6 inches and a minimum draft of 6 inches may be needed. Use 50ft of Oil Snare, 100ft of sorbent boom to recover any oil that may accumulate. If oil accumulates in skimmable quantities, contact IC prior to skimmer deployment.

b) Place 300 feet of shoreline protection fabric along the shoreline to which the oil is deflected to minimize the amount of shoreline clean-up required.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100		
Anchor	Danforth	25 lb		8		
Staff	Staff to Deploy			5		

Strategy: 2-158.3 Objective: Oil Recovery by skimming

Strategy: If oil accumulates in skimmable quantities as a result of strategy .2, use of 2 portable skimmers and portable oil storage facilities will be needed to recover the oil as it accumulates. Contact IC prior to deploying skimmers.

Table of Response Resources

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

Logistics:

Directions: From Hwy 1 at Valley Ford, take the Valley Ford Franklin School Road southbound. Near Whitacker Bluff Road it will cross the upper end of the Estero. Small boats (skiffs) can be hand launched here. The site is bounded by private property and it is unknown whether there are farm roads which lead to the Estero mouth.

Land Access: Dirt road leads to Estero mouth from the south-needs repair.

On-Water Limitations: Sandbar sometimes isolates estuary from sea. The Pozzi and Fanning Ranches are located upstream the Estero.

Facilities, Staging Areas, Command Posts, Available Equipment: The mixed sand and gravel north shoreline just inside the estuary mouth has good shoreline access there for the support of recovery equipment and is the preferred containment site. An alternate site is the sandy shore of the estuary behind the spit but is not preferred because access for support equipment is difficult at best.

2-158-A Site Strategy - Estero de San Antonio

2-158-A

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Strategy has not been deployed or tested.



County: Marin **ACP Division/Segment:** MR - A - S004**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.264123 -122.975646**Site Description:**

Located within the Greater Farallones National Marine Sanctuary a few miles north of the entrance to Tomales Bay. The site includes a group of rocky islands to the north and south of Estero de San Antonio. Offshore rock islands of varying size. Site is associated with BLM Ca Coastal National Monument resources.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	seabirds		Year-round	Mar-Sep
Birds	pelagic cormorant	FP	Year-round	Mar-Aug
Birds	Brandt's cormorant	FP	Year-round	Mar-Aug
Birds	pigeon guillemot	FP	Year-round	May-Aug
Birds	black oystercatcher	FP	Year-round	Apr-Oct
Birds	western gull	FP	Year-round	Feb-Sep
Birds	California brown pelican	FP, SP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Oil on and around these rocks and islands will expose seabirds to oil, excessive surf conditions may splash oil onto roost or nest areas. Oil will also be detrimental to the intertidal and shallow subtidal organisms that occur in the area.

Hazard and Restrictions:

Heavy surf, submerged rocks and wash rock.

Site Strategies:

Site Validation Level: 0

Strategy: 2-161.1 Objective: Prevent oil from stranding and contaminating bird use areas on the rocky islands.

Strategy: Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersants, in-situ burning).

Table of Response Resources

Last Page Update

Logistics:

Directions: Accessible only by water. This site is a collection of near-shore wash rocks and islands north and south of Estero San Antonio in Marin County.

Land Access: boat only

On-Water Limitations: submerged rocks and heavy surf. Nearest launch in Bodega Bay or Tomales Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: Closest facilities in Bodega or Tomales Bays.

Communications Problems:



County: Marin**ACP Division/Segment:** MR - B - S001 MR - E - S010**NOAA Chart:** Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.161455 -122.906105**Site Description:**

This site includes all of Tomales Bay from the entrance at the north end to the head of the bay at Lagunitas Creek at the southerly head. Several environmentally sensitive sites identified in this ACP (164-184) are also located within this site. Site lies within the Greater Farallones National Marine Sanctuary. This site includes all of Tomales Bay from the entrance at the north end to the head of the bay at Lagunitas Creek at the southerly head. Tomales bay is a large elongate bay, approximately 13 miles long, with a narrow mouth (1,200 ft wide). There are strong tidal currents through the mouth. Most of the tidal volume scours a deep channel along the west shore all the way south to Pelican Point. Lesser channels braid away from the mouth to the east forming a complex of bars and channels which shift throughout the year and require local expertise to negotiate. Elsewhere waters are shallow and salt marshes, sand and mud flats, extensive eelgrass beds, clam beds, and oyster aqua culture facilities are typical throughout the bay. Significant numbers of migratory shorebirds, seabirds, and waterfowl (dabbling, diving, and sea ducks) use the area particularly during fall and winter months. Pacific herring spawn in eelgrass beds. Anadromous fishes are present in the bay and its tributaries from November through May. Ownership of the bay margin is predominantly public agencies and conservation groups: Point Reyes National Seashore, Golden Gate National Recreation Area, Tomales Bay State Park, Audubon Society. Many private landowners bordering the bay are concerned about the conservation and well being of the bay. All response actions should be temporized by the fact that the entire margin of the bay, especially drainage mouths, have archeologic sites from heavy native American use.

Resources at Risk:*ESI and Habitat:* 10A Salt - and brackish-water marshes

9B Vegetated low banks

9A Sheltered tidal flats

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC		
Birds	Western snowy plover	FT, SSC		
Birds	California Ridgeway's rail	FE, SE		
Birds	tri-colored blackbirds	FP, SSC		
Birds	California black rail	FP, ST		
Fish	longfin smelt	ST		
Fish	salmonids			
Fishery	clamming - Sport			
Fishery	Aquaculture - Commercial			

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
E	/Owner	Lawson's Landing Store & Campground	(707) 878-2443
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
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T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

This area has a high diversity of species including two federally listed butterflies, Point Reyes blennosperma (FE/SR), Golden larkspur (SR), eelgrass beds, pacific herring, shorebirds, waterfowl, porpoises, etc. More details can be found from 2-166 to 2-191.

Concerns and Advice to Responders:

Oil may contaminant a wide variety of resources in the bay including saltmarshes, eelgrass beds, clam beds, harbor seals, birds and oyster aquaculture facilities. Shallow waters and large tidal mudflats will create access difficulties. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Extremely strong tidal currents near the mouth of the bay. Shallow tidal bars and flats exist throughout the bay especially in the northeastern portion at the mouth of the bay. Submerged oyster aquaculture facility structures common on the eastern side of the central bay.

Site Strategies:

Site Validation Level: II

Strategy: 2-164.1 Objective: Primary exclusion for heavy oil impact threats: Exclude/divert/contain oil near mouth of bay to collection near Pelican Pt and minimize free spreading of oil on high velocity currents.

Strategy: The concept is to keep oil from spreading and allowing currents to move it to an area near Pelican Pt where currents cease to be a serious factor and collection is relatively easy. On the ebb current this strategy will also direct oil to shoreline collection at Tom's Pt area. This technique requires the direction of local fishermen (see contacts below), because dealing with channels and shallow bottoms along and south of Tom's Pt require detailed local knowledge and very shallow draft vessels, as does the approach to Tom's Pt shoreline.

Deploy 15,000 ft of Hboom from about a point about 1000 ft north of Toms Pt at a diagonal into the channel and then centered in the current all the way past Hog Island to collection at Pelican Pt. A second deflection from shore should precede the main deflection. The oil will stay within the current and move to collection areas, and not spread across the bay. Currents throughout upper bay are very strong and booms must be set with and not against current using large anchors (22# and 40# danforths with chain) else currents will entrain oil under booms. Set anchors every 500 feet and more often to angle boom into the current at Tom's Pt shoreline and Pelican Pt shoreline (and other places where channel turns). Cascade boom where necessary. If boom is set with or very diagonal to the current, then oil will not entrain under the boom. Target time for completion for six boomboats working at both ends of the strategy is about 3.5 hrs.

Collection should be set up just before or just after Pelican Pt by bringing boom end to shoreline. Even though Pelican Pt is a sensitive site (2-174), it is one of the few locations where oil may be managed and controlled and where land-based or water-based collection can be successful. The deepest water is just after Pelican Pt. Use Self Propelled Skimmers (SPS) with storage barges to collect, decant, and transport oil to storage at the east shoreline. A secondary collection area may be established at the mouth of White Gulch (see substrategy 2-177.3).

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		15000	feet	
Anchor	Danforth	25 lb		40		
Vessel	Skiff or Punt			2		
skimmer	self propelled			1		
Staff	Staff to Deploy			12		

Strategy: 2-164.2 Objective: Collect/Divert/Exclude - 2ndary backup strategy for threats of heavy oiling to exclude oil from spreading to upper Bay and divert to east shoreline collection.

Strategy: Deploy boom at a diagonal from just south of Pelican Pt to the shoreline about midway between Cypress Grove and Nick's Cove (note that there is a dairy on the hill above and a culvert under Hwy 1 at this location.) Currents are minimal along the entire length of this boom deployment; 7000 ft of 9X9+ if winds are threatening). Place anchors at 800 ft intervals. Construct a collection Boom pocket at the shoreline and service Shore Side Skimming (SSS) at Hwy 1.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		7000	feet	
Anchor	Danforth	25 lb		15		
Vessel	Skiff or Punt			1		
skimmer	shoreside			1		
Staff	Staff to Deploy			7		

Strategy: 2-164.3 Objective: Deflect to alternative collection locale at White Gulch.

Strategy: As a back-up collection area, divert oil from the containment boom in substrategy .1 past marker ## near Hog Isle to White Gulch. Deploy 2000' 9X9+ Hboom across the channel into White Gulch, cascading as necessary, with anchors at least every 400' intervals. The back portion of White Gulch cove has little current and oil may be skimmed with Self Propelled Skimmers (SPS). If oil is to be collected here, the protection strategy fo White Gulch (2-174.1) will require alteration by adding more boom and anchors (300' 6X6+) to create a collection pocket.

This location has possible physical conditions which may limit it's usefulness. 1) it may be difficult to divert surface currents across the channel past the shallow mid-channel eelgrass bed to the Cove, because of the current deflected off the upstream point toward the east; 2) there are stiff winds which typically blow down White Gulch which might prevent oil from staying in the collection pocket. These uncertainties cause this alternative to be viewed as an alternate until it can be demonstrated as effective.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		3500	feet	
Boom	Swamp	6x6 inch		300	feet	
Anchor	Danforth	25 lb		12		
Vessel	Skiff or Punt			1		
skimmer	shoreside			1		
Staff	Staff to Deploy			7		

Strategy: 2-164.4 Objective: 3rd alternate: Divert oil from Sand Point area across to Tomales Headland

Strategy: Deploy 6000' diversion boom from a locale near Sand Point (and in conjunction with Sand Pt Strategy 2-166.1) across the channel at a very gradual diagonal (to keep the flow against the boom to a minimum to avoid entrainment) to quiet waters near shore. Cascade boom as necessary and adjust cascades to avoid entrainment losses. Use mid-boom anchors to minimize catenary sags in boom. Use heavy anchoring with chain and extra scope on lines. If oil collects effectively, call for Self Propelled Skimmer and seek opportunities to ground oil on pocket beaches along the shoreline.

This strategy is the third alternate to control oil entering Tomales Bay for these reasons: 1) currents here are extremely strong (can exceed 4 knots) and requires exceptional booming skills; 2) there are no clear collection options at the shoreline; 3) very high tides may carry oil into riparian vegetation along shore.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		6000	feet	
Anchor	Danforth	25 lb		13		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			7		

Strategy: 2-164.5 Objective: Outside bay alternative: ART & Open Water Skimming.

Strategy: Eliminating oil before it enters the Bay is the optimal strategy for dealing with oil spill threats.

Only the application of Advanced Technologies (dispersants & in situ burning) has a high effectiveness in large slicks. Conventional skimming can be effective if oil encounter rate is high.

Under rare calm conditions oil might be diverted to shore outside the bay, but these deployments are not likely to be effective and will fail when conditions become aggressive.

Grounding of oil at Sand Pt outside the bay entrance is similarly problematic: Deflect oil to Dillon Beach by cascading small sections (300 to 500 feet) of ocean boom across the flood tidal channel that runs parallel to the beach. Use 4,000 feet of boom having a minimum freeboard of 20 inches and a minimum draft of 18 inches. Two boom boats capable of operating in 3 ft seas will be needed to pull the boom off the shore into formation.

Table of Response Resources

Last Page Update

Logistics:

Directions: Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or the Petaluma-Bodega Rd to Tomales-Petaluma Road to Hwy 1.

Land Access: Varies from foot only to large truck access.

On-Water Limitations: <40ft vessels preferred, shallow draft only over flats. Boats up to 35 feet LOA can be launched (hoist) at Marshall Boat Works (Owner: John Vilisitch (415-663-122x). There is a concrete boat launch ramp at Nick's Cove near Miller Park. There are also beach launching for small boats (<25ft.) at Lawson's Landing, Sacramento Landing, and Marconi. Inverness also has a launch

Facilities, Staging Areas, Command Posts, Available Equipment: There is good access and large staging area at Lawson's Landing. There is also space for a staging area at Marshall Boat Works and Nick's Cove boat ramp.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: Access to SE end of Brazil Beach is through private property owned by Mr. Jim Byers. Get phone # from County Sheriff or Audubon Canyon Ranch.



County: Marin**ACP Division/Segment:** MR - B - S001 MR - B - S002**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.227318 -122.956894**Site Description:**

Site includes shoreline and tidal areas east of the mouth of Tomales Bay from Sand Point to Vincent Landing, which is east of Tom's Point. Also included in the site are the extensive mudflat islands between Sand Point and Tom's Point: Clam Island and Seal Island. Site lies within the Greater Farallones National Marine Sanctuary. Though most of the current of Tomales Bay flows through the main channel, a secondary channel splits off perpendicularly (to the east) at Sand Point resulting in strong tidal currents, on both ebb and flood. This channel divides and subsequent channels and bars change rapidly and often. There is a lot of sediment and debris deposition here, both on the bars and the shorelines. Only a few locals know how to navigate the waters without fear of grounding. Mudflats and islands are rich in invertebrates and sustain heavy use by both man and dense migratory bird populations. The southern tip of the mudflat islands are also heavily used by pinnipeds as haulouts. The shallow intertidal also has extensive eelgrass beds. The north (Lawson's Landing - Sand Pt) and eastern margins are extensive sand beaches, Brazil Beach on the east. Just to the east of Tom's Pt is a large freshwater - saltwater marsh on the Audubon Canyon Ranch lands. The margins are in private ownerships: Lawson's Landing is heavily used by vacationers and day users; private individuals and Audubon own the eastern margin.

Resources at Risk:*ESI and Habitat:* 5 Mixed sand and gravel beaches

9B Vegetated low banks

3A Fine- to medium-grained sand beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	tri-colored blackbirds	FP, SSC	Year-round	Mar-Apr
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	Pacific herring		Year-round	Nov-Apr
Fishery	clamming - Sport		Year-round	
Mammals	porpoises	FP	Year-round	Mar-Jun
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
E	/Owner	Lawson's Landing Store & Campground	(707) 878-2443
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

This area is highly diverse with many migratory shorebirds, waterfowl, herons, a large number of harbor seals etc. Several sensitive plant species occur here, including Point Reyes salty bird's beak.

Concerns and Advice to Responders:

Oil at this site may be detrimental to the wetlands, clams beds, eelgrass beds, marine mammals and waterfowl that use this site. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Extremely strong tidal currents near the mouth of the bay. Shallow tidal bars and flats exist throughout the bay. Submerged oyster aquaculture facility structures common on the eastern side of the central bay.

Site Strategies:

Site Validation Level: II

Strategy: 2-166.1 Objective: exclusion/deflection/collection: when severe oil impacts are threatening, exclude oil entry by deflection to shoreside beach collection at Lawson's Landing.

Strategy: Cascade three 500 foot sections of Harbor boom in the channel south of Lawson's Landing to deflect oil north away from Clam Island (just off shore) and onto the sand beach at Lawson's Landing east of Sand Point. The boom must be deployed at sharp angles to the swift along-shore current to avoid entrainment of oil under booms. One boom boat and a skiff are needed to deploy the boom. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may have accumulated, and a collection site may need to be excavated on the sand beaches at Lawson's Landing. (This strategy is to be joined to the primary exclusion/collection strategy for Tomales Bay 164.2 .) Consult IC if oil begins to occur in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1500	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100		
Anchor	Danforth	25 lb		11		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-166.2 Objective: Diversion to shore / Collection at eastern Brazil Beach when severe oil impacts are threatening.

Strategy: Oil may be deflected to Brazil Beach by cascading several sections of boom from the north end of Seal Island to the southeast end of Brazil Beach. Up to 2,000 feet of 9X9+ curtain boom and heavy anchors are needed to accomplish this task. One shallow draft boom boat and a skiff will be needed to deploy and anchor the boom. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may have accumulated and Consult IC if oil begins to occur in skimmable quantities. This strategy may be reversed if oil is to be collected on the ebb. There is a lot of ebb current causing this area to be a natural collection site.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		2000	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	25 lb		7		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-166.3 Objective: Collection and Skimming for 2-166.1 and 2-166.2 boom deployments if significant quantities of oil can be accumulated.

Strategy: Use skimmer to collect oil if it accumulates in skimmable quantities as a result of strategies 2-166.1 and 2-166.2. A shore side skimmer and a portable storage device can located at Lawson's Landing (2-166.1) or at east side of Brazil Beach. Good access at both locations. Permission of owners (particularly at 2-166.2) is important (See DFG for private owner contacts for entry and using shoreside roads and ramp).

Table of Response Resources

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

Logistics:

Directions: Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or take the Tomales Petaluma Road to the mouth of the bay.

Land Access: Access through private land. Obtain owners permission before access.

On-Water Limitations: Very shallow water, shallow draft boats only. Vessel launch at Lawson's Landing and Nick's Cove.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging and facilities at Lawson's Landing. Staging at Nick's Cove.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: No Strategy was listed.



County: Marin**ACP Division/Segment:** MR - B - S005**NOAA Chart:** Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.209015 -122.929674**Site Description:**

Site includes the Walker Creek delta wetlands and tidal flats between Preston Point on the north and the unnamed point on the south and the creek upstream to the limit of tidal influence. Site lies within the Greater Farallones National Marine Sanctuary. Walker creek has a seasonal fresh flow which can be considerable during rainy seasons, but during much of the year, the tidal flow is dominant or exclusive. There is an extensive salt-marsh at the Walker Creek mouth and saltmarsh along the shores of the estuary. There are several channels leading into the estuary. There is a small pocket marsh on the south shore which is fed by a separate drainage. Shallow mudflats and oyster leases front the salt-marsh. These waters are barely navigable but only by the knowledgeable oystermen and other locals. Multiple licensed aquaculture leases are located nearshore.

Resources at Risk:*ESI and Habitat:* 9A Sheltered tidal flats

9B Vegetated low banks

5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	California Ridgeway's rail	FE, SE	Year-round	Feb-Aug
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Mammals	harbor seal	FP	Year-round	Mar-Jun
Mammals	North American river otter	SSC	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

A wide variety of species use this area including shorebirds, waterfowl, egrets, sensitive plants, pacific herring, etc. Oyster mariculture leases occur in this area as well.

Concerns and Advice to Responders:

Great potential for injury to wetland plants, eelgrass beds, waterfowl and shorebirds. Oil may penetrate into side channels of the marsh and upstream as far as tidal waters may extend. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Shallow water area. Aquaculture facilities offshore of the delta.

Site Strategies:

Site Validation Level: II

Strategy: 2-168.1 Objective: Minimal Exclusion effort: Boom each channel mouth of the delta. This can be executed with minimal staff and small boats. It leaves the marshfront exposed.

Strategy: a) Using small craft or oyster boats, boom the two entrances to Walker Creek delta and estuary. The southern opening should be boomed with about 350' of 6X6"+ swakp boom in a chevron configuration from the shoreline just north of Hamlet (yet before the pocket marsh along Hwy 1) and the delta bay front. The northerly opening requires 300' of 6X6"+ boom in a chevron configuration.

B) Boom small pocket marsh Northeast of Tom's Point with 300 ft swamp boom (6X6"+)

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		950	feet	
Anchor	Danforth		25 lb	4		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-168.2 Objective: Protective booming of Walker Creek Delta marsh front as augment to channel exclusions (2-168.1)

Strategy: Deploy 1500 ft 6X6 swamp boom across delta front and link to channel exclusions of (2-168.1). Extreme shallows will require operations with very shallow draft vessels and at high tide. Employ local oystermen if possible to make execution or for advice.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1500	feet	
Anchor	Danforth		25 lb	6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-168.3 Objective: 2nd layer of exclusion: boom entire marsh front including the various channels. This strategy excludes oil from all channels into the delta and the exposed marshfront as well.

Strategy: Using shallow draft vessels such as oyster boats, deploy 2500' of 6X6 swam boom from Preston Point to Hamlet. Anchor the boom at 800' intervals and form chevrons in the channels to avoid oil entrainment under the boom. Back channels with sorbent.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2500	feet	
Boom	Sorbent			600	feet	
Anchor	Danforth		25 lb	7		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			5		

Strategy: 2-168.4 Objective: 3rd exclusion: When heavy oil threat is pending, deploy large boom set from Tom's Pt to north of Nick's Cove to exclude oil and redirect oil to Tom's Pt on ebb for collection.

Strategy: Use when heavy oil impacts to Tomales Bay are pending and the primary exclusion/collection strategy for the Bay may not be effective and oil may spread into the east side of the bay.

Deploy 9,000 feet of 9X9 or larger boom from south of Hamlet to Tom's Point. At the channel immediately south of Tom's Point, the boom must be angled across the current to keep oil from entraining under the boom on the flood tide. These waters are extremely shallow. Anchor at about 600' intervals. The target time for deployment is about 4 hours using three boomboat equivalents.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		9000	feet	
Anchor	Danforth	25 lb		20		
Vessel	Skiff or Punt			2		
Staff	Staff to Deploy			8		

Strategy: 2-168.5 Objective: Upstream confinement for product spillage from Hwy 1 or upstream. Deploy boom across the lagoon near Hwy to contain and confine spill to upper estuary and prevent product from flowing down into delta.

Strategy: Deploy boom across the lagoon to contain and confine spill to upper estuary and bring it to a collection point near Hwy 1 (taking into consideration inhalation and flammability safety). Select a site where containment can be assured and deploy 200 ft of small boom across at a diagonal. Select a site based on prevailing conditions: 1) far enough away from product that safety compromised; 2) access for deployment; 3) only secondarily consider collection - because collection may not be advisable if the product is highly flammable. Repeat the booming to provide several layers of containment. Keep some slack near shore to assure containment even when boom drops during low tide. (strategy not shown on Site Strategy Diagram).

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		400	feet	
Anchor	Danforth	25 lb		3		
Vessel	Skiff or Punt			2		
Staff	Staff to Deploy			3		

Logistics:

Directions: Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or take the Tomales Petaluma Road to the mouth of the bay. Hwy 1 parallels the site near the intersection with Tomales Petaluma Road.

Land Access: Shallow draft vessel only, some land access upstream.

On-Water Limitations: Shallow draft only. Launch and Lawson's Landing or Nicks Cove.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging upstream at parking area off Hwy 1, Lawson's Landing or Nicks Cove. Facilities at Lawson's Landing and Marshall.

Communications Problems: Cell reception varies on outer coast.

Additional Operational Comments: No strategy on file.



County: Marin**ACP Division/Segment:** MR - E - S007**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.196687 -122.934892**Site Description:**

Site includes the islands and a sand bar in the middle of Tomales Bay. Site lies within the Gulf of the Farallones National Marine Sanctuary. These two islands are owned & managed by the National Park Service (Point Reyes National Seashore). Site is associated with BLM Ca Coastal National Monument resources. The island is actually two vegetated rocky islands with mixed sand and gravel beaches surrounding them. The sandbar, which is exposed at low tides at the northeast corner of the island, is a favorite resting area for brown pelicans and local cormorants, and occasional pinnipeds. The northern island is much larger and has a grove of trees that provide roosting and nesting for cormorants. Waters at the northwest corner are deep enough to approach the island, but recreational use and trespass is prohibited.

Resources at Risk:*ESI and Habitat:* 5 Mixed sand and gravel beaches

4 Coarse-grained sand beaches

2B Exposed scarps and steep slopes in clay

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	California brown pelican	FP, SP	Year-round	Dec-Feb
Birds	shorebirds		Year-round	
Birds	seabirds		Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Mammals	harbor seal	FP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Greatest potential for impact is oiling or disturbing roosting brown pelicans and other seabirds. If the spit becomes oiled, birds will get oiled when they land there. Response activity can disturb birds nesting and roosting in the trees or on the island. Stay off the upland portion of the island unless accompanied by a Pt. Reyes National Seashore representative (NPS).

Hazard and Restrictions:

Shallow shoals possible when approaching island.

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

Strategy: 2-171.1 Objective: Hazing Pelicans and seabirds away from oil on beach

Strategy: When oil on spit is a hazard for loafing birds, contact US Fish and Wildlife Service staff and Pt. Reyes National Seashore to advise of passive hazing measures. Mylar tape and balloons are recommended measures to keep birds from settling on oiled spit.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Hazing (OWCN)	propane cannon			1		
Hazing (OWCN)	mylar tape			2		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			2		

Strategy: 2-171.2 Objective: Protection booming to minimize shoreline cleanup.

Strategy: Surround the island with 2500 ft of 9X9+ protective boom. Anchor at 500' intervals and more frequently on the windward side.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	9x9 inch		2500	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			4		

Logistics:

Directions: Hwy 1 to Tomales Bay. Accessible by water only. Launch at Nicks Cove just east of Hog Island.

Land Access: None - water access only.

On-Water Limitations: Sandbar is exposed at all tides. Nearest boat ramp is at Nicks Cove, Marshal and Sacramento Landing.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging at Nicks Cove, Marshall, or Lawson's Landing. All have other support facilities.

Communications Problems: Cell reception varies on outer coast.



County: Marin **ACP Division/Segment:** MR - E - S008**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.194641 -122.949349**Site Description:**

White Gulch is a small, sheltered, bay on west shore of Tomales Bay within Philip Burton Wilderness of Point Reyes National Seashore. Site lies within the Greater Farallones National Marine Sanctuary. A small bay lined with freshwater and salt-marsh vegetation. Eelgrass beds are present in the shallow water areas inside and offshore of the bay.

Resources at Risk:

ESI and Habitat: 9A Sheltered tidal flats
9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	tri-colored blackbirds	FP, SSC	Year-round	Mar-Apr
Birds	waterfowl		Year-round	
Birds	seabirds		Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	Pacific herring		Year-round	Nov-Apr
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Plants	salt marsh bird's beak	FE, SE	Year-round	May-Oct
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

There is a wide variety of birds present in high numbers in this area as well as several sensitive plants.

Concerns and Advice to Responders:

Considerable impact is possible to the extensive wetland around White Gulch and the eelgrass beds just offshore in the tidal areas. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Shallow water inside bay.

Site Strategies:

Site Validation Level: II

Strategy: 2-174.1 Objective: Exclusion booming to prevent oil contamination to wetlands within White Gulch.

Strategy: Deploy 2000 feet of 6X6 swamp boom within White Gulch in two layers. Tidal currents are aggressive at mouth of Gulch. Set booms inside of Gulch, out of current. Boom should be set approximately halfway into Gulch. Anchor each boom end as close as possible to cliff face. Leave a trailing boom length on both sides for a tidal seal.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2000	feet	
Anchor	Danforth		25 lb	6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Hwy 1 to Tomales Bay. This site is accessible only by water from launch ramps at Miller Park, Inverness, or Lawson's Landing.

Land Access: Unknown, but doubtful.

On-Water Limitations: Shallow water inside bay. Nearest launch ramps at Nicks Cove, Lawson's Landing and Inverness.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging at Nicks Cove or Lawson's Landing which also includes some facilities.

Communications Problems: Cell reception varies on outer coast.



County: Marin**ACP Division/Segment:** MR - E - S006**NOAA Chart:** Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.187209 -122.932166**Site Description:**

Pelican Point is a sand spit and shallow water sandbar which extends into the bay from the steep Tomales headlands just south of Hog Island. Site lies within the Greater Farallones National Marine Sanctuary. It is a sandy point where the strong influent currents of Tomales Bay abruptly fade resulting in deposit of a sand point and bar which extends well into the bay. The south side of the point is an elongated fine grain sand beach. Waters are deep both before and after the point and collection eddies form behind (south) of the point. The point is a favored resting area for sea birds including brown pelicans and as many as 50 or more pelicans may loaf there. Pelican Point is within the Philip Burton Wilderness of Point Reyes National Seashore.

Resources at Risk:*ESI and Habitat:* 3A Fine- to medium-grained sand beaches

5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	seabirds		Year-round	
Birds	shorebirds		Year-round	
Birds	brown pelican	FP, SP	Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Myrtle's silverspot butterfly	FE	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Owner	Hog Island Oyster Company	(415) 602-9281
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Oil at this site may contaminate pelicans and shorebirds using this site. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

There are extreme shallows at the tip of the point all the way to the channel marker.

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

Strategy: 2-177.1 Objective: Haze birds away from point

Strategy: Use passive hazing devices to keep birds off oiled shoreline: mylar tape, mylar balloons. (If this site is used for collection as indicated in 2-164.1, then hazing may not be necessary; refer to strategy for oil collection activity at this location.)

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Hazing (OWCN)	propane cannon			1		
Hazing (OWCN)	mylar tape			2		
Staff	Staff to Deploy			2		

Logistics:

Directions: Take Hwy 1 to Tomales Bay. This site is accessible only by water. From the east shore there is launching at Nicks Cove, Marshall, Miller Park, or Lawson's Landing. From the west shore boat access is limited at Inverness and Sacramento Landing.

Land Access: None; boat access only.

On-Water Limitations: Shallow water around point. Nearest launch ramps at Nicks Cove, Lawson's Landing and Inverness. There is a boat lift at Marshall.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging at Nicks Cove or Lawson's Landing which also includes some facilities.

Communications Problems: Cell reception varies on outer coast.



County: Marin**ACP Division/Segment:** MR - B - S007**NOAA Chart:** Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.166374 -122.900492**Site Description:**

The Cypress Grove Preserve is located on a 135 acre nature preserve owned by Audubon Canyon Ranch at Cypress Grove Point on the east shore of Tomales Bay. The northern saltwater marsh begins approximately 1/2 mile north of Cypress Grove Point and extends south along the east shore to about 2500' north of the Point. A freshwater/brackish salt-marsh lies behind a railroad levee adjacent to the saltmarsh. Site lies within the Gulf of the Farallones National Marine Sanctuary. This sensitive site encompasses both a saltwater and freshwater/brackish marsh. There are several aquaculture licensed leases nearshore. The saltwater marsh along the east shore of Tomales Bay is relatively narrow (<25 yards wide) and not extensive (<200 yds long). A large freshwater/brackish salt-marsh lies behind a levee adjacent to the salt-marsh. A breach in the levee which functions as a narrow tidal channel is covered by a foot bridge. A white Audubon research building is located just south of the foot bridge. A wooden bulkhead structure lies south of the salt-marsh and adjacent to the white research building.

Resources at Risk:*ESI and Habitat:* 10A Salt - and brackish-water marshes

10B Freshwater marshes

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	tri-colored blackbirds	FP, SSC	Year-round	Mar-Apr
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	shorebirds		Year-round	
Birds	waterfowl		Year-round	
Fish	Pacific herring		Year-round	Nov-Apr
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Western bumble bee	SP	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

This area contains aquaculture leases and is a dungeness crab nursery. Several sensitive plants occur in the vicinity. Salt marsh common yellow throat (SSC) and Point Reyes salty bird's beak also occurs in the area.

Concerns and Advice to Responders:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

Hazard and Restrictions:

Shallow tidal flats when approaching from the water.

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

Strategy: 2-179.1 Objective: Exclude oil from entering tidal channel to freshwater marsh.

Strategy: Deploy 200' of 6X6" swamp boom in chevron configuration to protect tidal channel to freshwater/brackish marsh.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		200	feet	
Anchor	Danforth		25 lb	3		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-179.2 Objective: Protect bayfront salt-marsh from oiling.

Strategy: Deploy 600' of 6X6" swamp boom along shoreline in front of salt-marsh area.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		600	feet	
Anchor	Danforth		25 lb	4		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-179.3 Objective: Protection booming of wooden bulkhead structure adjacent to white residential building from oiling. Divert oil from riprap on shore near footbridge.

Strategy: Deploy 100' of 6X6" swamp boom in shallow chevron configuration around wooden bulkhead structure. Deploy 200' of 6X6" swamp boom in shallow chevron configuration around riprap area.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		300	feet	
Anchor	Danforth		25 lb	4		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Hwy 1 to Tomales Bay. Site is on the east shore and access through a marked gate approximately 0.75 miles north of Marshall.

Land Access: All vehicles

On-Water Limitations: Shallow water nearshore. Boat ramps at Nicks Cove and Lawson's Landing.

Facilities, Staging Areas, Command Posts, Available Equipment: Small amount of staging can be done on-site. A larger staging area would be at Nicks Cove.

Communications Problems:



CDFG - OSPR & USCG Site: 2-179 Name: Cypress Grove Preserve

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 12/29/2021

County: Marin**ACP Division/Segment:** MR - E - S004**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.152365 -122.909839**Site Description:**

This Site extends from Lairds Landing to Shell Beach. Site lies within the Greater Farallones National Marine Sanctuary. Although this entire shoreline is sheltered, there is a wide variety of habitats and ecologic sensitivities. Upland varies between steep and mild gradient hills, and in parallel, shoreline varies between rocky exposure at drainage divides to recessed shorelines with pocket beaches and salt-marsh pockets and margins. Three significant tidal salt-marshes in pocket coves are the unnamed drainage just north of Sacramento Landing, Indian Beach, and Shallow Beach. As is the case throughout the bay, every drainage has cultural sites associated with it. Fronting most of the shoreline is mudflats and eelgrass beds. The shoreline from Lairds Landing to Duck Cove is Pt. Reyes National Seashore and the remainder is within Tomales Bay State Park. Access to this site is through the cooperation of these respective agencies. There is limited landside access through parks lands.

Resources at Risk:**ESI and Habitat:** 10A Salt - and brackish-water marshes

9B Vegetated low banks

3A Fine- to medium-grained sand beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	waterfowl		Year-round	
Birds	shorebirds		Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	Pacific herring		Year-round	Nov-Apr
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Western bumble bee	SP	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Dispatch, 24-hr	California State Parks, Bay Area District	(916) 358-1300
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

A wide variety of birds inhabit the area as well as two notable sensitive plants: Point Reyes salty bird's beak and San Francisco owl's clover

Concerns and Advice to Responders:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or penetrating oil into the sediments which can cause long term oil injury to the environment.

Hazard and Restrictions:

Shallow water in the nearshore area.

Site Strategies:

Site Validation Level: II

Strategy: 2-181.1 Objective: Exclude/protect marshes by booming across cove/marsh front

Strategy: Deploy boom across frontage of marshes at pocket coves. Though some land access is possible, boom may best be delivered by a boat capable of beaching on or nearshore so that boom can be anchored at shore. Anchor boom near shore and leave trailing lengths of booms to ensure that oil will not short circuit around boom during changes in tide elevation. 1000' of 6X6 swamp boom is needed: 750' at the unnamed drainage just north of Sacramento Landing; 100' at Indian Beach; and 150' at Shallow Beach.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1000	feet	
Anchor	Danforth	25 lb		5		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

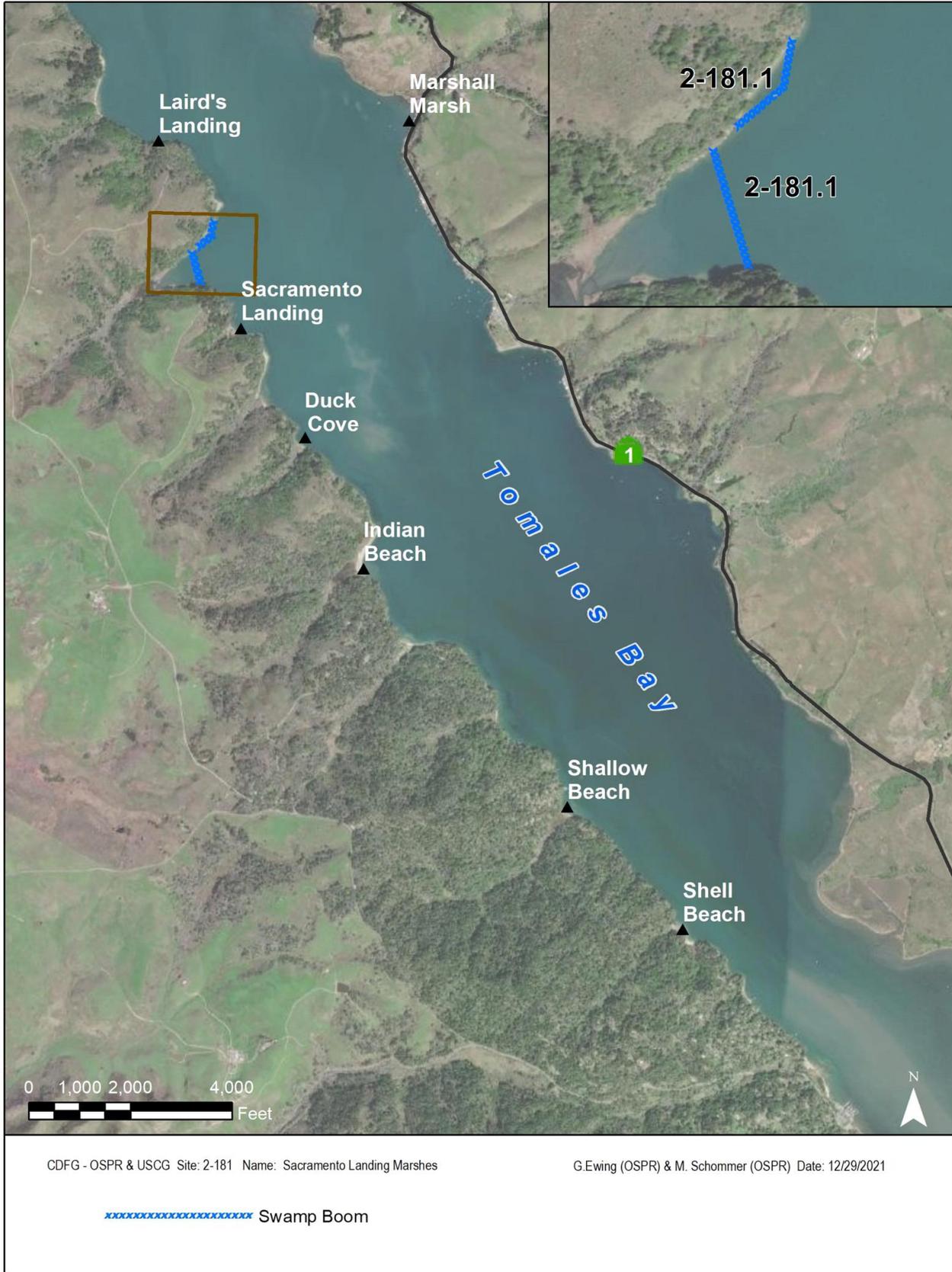
Directions: Best access is via boat. However, if driving, take Hwy 1 to Point Reyes Station near the head of Tomales Bay. Proceed westward on Sir Francis Drake through Inverness, turn right on Pierce Point Road, turn right on L Ranch Road, take the second right onto a dirt road to Sacramento Landing. This land is either State Park or Pt. Reyes National Seashore property and access should be made through contacts to them.

Land Access: Access via dirt road.

On-Water Limitations: Shallow water near shore. Beach launch at Sacramento Landing. Nearest launch ramps at Nicks Cove, Marconi, and Inverness. Boat lift at Marshall.

Facilities, Staging Areas, Command Posts, Available Equipment: Staging at Sacramento Landing, Pt Reyes National Seashore facilities or Inverness. Contact Pt. Reyes National Seashore for access and potential limitations. Alternate is Nicks Cove and possible Marshall. Food available at Nicks, Marshall, and Inverness and gasoline at Inverness.

Communications Problems: Cell reception varies on outer coast.



County: Marin**ACP Division/Segment:** MR - C - S005**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.106498 -122.8498**Site Description:**

Site encompasses the east side of Tomales bay from Bivalve to just north of Millerton point, and includes the beach on the north side of the point and the small wetland near Hwy 1, the salt-marsh on the south side of Millerton Pt, and, further south, several pocket marshes between the railroad levee and Hw1 at mouth of Millerton Creek and three other unnamed drainages. Site lies within the Greater Farallones National Marine Sanctuary. Both Millerton Pt and Tomasini Pt have similar geography: an elevated landmass protruding into the bay resulting in a prograding tidal salt-marsh on the south side (down current). There is also a pocket of salt-marsh at the forward edge of the peninsula near Hwy 1. The habitats that result are extensive tidal salt-marshes and bayfront tidal mudflats and sheltered tidal mudflats extending in front of the salt-marsh. Where drainages flow into the bay, delta marshes form; most of these are confined behind the remnants of the old railroad grade, the grade has openings which allow outflow and tidal exchange. The northern shore of the point is exposed to wave wash and erosion; beaches consist of mixed sand and gravel. There are aquaculture licensed leases north of the point. This site is part of Tomales Bay State Park.

Resources at Risk:*ESI and Habitat:* 5 Mixed sand and gravel beaches

9A Sheltered tidal flats

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	shorebirds		Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Fish	Pacific herring		Year-round	Nov-Apr
Mammals	North American river otter	SSC	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
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C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks, Bay Area District	(916) 358-1300
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

This location is highly diverse in terms of the variety of bird, sensitive plants, bats, etc. and dungeness crab use this area as a nursery.

Concerns and Advice to Responders:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

Hazard and Restrictions:

There is exceedingly shallow water and oyster beds nearshore. Telephone poles and lines may cross over site, posing an aerial hazard.

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

Strategy: 2-186.1 Objective: Exclude oil from entering marshes

Strategy: There are a several tidal marshes along the length of this site. Each can be closed with short pieces of swamp boom deployed in a chevron exclusion formation. Deployments must be made when tides are 2.5' or greater to permit adequate draft. It is recommended that deployment be scheduled for the incoming tide to avoid stranding. Contact local State Parks and oystermen to aid in locating deploy locations and navigating the exceedingly shallow waters. The following are a list of boom deployment locations from north to south.

a) marsh mouth on unnamed drainage 0.75 miles north of Millerton - 100' boom, 1 anchor, 2 stakes

b) marsh channel opening at SW tip of Millerton Pt - 200' boom, 3 anchors, 2 stakes, 200' oil snare inside boom

c) marsh mouth on Millerton Creek Gulch just south of Millerton Pt - 200' boom, 1 anchor, 4 stakes

d) marsh mouth on unnamed drainage 0.5 miles south of Millerton - 100' boom, 1 anchor, 2 stakes

e) marsh mouth on unnamed drainage 0.75 miles south of Millerton - 100' boom, 1 anchor, 2 stakes

f) marsh mouth on unnamed drainage 1.2 miles south of Millerton - 100' boom, 1 anchor, 2 stakes

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		800	feet	
Boom	Oil Snare (pom-pom)			200	feet	
Anchor	Danforth	25 lb		12		
Anchor	Stakes			16		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-186.2 Objective: Exclusion Protection of shoreline from Millerton Pt to Tomasini Pt. Also excludes oil from large areas of oyster production.

Strategy: To keep oil from moving near or onto the shoreline, deploy 2500' of 6X6 swamp boom from Tomasini Pt to Millerton Pt. Anchor up on shore. Contact local oystermen for aids and direction in navigating these extreme shallows.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2500	feet	
Anchor	Danforth	25 lb		16		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

Directions: Hwy 1 to the eastside shore of Tomales Bay. Approximately 5 miles north of Pt. Reyes Station.

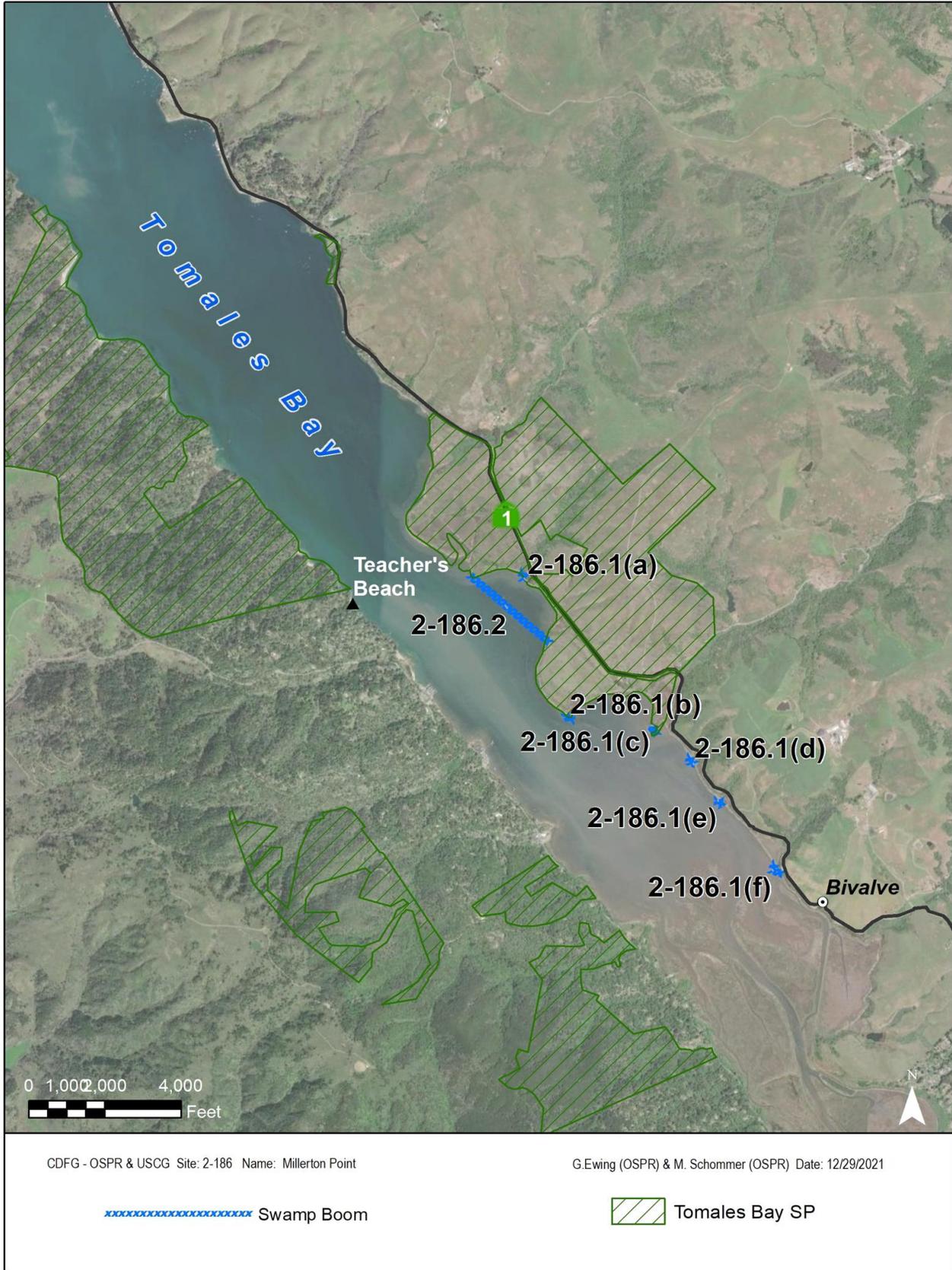
Land Access: Access for a large truck to parking area.

On-Water Limitations: shallow near site. Nearest launch ramps at Inverness. Also Nicks Cove, Marconi, and beach launch at Millerton.

Facilities, Staging Areas, Command Posts, Available Equipment: Small staging area in unpaved parking lot above site.

Inverness is nearby launch.

Communications Problems: Cell reception varies on outer coast.



County: Marin **ACP Division/Segment:** MR - D - S002**NOAA Chart:** Bodega and Tomales Bays **Map Book:** Marin County
18643**Decimal Degrees:** 38.102544 -122.856913**Site Description:**

This site is at the extreme southwesterly margin of Tomales Bay and extends from the State Park Boundary north of Teachers Beach about one mile south to southern edge of Inverness. Site lies within the Greater Farallones National Marine Sanctuary. The bay margin is very shallow in this area and has a wide band a tidal salt-marsh and mudflats. Mudflats become very wide in the southern half of the site. The salt-marshes and a portion of the mudflats are within the Point Reyes National Seashore. Most of the land adjacent to this site is private property and the town of Inverness is in the northern half. Sir Francis Drake Highway parallels the shoreline for most of the length of this site. Ownerships here are scattered between private and public.

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

8B Sheltered solid man-made structures

5 Mixed sand and gravel beaches

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Fish	Pacific herring		Year-round	Nov-Apr
Fish	longfin smelt	ST	Year-round	Nov-May
Mammals	North American river otter	SSC	Year-round	
Plants	eelgrass		Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Director of Conservation Science	Audubon Canyon Ranch	(415) 663-8203
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

There is a wide variety of species at this site including birds, sensitive plants, bats, salamanders, dungeness crab, etc. at this location.

Concerns and Advice to Responders:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

Hazard and Restrictions:

Extensive mudflats and shallow water front this site.

Site Strategies:

Site Validation Level: II

Strategy: 2-188.1 Objective: Protective booming of marshfront where endangered plant occurs.

Strategy: To prevent oil from threatening endangered plant or its habitat, deploy 1500' of swamp boom from the Yacht club south along the marsh margin. Use anchors and stakes to position the boom. Run boom ends to shore to stop oil from getting around the boom. Deploy from very shallow draft work boats (contact oystermen) when tide is in.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1500	feet	
Anchor	Danforth	25 lb		6		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

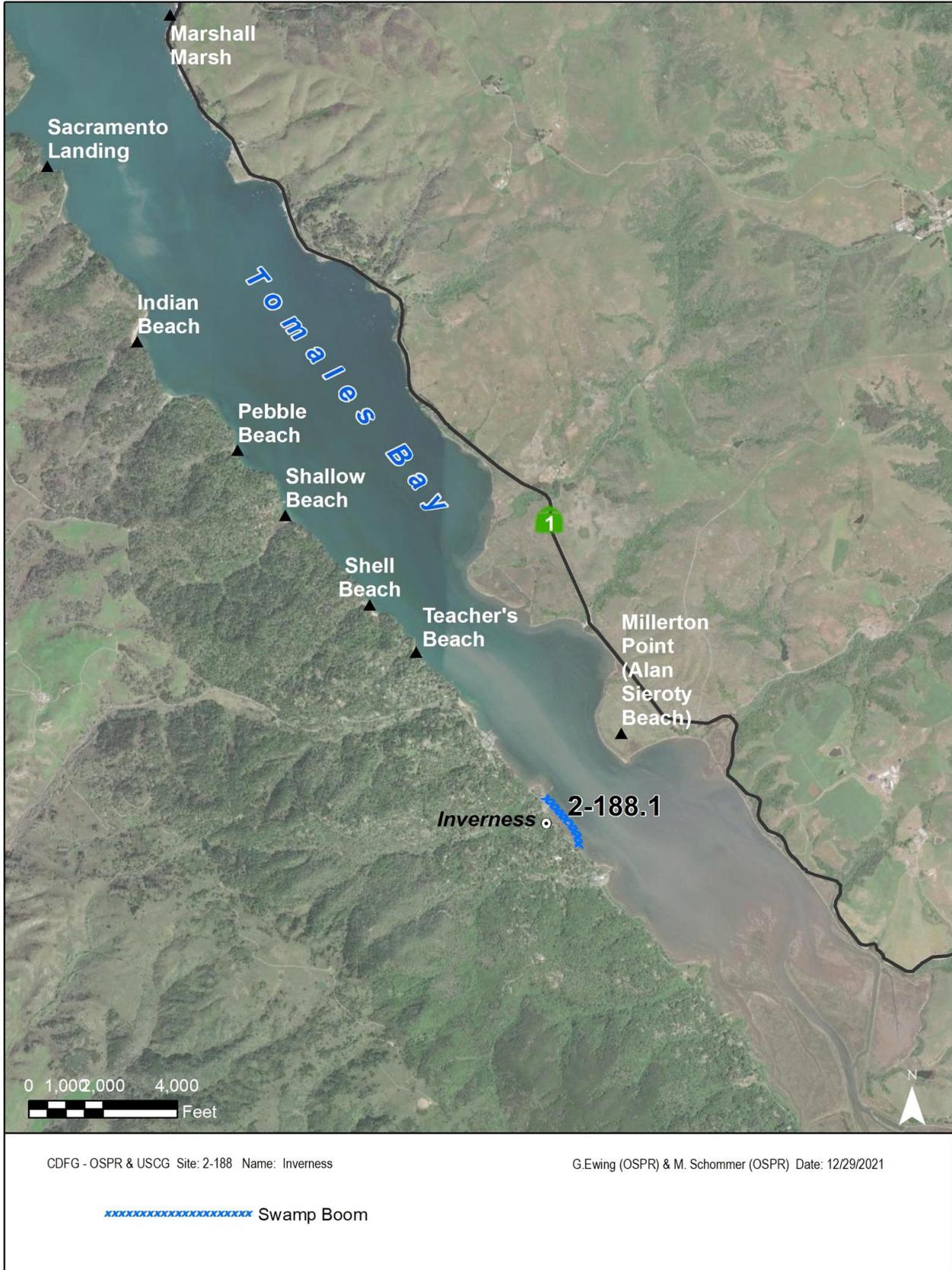
Directions: Hwy 1 to Point Reyes Station near the head of Tomales Bay. Proceed westward on Sir Francis Drake to Inverness.

Land Access: Good access for large trucks.

On-Water Limitations: Extremely shallow water. Nearest launch ramps at Inverness. Launch also at Nicks Cove and Marconi. Gasoline at Inverness.

Facilities, Staging Areas, Command Posts, Available Equipment: Small staging areas may be available at several of the hotels and marina along the Inverness shoreline.

Communications Problems: Cell reception varies on outer coast.



County: Marin**ACP Division/Segment:** MR - D - S001**NOAA Chart:** Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.087531 -122.832375**Site Description:**

Site includes all of the tidal salt-marshes and mudflats at the head of Tomales Bay from the south edge of Inverness (about a mile north of Willow Pt on the west side) and Bivalve (on the east side), as well as Lagunitas Creek upstream to Point Reyes Station. Pt. Reyes National Seashore owns most of this site. Site lies within the Greater Farallones National Marine Sanctuary. The site includes mudflats, low to high salt-marsh, and freshwater marshes and riparian corridors. There are extensive mudflats which graduate to prograding salt-marshes north of the levied portion of the delta. The area behind the delta levees is a mix of salt marsh (where levees have been breached) and wet meadow, but all the levied area will be restored to salt-marsh in the future. Lagunitas Creek is tidal upstream to Point Reyes Station and provides the largest freshwater inflow into Tomales Bay. There is riparian habitat in upper estuary on Levees and banks of Lagunitas Creek, Tomasini Creek, and Olema Creek. This stream system is key to California Coho populations. The Tomales Bay Ecological Reserve is an extensive salt-marsh area on the east shore behind the old railroad bed and north of Pt. Reyes Station.

Resources at Risk:*ESI and Habitat:* 10A Salt - and brackish-water marshes

9A Sheltered tidal flats

9B Vegetated low banks

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Western bumble bee	SP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Ranger	Marin County, Parks & Open Space	(415) 499-6405
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

A wide variety of species occur in the area including an array of birds, sensitive plants, bats, California giant salamander, dungeness crab, Point Reyes mountain beaver, etc.

Concerns and Advice to Responders:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

Hazard and Restrictions:

Extremely shallow water.

Site Strategies:

Site Validation Level: II

Strategy: 2-191.1 Objective: Primary, exclude / protect marsh from substantial marine oil threat

Strategy: Deploy 4200' of 9X9 Harbor boom from Inverness to Millerton. The boom should be set at a diagonal angle from the upper end of Inverness (in the area where Sir Francis Drake Highway veers away from the bay) to the low beach on Millerton Point. Tidal currents are minimal here. Contact State Parks about setting up a shore side skimming operation (if needed) on Millerton Point beach.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		4200	feet	
Anchor	Danforth	25 lb		10		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-191.2 Objective: 2ndary exclusion / protection of marsh. This is secondary booming strategy to protect south bay from substantial marine oil threat. More sites are afforded protection but oil will impact here sooner.

Strategy: Deploy 4500' of 9X9 Harbor boom from west shore to east shore north of Shell Beach. The boom should be set at a diagonal angle from the shoreline near Shallow Beach to Tomasina Pt (the point north of Millerton Point- unnamed on some maps). Tidal currents are minimal here. Contact State Parks about setting up a SSS (shore side skimming) operation: shoreside skimming may be a problem here because shoreline is abrupt bluffs. (If shoreside skimming is impractical, plan an on-water skimming operation, and contact unified command.)

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		4500	feet	
Anchor	Danforth	25 lb		10		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-191.3 Objective: For upstream spill threats, divert to collection.

Strategy: If petroleum enters upstream drainage from a roadside or similar land based spill, minimize spread downstream by diverting to containment/collection. Boom Inverness Creek, Olema Creek, Bear Valley Creek, or other drainage at most feasible access point, such as Inverness Park, Hwy 1 bridge, Bear Valley Road, etc. Position boom swamp boom or other small boom at an angle to the current to avoid entrainment of petroleum. Use local emergency responders to deploy boom. Use local supplies of anchors and punts to secure boom. Temporary absorbants may be useful while awaiting arrival of sorbent boom or skimmers. (Strategy not on Site Strategy Diagram).

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		300	feet	
Anchor	Danforth	25 lb		4		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Logistics:

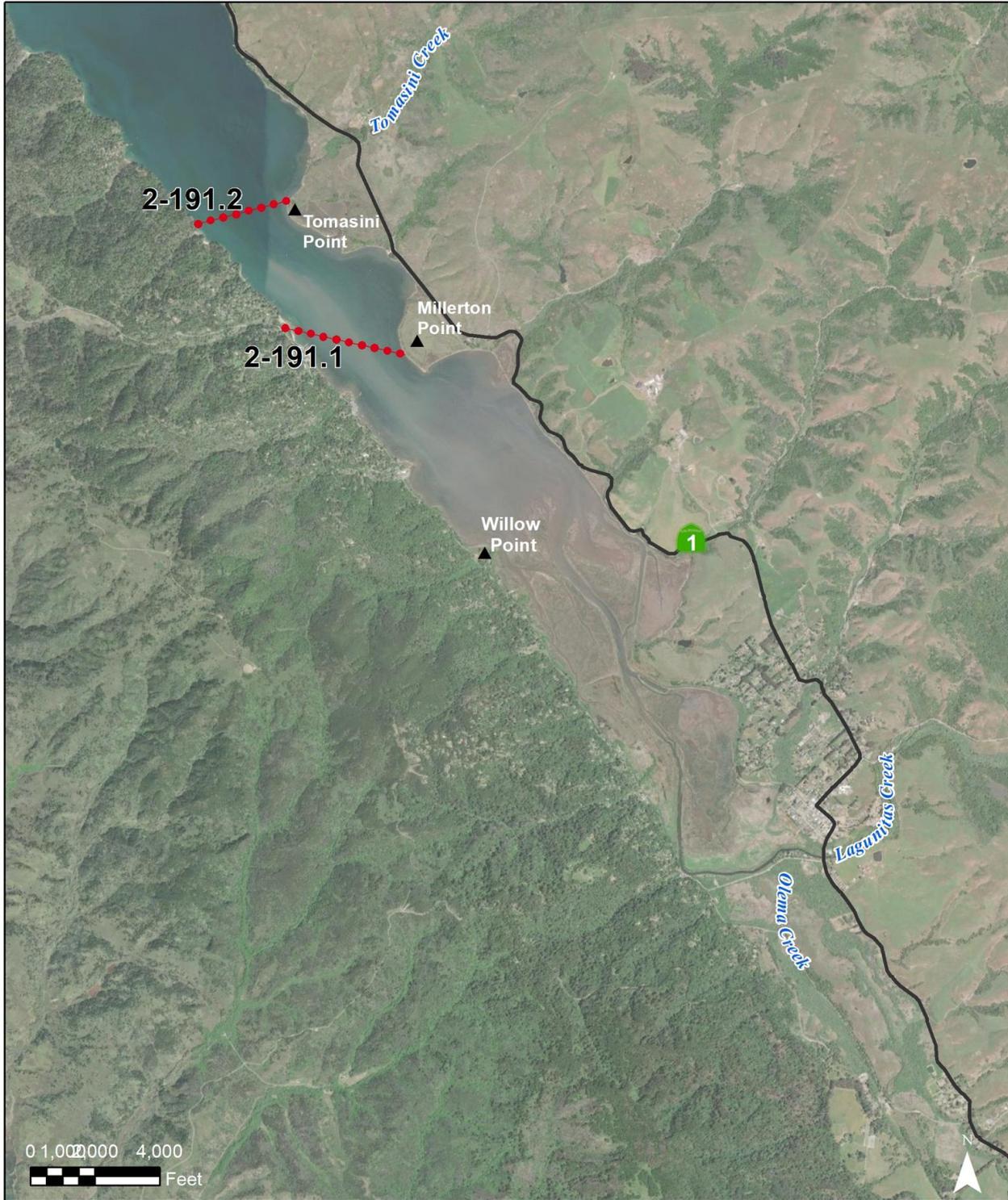
Directions: Hwy 1 to Point Reyes Station near the head of Tomales Bay. To gain access to Lagunitas Creek, proceed westward on Sir Francis Drake approximately 1/2 mile to White House Pool County Park area; or at the Hwy 1 Bridge in Pt. Reyes Station.

Land Access: Large trucks to Pt. Reyes Station and Inverness.

On-Water Limitations: Extremely shallow water at the head of Tomales Bay. Nearest launch ramps at Nicks cove and Inverness.

Facilities, Staging Areas, Command Posts, Available Equipment: None known.

Communications Problems: Cell reception varies on your location.



CDFG - OSPR & USCG Site: 2-191 Name: Lagunitas Creek & Delta Marsh

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 12/29/2021

●●●●● Harbor Boom

County: Marin **ACP Division/Segment:** MR - F - S001**NOAA Chart:** Bodega and Tomales Bays 18643 **Map Book:** Marin County**Decimal Degrees:** 38.230129 -122.994193**Site Description:**

A single rock island pinnacle approximately 300 yds offshore and west of Tomales Point. Site lies within the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources. Large, steep-faced rock island surrounded by several washrocks. Located within Point Reyes National Seashore.

Resources at Risk:*ESI and Habitat:* 1A Exposed Rocky Shore

2A Exposed wave-cut platforms in bedrock, mud, or clay

List of Resources at Risk:

Resource Name		Status	Presence	Sensitivity
Birds	seabirds		Year-round	Mar-Sep
Birds	shorebirds		Year-round	
Invertebrates	black abalone	FE	Year-round	
Mammals	harbor seal	FP	Year-round	

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

List of Key Contacts:

Type	Name/Title	Organization	Phone
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

Concerns and Advice to Responders:

Principal concerns are oil contamination and response activity impacts to seabirds, marine mammals, and other vulnerable intertidal plants and wildlife. The primary objective is to minimize exposure of oil to the natural resources present at the site. Other concerns are the impacts resulting from response activities. Avoid low flying aircraft/helicopters (<1000 ft) over the seabird colonies and marine mammal haulout areas. Avoid noisy boat traffic near the site.

Hazard and Restrictions:

Numerous washrocks surround Bird Rock.

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

Strategy: 2-194.1 Objective: Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Table of Response Resources

Last Page Update**Logistics:**

Directions: Accessible only by boat, the site is located approximately 300 yds offshore, west of Tomales Point

Land Access: None; rocky offshore island. Stay off.

On-Water Limitations: Shallow washrocks, heavy surf and swell. Nearest boat ramp is at Lawson's Landing inside Tomales Bay, others are in Bodega Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: Lawson's Landing in Tomales Bay.

Communications Problems: Cell reception varies on outer coast.



County: Marin**ACP Division/Segment:** MR - G - S001**NOAA Chart:** 18640 / Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.118241 -122.957255**Site Description:**

Located within Pt. Reyes National Seashore. The lagoon is in the northern half Pt. Reyes Seashore and fronted by Point Reyes Beach. Site lies within the Greater Farallones National Marine Sanctuary. The lagoon is open seasonally, primarily during the winter months of very wet years and following periodic high tide over-wash activity. It is surrounded by sandy beaches and backed by vegetated sand dunes.

Resources at Risk:*ESI and Habitat:* 4 Coarse-grained sand beaches

5 Mixed sand and gravel beaches

1C Exposed rocky cliffs with boulder talus base

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	California black rail	FP, ST	Year-round	Mar-Aug
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Insects	Western bumble bee	SP	Year-round	
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun

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

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O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 479-5311
T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

A wide variety of birds and sensitive plant species occur in this area.

Concerns and Advice to Responders:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sand dunes, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Heavy surf along Point Reyes beach. Muddy roads in winter may be impassible.

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

Strategy: 2-197.1 Objective: No action when natural sand berm is in place

Strategy: If the sand berm is blocking the entrance of the lagoon, no action is needed unless there is evidence or likelihood that surf may over-top the berm and wash oil into the lagoon. If this is the case, employ strategy 2.

Table of Response Resources

Last Page Update

Strategy: 2-197.2 Objective: Exclude by booming when tidal exchange with lagoon

Strategy: Deploy boom on inside of lagoon to contain and prevent spread within lagoon. Divert oil to becalmed shore location for collection & recovery. Advise UC/IC of advisability of constructing sediment dike as necessary and feasible (see Strategy 3)

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Sorbent			600	feet	
Anchor	Danforth	25 lb		3		
Vessel	Skiff or Punt			1		
Staff	Staff to Deploy			3		

Strategy: 2-197.3 Objective: Exclude with sediment dike (medium grained sand). Prevent oil from entering lagoon.

Strategy: If surf is over-topping into the lagoon, use Bobcat w/ tracks or front-end loaders to build up the barrier berm by skimming sand from the neighboring flat beach (do not use the dunes for sand supply). Use plastic and/or sand bags as necessary to create a temporary non-erodible barrier. Place 6X6 swamp boom backed by sorbent boom inside the lagoon to catch any oil which may be washed past the sand dike and barrier. Heavy equipment access from South Beach Parking Lot (3 miles to south).

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		500	feet	
Boom	Sorbent			600	feet	
Anchor	Danforth	25 lb		4		
Vessel	Skiff or Punt			1		
Heavy Equip	Bobcat w/ tracks			1		
Staff	Staff to Deploy			4		

Logistics:

Directions: From San Francisco take Hwy 101 North to Sir Francis Drake Blvd. West to Olema. Turn north (right) on Hwy 1, go 2 miles and take a left on Sir Francis Drake Blvd through Inverness. Turn right on Pierce Point Road and proceed to the Abbott's Lagoon parking area. This parking is still about 1 mile from the site, however, park rangers can open gates to allow some vehicle access down to lagoon.

Land Access: 2WD, 4WD - not likely in winter, Heavy equipment access from South Beach Parking Lot approx 3 miles by

beachfront

On-Water Limitations: The lagoon is open seasonally. Skiffs only in lagoon. Hand launch from shore.

Facilities, Staging Areas, Command Posts, Available Equipment: None close by. Set up staging on site or at North Beach Parking lot (3 miles away). Contact NPS for assistance/coordination.

Communications Problems: Cell coverage varies.

Additional Operational Comments: Further coordination and planning with the National Park Service will be required to establish access. Services (sanitation, power, and water) are unavailable in this area. Strategy has not been deployed or tested.



County: Marin**ACP Division/Segment:** MR - G - S001**NOAA Chart:** 18640 / Bodega and Tomales Bays 18643**Map Book:** Marin County**Decimal Degrees:** 38.076678 -122.975407**Site Description:**

Located within Pt. Reyes National Seashore on the northwest side, this beach (aka "The Great Beach") is about 12 miles long and extends from Point Reyes Headland (Lighthouse) north to Kehoe Beach. Abbott's Lagoon outlet is at the northern half of beach. Site lies within the Greater Farallones National Marine Sanctuary. A northwesterly facing beach with medium coarse sand, moderate slope, and potentially very heavy surf. The back beach rises as vegetated dunes or steep bluffs. The upper beach is littered with driftwood and debris.

Resources at Risk:**ESI and Habitat:** 4 Coarse-grained sand beaches

3B Scarps and steep slopes in sand

List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Mammals	Northern elephant seal	FP	Year-round	Nov-Jul
Mammals	Steller sea lion	FP	Year-round	
Plants	Tidestrom's lupine	FE, SE	Year-round	Apr-Jun
Plants	beach layia	FE, SE	Year-round	Mar-Jul
Plants	Point Reyes blennosperma	SR	Year-round	Feb-Apr
Plants	showy rancheria clover	FE	Year-round	Apr-Jun
Plants	Point Reyes meadowfoam	SE	Year-round	Mar-May
Plants	Sonoma alopecurus	FE	Year-round	May-Jul

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

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C	/Coordinator	Northwest Information Center	(707) 588-8455
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T	/Park Ranger, 24 hr	US National Park Service, Point Reyes	(415) 464-5175

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

Additional Site Summary Comments:

This site hosts a large array of species including sensitive plants, a variety of birds, pinnipeds, sensitive insects, Point Reyes jumping mouse, etc. Shorebirds nest here from October-April.

Concerns and Advice to Responders:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize exposure of oil to the site and natural resources present at the site. Snowy Plovers use beach as nesting site. Have a biological monitor flag off nesting area to avoid impacts. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sand dunes, sensitive plants and animals causing penetration of oil into the sediments and further injury to the environment.

Hazard and Restrictions:

Narrow roads, Large surf and swell. Vehicle access thru South Beach Parking Lot.

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

Strategy: 2-198.1 Objective: Prevent oiling of snowy plover and elephant seal use areas. Prevent injury to sand dunes from cleanup activities.

Strategy: This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy conditions at this site. Consider use of ARTs.

- a) Recommended response strategy is on-water containment and recovery.
- b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
- c) If suitable conditions exist, deflect oil away from the south end of the beach which is used by seals.
- d) The beach may be suitable as an oil collection site, but there is no indication that the oil will hold on the beach once it strands. The southerly quarter is not desirable for collection due to the proximity of seals. For details, contact Pt. Reyes National Park resource specialists.
- e) Conduct beach pre-cleaning during plover nesting season only with advice and consent of DFW and USFWS. Also contact Pt. Reyes National Park resource specialists.
- f) Use manual recovery methods in most situations. For very heavy oiling conditions, consider front-end loaders.

Table of Response Resources

Last Page Update**Logistics:**

Directions: From San Francisco take Hwy 101 North to Sir Francis Drake Blvd., west to Olema. Turn north (right) on Hwy 1, go 2 miles and take a left on Sir Francis Drake Blvd through Inverness. Several access points to the beach are possible. Take Pierce Point Road to access McClure's Beach, Kehoe Beach, or Abbott's Lagoon. Continue on Sir Francis Drake to access the North and South Beach parking areas.

Land Access: Large truck okay thru South Beach Parking Lot.

On-Water Limitations: Large surf and swell common; steep beach. Nearest boat ramp at Lawson's Landing in Tomales Bay, other ramps in Bodega Bay.

Facilities, Staging Areas, Command Posts, Available Equipment: No facilities. Staging at parking areas.

Communications Problems: Cell reception varies.

Additional Operational Comments: Coordination with the National Park to establish access routes. Services (sanitation and water) are infrequent in this beach area.



CDFG - OSPR & USCG Site: 2-198 Name: Point Reyes Beach

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 06/03/2014

9814.2 Response Summary Tables

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

Summary of ACP 2 GRA 1 Response Resources by Site and Sub-Strategy

Site	Site Name	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT		
Sub-Strategy	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-100	Gualala River Inlet			
.1 - Build Berm				
.2 - Exclude Oil				
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Anchor	Danforth	25 lb	12
	Boom	Sorbent		3100 feet
	Boom	Harbor	9x9 inch	2000 feet
	Boom	Oil Snare (pom-pom)		50 feet
.3 - Exclude Oil				
.4 - Collect Oil with Skimmer				
	Staff	Staff to Deploy		3
	skimmer	shoreside		1
2-103	Del Mar Landing Ecological Reserve			
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-104	Sea Ranch			
.1 - Divert Oil				
	Staff	Staff to Deploy		5
	Boom	Harbor	9x9 inch	1500 feet
	Vessel	Skiff or Punt		1
	Anchor	Danforth	40 lb	6
.2 - Shoreline Pre-Clean: Resource Specialist Supervision Required				
.3 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-107	Black Point			
.1 - Divert Oil				
	Anchor	Danforth	40 lb	6
	Boom	Harbor	9x9 inch	1500 feet
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
.2 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-110	Stewart's Point			
.1 - Exclude Oil				
	Boom	Harbor	9x9 inch	1500 feet
	Staff	Staff to Deploy		5
	Anchor	Danforth	40 lb	6
	Vessel	Skiff or Punt		1
.2 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-113	Gerstle Cove			
.1 - Divert Oil				
	Staff	Staff to Deploy		5
	Boom	Harbor	9x9 inch	1500 feet
	Anchor	Danforth	40 lb	6
	Vessel	Skiff or Punt		1
.2 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
.3 - Shoreline Pre-Clean: Resource Specialist Supervision Required				

Site Site Name

Sub-Strategy PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT

	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-116 Stillwater Cove				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
.2 - Build Berm				
	culvert			3
	Staff	Staff to Deploy		5
	Heavy Equip	Backhoe		1
.3 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
	pressure washer			3
	Staff	Staff to Deploy		7
	Boom	Oil Snare (pom-pom)		300 feet
	Anchor	Danforth	40 lb	7
2-119 Russian Gulch				
.1 - Exclude Oil				
	culvert			3
	Staff	Staff to Deploy		5
	Heavy Equip	Bobcat w/ tracks		1
2-122 Russian River Inlet - Mouth and Estuary				
.1 - Exclude Oil				
	Anchor	Danforth	25 lb	9
	Vessel	Skiff or Punt		1
	Boom	Harbor	9x9 inch	1200 feet
	Boom	Sorbent		100 feet
	Staff	Staff to Deploy		5
	Boom	Oil Snare (pom-pom)		50 feet
.2 - Deploy Sorbent Boom				
	Boom	Harbor	9x9 inch	1200 feet
	Staff	Staff to Deploy		5
	Anchor	Danforth	25 lb	6
	Boom	Sorbent		100 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Vessel	Skiff or Punt		1
.3 - Collect Oil with Skimmer				
	Staff	Staff to Deploy		3
	skimmer	shoreside		1
2-125 Goat Rock Beach				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-128 Blind Beach				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-131 Wright's Beach				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-134 Gleason Beach				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-137 Portuguese Beach				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-140 Salmon Creek				
.1 - Exclude Oil				
	Staff	Staff to Deploy		5
	culvert			3
	Heavy Equip	Bobcat w/ tracks		1
.2 - Exclude Oil				
	Boom	Harbor	9x9 inch	2000 feet
	Anchor	Danforth	25 lb	6
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		3
2-143 Bodega Head				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-146 Bodega Rock				
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART				
2-150 Bodega Harbor				
.1 - Exclude Oil				
	Boom	Harbor	9x9 inch	5000 feet
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Anchor	Danforth	40 lb	15
.2 - Exclude Oil				
	Anchor	Danforth	40 lb	10
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		5
	Boom	Harbor	9x9 inch	1800 feet
.3 - Exclude Oil				
	Vessel	Skiff or Punt		1
	Boom	Harbor	9x9 inch	2000 feet
	Staff	Staff to Deploy		5
	Anchor	Danforth	25 lb	6
.4 - Divert Oil				
	Boom	Harbor	9x9 inch	2000 feet
	Anchor	Danforth	25 lb	6
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		3
.5 - Exclude Oil				
	Vessel	Skiff or Punt		1
	Anchor	Danforth	40 lb	15
	Boom	Harbor	9x9 inch	6000 feet
	Staff	Staff to Deploy		7
	Boom	Sorbent		6000 feet

2-152 Pinnacle Rocks

.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-155 Estero Americano			
.1 - Exclude Oil			
culvert			3
Staff	Staff to Deploy		5
Heavy Equip	Bobcat w/ tracks		1
.2 - Exclude Oil			
Boom	Harbor	9x9 inch	1500 feet
Staff	Staff to Deploy		5
Anchor	Danforth	25 lb	10
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		300 feet
.3 - Exclude Oil			
Plastic sheeting	visqueen		300 feet
Anchor			24
Staff	Staff to Deploy		5
.4 - Collect Oil with Skimmer			
skimmer	shoreside		1
Staff	Staff to Deploy		3
2-158 Estero de San Antonio			
.1 - Exclude Oil			
Staff	Staff to Deploy		5
culvert			3
Heavy Equip	Bobcat w/ tracks		1
.2 - Exclude Oil			
Anchor	Danforth	25 lb	8
Staff	Staff to Deploy		5
Boom	Sorbent		100
Boom	Oil Snare (pom-pom)		50 feet
Boom	Harbor	9x9 inch	1500 feet
.3 - Collect Oil with Skimmer			
Staff	Staff to Deploy		3
skimmer	shoreside		1
2-161 Dillon Beach Rocks			
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART			

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-164 Tomales Bay			
.1 - Exclude Oil			
Staff	Staff to Deploy		12
Anchor	Danforth	25 lb	40
Boom	Harbor	9x9 inch	15000 feet
Vessel skimmer	Skiff or Punt self propelled		2 1
.2 - Divert Oil			
Staff	Staff to Deploy		7
Anchor	Danforth	25 lb	15
Vessel skimmer	Skiff or Punt shoreside		1 1
Boom	Harbor	9x9 inch	7000 feet
.3 - Divert Oil			
Vessel skimmer	Skiff or Punt shoreside		1 1
Anchor	Danforth	25 lb	12
Boom	Swamp	6x6 inch	300 feet
Boom	Harbor	9x9 inch	3500 feet
Staff	Staff to Deploy		7
.4 - Divert Oil			
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		7
Anchor	Danforth	25 lb	13
Boom	Harbor	9x9 inch	6000 feet
.5 - No Onsite Options: Consider Offshore Containment/Recovery/ART			

2-166 Sand Point to Toms Point

.1 - Exclude Oil			
Anchor	Danforth	25 lb	11
Vessel	Skiff or Punt		1
Boom	Harbor	9x9 inch	1500 feet
Boom	Sorbent		100
Boom	Oil Snare (pom-pom)		50 feet
Staff	Staff to Deploy		5
.2 - Divert Oil			
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		5
Boom	Harbor	9x9 inch	2000 feet
Boom	Oil Snare (pom-pom)		50 feet
Anchor	Danforth	25 lb	7
Boom	Sorbent		100 feet
.3 - Collect Oil with Skimmer			
skimmer	shoreside		1
Staff	Staff to Deploy		3

Site **Site Name**

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
2-168 Walker Creek and Delta				
.1 - Exclude Oil				
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		3
	Anchor	Danforth	25 lb	4
	Boom	Swamp	6x6 inch	950 feet
.2 - Exclude Oil				
	Vessel	Skiff or Punt		1
	Staff	Staff to Deploy		3
	Boom	Swamp	6x6 inch	1500 feet
	Anchor	Danforth	25 lb	6
.3 - Exclude Oil				
	Staff	Staff to Deploy		5
	Vessel	Skiff or Punt		1
	Anchor	Danforth	25 lb	7
	Boom	Sorbent		600 feet
	Boom	Swamp	6x6 inch	2500 feet
.4 - Exclude Oil				
	Boom	Harbor	9x9 inch	9000 feet
	Staff	Staff to Deploy		8
	Anchor	Danforth	25 lb	20
	Vessel	Skiff or Punt		2
.5 - Exclude Oil				
	Anchor	Danforth	25 lb	3
	Staff	Staff to Deploy		3
	Boom	Swamp	6x6 inch	400 feet
	Vessel	Skiff or Punt		2
2-171 Hog Island				
.1 - Other: See Strategy Box				
	Hazing (OWCN)	mylar tape		2
	Hazing (OWCN)	propane cannon		1
	Staff	Staff to Deploy		2
	Vessel	Skiff or Punt		1
.2 - Exclude Oil				
	Anchor	Danforth	25 lb	6
	Staff	Staff to Deploy		4
	Boom	Swamp	9x9 inch	2500 feet
	Vessel	Skiff or Punt		1
2-174 White Gulch				
.1 - Exclude Oil				
	Boom	Swamp	6x6 inch	2000 feet
	Vessel	Skiff or Punt		1
	Anchor	Danforth	25 lb	6
	Staff	Staff to Deploy		3
2-177 Pelican Point				
.1 - Other: See Strategy Box				
	Hazing (OWCN)	propane cannon		1
	Hazing (OWCN)	mylar tape		2
	Staff	Staff to Deploy		2

Sub-Strategy PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-179 Cypress Grove Preserve			
.1 - Exclude Oil			
Anchor	Danforth	25 lb	3
Boom	Swamp	6x6 inch	200 feet
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		3
.2 - Exclude Oil			
Anchor	Danforth	25 lb	4
Boom	Swamp	6x6 inch	600 feet
Vessel	Skiff or Punt		1
Staff	Staff to Deploy		3
.3 - Divert Oil			
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	300 feet
Staff	Staff to Deploy		3
Anchor	Danforth	25 lb	4
2-181 Sacramento Landing Marshes			
.1 - Exclude Oil			
Anchor	Danforth	25 lb	5
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	1000 feet
Staff	Staff to Deploy		3
2-184 Tomasini Point			
.1 - Exclude Oil			
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	400 feet
Anchor	Danforth	25 lb	6
Staff	Staff to Deploy		3
2-186 Millerton Point			
.1 - Exclude Oil			
Boom	Swamp	6x6 inch	800 feet
Staff	Staff to Deploy		3
Boom	Oil Snare (pom-pom)		200 feet
Anchor	Danforth	25 lb	12
Anchor	Stakes		16
Vessel	Skiff or Punt		1
.2 - Exclude Oil			
Boom	Swamp	6x6 inch	2500 feet
Staff	Staff to Deploy		3
Vessel	Skiff or Punt		1
Anchor	Danforth	25 lb	16
2-188 Inverness			
.1 - Exclude Oil			
Staff	Staff to Deploy		3
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	1500 feet
Anchor	Danforth	25 lb	6

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
2-191 Lagunitas Creek & Delta Marsh			
.1 - Exclude Oil			
Vessel	Skiff or Punt		1
Anchor	Danforth	25 lb	10
Boom	Harbor	9x9 inch	4200 feet
Staff	Staff to Deploy		3
.2 - Exclude Oil			
Vessel	Skiff or Punt		1
Boom	Harbor	9x9 inch	4500 feet
Staff	Staff to Deploy		3
Anchor	Danforth	25 lb	10
.3 - Divert Oil			
Boom	Swamp	6x6 inch	300 feet
Staff	Staff to Deploy		3
Vessel	Skiff or Punt		1
Anchor	Danforth	25 lb	4

2-194 Bird Rock

.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART

2-197 Abbott's Lagoon

.1 - Other: See Strategy Box

.2 - Exclude Oil			
Vessel	Skiff or Punt		1
Boom	Swamp	6x6 inch	500 feet
Anchor	Danforth	25 lb	3
Staff	Staff to Deploy		3
Boom	Sorbent		600 feet
.3 - Build Berm			
Heavy Equip	Bobcat w/ tracks		1
Staff	Staff to Deploy		4
Vessel	Skiff or Punt		1
Anchor	Danforth	25 lb	4
Boom	Swamp	6x6 inch	500 feet
Boom	Sorbent		600 feet

2-198 Point Reyes Beach

.1 - Exclude Oil

9814.3 Lists of Economic Resources Susceptible to Oiling

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

Economic Sites - GRA 1

Site Information	Site Number & Location	Lat/Long & Priority
<p>Dillion/Lawson's Landing</p> <p>Dillion Beach CA Phone: 707-878-2443</p> <p>Site Description:</p>	<p>Site Number: 2-1-MR-100-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.25 -122.97</p>
<p>Miller Park</p> <p>Tomales CA Phone:</p> <p>Site Description:</p>	<p>Site Number: 2-1-MR-105-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long: 38.2 -122.92</p>
<p>Tomales Bay Aquaculture Sites</p> <p>Tomales Bay CA Phone:</p> <p>Site Description: Multiple sites- lat/long is estimate</p>	<p>Site Number: 2-1-MR-110-D Operational Division:</p>	<p>Aquaculture and Mariculture D Lat/Long: 38.16 -122.9</p>
<p>Gualala Point Regional Park</p> <p>42401 Coast, CA-1 Gualala CA 95445 Phone: 707-565-2267</p> <p>Site Description: county park</p>	<p>Site Number: 2-1-SN-100-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long:</p>
<p>Kruse Rhododendron State Natural Reserv</p> <p>Cazadero CA 95421 Phone: 707-87-3221</p> <p>Site Description:</p>	<p>Site Number: 2-1-SN-105-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long: 38.59 -123.34</p>
<p>Salt Point State Park</p> <p>25050 CA-1 Jenner CA 95450 Phone: 707-847-3221</p> <p>Site Description:</p>	<p>Site Number: 2-1-SN-110-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long:</p>
<p>Stillwater Cove Regional Park</p> <p>22455 CA-1 Jenner CA 95450 Phone: 707-847-3245</p> <p>Site Description:</p>	<p>Site Number: 2-1-SN-115-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long: 38.55 -123.3</p>
<p>Bodega Marine Lab</p> <p>2099 Westshore Rd Bodega Bay CA 94923 Phone: 707-875-2211</p> <p>Site Description:</p>	<p>Site Number: 2-1-SN-120-D Operational Division:</p>	<p>Aquariums and Marine Labs D Lat/Long: 38.32 -123.07</p>
<p>Westside Regional Park</p> <p>2400 Westshore Rd Bodega Bay CA 94923 Phone: 707-875-2640</p> <p>Site Description: boat ramp</p>	<p>Site Number: 2-1-SN-125-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas D Lat/Long: 38.32 -123.05</p>
<p>Spud Point Marina</p> <p>1818 Westshore Rd Bodega Bay CA 94923 Phone: 707-875-3535</p> <p>Site Description: Commercial and recreational berths</p>	<p>Site Number: 2-1-SN-130-D Operational Division:</p>	<p>Public Marinas and Harbors D Lat/Long: 38.33 -123.05</p>

