

Figure 1: GRA 2 Environmental Sensitive Sites + Operational Divisions Overview

## **ACP 2 – Gulf of Farallones and San Mateo Coast**

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## 9815 Gulf of Farallones and San Mateo Coast (GRA 2)

### 9815.1 Geographic Response Strategies for Environmental Sensitive Sites

#### 9815.1.1 GRA 2 Site Index

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**County:** Marin**ACP Division/Segment:** MR - H - S002**NOAA Chart:** 18640 / 18647**Map Book:** Marin County**Decimal Degrees:** 37.996234 -123.020113**Site Description:**

Pt. Reyes Lighthouse to Chimney Rock and inside Drake's Bay to Lifeboat Station. Site is located within Pt. Reyes National Seashore and Greater Farallones National Marine Sanctuary. Site is within the following State Marine Protected Areas: Point Reyes Headlands Special Closure & Point Reyes State Marine Reserve. Site is associated with BLM Ca Coastal National Monument resources. A rocky headland approximately 3.5 miles long; steep cliffs; high energy offshore washrocks; small pocket beaches of mixed sand and gravel; and rocky intertidal pools.

**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:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
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	
Invertebrates	black abalone	FE	Year-round	
Mammals	Northern elephant seal	FP	Year-round	Dec-Mar
Mammals	Steller sea lion	FP	Aug - Apr	
Mammals	California sea lion	FP	Aug - Apr	
Mammals	grey whale	FP	Dec - Feb, Apr - 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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
O	/Agency Representative (24hr)	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(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	/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	/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:**

Large numbers of Brant's and pelagic cormorants, black oyster catchers, common murre, pigeon guillemots, tufted puffin, and western gulls and various other sea birds utilize this area year-round, nesting from March-July. Several listed plant species occur in the area, including Tidestom's lupine (SE/FE), Beach layia (FE/SE), Point Reyes meadow foam (SE), Sonoma alopecurus (FE), and Point Reyes blenosperma (SR).

**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 which are present throughout the year. The primary objective is to minimize exposure of oil to the natural resources present at the site. Avoid low flying aircraft/helicopters (<1000 ft) over the seabird colonies and marine mammal haulout areas. Avoid noisy boat traffic near the headlands (nesting areas).

**Hazard and Restrictions:**

Heavy surf, large swell, and strong current common at this site. Nearshore washrocks are present along the headland.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-201.1 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**

**Strategy: 2-201.2 Objective:** Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.

*Strategy:* If sea conditions allow:

- a) Deploy ocean boom off north or south points (1000 ft each) of headland to deflect oil away. Deploy boom off rocky points near seal haulout coves to deflect oil from pocket beaches.
- b) Deploy 500 ft of ocean deflection boom from Chimney Rock area easterly into Drakes Bay to deflect oil away from rocky intertidal shore along the inside of the headland.
- c) Waters inside Drakes Bay, in the lee of the headland, are often calm, however the currents are variable and unpredictable. Use 18" curtain boom at proper angles to the current to keep oil off the shore using the piers and mooring bouys as anchors if necessary.
- d) Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect any oil that may accumulate. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		3000	feet	
Boom	Oil Snare (pom-pom)			3050	feet	
Boom	Sorbent			100	feet	
Anchor	Danforth	30 lb		30		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			10		

**Strategy: 2-201.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities as a result of strategies .1 or .2, deploy skimmers from vessels or piers using boom to deflect and contain oil. Contact IC prior to initiation of this recovery strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

### Logistics:

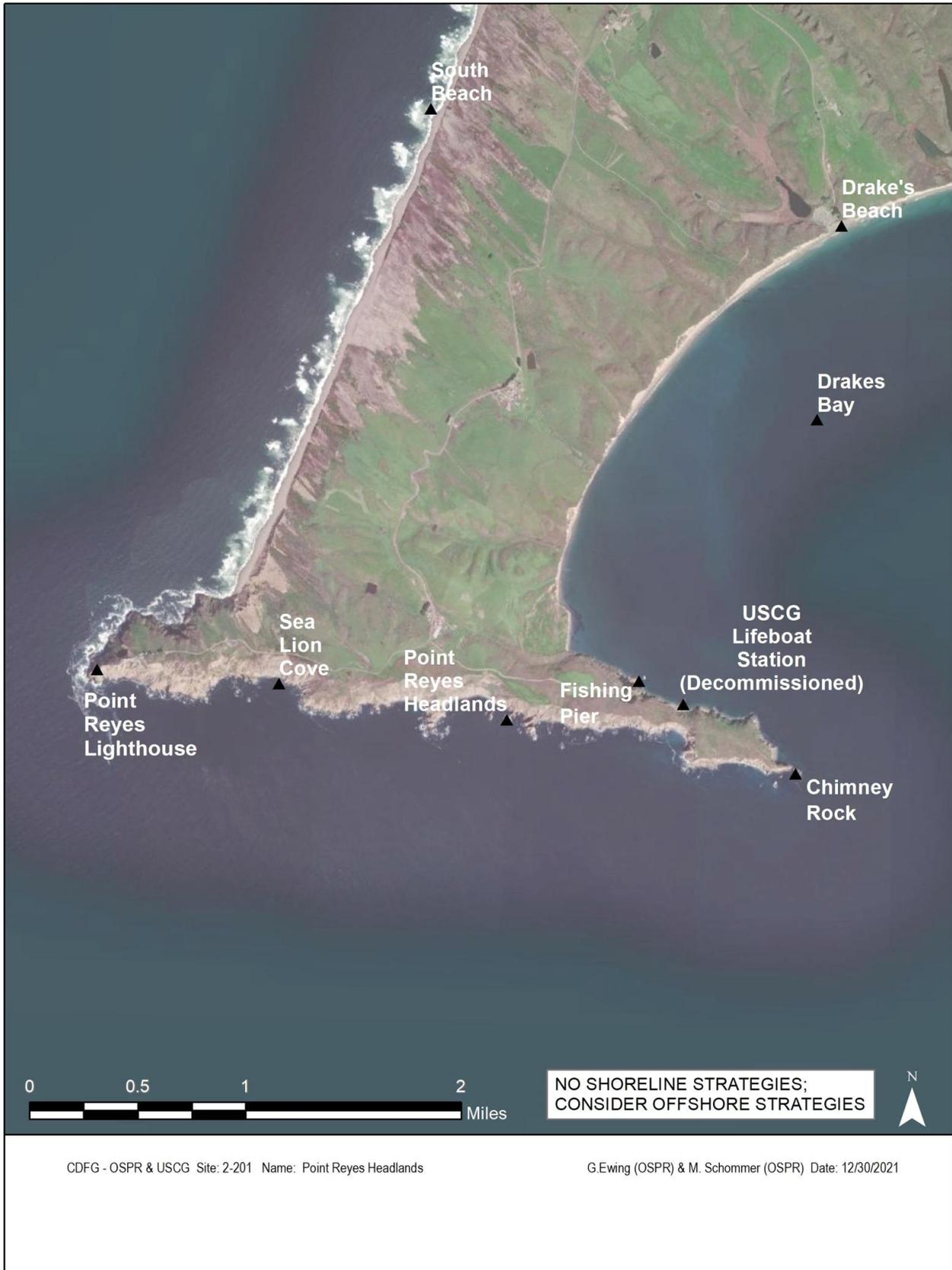
*Directions:* From San Francisco take Hwy 101 North to Sir Francis Drake Blvd in San Rafael, go west to Olema. Turn north (right) on Hwy 1, go 2 miles and take a left on Sir Francis Drake Blvd through Inverness. Continue on Sir Francis Drake to the headlands and Lighthouse.

*Land Access:* Access to shoreline is difficult if not impossible. Contact NPS Personnel for access.

*On-Water Limitations:* Large surf and swell, washrocks. Beach landings possible. Small boat launch on north side of headland at lifeboat station.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Coordinate with NPS Personnel. Staging at Lifeboat station on north side of Pt. Reyes headland. Deploy skimmers from vessel, pier, or shore.

*Communications Problems:* Cell reception varies.



County: Marin

ACP Division/Segment: MR - I - S002

NOAA Chart: 18647

Map Book: Marin County

Decimal Degrees: 38.027582 -122.962488

**Site Description:**

This site is 200 meters of Drakes Beach located within Pt. Reyes National Seashore at the southwesterly crook of Drakes Bay about a quarter mile north of the commercial fishing pier. This portion of the beach is bounded by cliff to west end and a rocky point to the east. Site is within the following State Marine Protected Area: Point Reyes State Marine Reserve and the Greater Farallones National Marine Sanctuary. This site is 200 meters of east facing, sand/cobble beach. The back beach rises as vegetated steep bluffs. The upper beach is littered with driftwood and debris. Contains cliff, cobble, boulder, and pilings.

**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
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Birds	shorebirds		Year-round	
Birds	seabirds		Year-round	
Birds	waterfowl		Year-round	
Mammals	Northern elephant seal	FP	Year-round	Dec-Mar
Mammals	pinnipeds	FP	Year-round	Nov-Jun
Plants	Point Reyes meadowfoam	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
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(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	California Department of Fish and Wildlife	(707) 445-5365
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

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**Additional Site Summary Comments:**

A wide variety of birds and sensitive plant species occur in this area. Various species of pinnipeds utilize this site as a haulout and pupping location. Myrtle's silverspot butterfly (FE) and the California red-legged frog (FT/SSC) have been documented in the upland area of this site.

**Concerns and Advice to Responders:**

The concerns are oil contamination and response activity impacts to the sand beach and marine mammals which are present most of the year. The primary objective is to minimize the exposure of oil to natural resources present at the site. Avoid trampling sensitive plants and animals and disturbing the seals. Avoid low flying aircraft/helicopters (<1000 ft) over marine mammal haulout areas (pocket beaches). Avoid noisy boat traffic near the seal haulout areas.

**Hazard and Restrictions:**

Poison oak along trails. Large south swell possible and strong currents common near this site. Access from pier area involves negotiating a steep dirt trail. Equipment access best from visitors center.

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

**Strategy: 2-203.1 Objective:** Prevent oil from stranding on shoreline and contaminating marine mammal use areas.

*Strategy:* Site is relatively protected except from east or southeast winds. There is often a large counter clockwise gyre in Drakes Bay. In addition to on-water recovery and containment efforts, the following site-specific measures should also be carried out.

Deploy 500 ft of ocean boom from Chimney Rock area east into Drakes Bay to deflect oil downcoast and away from Drakes Bay.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		500	feet	
Anchor	Danforth		50 lb	3		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-203.2 Objective:** Prevent oil from stranding on shoreline and contaminating marine mammal use areas.

*Strategy:* Waters inside Drakes Bay, in the lee side of the headlands, are often calm, however the currents and the swell are variable and unpredictable. Use curtain boom at proper angles to the current to keep oil off the shore using the piers and mooring buoys as anchors if necessary.

- a) Deploy 3000 ft of 18" curtain boom from shore at either end of the beach to exclude oil from the beach and deflect it back into the bay for possible collection.
- b) Deploy boom from vessels or piers to deflect and contain oil. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect small amounts of oil that may accumulate. If oil accumulates in skimmable quantities contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		3000	feet	
Boom	Sorbent			100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth		30 lb	12		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-203.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities, deploy skimmers from vessels or piers. Contact IC prior to initiation of this strategy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
skimmer	self propelled			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**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. Continue on Sir Francis Drake past the North Beach access, turn left at sign to Drakes Beach and visitor center. Alternatively, continue to end of road veering left to Chimney Rock.

*Land Access:* 2WD, flatbed trucks, 4WD, ATV, or by foot. Contact NPS Personnel for access.

*On-Water Limitations:* None. There is a boat lift on the commercial fish pier and a small boat ramp next to the USCG lifeboat station.

*Facilities, Staging Areas, Command Posts, Available Equipment:* There are small parking areas at commercial fish pier and lifeboat station on east side of Pt. Reyes headland. Parking and staging is also available at Drakes Beach Visitors Center.

*Communications Problems:* Cell reception varies.

*Additional Operational Comments:*



**County:** Marin**ACP Division/Segment:** MR - I - S003**NOAA Chart:** 18647**Map Book:** Marin County**Decimal Degrees:** 38.032537 -122.931394**Site Description:**

Located within Point Reyes National Seashore and part of site is within a designated Wilderness Area. This site includes all of Drakes Bay and Limantour Estero. Site is within the following State Marine Protected Areas: Point Reyes State Marine Reserve and the Greater Farallones National Marine Sanctuary (GFNMS). A large natural inlet with medium-grained sandy outer beaches. Drakes Estero and Estero de Limantour are connected and tidally flushed through the same opening into Drakes Bay. This shallow Estero contains extensive marshes, tidal mudflats, and 1000 acres of commercial oyster aquaculture operations.

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

9B Vegetated low banks

10A Salt - and brackish-water marshes

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	migratory waterfowl	FP	Sep-Apr	
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	Pacific herring		Year-round	Nov-Mar
Fishery	Aquaculture - Commercial		Year-round	
Invertebrates	Dungeness crab nursery		Year-round	
Mammals	harbor seal	FP	Year-round	Mar-Jun
Plants	eelgrass		Year-round	
Plants	showy rancheria clover	FE	Year-round	Apr-Jun

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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
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

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

**Additional Site Summary Comments:**

A wide variety of birds and sensitive plant species occur in this area. Various species of pinnipeds utilize this site as a haulout and pupping location. Myrtle's silverspot butterfly (FE) and the California red-legged frog (FT/SSC) have been documented in the upland area of this site.

**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. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment. Avoid low flying aircraft/helicopters (<1000 ft) over the seabird use areas and marine mammal haulout areas.

**Hazard and Restrictions:**

Large swell and surf along the outer beach and strong current common through the mouth of the Estero.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-205.1 Objective:** Exclude oil from entering either Drakes or Limantour Estero.

*Strategy:* This large natural inlet cannot be closed by constructing a sediment dike. The mouth may be greater than 1000 ft wide. Length and specific placement of booms may vary due to changing position of estero mouth. In addition to on-water containment and recovery efforts, the following site-specific protection measures should also be carried out:

- a) As much oil as possible should be stranded on the outer beaches to reduce the volume flowing into the estero. If conditions allow, deploy several 100-300 ft sections of deflection booms along shore to divert oil onto hard-packed, medium-grained outer sand beaches.
- b) Alternative: if conditions allow and inlet mouth is relatively narrow; place a "V shaped" boom configuration beginning several yards from up- and down-coast from the mouth and pointing out from the mouth and into the bay.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		2000	feet	
Anchor	Danforth		50 lb	7		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-205.2 Objective:** Exclude oil from entering either Drakes or Limantour Estero.

*Strategy:* Under high surf conditions when booming outside the mouth is not possible, deploy the following deflection/collection booming strategy inside the estero mouth:

- a) Deploy a series of cascading 18" curtain boom in the interior east channel (Estero de Limantour) with a hinge point near mid-channel. Deploy at an angle appropriate to deflect oil based on current and/or wind conditions, divert oil to either the fine sand beach catchment area on the mainland directly northeast of the inlet throat, or onto the landward side of the east spit.
- b) Deploy another hinged set of cascading deflection booms (18") in the interior northwest channel (Drakes Estero) angled to deflect oil onto the fine sand beach catchment area on the mainland directly northeast of the inlet throat onto the landward side of the west spit . Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may possibly accumulate.

Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		6000	feet	
Boom	Sorbent			2100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Vessel	Boom Boat			2		
Vessel	Skiff			1		
Staff	Staff to Deploy			8		

**Strategy: 2-205.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities, deploy skimmers to collect oil. Because of very strong flood currents, there may be some entrainment of oil. To guard against this eventuality, it may be necessary to position additional skimmers further back in the tidal channels.

Consult IC prior to initiation of this recovery strategy.

Table of Response Resources

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

### Logistics:

*Directions:* From Highway 101 in San Rafael, take Sir Francis Drake Blvd to Hwy 1 at Olema. Turn right (north) and go 2 miles, turn left (west) on Sir Francis Drake through Inverness. Proceed out to headland and turn left onto Drakes Beach Road to Visitors Center. This will give access to the north spit of the Estero. To reach the south spit: after turning off Hwy 1 onto Sir Francis Drake, take the first left onto Bear Valley Road, then right on Limantour Road, proceed to the end of the road.

*Land Access:* Use of motorized vehicles is restricted within a designated wilderness area. Contact NPS Personnel for access.

*On-Water Limitations:* Tidal sandbar cannot often be crossed. Small boat launching is possible at Johnson's oyster farm during high tide. Bodega Bay is an optional boat launch.

*Facilities, Staging Areas, Command Posts, Available Equipment:* On-site staging areas are not available. Closest area is Limantour Beach parking lot 2.5 miles south of the inlet.

*Communications Problems:* Cell reception varies on outer coast.

*Additional Operational Comments:* This is a designated Wilderness Area and access is very poor. Permission to access granted by National Seashore (National Park Service). Some farm roads and trails exist but may be impassible. Possible access to Limantour spit from Limantour road south of the Estero. Access by water with landing craft or air from

helicopters will be the fastest response, although difficult.



**County:** Marin **ACP Division/Segment:** MR - J - S001**NOAA Chart:** 18647**Map Book:** Marin County**Decimal Degrees:** 38.02977 -122.918642**Site Description:**

Located within Pt. Reyes National Seashore and Estero de Limantour Reserve. The south spit of Limantour Estero is approximately 2.5 miles long and designated as a Wilderness Area. Site also includes the eastern stretch of beach from the parking area to the cliffs. This site is contiguous with site 2-205-A, Drakes Estero. Site is within the Greater Farallones National Marine Sanctuary. A dynamic medium-grained sand beach backed by vegetated sand dunes.

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

9A Sheltered tidal flats

10A Salt - and brackish-water marshes

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Mar
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Aug
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Birds	migratory shorebirds	FP	Sep-Apr	
Insects	Myrtle's silverspot butterfly	FE	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-Jun
Plants	Pacific Grove clover	SR	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:**

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C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(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	/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. Various species of pinnipeds utilize this site as a haulout and pupping 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. Avoid trampling sand dunes, sensitive plants and animals causing penetration of oil into the sediments and further injury to the environment. Avoid low flying aircraft/helicopters (<1000 ft) over marine mammal haulout areas.

**Hazard and Restrictions:**

Large swell and surf common along this shoreline.

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

**Strategy: 2-207.1 Objective:** Prevent oiling on beach, especially west end from parking area to the estero mouth.

*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.

- 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) Manual recovery is the likely cleanup method, however heavy equipment (e.g. graders, front-end loaders, bobcats) may be useful for cleaning this sand beach.
- d) Access to the west beach portion of this site is restricted to vehicular traffic due to the presence of the threatened western snowy plover and this site's designation as a Wilderness Area. Snowy plovers nest on the foredune above the high tide line March through August. All traffic must be kept out of the area from the high tide line to the top of the dunes during nesting season. Contact Point Reyes National Seashore Resource Specialists for entry.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			2		
Staff	Staff to Deploy			3		

**Logistics:**

*Directions:* From Highway 101 in San Rafael, take Sir Francis Drake Blvd to Hwy 1 at Olema. Turn right (north) and go 2 miles, turn left (west) on Sir Francis Drake, take the first left onto Bear Valley Road, then right on Limantour Road, proceed to the end of the road.

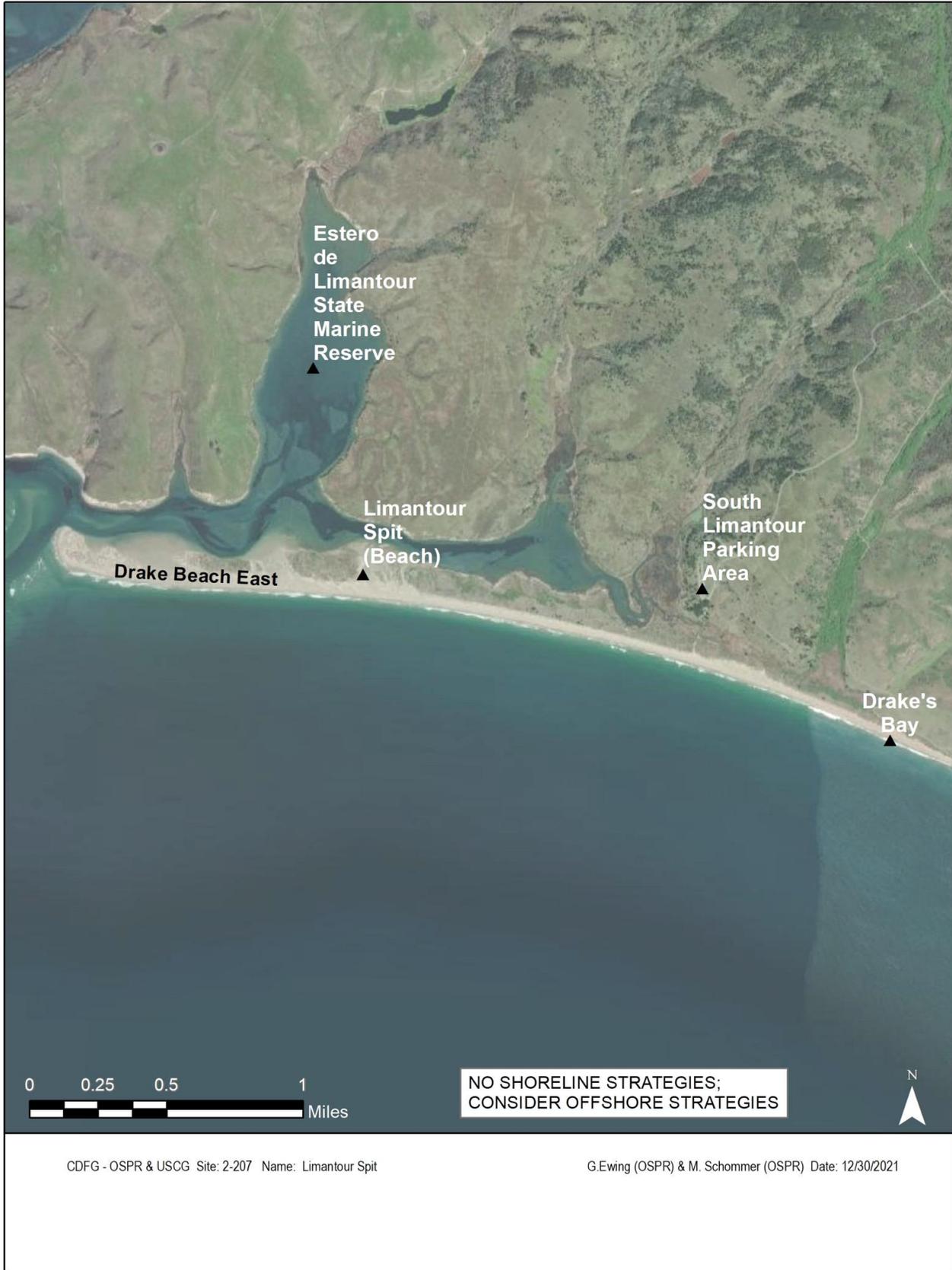
*Land Access:* Access by foot or ATV on beach. Contact NPS Personnel for further access.

*On-Water Limitations:* Access to shoreline restricted due to bird nesting. Nearest small boat ramp at Lifeboat Station on Pt. Reyes Headland or from Drakes Estero.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging at Limantour Beach parking lot.

*Communications Problems:* Cell reception varies.

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



**County:** Marin**ACP Division/Segment:** MR - K - S001**NOAA Chart:** 18640 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.99871 -122.827286**Site Description:**

A rocky point located within Pt. Reyes National Seashore and Greater Farallones National Marine Sanctuary along the east shore of Drakes Bay. Approximately 20 nautical miles upcoast of the Golden Gate. Site is within the following State Marine Protected Area: Point Resistance Rock Special Closure. This site consists of a rocky point with exposed rocky cliffs and gravel/cobble shoreline.

**Resources at Risk:***ESI and Habitat:* 3B Scarps and steep slopes in sand

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	Brandt's cormorant	FP	Year-round	Mar-Jul
Birds	pigeon guillemot	FP	Year-round	Mar-Jul
Birds	common murre	FP	Year-round	Mar-Jul
Birds	pelagic cormorant	FP	Year-round	Mar-Jul
Birds	western gull	FP	Year-round	Mar-Jul
Invertebrates	black abalone	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
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
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:**

**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 which are present throughout the year. The primary objective is to minimize exposure of oil to the natural resources present at the site. 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:**

Heavy surf and large swell common at this site. Steep cliffs.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-210.1 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:* No road access. Accessible only by hiking trail or by boat.

*Land Access:* No vehicular shoreline access. Contact NPS Personnel for access.

*On-Water Limitations:* Heavy surf, washrocks. Nearest launch is San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging on-water only.

*Communications Problems:* Cell reception varies.

*Additional Operational Comments:* Date developed: March 1995. Strategy has not been deployed or tested.



**County:** Marin**ACP Division/Segment:** MR - K - S003**NOAA Chart:** 18640 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.985016 -122.811426**Site Description:**

A rocky point located within Pt. Reyes National Seashore and Greater Farallones National Marine Sanctuary along the east shore of Drakes Bay. Approximately 18 nautical miles upcoast of the Golden Gate. Site is associated with BLM Ca Coastal National Monument resources. The intertidal zone at Miller Point consists of a rocky bench of varying width. The beach to the north is moderately sloped composed of a mixture of sand and gravel. The beach to the south is sand/gravel/cobble substrates.

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

6A Gravel Beach

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

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	Brandt's cormorant	FP	Year-round	Mar-Jul
Birds	pelagic cormorant	FP	Year-round	Mar-Jul
Birds	pigeon guillemot	FP	Year-round	Mar-Jul
Birds	common murre	FP	Year-round	Mar-Jul
Birds	western gull	FP	Year-round	Mar-Jul
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	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
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 which are present throughout the year. The primary objective is to minimize exposure of oil to the natural resources present at the site. 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:**

Large surf and swell, washrocks, steep cliffs.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-213.1 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:* No road access. Accessible only by hiking trail or by boat.

*Land Access:* No vehicular shoreline access. Contact NPS Personnel for access.

*On-Water Limitations:* Heavy surf, washrocks. Nearest boat ramp is in San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging on-water only.

*Communications Problems:* Cell reception varies.

*Additional Operational Comments:* Date developed: March 1995



**County:** Marin**ACP Division/Segment:** MR - K - S003**NOAA Chart:** 18640 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.947563 -122.782212**Site Description:**

Located within Pt. Reyes National Seashore and Greater Farallones National Marine Sanctuary (GNMS) along the east shore of Drakes Bay. Approximately 16 nautical miles upcoast of the Golden Gate. Site includes the two rocky points known as Double Point, the cove between the points, and the large offshore rock known as Stormy Stack. Site is within the following State Marine Protected Areas: Double Point/Stormy Stack Rock Special Closure. Site is associated with BLM Ca Coastal National Monument resources. Double Point is a wave-cut rocky platform with mixed sand/gravel beaches on both sides of the two points and in the cove in-between. Stormy stack is an exposed flat-top island with steep rocky cliffs approximately 800 yds off the northern point of Double Point.

**Resources at Risk:***ESI and Habitat:* 1C Exposed rocky cliffs with boulder talus base

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

5 Mixed sand and gravel beaches

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	common murre	FP	Year-round	Mar-Jul
Birds	Brandt's cormorant	FP	Year-round	Mar-Jul
Birds	pelagic cormorant	FP	Year-round	Mar-Jul
Birds	pigeon guillemot	FP	Year-round	Mar-Jul
Birds	brown pelican	FP, SP	Year-round	Mar-Jul
Birds	Ashy storm petrel	SSC	Year-round	Mar-July
Mammals	California sea lion	FP	Year-round	Aug-Mar
Mammals	harbor seal	FP	Year-round	Apr-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

**List of Key Contacts:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(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	/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	/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

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**Additional Site Summary Comments:**

A large colony of various seabirds utilize this area. A variety of pinnipeds haul out and pup in this area as well.

**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 which are present throughout the year. The primary objective is to minimize exposure of oil to the natural resources present at the site. 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:**

Heavy surf, large swell and washrocks common at this site. Steep cliffs.

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

**Strategy: 2-216.1 Objective:** on-water and off shore response

*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**

**Strategy: 2-216.2 Objective:** Deflect when sea conditions permit: to avoid oil stranding on rocky shoreline and contaminating seabird and marine mammal use areas.

*Strategy:* If sea conditions allow, deploy ocean boom off north or south points of headland to deflect oil away. Deploy boom off rocky points near seal haul-out coves to deflect oil from beach.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		1000	feet	
Anchor	Danforth		50 lb	11		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Logistics:**

*Directions:* No road access. Accessible only by hiking trail or by boat.

*Land Access:* No vehicular shoreline access. Contact NPS Personnel for access.

*On-Water Limitations:* Heavy surf and large swell common at this site. Closest boat ramp is in Bolinas Lagoon or San Francisco Bay (Horseshoe Cove).

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging on-water only.

*Communications Problems:* Cell reception varies.

*Additional Operational Comments:* Date developed: March 1995, site strategy has not been deployed or tested.



*County:* Marin*ACP Division/Segment:* MR - L - S006*NOAA Chart:* 18649 / 18680*Map Book:* Marin County*Decimal Degrees:* 37.892052 -122.704635**Site Description:**

The site is located within Greater Farallones National Marine Sanctuary (GNMS) and partially within Point Reyes National Seashore. It is approx 12 nautical miles upcoast from the Golden Gate near the town of Bolinas. The reef is several hundred yards wide and nearly 3 miles long. Site is within the following State Marine Protected Area: Duxbury Reef State Marine Conservation Area. Site is associated with BLM Ca Coastal National Monument resources. This is the largest intertidal reef in California. It is a designated wildlife preserve. It consists of a large wave-cut mudstone rocky bench backed by coarse-grained beaches and eroding cliffs with extensive intertidal and tidepool areas.

**Resources at Risk:***ESI and Habitat:* 1C Exposed rocky cliffs with boulder talus base

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-Jul
Birds	wading birds		Year-round	
Birds	raptors		Year-round	
Invertebrates	rocky intertidal invertebrates		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
O	/Dispatch, 24-hr	Bolinas Fire Department	(415) 499-6717
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Emergency Service Coordinator	Marin County Office of Emergency Services	(415) 250-0267
O	/Dispatch, 24-hr	Marin County Parks, Open Space District	(415) 479-2311
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	California Department of Fish and Wildlife	(707) 445-5365
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:**

Commercial and recreational fishing occurs in the area.

**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 which are present throughout the year. 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:**

Potentially heavy surf and large swells common at this site. Very wide, rocky reef. Steep, eroding cliffs.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-219.1 Objective:** Open water & on-water counter measures.

*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**

**Strategy: 2-219.2 Objective:** Shoreline oil mitigation and cleanup: Prevent penetration of oil into gravel beaches resulting in long-term persistent oiling of the area.

*Strategy:* Place several thousand feet of sorbent booms (pom-poms or adsorbent booms) along upper beach to minimize oil penetrating into gravel beach.

Manual removal of oil would most likely be the recommended cleanup method due to the sensitivity of the reef organisms.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Oil Snare (pom-pom)			5000	feet	
Anchor	Danforth	30 lb		11		
Staff	Staff to Deploy			4		

**Logistics:**

*Directions:* Hwy 101 to Hwy1 to Bolinas Lagoon. At the top or head of the lagoon turn westward onto Olema-Bolinas Road. Turn right on Mesa Road. Several access point to the reef exist: 1) public access trails from Mesa Road at Palomarin; 2) through the Commonweal Institute north of Bolinas; 3) at Agate Beach County Park. To get to Agate Beach: from Mesa Road turn left on Overlook Drive, turn right on Elm Road and proceed to the parking lot at the end of the road.

*Land Access:* Vehicular access to beach thru town of Bolinas. Contact NPS Personnel for access.

*On-Water Limitations:* Heavy surf and large swell common at this site. Nearest boat launch is from Seadrift Community or from San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging access through Agate Beach County Park in Bolinas, the Commonweal Institute on bluffs above the site, and on the Palomarin Beach access at the northwest end of beach.

*Communications Problems:* Cell reception varies on the outer coast.

*Additional Operational Comments:* Strategy developed March 1995, has not been deployed or tested.



**County:** Marin**ACP Division/Segment:** MR - M - S003**NOAA Chart:** 18649**Map Book:** Marin County**Decimal Degrees:** 37.909052 -122.679503**Site Description:**

This site includes all of Bolinas Lagoon, mudflats, and salt-marshes adjacent to the communities of Bolinas and Stinson Beaches. Shorelines are under NPS Management. The site lies within Greater Farallones National Marine Sanctuary (GNFMS). A large natural coastal lagoon/estuary with extensive tidal mudflats, saltmarsh, and riparian habitat along freshwater inflows. The lagoon mouth is open all year. Currents at the mouth may exceed 5 knots and protective strategies are designed further into the lagoon where surface currents slow to a collection point.

**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:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	California black rail	FP, ST		
Birds	California Ridgeway's rail	FE, SE		
Birds	Western snowy plover	FT, SSC		
Fish	steelhead - Central/Northern California	FT		
Fish	coho salmon - south of Punta Gorda	FE, SE		
Mammals	harbor seal	FP		
Plants	showy rancheria clover	FE	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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Sea Drift Association	(415) 868-9043
E	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
O	/Dispatch, 24-hr	Bolinas Fire Department	(415) 499-6717
O	/Agency Representative, 24-hr	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 Parks, Open Space District	(415) 479-2311
O	/Dispatch, 24-hr	Marin County Sheriff's Department	(415) 479-2311
O	/Emergency Contact (24hr)	Stinson Beach Fire Department	(415) 488-4321
T	/Agency Representative	California Department of Fish and Wildlife	(707) 445-5365
T	/Agency Representative	Golden Gate National Recreation Area	(415) 561-4731
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 wide variety of bird species inhabit the area along with several sensitive plant species.

**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 keep oil from entering and spreading in the lagoon. Secondary concern is to minimize response activities impacts. Avoid trampling wetlands, sand dunes, sensitive plants and animals, and soft mudflats; causing penetration of oil into the sediments; and harassing seals, birds, and wildlife.

**Hazard and Restrictions:**

Shallow water/mudflats inside lagoon and strong currents (>5 knots) at the mouth. Heavy surf and strong currents exist outside the lagoon entrance and along the outer beach.

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

**Strategy: 2-222.1 Objective:** Objective: Primary – Use chevron (.a and .b) to Divert oil from Eastern Channel to Collections at SeaDrift and Kent Island. (.c) Exclude oil from Western channel between Bolinas and Kent Island

*Strategy:* a) 1st leg of chevron. Diverts oil from south flow of eastern channel to collection pocket at Sea Drift Boat Ramp. Deploy 2400+ ft. of river boom (4" flotationx6"skirt), at a 10-15 degree angle into the incoming tidal current, from the Sea Drift Community Boat Ramp to 80' SW of the eastern most channel mooring buoy (cascading legs may be needed if strong current is present). Create a skimming pocket at the Boat Ramp, wrap boom back against shore toward entry, and prepare the pocket to collect oil initially with sorbents and pompoms, if collectable quantities of oil present, advise Incident Command of skimmable oil and request skimmer (see 222.5).

b) 2nd leg of chevron. Diverts oil from north flow of eastern channel to collection pocket on Kent Island. Deploy 1380 ft. of deflection river boom (4" flotationx6"skirt) from northern end of .1a boom to eastern end of Kent Island at a 20-25 degree angle, to divert oil out of eastern channel onto the high tide sand beach of Kent Island.

c) Exclude oil from Western Channel next to Wharf Rd to Western end of Kent Island. Deploy 600 ft. of deflection river boom (4" flotationx6"skirt) from northern end of western side of the main channel, along house pilings, to divert oil heading up west channel onto the high tide sand beach of Kent Island. Anchor on land with a 22+# anchor or two stakes. Local responders can deploy .1c.

## Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		4400	feet	
Boom	Sorbent			200	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	22 lb		25		
Vessel	Skiff			3		
Staff	Staff to Deploy			8		

**Strategy: 2-222.2 Objective:** Backup Strategy to .1. Use chevron to Divert and Collect oil from Eastern Channel to Collection at SeaDrift Boat Ramp and Kent Island.

*Strategy:* a) 1st leg of chevron. Deploy 600' of river boom (4" flotationx6"skirt) from the SeaDrift Boat Ramp at a 20-25 degree angle toward .1a boom. Create collection pocket at Boat Ramp, and prepare the pocket to collect oil initially with sorbents and pompoms, if collectable quantities of oil present, advise Incident Command of skimmable oil and request skimmer (see 222.5).

b) 2nd leg of chevron. Deploy 1650' river boom (4" flotationx6"skirt) from west end of .4a) boom to eastern tip (above high water line) of Kent Island. Deploy at best achievable angle to flood current. Create a collection pocket by wrapping boom back along Kent Island shoreline. Local responders can deploy .2a and b.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2250	feet	
Boom	Sorbent			200	feet	
Anchor	Danforth	22 lb		8		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-222.3 Objective:** Prevent oil from entering northern and southern interiors of lagoon

*Strategy:* Both legs are very shallow water deployments, crossing exposed mud flats at low tide and small secondary channels. Close and parallel to Highway 1 shoreline are deep water channels. Boom must be angled across channel at 20-25 degrees. Collection pockets should be established on Highway 1 shoreline. Several small channels may be encountered in mudflats and boom should be properly angled and backed with sorbent boom.

a) Deploy 3250' of river boom (4x6) from Highway 1 shoreline to eastern end of Kent Island (above high tide line). Both legs are very shallow water deployments, crossing exposed mud flats at low tide until close to Highway 1 shoreline when deeper water channels are reached. Boom then must be angled across channel at 20-25 degrees to then establish collection pockets on Highway 1 shoreline. Create a skimming pocket against sand beach on the Highway 1 side, wrap boom back against shore toward entry, and prepare the pocket to collect oil initially with sorbents and pompoms, if collectable quantities of oil present, advise Incident Command of skimmable oil and request skimmer (see 222.5).

b) Deploy 3750' of river boom (4x6) from SeaDrift Boat Ramp to Highway 1 shoreline. Both legs are very shallow water deployments, crossing exposed mud flats at low tide until close to Highway 1 shoreline when deeper water channels are reached. Boom then must be angled across channel at 20-25 degrees to then establish collection pockets on Highway 1 shoreline. Create a skimming pocket against sand beach on the Highway 1 side, wrap boom back against shore toward entry, and prepare the pocket to collect oil initially with sorbents and pompoms, but if collectable quantities of oil present, advise Incident Command of skimmable oil and request skimmer (see 222.5). Local responders can deploy .3a and b.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		7000	feet	
Boom	Sorbent			400	feet	
Anchor	Danforth	22 lb		25		
Vessel	Skiff			2		
Staff	Staff to Deploy			8		

**Strategy: 2-222.4 Objective:** Capture and Recover oil at entrance channel to Bolinas Lagoon

*Strategy:* Place and anchor 400-1000' of oil snare lines along inside of channel entrance on Stinson and Bolinas shores, running angled to channel as conditions permit. Local responders can deploy.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Oil Snare (pom-pom)			1000	feet	
Anchor	Danforth		22 lb	11		
Staff	Staff to Deploy			6		

**Strategy: 2-222.5 Objective:** Shoreside Recovery of skimmable oil in collection/exclusion boom

*Strategy:* When skimmable quantities of oil are present, deploy shoreside skimming system (SSS) to operate with 222.1 and 222.2 and 222.3 collection points as needed. Consider use of Self Propelled Skimmer if conditions warrant.

Table of Response Resources

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

### Logistics:

*Directions:* From Hwy 101 in Marin County, take Hwy 1 from Sausalito to Stinson Beach; or from San Rafael take Sir Francis Drake Blvd west to Hwy 1, then south to Bolinas or Stinson Beach. To reach south side of lagoon mouth and boat ramp; in Stinson Beach turn on Calle del Arroyo, proceed to Sea Drift Community gate. Once in the community go to end of Sea Drift Rd. To get to north/west side of lagoon mouth pass through Stinson Beach to upper end of lagoon on Hwy 1; turn left on Olema-Bolinas Rd., proceed into the town of Bolinas, turn left on Wharf Rd. and go to end of road.

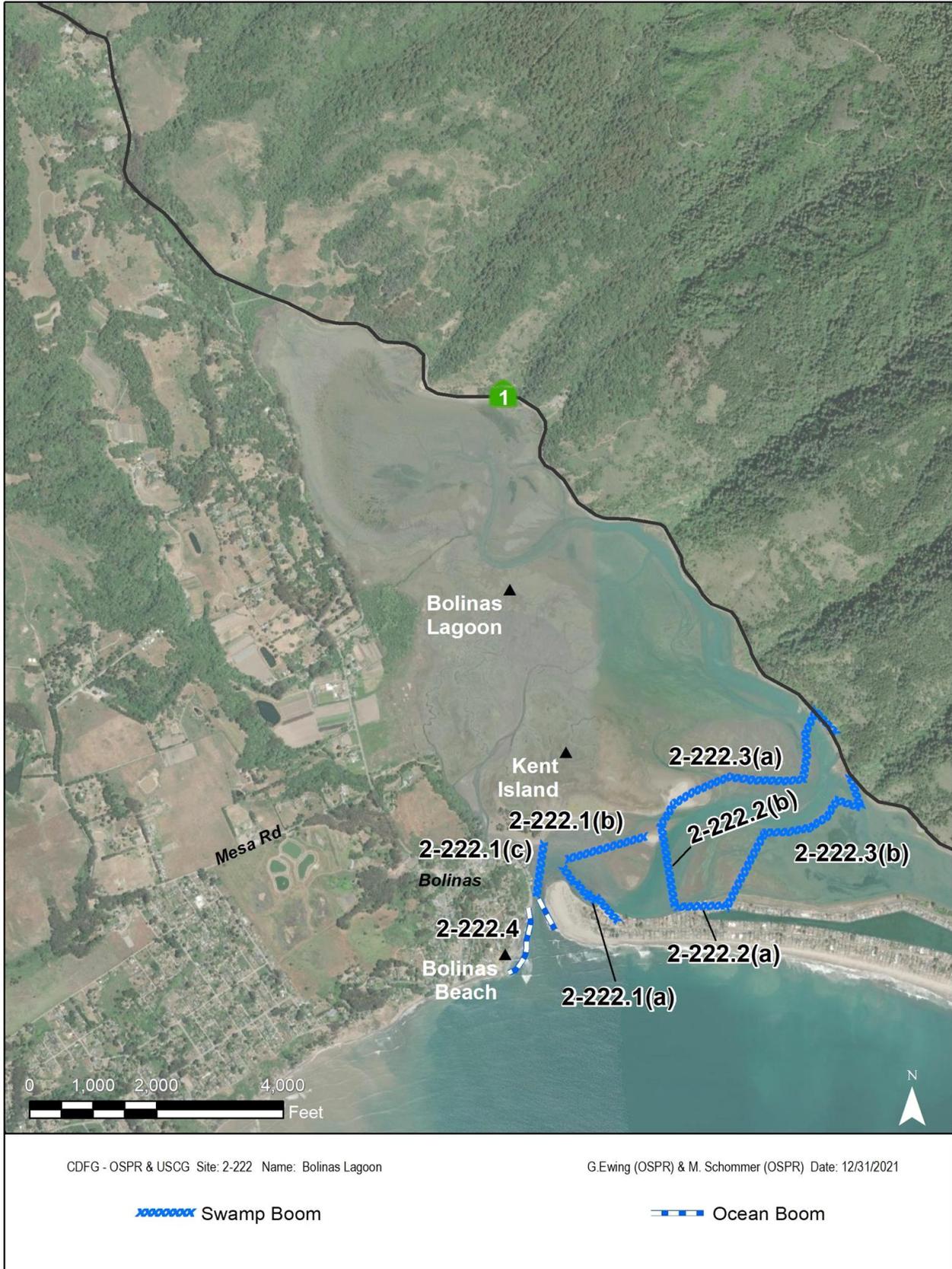
*Land Access:* Large trucks okay, no tractor-trailer rigs.

*On-Water Limitations:* Heavy surf and strong currents outside, shallow inside. Boat ramp to lagoon at Sea Drift Community on Stinson Beach spit - accessible only during high tides.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging on south spit at end of Sea Drift Rd and at boat ramp. Space very limited in Bolinas. Equipment and helo pad available at Bolinas Fire Station a few miles away.

*Communications Problems:* Cell reception varies on outer coast.

*Additional Operational Comments:*



**County:** Marin**ACP Division/Segment:** MR - N - S006**NOAA Chart:** 18649 / 18680**Map Book:****Decimal Degrees:** 37.859505 -122.576218**Site Description:**

Site includes Muir Beach between cliffs north and south, Big Lagoon behind the beach berm and Redwood Creek up to the maximum extent of tidal influence. This site is within the Greater Farallones National Marine Sanctuary (GNFMS). Shoreline under jurisdiction Golden Gate National Recreation Area (National Park Service). Muir beach is a medium to coarse grained sand beach with a rocky boulder shore at the northern end. Big Lagoon, at the mouth of Redwood Creek, lies behind the beach and is open to the ocean winter through spring. The lagoon is long, narrow, shallow, and surrounded by salt-marsh vegetation. Redwood Creek is small and has riparian vegetation along its banks.

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

10A Salt - and brackish-water marshes

1A Exposed Rocky Shore

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	seabirds		Year-round	
Birds	peregrine falcon	FP, SP		Mar-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	North American river otter	SSC	Year-round	
Reptiles	Western pond turtle	SSC	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

**List of Key Contacts:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(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	Golden Gate National Recreation Area	(415) 561-4731
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

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**Additional Site Summary Comments:**

Oil from the T/V APEX HOUSTON spill in 1986 was carried into the lagoon.

**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. Another concern is 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:**

Large surf and swell possible.

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

**Strategy: 2-225.1 Objective:** Exclude oil by booming.

*Strategy:* Deploy sorbent and swamp boom across lagoon/creek to prevent movement of oil upstream. Place several layers 20 feet apart as necessary. Deploy by hand.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		200	feet	
Boom	Sorbent			1000	feet	
Anchor	Danforth	22 lb		5		
Staff	Staff to Deploy			2		

**Strategy: 2-225.2 Objective:** Exclude oil by Sediment dam.

*Strategy:* Block off inlet with sediment dike (fine-grained sand) using a small bulldozer or front-end loader. The zone of high-tide overwash on the spit is approximately 300 feet long. This is the length of the dike required. If large surf conditions exist, construct a dike with a runnel (a shallow ditch behind the dike) to catch any overwash. This can only be done if sand is plentiful and beach is wide enough.

Table of Response Resources

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

**Logistics:**

*Directions:* From Sausalito, Hwy 101 take Hwy 1 (Shoreline Hwy) north, left on Pacific Way to Muir Beach Parking Lot.

*Land Access:* Large trucks okay to parking lot. No vehicle access to beach area. ATV accessible.

*On-Water Limitations:* Large surf common at this site. Nearest launch ramp in San Francisco Bay (Horseshoe Bay).

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging area and access at Muir Beach parking lot.

*Communications Problems:* Cell coverage varies on outer coast.

*Additional Operational Comments:* Developed March 1995, strategy has not been deployed or tested.



CDFG - OSPR & USCG Site: 2-225 Name: Redwood Creek / Big Lagoon/Muir Beach

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 12/31/2021

 Swamp Boom

 Dike or Berm

**County:** Marin**ACP Division/Segment:** MR - O - S003**NOAA Chart:** 18649 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.830153 -122.536567**Site Description:**

Site includes Rodeo Lagoon and Rodeo beach at Fort Cronkhite. It is located within the Golden Gate National Recreation Area (National Park Service) only a few miles north of the Golden Gate Bridge. This site is associated within the Greater Farallones National Marine Sanctuary (GNMS). Rodeo Lagoon occupies 73 acres behind a coarse-grained sand beach. The Lagoon is open intermittently in winter-spring but experiences significant overwash all year. Freshwater and brackish salt-marsh vegetation line the banks of the lagoon. The site receives a significant amount of public, recreational and educational use.

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

10A Salt - and brackish-water marshes

9B Vegetated low banks

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Birds	California least tern	FE, SE	Apr-Sep	Apr-Jun
Birds	shorebirds		Year-round	
Birds	wading birds		Year-round	
Birds	waterfowl		Year-round	
Birds	raptors		Year-round	
Fish	tidewater goby	FE, 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:**

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C	/Coordinator	Northwest Information Center	(707) 588-8455
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O	/Dispatch, 24-hr	California State Parks	(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	Golden Gate National Recreation Area	(415) 561-4731
T	/Agency Representative, 24-hr	Greater Farallones National Marine Sanctuary	(650) 678-4943
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T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505

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

**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

The 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, Also of concern 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:**

Large surf and swell common at this site. Access to south Rodeo Beach is tide dependent. Parking/access trailhead from Battery Alexander (Field Rd).

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

**Strategy: 2-228.1 Objective:** Exclude oil by booming at lagoon mouth

*Strategy:* Deploy swamp and sorbent booms or fence boom across lagoon and mouth as a precautionary measure. Place sorbent along backside of sand spit. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to recover oil that may accumulate. If oil accumulates in skimmable quantities, advise IC with recommendations for skimming.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1200	feet	
Boom	Sorbent			2100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	22 lb		10		
Staff	Staff to Deploy			5		

**Strategy: 2-228.2 Objective:** Exclude oil using sediment dike

*Strategy:* Block entrance with sediment dike (coarse-grained sand, granules, and pebbles). Dike should extend from the vegetated dune portion of the spit to the rock scarp adjacent to the inlet mouth on the northwest side of the lagoon (approx 800 ft). Height of the dike will be determined by wave conditions. Construct dike with gated culverts, if necessary for runoff during winter. If large surf conditions exist, construct a dike with a runnel (a shallow ditch behind dike) to catch overwash. This can only be done if sand is plentiful and beach is wide enough.

Table of Response Resources

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

**Strategy: 2-228.3 Objective:** Oil Recovery by skimming

*Strategy:* Deploy skimmer if oil accumulates in skimmable quantities. Consult IC prior to initiation of any skimming activities.

Table of Response Resources

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

**Logistics:**

*Directions:* Exit off Hwy 101 at Golden Gate Bridge for Golden Gate National Recreation Area (Marin Headlands). Take the tunnel through the mountain and proceed on Bunker Road to the end at Fort Cronkhite.

*Land Access:* Access to Parking Lot. For beach or gate access, contact NPS Personnel.

*On-Water Limitations:* Large surf and swell common at this site. Nearest boat launch in San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Large staging area and easy access at Rodeo Lagoon parking lot. Restrooms in parking lot.

**2-228-A Site Strategy - Rodeo Lagoon**

**2-228-A**

*Communications Problems:* Cell reception varies on outer coastline.

*Additional Operational Comments:*



**County:** Marin**ACP Division/Segment:** MR - O - S004**NOAA Chart:** 18647 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.824012 -122.536974**Site Description:**

Large, offshore, flat-top rock island south of Rodeo Lagoon, between Fort Cronkhite and Point Bonita. This site is within the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources. A large offshore rock that has steep vertical cliffs with boulder talus and rocky intertidal habitat at its base. Very exposed to all waves and weather. Just offshore at the south end of Rodeo Cove beach. Approximately 3/4 mile north of Point Bonita Lighthouse.

**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	California brown pelican	FP, SP	Year-round	Apr-Dec
Birds	seabirds		Year-round	Apr-Dec

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

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O	/Dispatch, 24-hr	California State Parks	(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	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	Golden Gate National Recreation Area	(415) 561-4731
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

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 which are present throughout the year. 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:**

Heavy surf and large swell common at this site.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-231.1 Objective:** Prevent oil from stranding on rocky shoreline and contaminating seabird use areas.

*Strategy:* Island has high verticle rock cliffs with boulders at the base. 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:* No road access to this island. Closest shore access is to Rodeo Beach.

*Land Access:* No access.

*On-Water Limitations:* Heavy surf and large swell common at this site. Nearest boat launch is in San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging inside SF Bay. Staging at Rodeo Lagoon parking area but it would be very difficult to pass anything through the surf zone.

*Communications Problems:* Cell reception varies on outer coastline.

*Additional Operational Comments:*



**2-234-C Site Summary - Point Bonita and Bonita Cove****2-234-C****County:** Marin**ACP Division/Segment:** MR - O - S006 MR - O - S007**NOAA Chart:** 18649 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.819171 -122.529475**Site Description:**

Site includes wave-cut, rocky, outcroppings, steep cliffs, rocky shores and sand beaches in Bonita Cove from Pt. Bonita to Pt. Diablo. Area is under jurisdiction of Golden Gate National Recreation Area (National Park Service). Vertical rock cliffs with a coarse-grained sand and gravel/cobble beach at Bonita 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	raptors		Year-round	
Birds	seabirds		Year-round	
Mammals	harbor seal	FP	Year-round	
Mammals	California sea lion	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

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

**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

The concerns are oil contamination and response activity impacts to 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. Other concerns are the impacts resulting from response activities. Avoid trampling sensitive plants and animals, disturbing marine mammals, and causing penetration of oil into the sediments and further injury to the environment.

**Hazard and Restrictions:**

Large surf, swell, and strong currents common at this site. Wash rocks nearshore.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-234.1 Objective:** Prevent contamination and injury to marine mammals, seabirds, shorebirds, and the rocky intertidal zone. Penetration and long-term persistence of oil into coarse-grained beach sediments.

*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**

**Strategy: 2-234.2 Objective:** Deflect oil away from shore to on-water recovery operations. Prevent oil from stranding on rocky shoreline and contaminating marine mammal use areas.

*Strategy:* Deflection booms may be deployed in Bonita Cove to protect harbor seal haulout and the rocky intertidal areas if wave conditions permit.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		2000	feet	
Anchor	Danforth		50 lb	10		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			6		

**Strategy: 2-234.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities as a result of strategies .1 and/or .2, contact IC prior to initiating strategy to deploy skimmer.

Table of Response Resources

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

**Logistics:**

*Directions:* From Hwy 1 exit immediately north of the Golden Gate Bridge onto Conzelman Road. Proceed to end of road to reach lighthouse at Pt. Bonita. Trails to beach can be accessed from parking lots above Bonita Cove.

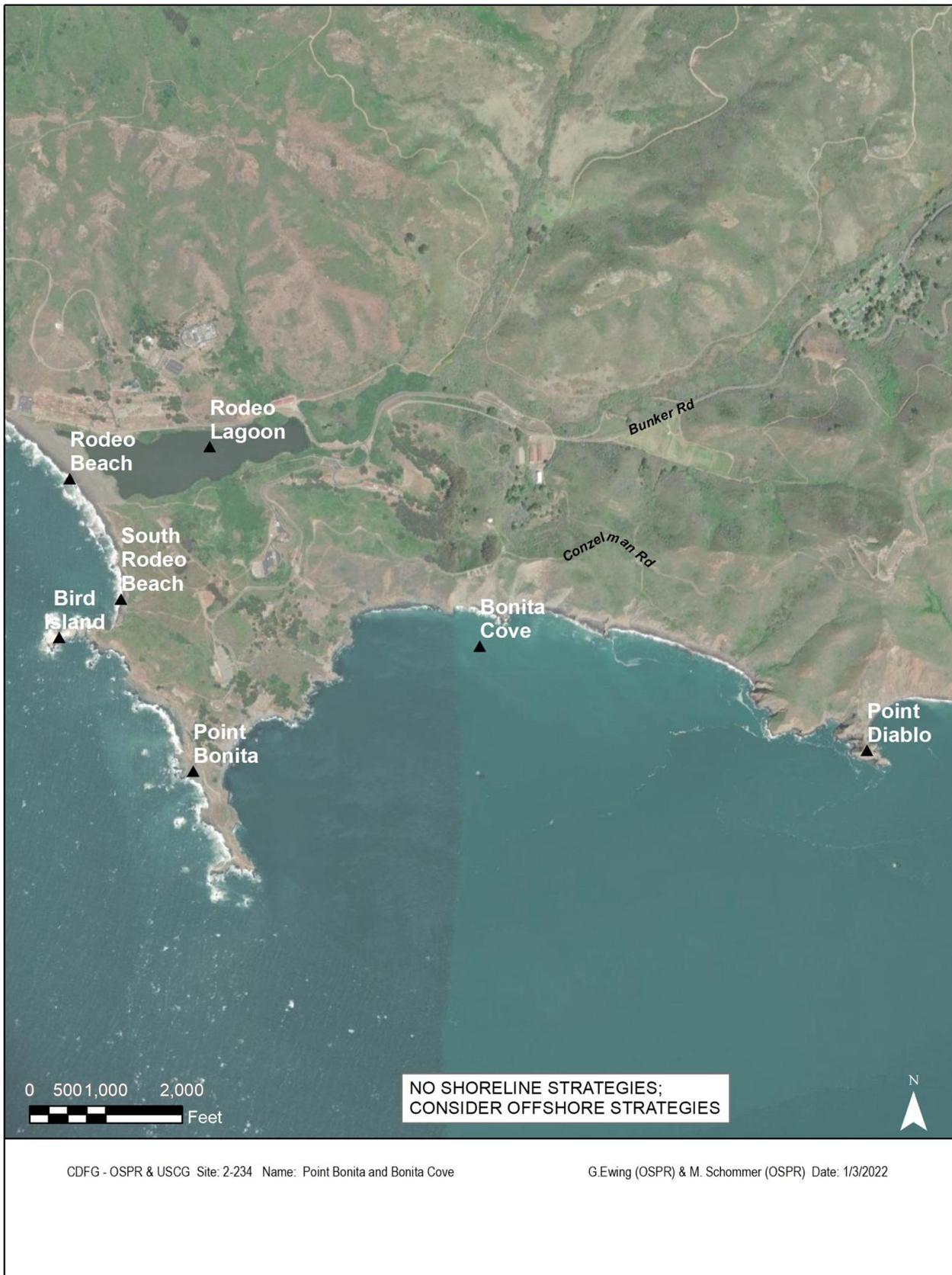
*Land Access:* Contact NPS for access through locked gates.

*On-Water Limitations:* Large surf, swell, and strong currents common nearshore. Nearest boat launch inside San Francisco Bay (Horseshoe Cove).

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging and access from on-water. Very limited shore access from steep bluffs above beaches. Contact NPS Personnel for access.

*Communications Problems:* Cell reception varies on outer coast.

*Additional Operational Comments:*



**County:** Marin**ACP Division/Segment:** MR - O - S010 MR - O - S012**NOAA Chart:** 18649 / 18680**Map Book:** Marin County**Decimal Degrees:** 37.826781 -122.490335**Site Description:**

Site includes steep vertical cliffs, rocky seashores and sandy beaches from Pt. Diablo to Lime Point along the north shore of the Golden Gate. Area is under jurisdiction of Golden Gate National Recreation Area (National Park Service). Tides and currents are strong nearshore. Vertical rocky cliffs with coarse-grained pocket beaches. Kirby Cove is accessible by road, contact NPS for gate access.

**Resources at Risk:***ESI and Habitat:* 1C Exposed rocky cliffs with boulder talus base

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

4 Coarse-grained sand beaches

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	raptors		Year-round	Aug-Dec
Birds	seabirds		Year-round	
Fish	longfin smelt	ST	Year-round	Nov-May
Insects	Mission blue butterfly	FE	Year-round	
Plants	marsh sandwort	FE, SE	Year-round	May-Aug

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

**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

The concerns are oil contamination and response activity impacts to 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. Other concerns are the impacts resulting from response activities. Avoid trampling sensitive plants and animals causing penetration of oil into the sediments and further injury to the environment.

**Hazard and Restrictions:**

Large surf, swell, and strong currents common at this site.

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

**Strategy: 2-236.1 Objective:** Prevent contamination and injury to marine mammals, seabirds, shorebirds, and the rocky intertidal zone. Prevent penetration and long-term persistence of oil into coarse-grained beach sediments.

*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**

**Strategy: 2-236.2 Objective:** Deflect oil away from shore to on-water recovery operations. Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.

*Strategy:* Deflection booms may be deployed from rocky headlands to deflect oil from coarse-grained beaches, if wave conditions permit.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		2000	feet	
Anchor	Danforth		50 lb	5		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-236.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities as a result of strategies .1 and/or .2, contact IC prior to initiating strategy to deploy skimmer.

Table of Response Resources

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

**Logistics:**

*Directions:* From Hwy 1 exit immediately north of the Golden Gate Bridge onto Conzelman Road. Trails and road through locked gate to beach at Kirby Cove can be accessed from parking lots above beach.

*Land Access:* Contact NPS for access through any locked gates.

*On-Water Limitations:* Large surf, swell, and strong currents common at this site. Nearest boat launch is inside San Francisco Bay.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Staging Facilities available. Very limited shoreline access to beaches. Contact NPS Personnel.

*Communications Problems:* Cell reception good.

*Additional Operational Comments:*

ACP 2 SF Bay & Delta

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v. 2022.1 - July 2023



CDFG - OSPR & USCG Site: 2-236 Name: Pt. Diablo to Lime Point

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 1/3/2022

**County:** San Francisco **ACP Division/Segment:****NOAA Chart:** Gulf of the Farallones,  
18645**Map Book:****Decimal Degrees:** 37.698613 -123.002745**Site Description:**

The Farallon Islands are comprised of rocky islands 28 miles west of San Francisco including North, Middle, and Southeast Farallon Islands. The islands and surrounding waters are located within the Greater Farallones National Marine Sanctuary (GFNMS) and are part of both State and Federal Wildlife Refuges. North Farallon and Southeast Farallon Isles are both Protected State Marine Reserves and have special closures. Farallon islands, exposed to heavy surf from all directions. The largest island, Southeast Farallon Island, has rocky marine terraces and cliffs around much of the island. Middle and the North Farallon Island group are small rock island pinnacles (< 0.25 mile diameter).

**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	California black rail	FP, ST	Year-round	Mar-Aug
Mammals	Northern elephant seal	FP	Year-round	
Mammals	Guadalupe fur seal	FT, ST	Year-round	
Mammals	California sea lion	FP	Year-round	
Mammals	Steller sea lion	FP	Year-round	
Mammals	harbor seal	FP	Year-round	
Mammals	Northern fur seal	FP	Year-round	
Mammals	Cetaceans		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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Duty Officer (24hr)	San Francisco Dept. of Emergency Management	(415) 260-2591
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	/California Stranding Coordinator	NOAA National Marine Fisheries Service	(562) 980-3230
T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
T	/Supervisory Wildlife Biologist	USFWS, San Francisco Bay National Wildlife Refuge	(510) 557-1042
T	/Spill Response Coordinator	USFWS, SF Bay-Delta Office	(916) 799-0588

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

**Additional Site Summary Comments:**

The Farallon Islands are a nesting and breeding habitat for a variety of seals and sea lions as well as thousands of seabirds. This sanctuary has the largest concentration of breeding seabirds in the contiguous United States. Many species of whale and dolphin range through this area.

**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 which are present throughout the year. 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:**

Heavy surf and swell, washrocks, great white sharks.

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

**Strategy: 2-240.1 Objective:** Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.

*Strategy:* This site is difficult if not impossible 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. Consider ARTs.

- a) Recommended response strategy is on-water containment and recovery.
- b) Recommend 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:* No road access. Accessible only by vessel.

*Land Access:* No land access, contact NPS Personnel for vessel access.

*On-Water Limitations:* Either transport by Coast Guard Cutter to Farallon Islands or charter vessels for access. Coast Guard Station Golden Gate is the nearest SAR Station.

*Facilities, Staging Areas, Command Posts, Available Equipment:* No facilities available

*Communications Problems:* Unknown cell reception.



**County:** San Francisco **ACP Division/Segment:** SF - I - S008**NOAA Chart:** Gulf of Farallones 18645, **Map Book:**  
SF Bay 18649**Decimal Degrees:** 37.785902 -122.508844**Site Description:**

Land's End is a group of small rocky islands offshore, washrocks, and vertical rock cliffs with sandy pocket beaches along the SF County shoreline. Site is within Golden Gate National Recreation Area (NPS). Site is associated with BLM Ca Coastal National Monument resources. This is an exposed and potentially high energy location. These beaches and rocks are used by pinnipeds for pupping and haulouts during low tide cycles.

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

1C Exposed rocky cliffs with boulder talus base

5 Mixed sand and gravel beaches

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	Brandt's cormorant	FP	Year-round	
Birds	pigeon guillemot	FP	Year-round	
Birds	black oystercatcher	FP	Year-round	
Birds	western gull	FP	Year-round	
Birds	brown pelican	FP, SP	Year-round	
Birds	seabirds		Mar-Jul	
Mammals	harbor seal	FP	Year-round	Mar-Jun
Mammals	California sea lion	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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Duty Officer (24hr)	San Francisco Dept. of Emergency Management	(415) 260-2591
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	Golden Gate National Recreation Area	(415) 561-4731
T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505

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:**

Potentially heavy surf onto rocky shorelines.

**Hazard and Restrictions:**

On Land: Slips, trips and falls; Beware of auto traffic. Vessels: beware of submerged rocks.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-244.1 Objective:** offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

**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/or 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:* This site is just off the coast of San Francisco, north of Sutro Baths.

*Land Access:* Accessible by foot and boat only.

*On-Water Limitations:* The Coast Guard Station Golden Gate is the closest SAR station.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Contact OES for potential ICP locations.

*Communications Problems:* Good cell reception.



**County:** San Francisco **ACP Division/Segment:** SF - J - S002**NOAA Chart:** Gulf of Farallones 18645, **Map Book:**  
SF Bay 18649**Decimal Degrees:** 37.77872 -122.51382**Site Description:**

This site is a group of large offshore rocks (<0.25 mile) and narrow wave-cut platforms along the shore just west of the Golden Gate Bridge. Site is within Golden Gate National Recreation Area (NPS). Site is associated with BLM Ca Coastal National Monument resources. This is an exposed and potentially high energy location. These rocky platforms are used by pinnipeds for pupping and as haulouts. Sutro Baths is a cultural/ historical landmark above the high tide line.

**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:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	Brandt's cormorant	FP	Year-round	
Birds	pigeon guillemot	FP	Year-round	
Birds	black oystercatcher	FP	Year-round	
Birds	western gull	FP	Year-round	
Birds	brown pelican	FP, SP	Year-round	
Mammals	harbor seal	FP	Year-round	Mar-Jun
Mammals	California sea lion	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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Duty Officer (24hr)	San Francisco Dept. of Emergency Management	(415) 260-2591
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	Golden Gate National Recreation Area	(415) 561-4731
T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505

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:**

Strong nearshore currents. Steep cliffs, loose rocks. Slips, trips and falls.

**Hazard and Restrictions:**

On Land: Slips, trips and falls; Beware of auto traffic. Vessels: beware of submerged rocks.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-246.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

**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/or 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:* Use SF City streets to nearest land location (Contact Golden Gate National Recreation Area).

*Land Access:* Total access capability for nearby the site.

*On-Water Limitations:* Nearshore there are underwater obstructions. Boat launching and marina facilities are inside the bay: Sausilitio and Lantern Cove at Marina Park.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Contact NPS Personnel for potential ICP locations,

*Communications Problems:* Good cell reception.



**County:** San Mateo **ACP Division/Segment:** SM - K - S001**NOAA Chart:** Gulf of Farallones 18645, **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.698112 -122.495817  
SF Bay 18649**Site Description:**

This site is a long stretch of medium to coarse-grained sand beach backed by vegetated dunes. Site is under jurisdiction of CA State Parks. The sand on this beach becomes progressively coarser and softer toward the south. Stay away from cliff base.

**Resources at Risk:**

*ESI and Habitat:* 3A Fine- to medium-grained sand beaches  
4 Coarse-grained sand beaches  
1C Exposed rocky cliffs with boulder talus base

**List of Resources at Risk:**

Resource Name		Status	Presence	Sensitivity
Birds	seabirds		Year-round	
Birds	shorebirds		Year-round	
Fish	surf smelt		Year-round	Mar - Aug
Plants	San Francisco Bay spineflower	SSSP	Year-round	Apr-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

**List of Key Contacts:**

Type	Name/Title	Organization	Phone
E	/Dispatch	California Department of Parks and Recreation	(916) 358-1300
E	/Office	California State Parks, Lighthouse Field SB	(831) 423-9703
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Sanctuary Manager	Greater Farallones National Marine Sanctuary	(415) 254-8747
T	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505

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

**Additional Site Summary Comments:**

Stay away from base of sandstone cliffs. They collapse without warning. Beware of tides when accessing beach area. Have an emergency exit plan.

**Concerns and Advice to Responders:**

There is potential for penetration and burial of oil on this beach from sand deposition and wave action.

**Hazard and Restrictions:**

Stay away from base of sandstone cliffs. They collapse without warning. Cliff swallows nest in the highly erodable cliffs at Fort Funston. Keep people away from these cliffs at all times. Aircraft- cliffs; boats- heavy surf; trucks and heavy equipment- possible entrapment at high tide, no access from south, questionable from north; pedestrians- isolation at high tide, surf.

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

**Strategy: 2-250.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or 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**

**Strategy: 2-250.2 Objective:** Deflect oil past site to shore collection.

*Strategy:* Place deflection boom along south edge of beach outward. Oil collection point: beach (coarse grain sand to granule). Use 50ft of oil snare (OS) and/or 100ft of sorbent boom to recover any oil that may accumulate. If oil accumulates in skimmable quantities, advise IC with recommendations for initiating strategy to deploy skimmer.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Ocean Boom	36X36 inch		1000	feet	
Boom	Sorbent			100		
Anchor	Danforth	50 lb		7		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-250.3 Objective:** Oil Recovery by skimming if skimmable quantities of oil are present

*Strategy:* Position shoreside skimming system end of bridge.

Table of Response Resources

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

**Logistics:**

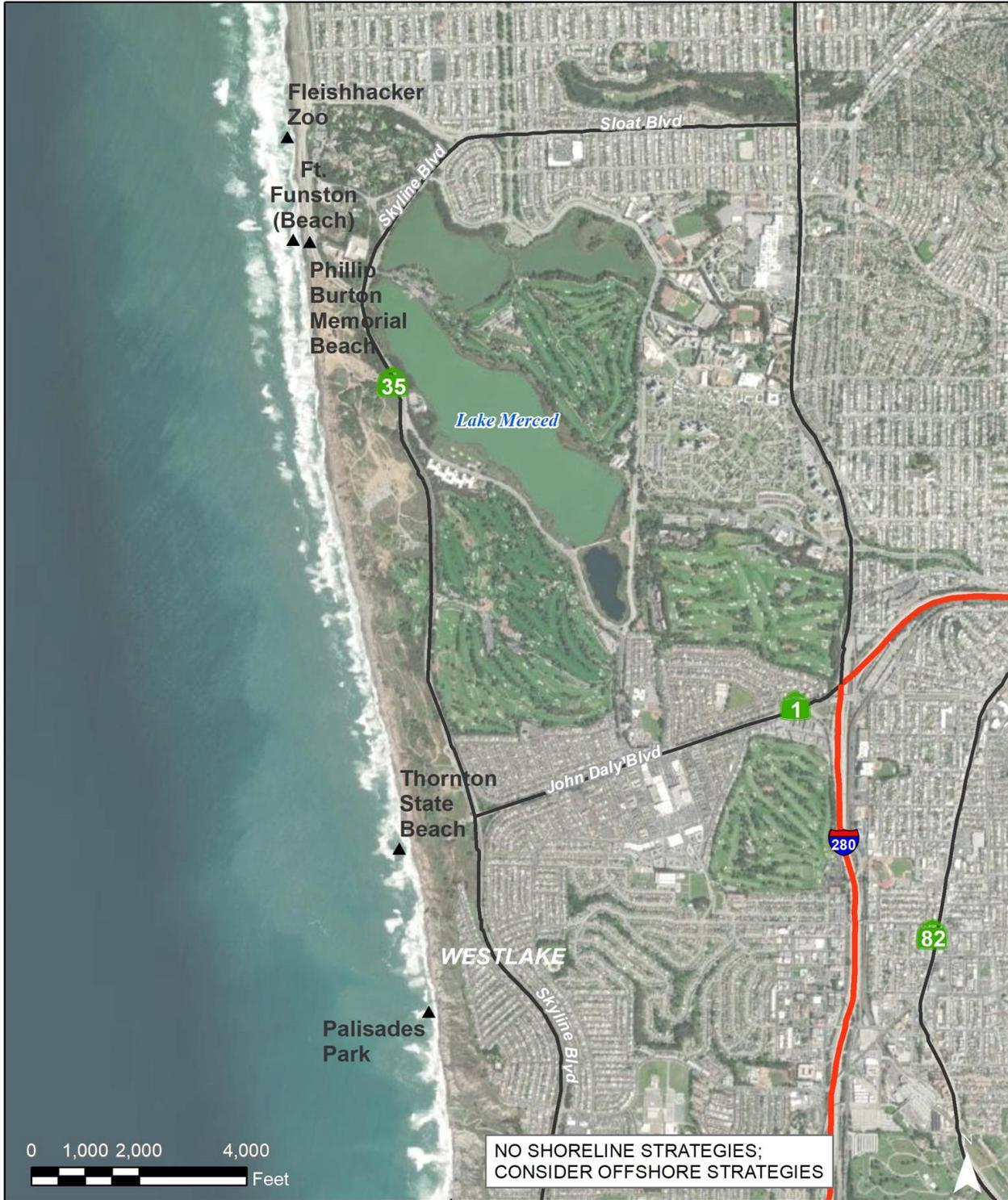
*Directions:* Take Hwy 35 to John Dailey Blvd in Daly City. Turn seaward and park at locked gate. Hike around gate and follow trail to Beach or take Sloat Blvd or Hwy 35 to the Great Hwy in San Francisco, go to southern-most parking lot on Great Highway. There is vehicle access to beach here. Hike or drive south to Thornton State Beach.

*Land Access:* Contact CA State Parks Personnel for vehicle access.

*On-Water Limitations:* No vessel access due to heavy surf.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Daly City is nearby with full amenities.

*Communications Problems:* Good cell reception near water, watch for sleeper waves.



CDFG - OSPR & USCG Site: 2-250 Name: Thornton State Beach

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 1/3/2022

**County:** San Mateo **ACP Division/Segment:** SM - K - S006**NOAA Chart:** 18645,18680 Gulf of Farallons, Sur-SF **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.596436 -122.505555**Site Description:**

The site includes San Pedro creek mouth on Pacifica Beach and includes the riparian corridor upstream and above the Hwy 1 bridge. Pacifica Beach is under CA State Parks Management. San Pedro creek flows through the lagoon (upstream of the Hwy 1 bridge) which is surrounded by riparian vegetation and through several bridges then through an urbanized channel to discharge across an medium to low sloping beach to ocean. Creek is open to ocean seasonally, primarily in winter. The local community has a high level of interest and investment in this restored stream.

**Resources at Risk:***ESI and Habitat:* 3B Scarps and steep slopes in sand

3A Fine- to medium-grained sand beaches

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

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 688-6768
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

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:**

Keep oil out of the creek because it is a steelhead trout stream year-around and the local community has high interest in this stream. Use booms or sediment dikes to keep oil out of creek. Use diversion booms off the beach if necessary to keep oil away from creek. The beach to the south is a natural collection site.

**Hazard and Restrictions:**

Slips, trips and falls. Beware of auto traffic.

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

**Strategy: 2-253.1 Objective:** Exclude oil with boom from creek and riparian corridor during modest flow conditions.

*Strategy:* Boom creek with multiple layers curtain and sorbent boom as far seaward in the creek as possible. Set boom at an angle to flow to avoid entrainment. Access facilitates the use of a shore side skimming system if necessary.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		50	feet	
Boom	Sorbent			50	feet	
Anchor	Stakes			8		
Staff	Staff to Deploy			2		

**Strategy: 2-253.2 Objective:** Exclude oil using sediment dike when high surf pushing up into creek mouth

*Strategy:* Erect sediment berm across the creek mouth with flow-through siphon preferably with sand or with loose sediment. Evaluate feasibility of deflection boom off shore to divert oil past creek mouth toward south end of beach. Good access facilitates the use of a shoreside skimming system and vacuum truck if necessary.

Table of Response Resources

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

**Logistics:**

*Directions:* Take Highway 1 to Pacifica. Park on seaward side of Highway between Linda Mar Blvd and San Pedro Ave. San Pedro Creek Flows under highway between these two intersections.

*Land Access:* All traffic - good access from Hwy 1 and adjacent parking lot.

*On-Water Limitations:* City services available nearby.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Parking lots at mouth will be adequate staging site for this and beach cleanup. Lots of support services including fast food are nearby.

*Communications Problems:* Good cell reception.



**County:** San Mateo **ACP Division/Segment:** SM - K - S008**NOAA Chart:** 18645,18680 Gulf of Farallons, Sur-SF **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.597015 -122.514187**Site Description:**

This site is the crescent cove between San Pedro Point and offshore rocks to a second rocky headland just to the north. Site lies within the Montara State Marine Reserve and is associated with the following BLM Ca Coastal National Monument Site: San Pedro Rock. The gravel beach between the two headlands is exposed to substantial wave action. The back beach is a medium-grained sand beach. Cliffs rise steeply from the beach. Stay away from cliff base. The rocky headlands which extend seaward on each side like a row of teeth, are heavily used by birds for nesting and roosting. This site is very inaccessible to any approach: a considerable hike by foot, possible by ATV. Residential homes are along the beach. If oil comes ashore, Shelter Cove will act as a natural collection point.

**Resources at Risk:****ESI and Habitat:** 1C Exposed rocky cliffs with boulder talus base

5 Mixed sand and gravel beaches

4 Coarse-grained sand beaches

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	black oystercatcher	FP	Year-round	
Birds	Brandt's cormorant	FP	Year-round	
Birds	pigeon guillemot	FP	Year-round	
Birds	western gull	FP	Year-round	
Birds	brown pelican	FP, SP	Year-round	
Invertebrates	little neck clam		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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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

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**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

If oil comes ashore, Shelter Cove will act as a natural collection point. If oil reaches this beach, it will penetrate deeply into the gravel beach and kill important clam populations. Sea birds use the rocks. Minimize disturbance to nesting/roosting birds on the rocky headlands.

**Hazard and Restrictions:**

Beware of the steep slopes: steep eroding cliffs with single lane foot traffic.

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

**Strategy: 2-255.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

**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/or 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:** South Pacifica on Highway 1 to Lindamar Beach District - West on San Pedro Ave. Right on Dammann Ave, Left on Shelter Cove Rd. Park at end of Road and follow trail to Shelter Cove. Foot access (stairs) from top of hill off Blakburn off San Pedro. An excellent vantage point of the cove and rocks can be accessed by continuing on San Pedro Ave, turning left on Kent and following it until it ends at Blackthorne Terrace.

**Land Access:** Foot only on eroding road/down stairs. Possible ATV use. Locked gate for residential access.

**On-Water Limitations:** Offshore rocks, high surf may be dangerous to vessel traffic. Nearest boat ramp facilities are within Pillar Pt Harbor. Skiffs can be launched across Lindamar Beach near the outlet of San Pedro Creek in favorable conditions.

**Facilities, Staging Areas, Command Posts, Available Equipment:** No facilities or staging areas. This site is very inaccessible due to private property restrictions.

**Communications Problems:** Cell reception along the outer coast varies.



**County:** San Mateo **ACP Division/Segment:** SM - L - S007**NOAA Chart:** 18645,18680 Gulf of Farallons, Sur-SF **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.537169 -122.519141**Site Description:**

This site includes Montara State Beach south to Point Montara and the lighthouse station. The area is within the Monterey Bay National Marine Sanctuary. Site lies within Montara State Marine Reserve and is associated with BLM Ca Coastal National Monument resources. Montara State Beach maintained by CA State Parks. Exposed rocky cliffs with wave-cut terraces and sandy pocket beaches. Beaches are composed of coarse sand, granules, pebbles, cobbles, and boulders. Low cliffs rise abruptly from beaches and high energy surf zone. The area is exposed to aggressive surf and wave action.

**Resources at Risk:**

**ESI and Habitat:** 1A Exposed Rocky Shore  
 1C Exposed rocky cliffs with boulder talus base  
 5 Mixed sand and gravel beaches

**List of Resources at Risk:**

Resource Name	Status	Presence	Sensitivity
Invertebrates rocky intertidal invertebrates		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
E	/Office	California State Parks, Lighthouse Field SB	(831) 423-9703
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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	/Office	James Fitzgerald Marine Reserve	(650) 728-3584

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

**Additional Site Summary Comments:**

Stay away from cliff bases, they can abruptly fall at any time.

**Concerns and Advice to Responders:**

Primary concern is the oiling of harbor seal haulouts. Oil may also penetrate coarse, sediment beaches. Because of the difficulty of protecting or cleaning this site due to cliffs, obstructions and sea conditions, the primary strategy is to deal with oil before it impacts the shore using alternative and conventional technologies (ARTs).

**Hazard and Restrictions:**

Keep all personnel away from the base of steep cliffs. This is a rocky, cliff laden coastline with slip and fall hazards and submerged obstacles to boat traffic. Aggressive surf can be hazardous to beach and nearshore personnel. Be mindful of tides.

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

**Strategy: 2-258.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or rocky conditions at this site. Consider the 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.

Table of Response Resources

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

*Directions:* From Highway 1 in the city of Montara, turn west between 13th and 14th St.

*Land Access:* Vehicle access to frontage road.

*On-Water Limitations:* Steep, loose cliffs and underwater rocks and wave-cut platforms. Nearest launching is Pillar Pt Harbor. Under favorable conditions, skiffs can be launched across the beach at Lindamar Beach.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Best staging, equipment and services are available at Pillar Pt. Harbor and/or Half Moon Bay Airport.

*Communications Problems:* Good cell reception.



**2-260-B Site Summary - Seal Cove to Pillar Point****2-260-B****County:** San Mateo **ACP Division/Segment:** SM - L - S009**NOAA Chart:** 18645,18680 Gulf of Farallons, Sur-SF **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.50722 -122.505244**Site Description:**

This site includes all of Fitzgerald Marine Reserve beginning at Seal Cove/Moss Beach south to the apex at Pillar Point (Sail Rock). The area is within the Greater Farallones National Marine Sanctuary. Site lies within both Montara State Marine Reserve and James V. Fitzgerald Marine Reserve. Site is associated with BLM Ca Coastal National Monument resources. This entire site is wave-cut rock platforms backed by mixed sand and gravel beaches at the foot of sharply rising cliffs. The biota are those typical of wave-cut rocky platforms. This area is very important as a scientific study site for students and local trustees.

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

1C Exposed rocky cliffs with boulder talus base

4 Coarse-grained sand beaches

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	seabirds		Year-round	
Birds	wading birds		Year-round	
Birds	shorebirds		Year-round	
Invertebrates	rocky intertidal invertebrates		Year-round	
Mammals	California sea lion	FP	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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
E	/Office	Fitzgerald Marine Reserve	(650) 355-8289
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505

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

**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

The main concern is oil and cleanup impacts on tidepool and intertidal community which would damage the sealife and scientific continuity of this site. Coarse grain beaches are vulnerable to burial/penetration. Oil on seal haulout areas would threaten seals. Cleanup could be as damaging as oil. Best response is to deal with oil before it comes to shore, consider ART options.

**Hazard and Restrictions:**

Steep cliffs with loose substrate and rocky beaches are slip, trip and fall hazards. Keep all personnel away from base of steep cliffs. Aggressive surf also poses hazards to shoreline operations/personnel.

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

**Strategy: 2-260.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or rocky conditions at this site. Consider ARTs to minimize shoreline impacts.

- 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:* In Moss Beach, turn off Hwy 1 toward beach at California Ave (at sign to Fitzgerald Marine Reserve) and right again at North Lake. Moss Beach access/Fitzgerald Marine Reserve is at end of street. There are two other access points: at Cypress Ave in Moss Beach; and through Pillar Point Harbor: take Capistrano Rd. to Prospect Way, left on Broadway, right on Princeton and right on West Point Ave.

*Land Access:* Limited access points. Limited to foot and 4WD, contact Fitzgerald Marine Reserve Personnel for access.

*On-Water Limitations:* Waves and rock outcrops, launch from Pillar Point

*Facilities, Staging Areas, Command Posts, Available Equipment:* Best staging, equipment and services are available at Pillar Pt. Harbor and/or Half Moon Bay Airport. Local staging may best be located at James Fitzgerald Marine Reserve Office parking lot or the new parking lot at the end of Cypress Avenue.

*Communications Problems:* Cell coverage varies on the shoreline. Good reception in Pillar Point Harbor Area.

*Additional Operational Comments:*



**County:** San Mateo **ACP Division/Segment:** SM - M - S001 SM - M - S005**NOAA Chart:** 18645,18680 Gulf of Farallons, Sur-SF **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.501764 -122.495361**Site Description:**

Pillar Point Marsh is a 20 acre salt-marsh with 50 foot wide inlet to the harbor at the east end of its 700' beach front. The salt-marsh is located at the west corner of the outer harbor. Denniston Creek's 30ft creek mouth enters the harbor just west of the marina. The area is within the Greater Farallones National Marine Sanctuary. Pillar Point Marsh is a salt-marsh wetland on the south side of West Point Avenue with a freshwater marsh on the north side. Dune grasses and sand hummocks front the harbor for about 700' with a wide, low sloping, fine-grained beach. There is a recess and 50-100' opening through the dune grass barrier at the east end of the beach which has flow only during rainy periods or during very high tides. The salt-marsh portion has pickleweed and other salt-marsh species and standing lagoon year around. The freshwater portion is dense with cattails, tules and willows. The salt-marsh is part of Fitzgerald Marine Reserve and is managed/owned by San Mateo Co Parks District.

Denniston Creek is a small urbanized stream running through the town of Princeton into Pillar Point Harbor. The riparian corridor quality tends to improve upstream. The stream gradient from the bridge to the harbor is quite positive, and there is usually a positive outward flow; both making oil threat minimal from harbor. Never the less, the presence of steelhead and San Francisco garter snake have necessitated that this site remain a focus of concern for harbor and upstream spills and collateral response impacts.

**Resources at Risk:**

*ESI and Habitat:* 10A Salt - and brackish-water marshes  
 9B Vegetated low banks  
 8B Sheltered solid man-made structures

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Birds	seabirds		Year-round	
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Plants	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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	/Harbor Master	Pillar Point Harbor	(650) 730-7435
E	/Dispatch, 24-hr	US National Park Service, Golden Gate NRA	(415) 561-5505
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	Golden Gate National Recreation Area	(415) 561-4731
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	/Office	James Fitzgerald Marine Reserve	(650) 728-3584
T	/	US Fish and Wildlife Service, Endangered Species	(916) 414-6700

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

**Additional Site Summary Comments:**

**Concerns and Advice to Responders:**

The primary concern is oil carried into Pillar Pt Marsh and Denson Creek on high water or aggressive surf occasions. Keeping oil out of the breakwater would reduce threat to sensitive sites and marina, aquaculture, and other creatures as well. There is a strong tidal current through the breakwater entry, but the breakwater is porous and can admit. Damage and disturbance to plants, wildlife, and aquatic life during response is always a concern.

**Hazard and Restrictions:**

This is an urban environment with traffic concerns.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-262.1 Objective:** Exclude oil from marsh by sediment dike across marsh mouth.

*Strategy:* Keep oil from being carried into the marsh on high tide by erecting a 100ft long low sand berm. This has been successfully accomplished in the past by scraping local sand with a bulldozer. A culvert may be necessary to permit outflow from marsh. A secondary smaller berm farther back from the beach could be erected using hand labor. (Contact Harbor Master for help) This work must be accomplished before high tide when construction activity will not be possible.

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			3		

**Strategy: 2-262.2 Objective:** Keep oil out of Denniston Creek

*Strategy:* Denniston Creek - 50 ft of swamp boom across creek mouth. Back with 50ft sorbent and a second layer of curtain boom as necessary.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		50	feet	
Boom	Sorbent			50	feet	
Anchor	Stakes			4		
Staff	Staff to Deploy			2		

**Strategy: 2-262.3 Objective:** Divert oil away from marsh opening.

*Strategy:* Generally there is a light clockwise current and very light wave action in the harbor. Use this current pattern to deflect oil away from marsh mouth by deploying Harbor boom from the high beach (grass line) 25' west of the mouth, at a diagonal to a point about 100' out on the pier.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		500	feet	
Anchor	Danforth	44 lb		3		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-262.4 Objective:** Exclusion/collection to Keep oil from entering harbor through breakwater entry - booming without closing mouth to harbor traffic.

**Strategy:** Overlapped cascaded boom at breakwater entry to divert oil to catchment without blocking vessel passage. Deploy a boom at an angle two-thirds of the distance across the channel from just inside of breakwater jetty toward the easterly breakwater. Deploy a second boom halfway across the channel from the easterly breakwater, lapping the other boom but leaving enough room to allow vessels to drive around the booms. Create a collection pocket by extending the boom end and adding a flanking length. Station a skimming vessel to collect oil.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		500	feet	
Anchor	Danforth	50 lb		3		
Vessel	Skiff			1		
skimmer	self propelled			1		
Staff	Staff to Deploy			5		

**Strategy: 2-262.5 Objective:** Protection booming of inside of breakwater if heavy oil is likely to pass through the breakwater - line inside breakwater with boom. This will require considerable resources.

**Strategy:** Deploy swamp boom along the inside of the breakwater. Make shore collection sites at north and east beachfall lined with sorbents for land collection.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		12300	feet	
Boom	Sorbent			200	feet	
Anchor	Danforth	22 lb		25		
Vessel	Skiff			2		
Vessel	skimmer			1		
Staff	Staff to Deploy			8		

### Logistics:

**Directions:** Hwy 1 north from Hwy. 92 past Half Moon Bay to Capistrano Rd. Turn on Prospect Way. You will cross a bridge over Denniston Creek just after turning left on Broadway. Continue right on Princeton and right on West Point Ave around the marsh to the parking lot. There is a locked gate (contact harbor master) in the parking lot which permits vehicle access to beach and Pillar Pt. Denniston Creek - Hwy 1 north from Hwy 92. Left on Capistrano St. Turn left onto Prospect Way. Access via Broadway street next to creek.

**Land Access:** Beaches are gated, contact Harbor Master or San Mateo Co for access. Most are drivable- 4WD or ATV.

**On-Water Limitations:** Only modestly shallow nearshore. There are abundant boat services available.

**Facilities, Staging Areas, Command Posts, Available Equipment:** Best staging, equipment and services are available at Pillar Pt. Harbor and Half Moon Bay airport. Contact County OES and Harbor Master regarding staging.

**Communications Problems:** Good cell reception in area.



**County:** San Mateo **ACP Division/Segment:** SM - M - S007**NOAA Chart:** 18680 Point Sur to San Francisco Bay **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.464921 -122.446874**Site Description:**

The site extends from Pillar Point Harbor south approx 5.5 linear miles to South Miramontes Point. Frenchman's Creek is approx 3000 ft north of Pilarcitos Creek. The area is within the Greater Farallones National Marine Sanctuary. Most of this shoreline is comprised of beaches in Half Moon Bay State/City Beaches to include: Naples, Dunes, Venice, Elmar, and Francis State/City Beaches to south Miramontes Point. Beaches vary from medium to fine-grained sand and are backed by dunes or low cliffs, but also include some residences. There are two creeks, Pilarcitos and Frenchman's Creeks, outletting here. Pilarcitos creek has a seasonal lagoon. Seasonally these two creeks will run along the cliff face and merge into a single outlet.

**Resources at Risk:**

*ESI and Habitat:* 3A Fine- to medium-grained sand 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	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Fish	nightsmelt		Year-round	Feb - Jul
Fish	surf smelt		Year-round	May-Aug
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Plants	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Plants	Choris' popcorn flower	SR	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
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

Primary concern is disturbance of snowy plover nesting and foraging on the upper portion (above wrack line) of the beach: stay on the lower beach below the wrack line. Also, there is concern about impacts to sensitive marsh plants and animals in the Pilarcitos Creek corridor. Smelt spawn (Apr-Oct) in the low surf zone. Avoid disturbing the vegetation on dunes and, particularly the high back beach zone where plovers nest.

**Hazard and Restrictions:**

Waves on steep beaches and crumbling sandy dune faces are hazards.

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

**Strategy: 2-264.1 Objective:** Exclude/deflect oil in Pilarcitos Creek inlet and lagoon

*Strategy:* Deflection booms to divert oil onto the landward side of the southern vegetated portions of the spit. Be cautious of endangered snowy plover nests on adjacent dunes. Stake boom in diagonal angles to deflect oil to collection pockets on shorelines. Proceed only with State Park staff assistance.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1000	feet	
Boom	Sorbent			1000	feet	
Anchor	Danforth	22 lb		6		
Staff	Staff to Deploy			4		

**Strategy: 2-264.2 Objective:** Exclude oil with sediment dike when heavy oil impacts are anticipated

*Strategy:* Construct a sediment dike with flow-through culvert or pipe siphon over dike across creek (either Pilarcitos and/or Frenchman's Creeks as necessary). This requires on-site evaluation to determine if: 1) surf conditions will permit activity and success, 2) there is adequate sand, and 3) activities will not threaten nearby snow plover habitat. Proceed only with State Park Staff assistance.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert		12 inch		3		
Staff	Staff to Deploy			3		

**Logistics:**

*Directions:* There are several access points to the beach. Main access is through Half Moon Bay State Park entrance. From intersection of Hwy 92, take Hwy 1 South to first light and turn toward beach. Park Hq is left of kiosk. The mouth of Frenchmans Creek and Pilarcitos creek lagoon can be accessed by traveling north on Highway 1 from the intersection with Highway 92 and turning left on Venice Blvd.

*Land Access:* There is beach access via State Parks for ATV & 4WD.

*On-Water Limitations:* No known obstructions. Pillar Point Harbor has launching and vessel support services.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Best staging, equipment and services are available at Pillar Pt. Harbor and Half Moon Bay Airport. Local staging at State Parks Parking lots at Venice Blvd or Kelly.

*Communications Problems:* Good cell reception on outer coastline.



**County:** San Mateo      **ACP Division/Segment:** SM - N - S006**NOAA Chart:** 18680 Point Sur to San Francisco Bay      **Map Book:** SF Bay and Delta      **Decimal Degrees:** 37.375615 -122.408363**Site Description:**

Martins Beach extends from the headland to the south to a group of rocks at mid beach and a crescent beach to the north bounded with another prominent headland. The area is within the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources. The beaches are fine to coarse-grained sand beach approx one-mile in total length for both beaches. Beaches have varied from steep to moderate grade. The beach is backed with bluffs which rise very steeply. The group of large rocks at mid beach is a remnant of a rocky headland and is favored by birds for roosting and a seals haulout. There is a wave-cut platform to the south of the rock outcrop and a small tombolo behind. Lobitos Creek mouth outlets here with a pool high on the beach. There is a small community of dwellings, residences and weekend cottages, and a store/restaurant. This remains a fee-use private beach get-away spot as it has been for decades. Contact personnel at the store (along Hwy 1) upon arrival for access permission.

**Resources at Risk:**

*ESI and Habitat:* 2B Exposed scarps and steep slopes in clay  
 3A Fine- to medium-grained sand beaches  
 2A Exposed wave-cut platforms in bedrock, mud, or clay

**List of Resources at Risk:**

Resource Name		Status	Presence	Sensitivity
Birds	seabirds		Year-round	
Fish	nightsmelt		Year-round	Feb-Jul
Fish	surf smelt		Year-round	May-Aug
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
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	Martins Beach	(650) 712-8020
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

Primary concern is oil contamination and burial in coarse sands which could kill smelt eggs in the sandy intertidal beach. Other wildlife concerns are the birds and seals which rest on the rocks and the tide pool creatures on the rocky intertidal. This is the kind of beach were oil could become buried over night due to sand deposition from potentially heavy surf. The best place to deal with oil is the south end where oil and debris collects naturally.

**Hazard and Restrictions:**

Keep all personnel away from the base of cliffs. Offshore rocks and aggressive surf. Slips, trips and falls.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-266.1 Objective:** Minimize or avert oil from impacting shoreline habitats and wildlife by offshore containment and recovery 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 and/or 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**

**Strategy: 2-266.2 Objective:** Exclude oil from Martins Creek with boom or berm when mouth is open or when surf is high enough to wash oil into this back beach marsh.

*Strategy:* This small marshy lagoon may not need protection because often it is well above the high tide line. A site observation before deployment is recommended. If there is a threat from oil, block entrance of creek with boom and back with sorbent. A sediment berm may also work well.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Sorbent			50	feet	
Anchor	Danforth	22 lb		2		
Staff	Staff to Deploy			2		

**Strategy: 2-266.3 Objective:** Diversion to collection during favorable sea conditions, divert oil past north cove/beach and direct oil to recovery on fine-grained beach at south end of beach.

*Strategy:* Booming for beach protection is only possible under optimal sea conditions due to swell, surf and offshore rocks. Under optimal conditions, diversion booms may be placed off northerly headland and rocky midbeach to allow oil movement past the site or to the south end of the beach. Sand at south end of beach is fine and there is less problem of oil penetration. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may accumulate. If oil accumulates in skimmable quantities, contact IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Harbor	9x9 inch		1000	feet	
Boom	Sorbent			300	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	50 lb		7		
Vessel	Boom Boat			1		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-266.4 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities as a result of strategy .3, establish a shoreside skimming system and the south end of the beach. Consult with IC prior to deployment of this strategy.

Table of Response Resources

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

### Logistics:

*Directions:* Drive 8 miles south from Hwy 92 on Hwy 1. Turn right on a private road marked with a sign for Martins Beach.

*Land Access:* Private Beach, parking fee to access.

*On-Water Limitations:* Offshore rocky outcrops and big waves. Aside from beach launching which is feasible in optimal conditions, nearest facilities are at Pillar Pt. Harbor.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Small staging area on low bluff or on parking lot adjacent to store. Water, bathrooms, and limited food and refreshments area available.

*Communications Problems:* Cell reception is spotty along outer coastline. Land lines are available on site.



**County:** San Mateo **ACP Division/Segment:** SM - N - S008**NOAA Chart:** 18680 Point Sur to San Francisco Bay **Map Book:** SF Bay and Delta **Decimal Degrees:** 37.356582 -122.399131**Site Description:**

Site includes Tunitas Creek mouth and lagoon with an additional mile of beach bounded north and south by steep, rocky headlands. The area is within the Greater Farallones National Marine Sanctuary. The beach is a broad, fine-grain beach with steep cliffs. Stay away from cliff base. The lagoon behind the beach is deep and surrounded with dense riparian growth. The creek discharges across the beach in a braided channel (seasonal). The beach and creek mouth are very isolated by private property. Due to the difficulty of access to private ownership restrictions and steep cliffs, these two habitats of concern are combined as a single, tactical site and will require direction and arrangements thru IC/UC to provide safe access.

**Resources at Risk:**

*ESI and Habitat:* 3B Scarps and steep slopes in sand  
 3A Fine- to medium-grained sand beaches  
 5 Mixed sand and gravel beaches

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	nightsmelt		Year-round	Feb-Jul
Fish	surf smelt		Year-round	May-Aug
Plants	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

First concern is oil being washed into Tunitas Creek lagoon. Second concern is possible penetration and burial of oil into beach sands which would damage or destroy smelt eggs. Also of concern is disturbance of shorebirds, particularly the plovers which live in the high beach and wrack line. Access is limited and dangerous except through very restricted private ownership. Contact IC for access to gain access through private ownerships.

**Hazard and Restrictions:**

This site has very steep cliffs with limited access. Keep all personnel away from base of cliffs. Locked gate and potential fire hazard area.

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

**Strategy: 2-269.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or rocky conditions at this site. Consider the 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.

Table of Response Resources

**Last Page Update**

**Strategy: 2-269.2 Objective:** Exclude oil from creek using boom when surf and flow conditions may admit oil to creek.

*Strategy:* Protect creek and lagoon with swamp boom and sorbents to collect along edge as far seaward as possible. Review and report on the possibility and advisability of using pompoms for tarballs collection. Access is a problem here: get instructions/access from IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		200	feet	
Boom	Sorbent			200	feet	
Boom	Oil Snare (pom-pom)			200	feet	
Anchor	Danforth	22 lb		6		
Staff	Staff to Deploy			2		

**Strategy: 2-269.3 Objective:** Exclude oil from creek by diking when surf and flow conditions may admit oil to creek.

*Strategy:* Exclude oil from lagoon by hand constructed dike using sediments. A syphon or flow-through culvert may be necessary to allow outflow. Access is a problem here: get instructions/access from IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert		12 inch		3		
Staff	Staff to Deploy			3		

**Logistics:**

*Directions:* South on Hw1 from Hwy 92. Drive 3/10 mile past Tunitas Bridge and turn right into private road with locked gate. Access is very restricted: contact UC for access assistance and instructions.

*Land Access:* 4WD steep dirt road behind locked gate north of creek.

*On-Water Limitations:* Very limited by this site access from south beach at low tide. Nearest boat launching is Pillar Pt Harbor.

**2-269-A Site Strategy - Tunitas Beach and Creek**

**2-269-A**

*Facilities, Staging Areas, Command Posts, Available Equipment:* Parking along Hwy 1 at top of high cliffs.

*Communications Problems:* Cell reception varies along coastline. For best reception, head up to Hwy 1 (Cabrillo Hwy).

*Additional Operational Comments:* Cell communications on the beach are minimal but are outstanding on the hwy above and south of Tunitas Creek.



**County:** San Mateo **ACP Division/Segment:** SM - N - S009**NOAA Chart:** 18680 Point Sur to San Francisco Bay **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.322561 -122.402671**Site Description:**

Site is the beach from of San Gregorio Creek 1.8 miles north to rocky headland (Mussel Rock). The area is within the Greater Farallones National Marine Sanctuary. San Gregorio Beach is under State Parks Management. The beach is very broad, up to 150 yards wide, with an extensive back beach, except at San Gregorio Creek where the cliffs are near the sea. At San Gregorio Creek the waves come to the cliff base at high tide but is drivable at low tide. The entire beach is backed with steep cliffs. Sand granules varies from medium to coarse with corresponding variation in beach slope and scallop. The back beach is littered with large woody debris. There is a single private access (4WD) at midbeach granting landowners access to their portion of the back beach.

**Resources at Risk:**

*ESI and Habitat:* 4 Coarse-grained sand beaches  
 1C Exposed rocky cliffs with boulder talus base  
 5 Mixed sand and gravel beaches

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	shorebirds		Year-round	
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	nightsmelt		Year-round	Feb-Jul
Fish	surf smelt		Year-round	May-Aug

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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

The prime concern is oil penetration or burial on the beach which is a threat to smelt eggs buried in the surf zone of the beach. There may also be endangered western snowy plovers in the debris line and the back beach. Contact ecologists to establish traffic corridors before putting vehicles on the beach.

**Hazard and Restrictions:**

Portions of the beach are covered at high tide. Aggressive surf and rock falling from cliffs are main hazards. Keep all personnel away from cliff base.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-271.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or 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:* Site is about 12 miles south of Half Moon Bay on Hwy 1: access from San Gregorio Creek State Beach pullout (contact State Parks for vehicle access to beach): beach is drivable with 4WD and passable during low low tides. Other access may be available through private ownerships.

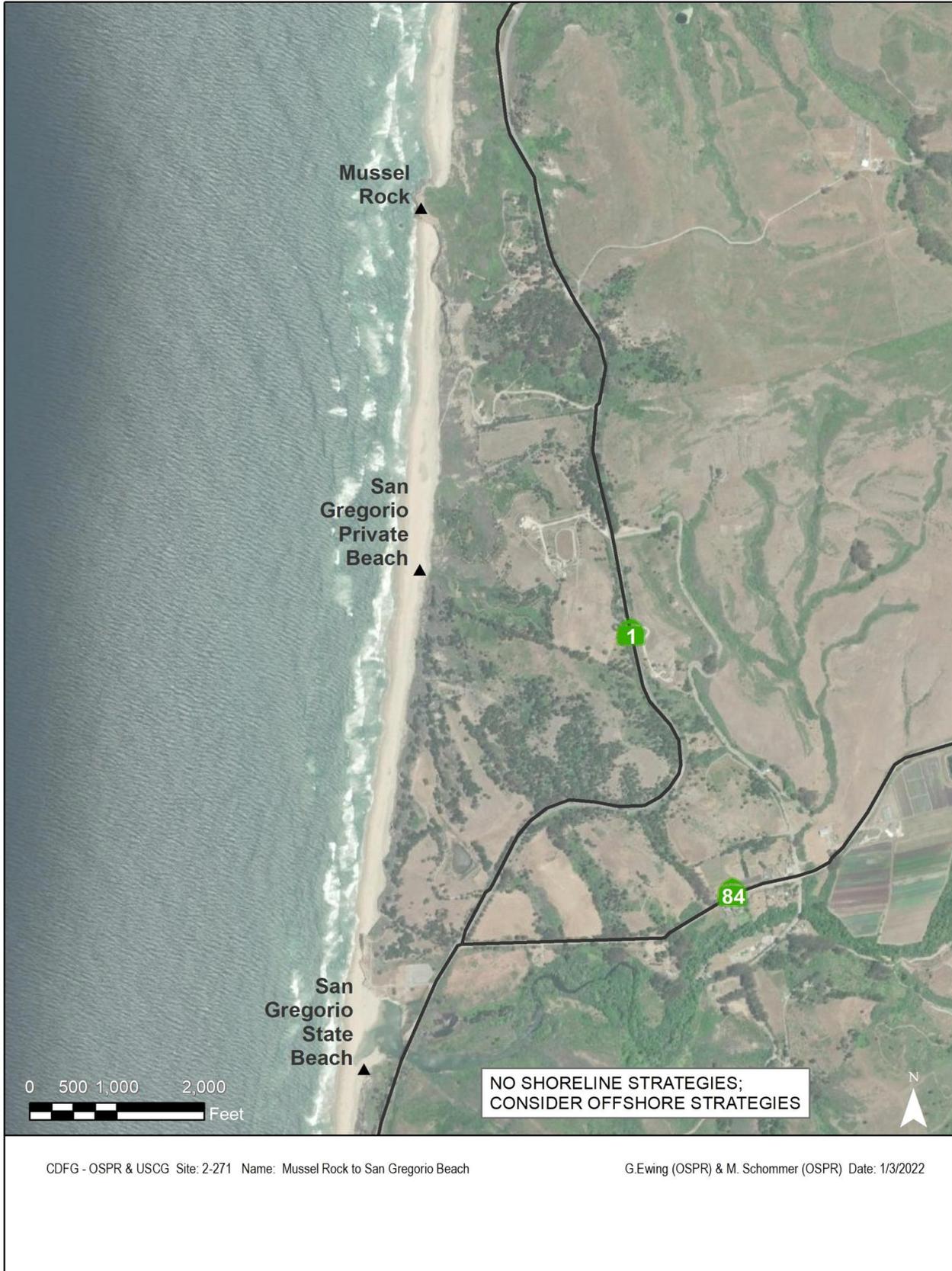
*Land Access:* 4WD/ATV access at low tide at San Gregorio parking lot -DPR permission.

*On-Water Limitations:* None known, nearest launch/support is Pillar Pt Harbor. Possible beach launching from Martins Beach in optimal conditions.

*Facilities, Staging Areas, Command Posts, Available Equipment:* San Gregorio State Park parking lot.

*Communications Problems:* Best cell reception up near Hwy 1, on beaches cell reception varies.

*Additional Operational Comments:* Communications from on the beach is impeded by steep and high cliffs which can block signals.



**County:** San Mateo **ACP Division/Segment:** SM - N - S010**NOAA Chart:** 18680 Point Sur to San Francisco Bay **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.322561 -122.402671**Site Description:**

This site includes San Gregorio Creek, the lagoon and marsh landward of the beach which extends some distance upstream from the Hwy 1 bridge. Both sides of this site are CA State Park Property; there is a kiosk and parking lot on the beach side. The area is within the Greater Farallones National Marine Sanctuary (GNFMS). The creek flows to the sea most of the year, but a sandbar may form in low-flow years providing a natural barrier from offshore threats. Medium-grained sand beach and berm is active and gets reworked by waves. The lagoon under the Hwy 1 bridge is present year round.

**Resources at Risk:**

*ESI and Habitat:* 3A Fine- to medium-grained sand beaches  
 10A Salt - and brackish-water marshes  
 1C Exposed rocky cliffs with boulder talus base

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
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	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Plants	Choris' popcorn flower	SR	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

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C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 688-6768
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:**

The primary concern is preventing oil washing into San Gregorio Creek and the large marsh which extends landward from the beach and well upstream of the highway. Oil in this lagoon would be very destructive to the surrounding brackish marsh vegetation and the fish and wildlife residents of the marsh and lagoon. Also be aware that a small endangered sandpiper is sometimes found nesting and resting in the debris at the mouth of the lagoon. Please avoid trampling plants and treading oil into the ground. Location of creek mouth changes frequently. Responders must adapt strategy to the situation they find but should advise IC before proceeding to improvise. Contact State Parks Personnel for vehicle access to beaches to minimize response impacts.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. Be mindful of tides, the rising tide can trap people and equipment on isolated, pocket beaches. The eroding cliff face is unstable, do not stand on or near the edge of the cliff, and when on the beach beware of falling rocks.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-273.1 Objective:** Exclude oil by diking the mouth of the creek when heavy oil impacts are expected.

*Strategy:* When heavy oiling is expected, the preferred option is to close off inlet with a sediment dike backed by collection trench (medium-grained sand). The dike would have to be about 500 feet long. Sediment may be in short supply, especially after storms. If outflow is high enough to washout the dike, a culvert or culverts must be installed in the dike.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert		12 inch		3		
Staff	Staff to Deploy					

**Strategy: 2-273.2 Objective:** Exclusion booming at the mouth of San Gregorio Creek, when level of oiling does not merit diking disturbance or as back-up to diking (2-273.1).

*Strategy:* Exclude oil from moving upstream in the lagoon by deploying exclusion-deflection boom at the mouth near the beach. Divert oil washing into lagoon to catchment areas on south shore of lagoon and on the landward side of the high berm. Depending upon configuration of creek mouth this strategy may require 600 to 1500 feet of swamp boom. 3,000 feet of oil snare on a rope should be deployed where waves are expected to wash over into the lagoon.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1500	feet	
Boom	Oil Snare (pom-pom)			3000	feet	
Anchor	Danforth	30 lb		10		
Vessel	Skiff			1		
Staff	Staff to Deploy			5		

**Strategy: 2-273.3 Objective:** Contain/collect oil at seaward end of lagoon, when oil has been washed into lagoon - to keep oil from marshy areas east of Hwy 1 bridge.

**Strategy:** When oil is threatening to move upstream past the bridge, use collection booms anchored to north and/or south bridge pilings to divert oil to a collection and recovery area. 600 feet of swamp boom and 600 feet of sorbent may be adequate for this strategy. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil. If oil begins to accumulate in skimmable quantity (deploy 273.4 strategy) consult IC.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		600	feet	
Boom	Sorbent			700	feet	
Boom	oil			50		
Anchor	Danforth	22 lb		8		
Staff	Staff to Deploy			4		

**Strategy: 2-273.4 Objective:** Oil Recovery by skimming

**Strategy:** Deploy skimmer if oil accumulates in skimmable quantities as a result of strategy .3. Use skimmer head and pump to storage on beach or truck on highway. Consult IC prior to initiating this strategy.

Table of Response Resources

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

### Logistics:

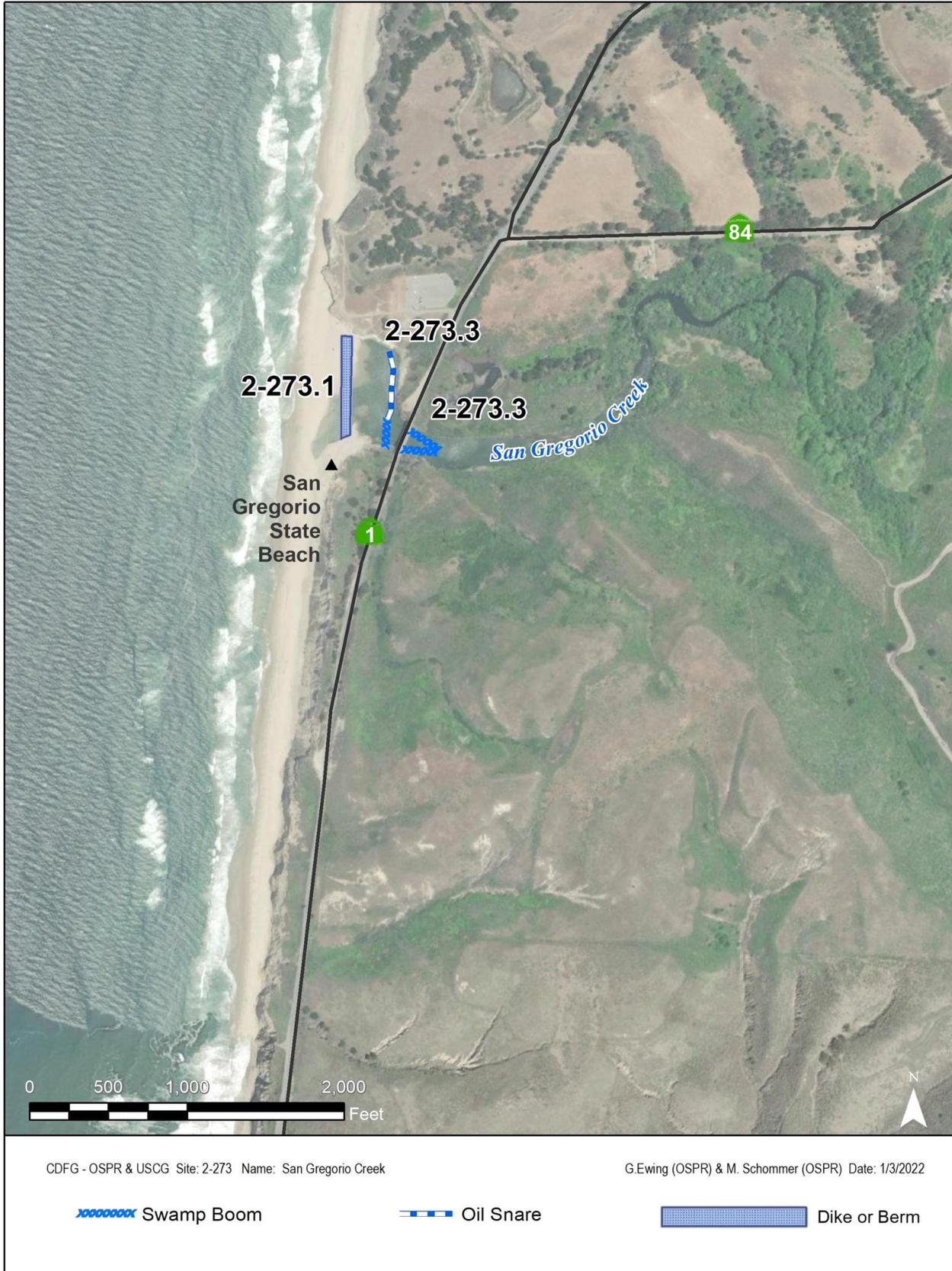
**Directions:** From Oakland take Hwy 880 south, turn west onto Hwy 92 to Half Moom Bay. At Half Moon Bay turn south onto Hwy 1, and continue 10 miles south to San Gregorio Beach parking lot.

**Land Access:** Foot access only around lagoon. 4WD vehicles may be able to travel on beach. Contact State Park Personnel to access w/ vehicles and/or heavy equipment.

**On-Water Limitations:** For skiffs in the lagoon, small skiffs can be carried down from parking area. Nearest boat facilities are in Half Moon Bay.

**Facilities, Staging Areas, Command Posts, Available Equipment:** The San Gregorio State Park parking lot is suitable for a small staging area or field post. A highway 1 pull-out on a hill to the south provides better communications, and the Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

**Communications Problems:** Cell reception varies, best signal up near Hwy 1.



**County:** San Mateo **ACP Division/Segment:** SM - N - S010 SM - N - S012**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.281528 -122.408806**Site Description:**

This site is four linear miles of fine to medium-grained sand beaches bounded by San Gregorio Creek on the north and Pescadero Creek to the south. The area is within the Greater Farallones National Marine Sanctuary (GNFMS) and under jurisdiction of CA State Parks. It includes San Gregorio, Pomponio, and Pescadero State Beaches within the San Mateo Coast State Beach system. In general, these beaches have low steep bluffs backing the beach. There are multiple access points to beaches.

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

3B Scarps and steep slopes in sand

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Birds	shorebirds		Year-round	
Birds	wading birds		Year-round	
Birds	waterfowl		Year-round	
Fish	nightsmelt		Year-round	Feb-Jul
Fish	surf smelt		Year-round	May-Aug
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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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 the beach may cause smelt eggs to fail to hatch or deformities in the larvae. Responders should avoid traffic above the last high tide swash to minimize impacts to snowy plovers.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches. The eroding cliff face is unstable, do not stand on the edge or base of the cliff, and when on the beach beware of falling rocks and sleeper waves.

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

**Strategy: 2-275.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or rocky conditions at this site. Consider 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.

Table of Response Resources

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

*Directions:* Take Hwy 92 to Halfmoon Bay. Continue south onto Hwy 1 about 15 miles. Turn into parking lot at Pomponio Creek.

*Land Access:* 4WD/ATV able to travel on beach. Contact State Parks Personnel for access.

*On-Water Limitations:* Nearest boat facilities are in Half Moon Bay, fifteen miles to the north

*Facilities, Staging Areas, Command Posts, Available Equipment:* The San Gregorio State Park parking lot is suitable for a small staging area or field post. A highway 1 pull-out on a hill to the south provides better communications, and the Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Spotty cell reception along coastline.

*Additional Operational Comments:* Communications are spotty in this part of the coast.



CDFG - OSPR & USCG Site: 2-275 Name: San Mateo Coast State Beaches

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 1/3/2022

**County:** San Mateo **ACP Division/Segment:** SM - N - S010**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.299376 -122.405026**Site Description:**

This site includes the beaches north and south of Pomponio Creek and upstream of the Hwy 1 bridge. The area is within the Greater Farallones National Marine Sanctuary (GFNMS). The creek flows to the ocean most of the year. Medium-grained sand beach and sand berm gets reworked by wave action. The lagoon under the Hwy 1 bridge is present year round. The channel configuration changes with seasonality and may or may not outflow to Pacific Ocean.

**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
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Plants	Choris' popcorn flower	SR	Year-round	Mar-Jun
Plants	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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

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O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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 in the lagoon may kill or severely injure salmon smolts. To minimize impacts to snowy plovers responders should stay on the wet portion of the beach. Use caution while on beach, snowy plovers are present. Nesting areas may not be fenced off.

**Hazard and Restrictions:**

Beware of heavy surf: it occasionally washes people and equipment out to sea. Keep all personnel away from base of cliffs.

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

**Strategy: 2-277.1 Objective:** Exclude oil from entering the lagoon. If oil does enter the lagoon, remove it with sorbent boom or pom-poms.

*Strategy:* Location of lagoon changes occasionally. Responders must adapt the strategy to the situation they find.

A) The preferred option is to close off inlet with a sediment dike backed by collection trench (medium-grained sand). The dike would have to be about 500 yards long. Consider constructing a collecting trench on the back side of the berm if oil is expected to wash over the top of the berm. Sediment may be in short supply, especially after storms, and the dike could wash out during periods of high runoff, consider underflow dam.

If dike doesn't hold or there is insufficient sand to construct one, backup strategy consists of:

b) try to keep oil on seaward side of Route 1 bridge by setting up deflection boom system to divert oil to catchment areas on south shore of lagoon and on the landward side of the high berm, or if there is sufficient flow of water out of the lagoon, deflect oil to outlet and back to the sea. Depending upon configuration of creek mouth this strategy may require 600 to 1500 feet of swamp boom. Up to 3,000 feet of oil snare on a rope should be deployed where waves are expected to wash over into the lagoon.

c) If there is risk of oil passing through the double culverts under highway 1, deploy swamp boom and sorbents across the creek on both sides of highway 1. If there is little or no flow of water through the culverts, dam the culverts with sediment. Use PVC pipe fitted with a 90 degree elbow to allow freshwater to flow through the dam.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		2100	feet	
Boom	Sorbent			3600	feet	
Anchor	Stakes			30		
Staff	Staff to Deploy			8		

**Logistics:**

*Directions:* Take Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 15 miles.

*Land Access:* Foot traffic only.

*On-Water Limitations:* Nearest boat facilities are in Half Moon Bay, fifteen miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Pomponio beach parking lot is suitable for a small staging area or field post. Responders may have to travel north or south on Hwy 1 to find a location where they can communicate with the command post. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception may be spotty along the coastline.



CDFG - OSPR & USCG Site: 2-277 Name: Pomponio Creek

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 1/3/2022

 Swamp Boom

 Dike or Berm

**County:** San Mateo **ACP Division/Segment:** SM - N - S012**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.265015 -122.409518**Site Description:**

The site includes the creek mouth from the surf upstream to the confluence of Butano Creek (approx 0.3 miles) and managed under CA State Parks. The area is within the Greater Farallones National Marine Sanctuary (GNFMS). Site is associated with BLM Ca Coastal National Monument resources. Pescadero marsh is the largest marsh system on this part of the coast. The mouth is wide (~300 ft) across the medium grained sand beach. The creek mouth is either open or susceptible to waves to waves washing over the berm at high tide and into the lagoon most of the year. There is a large freshwater lagoon inland of the Highway 1 bridge.

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

10B Freshwater marshes

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

**List of Resources at Risk:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Amphibians	California red-legged frog	FT, SSC	Year-round	Nov-Apr
Birds	common yellowthroat	FP, SSC	Year-round	Jun-Aug
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-Apr
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	tidewater goby	FE, SSC	Year-round	
Invertebrates	California brackish water snail		Year-round	
Plants	Ventura marsh milk-vetch	FE, SE	Year-round	Jul-Oct
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 688-6768
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:**

Several threatened, endangered, or proposed listed species are present within the creek and marsh, such as the tidewater goby, San Francisco garter snake, saltmarsh common yellowthroat, red-legged frog, and the California brackish water snail. Steelhead Trout migrate upstream from Nov. - Jan., while downstream migrants use the creek from Feb. - May, and smolts are present year round. Waterfowl and wading birds are also abundant in the creek and marsh system. The Pescadero Marsh system is an important resting and feeding area for migratory birds using the Pacific flyway.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-280.1 Objective:** Exclude oil from entering the mouth of the creek. If oil does enter the creek, prevent it from reaching the wetland vegetation.

*Strategy:* Flood currents could be fairly strong during spring tides. The shape of the creek mouth changes often. Responders may have to design a strategy suited to the conditions they find.

Under ideal conditions, it may be possible to close off the inlet with a sediment dike (medium-grained sand) about 500 feet long. There appears to be an abundant sand supply to the north. However, waves are typically quite large and storm waves would breach the dike. It could also wash out during periods of high run-off. If dike fails, there is a sandy-shoreline catchment area located on the north shore of the ponded water.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		4000	feet	
Boom	Sorbent			400	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	25 lb		12		
Staff	Staff to Deploy			8		

**Strategy: 2-280.2 Objective:** Exclude oil from entering the mouth of the creek. If oil does enter the creek, prevent it from reaching the wetland vegetation.

*Strategy:* If a dike is not possible consider the following:

b) Deploy 600 feet of swamp boom from the rocky headland on the south side of the creek mouth to the northern bridge footing to deflect oil to the sandy beach there during the flood tide, and another 600 feet of swamp boom from the southern bridge footing to the sandy beach on the north shore of the creek 300 feet upstream from the bridge. Oil could be stranded and collected here. Divert oil to two locations: 1) sandy shoreline (north shore), both seaward and inland of the highway 1 bridge (logs and other debris would have to be removed), and 2) 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect the oil that may accumulate.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Swamp	6x6 inch		1500	feet	
Boom	Sorbent			100	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	22 lb		7		
Staff	Staff to Deploy			5		

**Strategy: 2-280.3 Objective:** Oil Recovery by skimming

*Strategy:* If oil accumulates in skimmable quantities, deploy skimmer in open water to southeast of bridge. Consult with IC prior to initiation of strategy.

Table of Response Resources

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

**Logistics:**

*Directions:* From Hwy 92 at Halfmoon Bay, continue south on Hwy 1 to Pescadero Beach (approx 20 miles). The area is part of San Mateo Coast State Beach System.

*Land Access:* 4WD/ATV may be able to travel on beach. Stay on wetted sand to avoid nesting sites.

*On-Water Limitations:* Boats must be small enough to carry across beach. Nearest boat facilities are in Half Moon Bay, twenty miles to the north

*Facilities, Staging Areas, Command Posts, Available Equipment:* There is a small dirt parking lot seaward of highway 1 on the south side of the creek mouth. This parking lot may be suitable for a small staging area or field post. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception is spotty along coastline.

*Additional Operational Comments:* No communications problems reported at this location



County: San Mateo ACP Division/Segment: SM - O - S008

NOAA Chart: Pt Sur - S Francisco Map Book: AAA San Mateo C Decimal Degrees: 37.225571 -122.408843

**Site Description:**

The Bean Hollow CA State Park parking lot is in on a rocky promontory in the middle of the small cove, 1000 feet across, with a fine-grained sand beach encased with wave-cut rocky platforms. The area is within the Greater Farallones National Marine Sanctuary (GNMS). Site is associated with BLM Ca Coastal National Monument resources. There are rocky headlands on either side of the cove with a rocky reef about 1,000 feet seaward of the beaches. A freshwater lagoon on the inland side of Hwy 1 drains onto the south beach through a concrete culvert under Hwy 1.

**Resources at Risk:**

- ESI and Habitat: 2A Exposed wave-cut platforms in bedrock, mud, or clay
- 3A Fine- to medium-grained sand beaches
- 10B Freshwater marshes

**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	
Fish	tidewater goby	FE, 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:**

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C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

The freshwater marsh would be difficult if not impossible to clean if oil traveled thru the culvert under Hwy 1.

**Hazard and Restrictions:**

This cove is more protected than most along this coast. Waves break at the mouth of the cove about 300 yards seaward from the beaches. Small waves break on the gradually sloping, hard sand beaches. Small craft can sometimes be launched on the beach and safely operated in the cove.

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

**Strategy: 2-282.1 Objective:** Exclude oil from entering the culvert under highway 1.

*Strategy:* If high tides are expected and there is little or no water flowing through the culvert, block the culvert with a sand berm.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
Staff	Staff to Deploy			2		

**Logistics:**

*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1 at Halfmoon Bay. Turn into parking lot at Bean Hollow State Park.

*Land Access:* Limited access due to precarious conditions and potentially heavy surf.

*On-Water Limitations:* Small boats could be carried across the beach and launched. Nearest boat facilities are in Half Moon Bay, fifteen miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The very small Bean Hollow State Park parking lot is suitable only for staging personnel and equipment defending this site. They may have to travel a mile or two up or down highway 1 to find a location that permits communication with the command post. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception spotty along coastline.



**2-284-B Site Summary - Pescadero Point to Pebble Beach****2-284-B****County:** San Mateo **ACP Division/Segment:** SM - O - S005 SM - O - S006**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.238917 -122.417266**Site Description:**

Pebble Beach is within Bean Hollow State Beach. The site is within the Greater Farallones National Marine Sanctuary (GNFMS). Site is associated with BLM Ca Coastal National Monument resources. A one-half mile segment of coastline composed of wave-cut rock platforms, washrocks, and pocket beaches of mixed sand and gravel. Site located within and under jurisdiction of CA State Beaches.

**Resources at Risk:***ESI and Habitat:* 5 Mixed sand and gravel 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
Birds	shorebirds		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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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:**

The harbor seals will be impacted if they inhale or ingest petroleum.

**Hazard and Restrictions:**

Be mindful of the tides and sleeper waves. The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches.

**Site Strategies:**

**Site Validation Level: 0**

**Strategy: 2-284.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*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/or rocky conditions at this site. Consider 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.

Table of Response Resources

**Last Page Update**

**Logistics:**

*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Half Moon Bay. Turn south onto Hwy 1. Travel 16 miles to Pescadero Point or Pebble Beach. Pescadero Point is two miles past Pescadero State Beach. Inlet is located at Bean Hollow State Beach.

*Land Access:* Foot access only.

*On-Water Limitations:* Steep cliffs and heavy surf create safety concerns. Nearest boat facilities are in Half Moon Bay, fifteen miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The San Gregorio State Park parking lot is suitable for a small staging area or field post. A Hwy 1 turn-out on a hill to the south provides better communications, and the Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along coastline.



**County:** San Mateo **ACP Division/Segment:** SM - O - S017**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.166387 -122.361642**Site Description:**

This site is limited to the mouth of the creek and the lagoon immediately inland of the beach face and berm top. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area. The area is also within the Monterey Bay National Marine Sanctuary (MBNMS). Creek remains open during the winter months of the year and during high tides. Well-developed fringing freshwater marsh along the creek banks on both sides of the Hwy 1 bridge.

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

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

10B Freshwater marshes

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Fish	coho salmon - south of Punta Gorda	FE, SE	Year-round	Nov-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

**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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 688-6768
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 entering the lagoon will kill or injure salmon and steelhead smolts in the lagoon, and may injure birds using the beach and lagoon.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches. The eroding cliff face is unstable, keep all personnel away from the edge or base of cliffs.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-287.1 Objective:** Exclude oil from entering the lagoon at the mouth of the creek. Should oil enter the lagoon, contain it as near the outlet as possible and remove promptly to minimize impact to fish in the lagoon and vegetation along the inland side of the lagoon.

*Strategy:* Construct 600 foot long sediment dike between berm top and lagoon with collecting trench between dike and lagoon. Sediment may be scarce after major storms. Deploy 200 feet of small ( 4 inch freeboard ) boom to contain oil entering the lagoon along the seaward side of the lagoon. Recover oil that strands on beach seaward of the dike, and in the collecting trench behind dike. Should oil enter the lagoon, recover it as quickly as possible or allow it to flow back to sea if high runoff from the creek makes recovery ineffective. 50ft of Oil Snare (OS) or 200ft of sorbent boom may be effective if sufficient oil collects in the lagoon.

A cargo helicopter may be useful for moving equipment from the parking lot to the creek mouth. Use of a helicopter could greatly reduce the injury to upland vegetation and the time required to implement the booming strategy if the sediment dike is not constructed. Contact IC if oil accumulates in skimmable quantities.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
Boom	Swamp	6x6 inch		200	feet	
Boom	Sorbent			300	feet	
Boom	Oil Snare (pom-pom)			50	feet	
Anchor	Danforth	22 lb		5		
Staff	Staff to Deploy			4		

**Strategy: 2-287.2 Objective:** Oil Recovery by skimming

*Strategy:* Use drum or rope skimmer to collect oil if 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:**

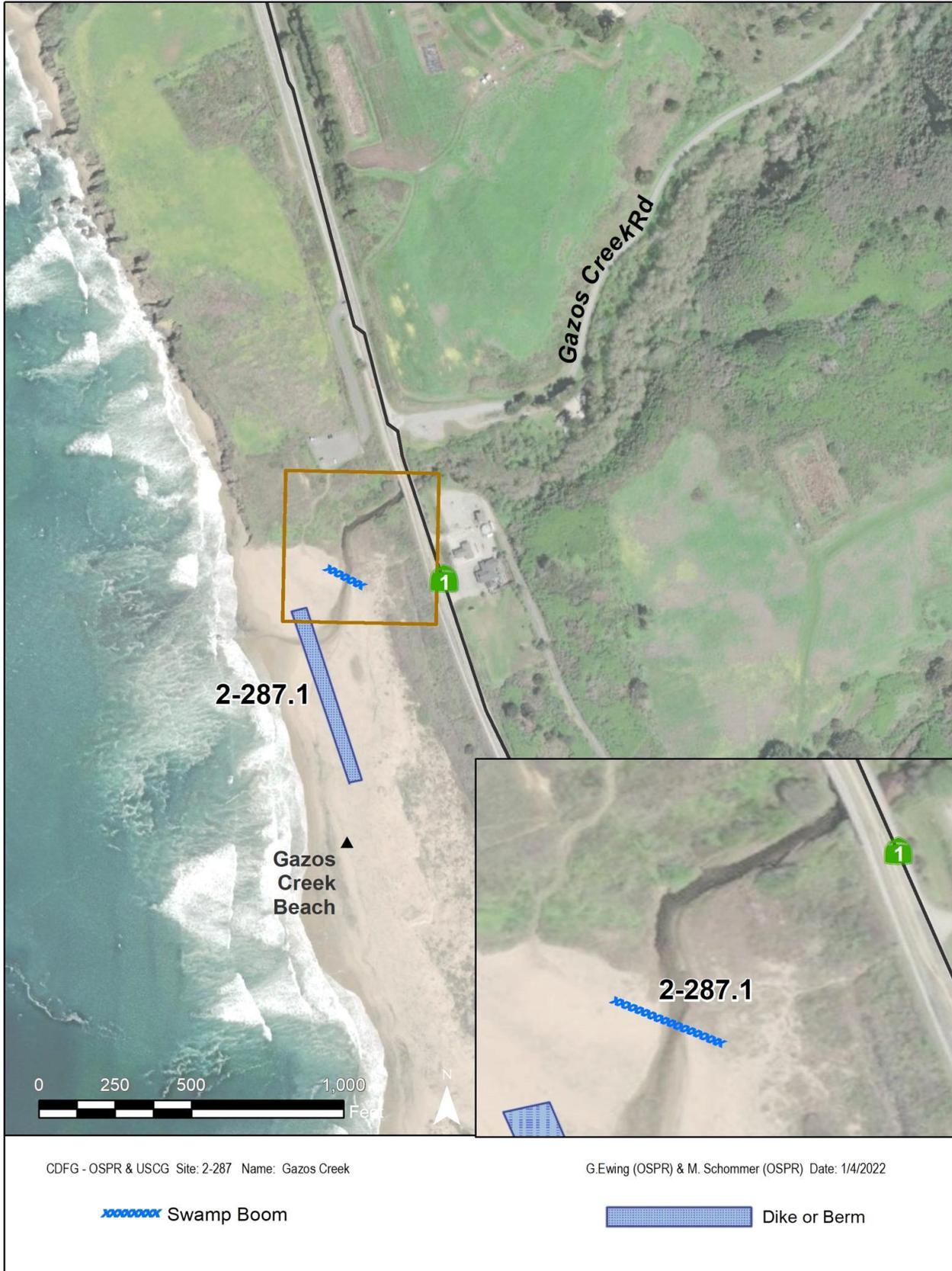
*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 22 miles. Access from paved parking lot on seaward side of Hwy 1, and locked gate along Gazos Creek Road immediately inland of Hwy 1.

*Land Access:* 4WD/ATV to travel on beach. Coordinate with State Parks Personnel for access.

*On-Water Limitations:* Nearest boat facilities are in Half Moon Bay, twenty-two miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Gazos Creek parking lot is suitable for a small staging area or field post. The Half Moon Bay airport is suitable for a large staging area. Smaller staging areas and field posts may be located at Ano Nuevo State Park or Pigeon Point Lighthouse. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along coastline.



**County:** San Mateo **ACP Division/Segment:** SM - O - S018**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.145646 -122.347131**Site Description:**

Whitehouse creek flows into the ocean about one mile southeast of Franklin Point. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area. The area is within the Monterey Bay National Marine Sanctuary (MBNMS). Site is associated with BLM Ca Coastal National Monument resources. Small creek flows across a fine to medium grained sand pocket beaches and may form a lagoon during winter months.

**Resources at Risk:***ESI and Habitat:* 3B Scarps and steep slopes in sand

3A Fine- to medium-grained sand beaches

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
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 688-6768
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 in the creek could injure steelhead trout smolts.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches. The eroding cliff face is unstable, do not stand on the edge or base of the cliffs.

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

**Strategy: 2-289.1 Objective:** Exclude oil from entering

*Strategy:* Build a dam near the high tide line using sediments. Place 50 feet of sorbent or swamp boom behind the dam to prevent the upstream migration of any oil that is splashed over the dam.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
Boom	Swamp	6x6 inch		50	feet	
Anchor	Stakes			4		
Staff	Staff to Deploy			4		

**Logistics:**

*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 25 miles. Park along highway 1 near an Eucalyptus grove, and hike approximately 1/2 mile across the marine terrace to the shoreline. The Department of Parks and Recreation may provide access for vehicles if it is necessary to deliver equipment to the shoreline.

*Land Access:* Access by foot only.

*On-Water Limitations:* Nearest boat facilities are in Half Moon Bay, 25 miles to the north

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Ano Nuevo State Park has room for a small staging area or field post. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along coastline.



CDFG - OSPR & USCG Site: 2-289 Name: Whitehouse Creek

G.Ewing (OSPR) & M. Schommer (OSPR) Date: 1/4/2022

Swamp Boom

Dike or Berm

**County:** San Mateo **ACP Division/Segment:** SM - O - S019**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.136079 -122.337675**Site Description:**

This site lies two miles south of Franklin Point and includes Ano Nuevo State Marine Conservation Area. The area is also within the Monterey Bay National Marine Sanctuary (MBNMS). Cascade Creek flows out of a freshwater marsh onto a gravel/cobble beach. There was no lagoon present when the SISRS team visited the site in 1998, Lagoon presence is determined by seasonal runoff. Driftwood in the marsh indicates that waves move heavy woody debris into the marsh during extreme high tides.

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

2B Exposed scarps and steep slopes in clay

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

**List of Resources at Risk:**

	Resource Name	Status	Presence	Sensitivity
Mammals	Northern elephant seal	FP	Year-round	
Plants	freshwater marsh		Year-round	
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Natural Resources Specialist	BLM, CA Coastal National Monument	(831) 582-2200
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

The marsh would be seriously impacted if oil entered it.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. Heavy surf and the rising tide can trap people and equipment on isolated beaches.

**Site Strategies:**

**Site Validation Level: II**

**Strategy: 2-291.1 Objective:** Exclude oil from entering the marsh.

*Strategy:* During extreme high tide events it may be helpful to build a filter fence or even build a wall across the face of the marsh using debris and cobbles from the beach. The volume of sand available is highly seasonal. Use multiple layers of sorbents in the event sediments are scarce.

Table of Response Resources

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

**Logistics:**

*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 25 miles. Park along highway 1 near an Eucalyptus grove, and hike approx 1/2 mile across the marine terrace to the shoreline. The Department of Parks and Recreation may provide access for vehicles if it is necessary to deliver equipment to the shoreline.

*Land Access:* Access by foot only.

*On-Water Limitations:* Nearest boat facilities are in Half Moon Bay, 25 miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Ano Nuevo State Park has room for a small staging area or field post. The Half Moon Bay Airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along the outer coastline.



**2-293-A Site Summary - Ano Nuevo Island****2-293-A****County:** San Mateo **ACP Division/Segment:** SM - O - S021**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.108014 -122.336146**Site Description:**

Ano Nuevo Island is 1/4 mile long and lies 1/2 mile west off Point Ano Nuevo. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area. The area is within the Monterey Bay National Marine Sanctuary (MBNMS). A low elevation rock island with little to no vegetation. The island's shores and surrounding washrocks are primarily wave-cut rocky intertidal platforms. On the lee side of the island is a sheltered sand beach ideal for pinniped haulout. A shallow rocky bench extends between the island and Ano Nuevo Point.

**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:**

	<b>Resource Name</b>	<b>Status</b>	<b>Presence</b>	<b>Sensitivity</b>
Birds	seabirds		Year-round	Dec-Aug
Mammals	Steller sea lion	FP	Year-round	Dec-Aug
Mammals	California sea lion	FP	Year-round	Dec-Aug
Mammals	harbor seal	FP	Year-round	Dec-Aug
Mammals	Northern elephant seal	FP	Year-round	Dec-Aug
Mammals	Southern sea otter	FT, 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:**

<b>Type</b>	<b>Name/Title</b>	<b>Organization</b>	<b>Phone</b>
C	/Coordinator	Native American Heritage Commission	(916) 373-3710
C	/Coordinator	Northwest Information Center	(707) 588-8455
O	/Agency Representative, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Operations, 24-hr	Moss Landing Marine Laboratories	(831) 239-2914
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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:**

Several threatened and endangered species use the island and surrounding waters; such as the Steller sea lion (May - Sept), marbled Murrelet, and southern sea otter. Other sensitive species that breed, forage, and/or haulout on or around this island include the northern elephant seal (Dec. - Aug), Calif. Sea lion (year-round), Harbor sea (year-round) and Rhinoceros Auklet. The oiling of any of these animals will require a difficult and dangerous capture and rehabilitation effort.

**Hazard and Restrictions:**

The exposed coastline and heavy surf occasionally washes people and equipment out to sea. Elephant seals and Steller sea lions breed on the island. They are capable of moving very rapidly and killing or severely injuring people. There are countless rocks, both exposed and submerged, in the waters around the island and along the adjacent coastline. Navigation in the appropriate vessel is possible, but potentially hazardous.

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

**Strategy: 2-293.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*Strategy:* No defense of this site will be easy or have great promise of success. The strategy must be adapted to the conditions encountered at the time of the event. Consider reducing the amount of oil threatening the shoreline through offshore activities such as: mechanical skimming, in-situ burning, and dispersant application (ARTs).

Table of Response Resources

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

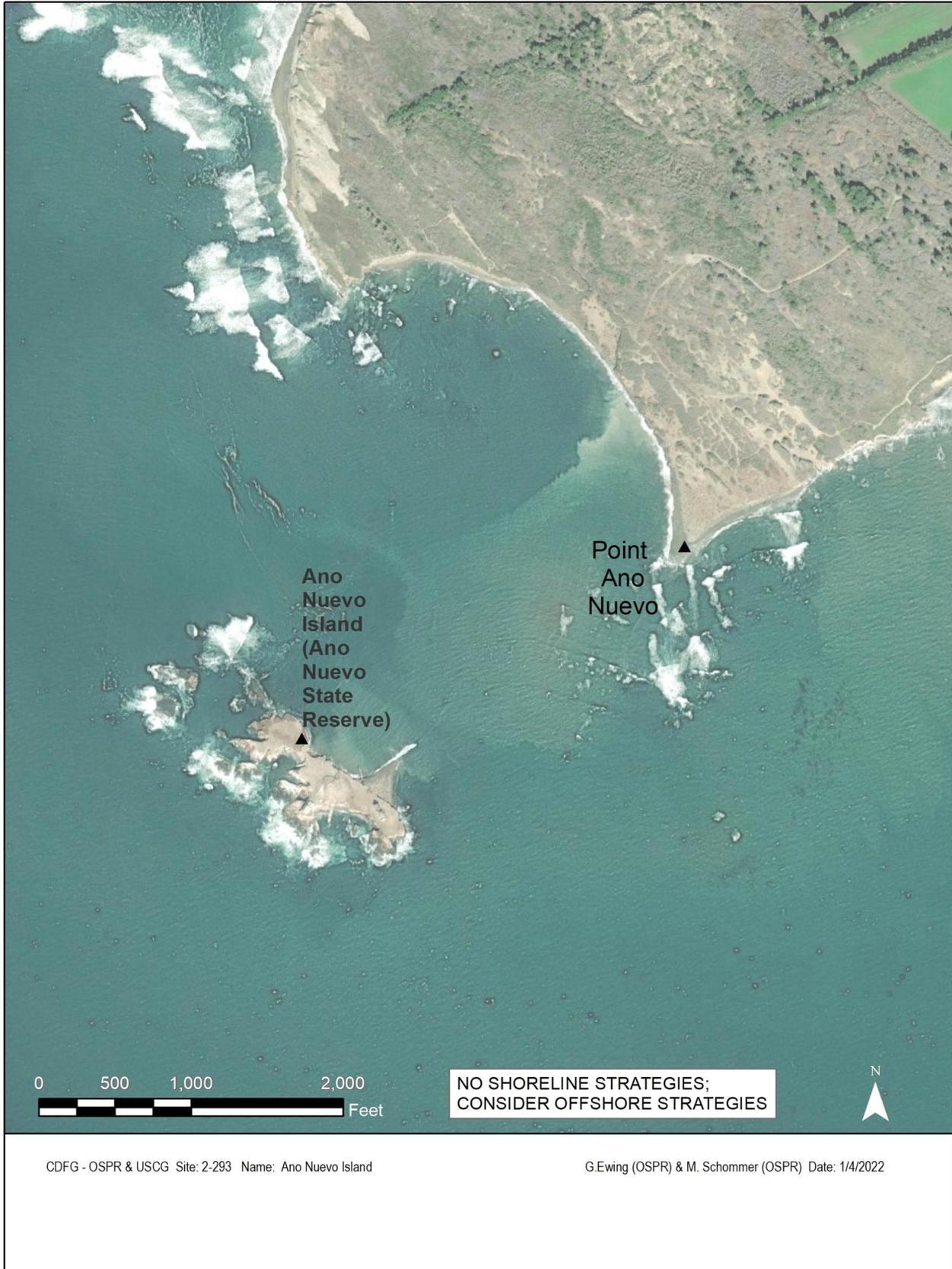
*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approx 27 miles to Ano Nuevo State Park entrance.

*Land Access:* Access by Vessel only, use extreme caution from submerged rocks and large pinnipeds.

*On-Water Limitations:* Shallow water with numerous obstructions and breakers. Nearest boat facilities are in Half Moon Bay, thirty miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Ano Nuevo State Park has space for a limited staging area and field post. Communications to a distant command post can be difficult. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along the outer coastline. Hwy 1 is the best location for cell reception.



**County:** San Mateo      **ACP Division/Segment:** SM - O - S021    SM - O - S022

**NOAA Chart:** Pt Sur - S Francisco      **Map Book:** AAA San Mateo C      **Decimal Degrees:** 37.112501 -122.329005

### Site Description:

Point Ano Nuevo is a prominent headland near the southern boundary of San Mateo County. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area; and within Monterey Bay National Marine Sanctuary (MBNMS). Site is associated with BLM Ca Coastal National Monument resources. The Point is surrounded on the north and west by a rocky intertidal bench just offshore. Sandy beaches and vegetated sand dunes are present from the lower intertidal to above the high tide area. Be aware of potential heavy surf when near shorelines.

### Resources at Risk:

**ESI and Habitat:** 3B Scarps and steep slopes in sand

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

3A Fine- to medium-grained sand beaches

### List of Resources at Risk:

	Resource Name	Status	Presence	Sensitivity
Birds	seabirds		Year-round	Dec-Aug
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Mammals	harbor seal	FP	Year-round	Dec-Aug
Mammals	Northern elephant seal	FP	Year-round	Dec-Aug
Mammals	Steller sea lion	FP	Year-round	Dec-Aug
Mammals	California sea lion	FP	Year-round	Dec-Aug
Mammals	Southern sea otter	FT, 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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Operations, 24-hr	Moss Landing Marine Laboratories	(831) 239-2914
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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:**

Several threatened and endangered species use the island and surrounding waters; such as the Steller sea lion (May - Sept), marbled Murrelet, Calif. Brown pelican, and southern sea otter. Other sensitive species that breed, forage, and/or haulout on or around this island include the northern elephant seal (Dec. - Aug), Calif. Sea lion (year-round), Harbor seal (year-round) and Rhinoceros Auklet. The oiling of any of these animals will require a difficult and dangerous capture and rehabilitation effort.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. Elephant seals and Steller sea lions breed on the island. They are capable of moving very rapidly and killing or severely injuring people. There are countless rocks, both exposed and submerged, in the waters around the island. Navigation in the appropriate vessel is possible, but potentially hazardous.

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

**Strategy: 2-294.1 Objective:** Offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife

*Strategy:* No defense of this site will be easy or have great promise of success. The strategy must be adapted to the conditions encountered at the time of the event. Consider reducing the amount of oil threatening the shoreline through offshore activities such as: mechanical skimming, in-situ burning, and dispersant application.

Under some conditions it may be possible to effectively cascade deflection boom offshore outside the breakers to deflect oil around the island. The size of boom must be appropriate to the sea state encountered. Several boom boats would be required to implement this strategy.

Table of Response Resources

**Last Page Update**

**Strategy: 2-294.2 Objective:** Shoreline Cleanup of oil stranded on beaches

*Strategy:* Manual removal using rakes, shovels, pitch forks and plastic bags. Ten people with plywood sheets must be available to protect workers from pinnipeds. Expect to remove 500 cubic yards of debris, mostly kelp.

Table of Response Resources

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

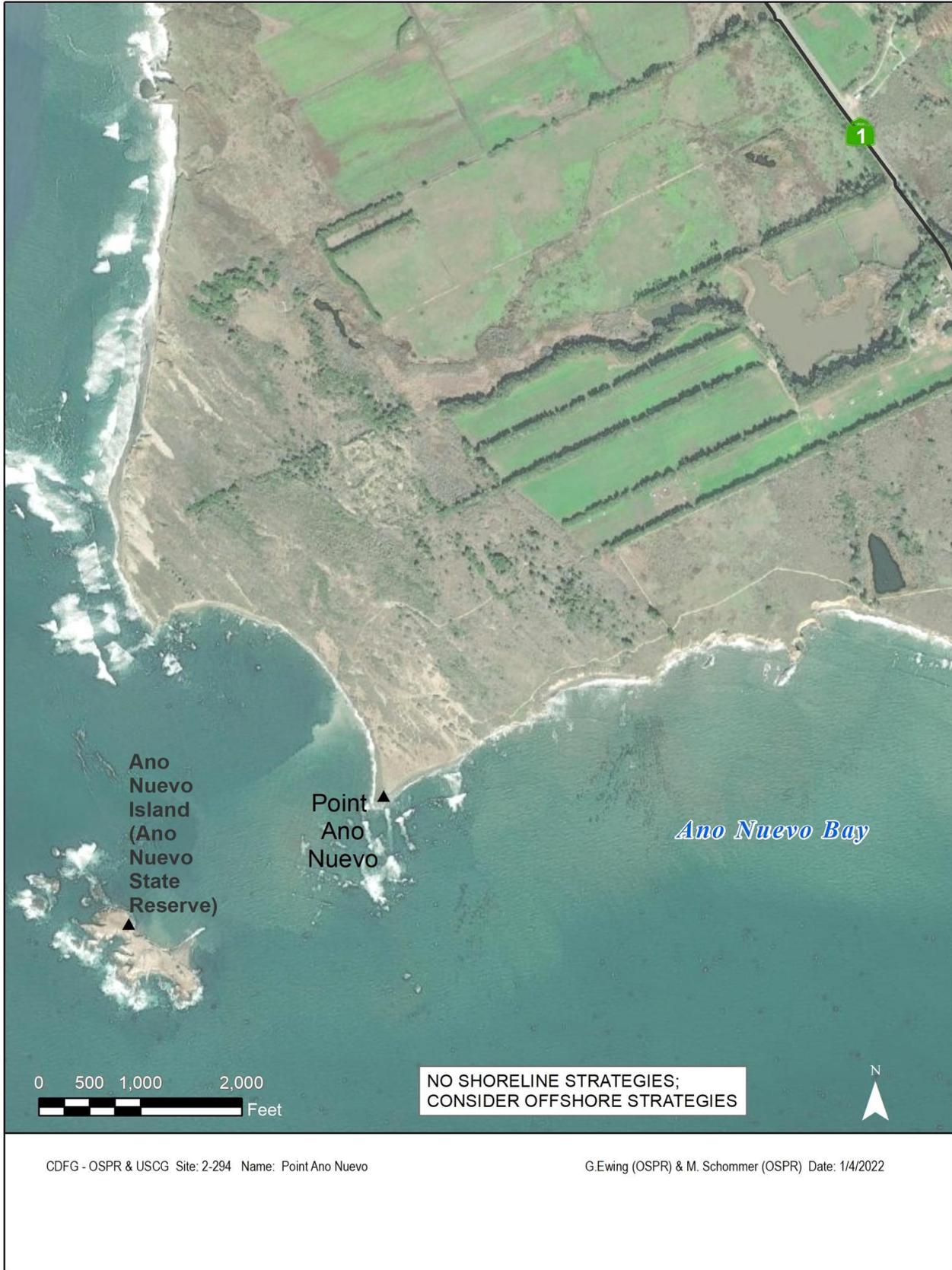
*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 27 miles to Ano Nuevo State Park entrance.

*Land Access:* 4WD/ATVs may be able to travel on some beaches. Stay on wetted sand to avoid nesting Plovers.

*On-Water Limitations:* Shallow water with numerous obstructions and breakers. Nearest boat facilities are in Half Moon Bay, thirty miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* The Ano Nuevo State Park has space for a limited staging area and field post. Communications to a distant command post can be difficult. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies along outer coastline.



**County:** San Mateo **ACP Division/Segment:** SM - O - S023**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.116433 -122.306207**Site Description:**

This small salmonid stream passes under Hwy 1 and into Ano Nuevo Bay southeast of Ano Nuevo Point. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area. The area is within the Monterey Bay National Marine Sanctuary (MBNMS). The small creek flows across a mixed sand and gravel beach. There is sometimes a small lagoon behind the berm top. The stream has a noticeable gradient. There is a significant riparian corridor along the creek. There is a foot path to near the mouth of the creek. Use caution while near shoreline due to heavy surf.

**Resources at Risk:****ESI and Habitat:** 5 Mixed sand and gravel 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
Birds	Western snowy plover	FT, SSC	Year-round	Mar-Oct
Fish	steelhead - Central/Northern California	FT	Year-round	Nov-Apr
Reptiles	San Francisco garter snake	FE, SE	Year-round	Apr-Sep

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, 24-hr	California Coastal Commission	(415) 693-8375
O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
T	/Agency Representative	California Department of Fish and Wildlife	(831) 649-2884
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:**

Steelhead trout spawn in this creek and juvenile steelhead are in the stream year-around and may be hurt by oil or response activity. This is particularly a concern if there are fish in the lagoon at the mouth. Minimize damage to riparian vegetation during response. Snowy Plovers nest above the wrack line and forage on beach front. Nesting areas may or may not be fenced off. Assign a biological monitor in the event of clean up operations.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches.

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

**Strategy: 2-296.1 Objective:** Exclude oil using oil snare, when oil threat is from sea side

*Strategy:* Using oil snare (pompoms on a rope) to collect oil washing over the top of the berm. If oil reaches the lagoon, do not contain in the lagoon, but allow it to run back to the sea. If there is insufficient flow in the creek to quickly flush the oil out of the lagoon, consider using trash pumps to pump seawater into the lagoon to flush the oil out.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Boom	Oil Snare (pom-pom)			2250	feet	
Boom	Sorbent			200	feet	
Anchor	Stakes			12		
Staff	Staff to Deploy			4		

**Strategy: 2-296.2 Objective:** For spills from inland, contain by damming

*Strategy:* Build underflow dams in the creek upstream of the lagoon. (Down-turned elbow or down-ward facing beveled ends are required to prevent venturies from carrying oil from surface and through dam.) Recover the oil using a skimmer, sorbents, or other appropriate method / material.

Table of Response Resources

Equipment	Sub-Type	Size	Unit	QTY	Unit	Last Page Update
Heavy Equip	Bobcat w/ tracks			1		
culvert		12 inch		3		
Staff	Staff to Deploy			4		

**Strategy: 2-296.3 Objective:** Remove oil that presents a threat to wildlife.

*Strategy:* Manual removal of surface oil. Consider removing buried oil if it will present a significant threat to birds and mammals when washed out by the winter storms.

Table of Response Resources

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

*Directions:* From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 27 miles to Ano Nuevo State Reserve.

*Land Access:* An ATV may be useful for transporting equipment to the beach. Stay on wetted sand to avoid Snowy Plover nests.

*On-Water Limitations:* Boats may be able to land on the beach. Nearest boat facilities are in Half Moon Bay, fifteen miles to the north.

*Facilities, Staging Areas, Command Posts, Available Equipment:* Ano Nuevo State Park has areas suitable for a small staging area or field post. Responders may have to travel north on highway 1 to find a location from which to make radio or cell phone contact with a distant command post. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

*Communications Problems:* Cell reception varies.



**County:** San Mateo **ACP Division/Segment:** SM - O - S018 SM - O - S024

**NOAA Chart:** Pt Sur - S Francisco **Map Book:** AAA San Mateo C **Decimal Degrees:** 37.12472 -122.337245

### Site Description:

This is an high energy ocean site from Franklin Point to Waddell Creek extending from the surf zone out 3 miles. Site is within the following State Marine Protected Area: Ano Nuevo State Marine Conservation Area. The area is within the Greater Farallones National Marine Sanctuary. Site is associated with BLM Ca Coastal National Monument resources. This is key foraging habitat for federally threatened marbled Murrelet and other seabirds. The shoreline character of this site changes from north to south. The two miles southeast of Franklin Point are characterized by narrow fine sand beaches between low (20 ft high) cliffs. The low intertidal to subtidal area is dominated by wave cut platforms and boulders. There is a broad marine terrace between the highway and the seacliff. The beach is wider over the next two miles. The cliff gives way to dunes and the offshore rock is covered with sand in most places. The three miles of shoreline between Point Ano Nuevo and Waddell Creek are backed by a high cliff (100 to 500 ft high). The southern half of this cliff is known as Waddell Bluff. There is a narrow beach of sand to mixed sand and gravel. In the intertidal and subtidal areas the wave cut platforms are intermitently exposed by the seasonally shifting sand. Six separate creeks flow across the beaches in this seven mile stretch of shoreline.

### Resources at Risk:

*ESI and Habitat:* 3B Scarps and steep slopes in sand

5 Mixed sand and gravel beaches

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
Birds	seabirds		Year-round	
Mammals	Southern sea otter	FT, SP	Year-round	
Mammals	harbor seal	FP	Year-round	
Mammals	Northern elephant 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

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O	/Dispatch, 24-hr	California State Parks	(916) 358-1300
O	/Dispatch, 24-hr	San Mateo Co. Dept. of Emergency Management	(650) 363-4963
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 in the nearshore waters can be expected to injure or kill many of the state endangered and federally threatened marbled murrelets. Marbled murrelets occur in nearshore waters from Half Moon Bay to Santa Cruz, however, the highest concentration of birds in the state occurs from Franklin Pt to Waddell Creek. They can be found all year long on the water during the daylight hours. At night they fly inland to nest in the forests. This area is also used by several other seabirds and pinnipeds. Snowy Plovers winter here. They forage in the upper intertidal and supratidal portions of sandy beaches. Avoid disturbing them by working on the ebb tide and keeping personnel and equipment on the wet sandy portion of beaches when it is safe to do so.

**Hazard and Restrictions:**

The surf occasionally washes people and equipment out to sea. The rising tide can trap people and equipment on isolated beaches. The eroding cliff face is unstable, do not stand near the base or edge of the cliff.

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

**Strategy: 2-298.1 Objective:** No on site protection strategy - offshore containment and recovery activities to minimize or avert oil from impacting shoreline habitats and wildlife. Clean beached oil immediately to prevent oiling of birds in upper intertidal areas.

**Strategy:** Reduce the amount of oil that reaches the waters off this shoreline. Consider mechanical recovery, burning, and the application of chemical dispersants to oil expected to reach the nearshore waters off this coastline. Keep helicopters away from old growth redwood trees to avoid disturbing the Marbled Murrelets. Promptly remove any oil that strands on sandy beaches. Manually remove oil from the last high tide swash on the falling tide. To minimize disturbance of snowy plovers, crews should not go any farther above the last high tide swash than necessary to recover the oil.

Table of Response Resources

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

**Directions:** From Oakland take Hwy 880 south, turn west onto Hwy 92 to Halfmoon Bay. Turn south onto Hwy 1. Drive down the coast approximately 25 miles.

**Land Access:** ATVs may be able to travel on beach, remain on wetted sand to avoid Snowy Plover Nesting Habitat. Coordinate with State Parks Personnel for access points and safety issues.

**On-Water Limitations:** Dangerous surf and submerged rocks in the subtidal. Nearest boat facilities are in Half Moon Bay, 25 miles to the north.

**Facilities, Staging Areas, Command Posts, Available Equipment:** Ano Nuevo State Reserve has areas suitable for a small staging area or field post. Responders may have to search for a site that permits radio and cell phone contact with a distant command post. The marine terrace north of Pt. Ano Nuevo may offer better communications. The Half Moon Bay airport is suitable for a large staging area. San Mateo County OES can identify an appropriate command post.

**Communications Problems:** Cell reception varies along outer coastline and near steep cliffs. Best cell reception is along Hwy 1.



## **9815.2 Response Summary Tables**

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

## Summary of ACP 2 GRA 2 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
<b>2-201 Point Reyes Headlands</b>				
<b>.1 - Exclude Oil</b>				
<b>.2 - Exclude Oil</b>				
	Anchor	Danforth	30 lb	30
	Boom	Oil Snare (pom-pom)		3050 feet
	Boom	Sorbent		100 feet
	Boom	Harbor	9x9 inch	3000 feet
	Vessel	Boom Boat		1
	Vessel	Skiff		1
	Staff	Staff to Deploy		10
<b>.3 - Collect Oil with Skimmer</b>				
	skimmer	self propelled		1
	Vessel	Skiff		1
	Staff	Staff to Deploy		5
<b>2-203 Drakes Beach (West)</b>				
<b>.1 - Exclude Oil</b>				
	Anchor	Danforth	50 lb	3
	Staff	Staff to Deploy		5
	Vessel	Boom Boat		1
	Boom	Ocean Boom	36X36 inch	500 feet
	Vessel	Skiff		1
<b>.2 - Exclude Oil</b>				
	Staff	Staff to Deploy		5
	Vessel	Skiff		1
	Boom	Harbor	9x9 inch	3000 feet
	Boom	Sorbent		100 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Anchor	Danforth	30 lb	12
	Vessel	Boom Boat		1
<b>.3 - Collect Oil with Skimmer</b>				
	Vessel	Skiff		1
	skimmer	self propelled		1
	Staff	Staff to Deploy		5
<b>2-205 Drakes Estero</b>				
<b>.1 - Exclude Oil</b>				
	Staff	Staff to Deploy		5
	Boom	Ocean Boom	36X36 inch	2000 feet
	Anchor	Danforth	50 lb	7
	Vessel	Boom Boat		1
	Vessel	Skiff		1
<b>.2 - Exclude Oil</b>				
	Staff	Staff to Deploy		8
	Boom	Harbor	9x9 inch	6000 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Vessel	Skiff		1
	Vessel	Boom Boat		2
	Boom	Sorbent		2100 feet
<b>.3 - Collect Oil with Skimmer</b>				
	Staff	Staff to Deploy		6
	skimmer	self propelled		2
<b>2-207 Limantour Spit</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
	Staff	Staff to Deploy		3
	Heavy Equip	Bobcat w/ tracks		2

**Site      Site Name**

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-210      Point Resistance</b>			
.1 - Exclude Oil			
<b>2-213      Miller Point</b>			
.1 - Exclude Oil			
<b>2-216      Double Point and Stormy Stack</b>			
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART			
.2 - Divert Oil			
Vessel	Skiff		1
Vessel	Boom Boat		1
Anchor	Danforth	50 lb	11
Boom	Ocean Boom	36X36 inch	1000 feet
Staff	Staff to Deploy		5
<b>2-219      Duxbury Reef</b>			
.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART			
.2 - Exclude Oil			
Boom	Oil Snare (pom-pom)		5000 feet
Staff	Staff to Deploy		4
Anchor	Danforth	30 lb	11
<b>2-222      Bolinas Lagoon</b>			
.1 - Divert Oil			
Boom	Swamp	6x6 inch	4400 feet
Boom	Sorbent		200 feet
Boom	Oil Snare (pom-pom)		50 feet
Anchor	Danforth	22 lb	25
Staff	Staff to Deploy		8
Vessel	Skiff		3
.2 - Divert Oil			
Boom	Swamp	6x6 inch	2250 feet
Boom	Sorbent		200 feet
Anchor	Danforth	22 lb	8
Staff	Staff to Deploy		5
Vessel	Skiff		1
.3 - Divert Oil			
Anchor	Danforth	22 lb	25
Boom	Swamp	6x6 inch	7000 feet
Boom	Sorbent		400 feet
Staff	Staff to Deploy		8
Vessel	Skiff		2
.4 - Contain Oil			
Staff	Staff to Deploy		6
Anchor	Danforth	22 lb	11
Boom	Oil Snare (pom-pom)		1000 feet
.5 - Collect Oil with Skimmer			
Staff	Staff to Deploy		3
skimmer	self propelled		1
<b>2-225      Redwood Creek/Big Lagoon/Muir Beach</b>			
.1 - Exclude Oil			
Boom	Sorbent		1000 feet
Anchor	Danforth	22 lb	5
Boom	Swamp	6x6 inch	200 feet
Staff	Staff to Deploy		2
.2 - Build Berm			
Heavy Equip	Backhoe		1
Staff	Staff to Deploy		3

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-228 Rodeo Lagoon</b>			
<b>.1 - Exclude Oil</b>			
Staff	Staff to Deploy		5
Boom	Swamp	6x6 inch	1200 feet
Anchor	Danforth	22 lb	10
Boom	Sorbent		2100 feet
Boom	Oil Snare (pom-pom)		50 feet
<b>.2 - Build Berm</b>			
Staff	Staff to Deploy		3
Heavy Equip	Bobcat w/ tracks		1
<b>.3 - Collect Oil with Skimmer</b>			
Staff	Staff to Deploy		3
skimmer	shoreside		1
<b>2-231 Bird Island</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-234 Point Bonita and Bonita Cove</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>.2 - Divert Oil</b>			
Boom	Ocean Boom	36X36 inch	2000 feet
Vessel	Boom Boat		1
Staff	Staff to Deploy		6
Vessel	Skiff		1
Anchor	Danforth	50 lb	10
<b>.3 - Collect Oil with Skimmer</b>			
skimmer	self propelled		1
Staff	Staff to Deploy		3
<b>2-236 Pt. Diablo to Lime Point</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>.2 - Divert Oil</b>			
Staff	Staff to Deploy		5
Boom	Ocean Boom	36X36 inch	2000 feet
Vessel	Skiff		1
Vessel	Boom Boat		1
Anchor	Danforth	50 lb	5
<b>.3 - Collect Oil with Skimmer</b>			
Staff	Staff to Deploy		3
skimmer	self propelled		1
<b>2-240 Farallon Islands</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-244 Land's End</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-246 Sutro Baths and Seal Rocks</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-248 Ocean Beach/Fort Funston</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>.2 - Divert Oil</b>			
Anchor	Danforth	50 lb	12
Vessel	Boom Boat		2
Vessel	Skiff		2
Staff	Staff to Deploy		8
Boom	Ocean Boom	36X36 inch	6000 feet

**Site**      **Site Name**

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-250      Thornton Beach State Park</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>.2 - Divert Oil</b>				
	Boom	Ocean Boom	36X36 inch	1000 feet
	Vessel	Boom Boat		1
	Boom	Sorbent		100
	Anchor	Danforth	50 lb	7
	Vessel	Skiff		1
	Staff	Staff to Deploy		5
<b>.3 - Collect Oil with Skimmer</b>				
	skimmer	shoreside		1
	Staff	Staff to Deploy		3
<b>2-253      San Pedro Creek</b>				
<b>.1 - Exclude Oil</b>				
	Anchor	Stakes		8
	Boom	Sorbent		50 feet
	Boom	Swamp	6x6 inch	50 feet
	Staff	Staff to Deploy		2
<b>.2 - Exclude Oil</b>				
	Staff	Staff to Deploy		3
	Heavy Equip	Bobcat w/ tracks		1
<b>2-255      Shelter Cove &amp; San Pedro Rock</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>2-258      Point Montara Area</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>2-260      Seal Cove to Pillar Point</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				

**Site**      **Site Name**

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-262 Pillar Point Marsh &amp; Denniston Creek</b>				
<b>.1 - Exclude Oil</b>				
	Staff	Staff to Deploy		3
	Heavy Equip	Bobcat w/ tracks		1
	culvert			3
<b>.2 -</b>				
	Boom	Sorbent		50 feet
	Staff	Staff to Deploy		2
	Boom	Swamp	6x6 inch	50 feet
	Anchor	Stakes		4
<b>.3 -</b>				
	Vessel	Boom Boat		1
	Boom	Harbor	9x9 inch	500 feet
	Vessel	Skiff		1
	Staff	Staff to Deploy		5
	Anchor	Danforth	44 lb	3
<b>.4 -</b>				
	Staff	Staff to Deploy		5
	Vessel	Skiff		1
	skimmer	self propelled		1
	Anchor	Danforth	50 lb	3
	Boom	Harbor	9x9 inch	500 feet
<b>.5 -</b>				
	Boom	Sorbent		200 feet
	Vessel	Skiff		2
	Vessel	skimmer		1
	Boom	Swamp	6x6 inch	12300 feet
	Anchor	Danforth	22 lb	25
	Staff	Staff to Deploy		8
<b>2-264 Halfmoon Bay Beaches: Naples to S. Miramontes Pt.</b>				
<b>.1 - Exclude Oil</b>				
	Anchor	Danforth	22 lb	6
	Boom	Sorbent		1000 feet
	Boom	Swamp	6x6 inch	1000 feet
	Staff	Staff to Deploy		4
<b>.2 - Build Berm</b>				
	Staff	Staff to Deploy		3
	culvert		12 inch	3
	Heavy Equip	Bobcat w/ tracks		1
<b>2-266 Martins Beach</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>.2 - Exclude Oil</b>				
	Staff	Staff to Deploy		2
	Anchor	Danforth	22 lb	2
	Boom	Sorbent		50 feet
<b>.3 - Divert Oil</b>				
	Boom	Harbor	9x9 inch	1000 feet
	Vessel	Boom Boat		1
	Staff	Staff to Deploy		5
	Boom	Sorbent		300 feet
	Boom	Oil Snare (pom-pom)		50 feet
	Anchor	Danforth	50 lb	7
	Vessel	Skiff		1
<b>.4 - Collect Oil with Skimmer</b>				
	skimmer	self propelled		1
	Staff	Staff to Deploy		3

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-269 Tunitas Beach and Creek</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>.2 - Exclude Oil</b>				
	Anchor	Danforth	22 lb	6
	Boom	Swamp	6x6 inch	200 feet
	Boom	Oil Snare (pom-pom)		200 feet
	Staff	Staff to Deploy		2
	Boom	Sorbent		200 feet
<b>.3 - Exclude Oil</b>				
	culvert		12 inch	3
	Staff	Staff to Deploy		3
	Heavy Equip	Bobcat w/ tracks		1
<b>2-271 Mussel Rock to San Gregorio Beach</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>2-273 San Gregorio Creek</b>				
<b>.1 - Build Berm</b>				
	Staff	Staff to Deploy		
	Heavy Equip	Bobcat w/ tracks		1
	culvert		12 inch	3
<b>.2 - Exclude Oil</b>				
	Staff	Staff to Deploy		5
	Boom	Oil Snare (pom-pom)		3000 feet
	Anchor	Danforth	30 lb	10
	Vessel	Skiff		1
	Boom	Swamp	6x6 inch	1500 feet
<b>.3 - Contain Oil</b>				
	Boom	Swamp	6x6 inch	600 feet
	Staff	Staff to Deploy		4
	Boom	Sorbent		700 feet
	Anchor	Danforth	22 lb	8
	Boom	oil		50
<b>.4 - Collect Oil with Skimmer</b>				
	Staff	Staff to Deploy		3
	skimmer	stationary floating		1
<b>2-275 San Mateo Coast State Beaches</b>				
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>				
<b>2-277 Pomponio Creek</b>				
<b>.1 - Exclude Oil</b>				
	Staff	Staff to Deploy		8
	Boom	Sorbent		3600 feet
	Anchor	Stakes		30
	Boom	Swamp	6x6 inch	2100 feet

**Site Site Name**

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

Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-280 Pescadero Marsh</b>			
<b>.1 - Exclude Oil</b>			
Boom	Oil Snare (pom-pom)		50 feet
Boom	Swamp	6x6 inch	4000 feet
Anchor	Danforth	25 lb	12
Staff	Staff to Deploy		8
Boom	Sorbent		400 feet
<b>.2 - Exclude Oil</b>			
Boom	Oil Snare (pom-pom)		50 feet
Staff	Staff to Deploy		5
Boom	Sorbent		100 feet
Anchor	Danforth	22 lb	7
Boom	Swamp	6x6 inch	1500 feet
<b>.3 - Collect Oil with Skimmer</b>			
Staff	Staff to Deploy		3
skimmer	self propelled		1
<b>2-282 Bean Hollow</b>			
<b>.1 - Exclude Oil</b>			
Staff	Staff to Deploy		2
Heavy Equip	Bobcat w/ tracks		1
<b>2-284 Pescadero Point to Pebble Beach</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-287 Gazos Creek</b>			
<b>.1 - Exclude Oil</b>			
Staff	Staff to Deploy		4
Heavy Equip	Bobcat w/ tracks		1
Boom	Oil Snare (pom-pom)		50 feet
Boom	Sorbent		300 feet
Anchor	Danforth	22 lb	5
Boom	Swamp	6x6 inch	200 feet
<b>.2 - Collect Oil with Skimmer</b>			
skimmer	shoreside		1
Staff	Staff to Deploy		3
<b>2-289 Whitehouse Creek</b>			
<b>.1 - Exclude Oil</b>			
Boom	Swamp	6x6 inch	50 feet
Anchor	Stakes		4
Heavy Equip	Bobcat w/ tracks		1
Staff	Staff to Deploy		4
<b>2-291 Cascade Creek</b>			
<b>.1 - Exclude Oil</b>			
Heavy Equip	Bobcat w/ tracks		1
Staff	Staff to Deploy		3
<b>2-293 Ano Nuevo Island</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>2-294 Point Ano Nuevo</b>			
<b>.1 - No Onsite Options: Consider Offshore Containment/Recovery/ART</b>			
<b>.2 - Other: See Strategy Box</b>			

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

	Equipment	Sub-Type	Size/Unit	QTY/Unit
<b>2-296</b>	<b>Ano Nuevo Creek</b>			
<b>.1 - Deploy Pompoms</b>				
	Boom	Oil Snare (pom-pom)		2250 feet
	Boom	Sorbent		200 feet
	Anchor	Stakes		12
	Staff	Staff to Deploy		4
<b>.2 - Build Underflow Dam</b>				
	Staff	Staff to Deploy		4
	culvert		12 inch	3
	Heavy Equip	Bobcat w/ tracks		1
<b>.3 - Other: See Strategy Box</b>				

**2-298**      **Franklin Pt. To Waddell Creek**

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

### **9815.3 Lists of Economic Resources Susceptible to Oiling**

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

Economic Sites - GRA 2

Site Information	Site Number & Location	Lat/Long & Priority
<p><b>Stinson Beach</b></p> <p>Phone:</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-MR-100-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.9 -122.64</p>
<p><b>Muir Beach</b></p> <p>Muir Beach CA 94965 Phone:</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-MR-105-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.86 -122.59</p>
<p><b>Presidio Yacht Harbor</b></p> <p>Sausalito CA Phone: 415-332-2319</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-MR-110-D Operational Division:</p>	<p>Public Marinas and Harbors <b>D</b> Lat/Long: 37.83 -122.47</p>
<p><b>Mile Rock Beach</b></p> <p>San Francisco CA 94121 Phone:</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SF-100-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.78 -122.5</p>
<p><b>China Beach</b></p> <p>San Francisco CA Phone:</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SF-105-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.79 -122.51</p>
<p><b>Baker Beach</b></p> <p>Phone: 415-561-4323</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SF-110-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.79 -122.48</p>
<p><b>Pacifica State Beach</b></p> <p>5000 Pacific Coast Hwy Pacifica CA 94044 Phone: 650-738-7381</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SM-100-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.62 -122.5</p>
<p><b>Gray Whale Cove State Beach</b></p> <p>Half Moon Bay CA 94019 Phone: 650-726-8819</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SM-105-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long: 37.57 -122.51</p>
<p><b>Fitzgerald Marine Reserve</b></p> <p>200 Nevada Ave Moss Beach CA 94038 Phone: 650-728-3584</p> <p><b>Site Description:</b></p>	<p>Site Number: 2-2-SM-110-D Operational Division:</p>	<p>Parks, Beaches, Recreational Areas <b>D</b> Lat/Long:</p>
<p><b>Pillar Point Harbor</b></p> <p>1 Johnson Pier Half Moon Bay CA 94019 Phone: 650-726-4382</p> <p><b>Site Description:</b> commercial, sport, and recreational harbor</p>	<p>Site Number: 2-2-SM-115-D Operational Division:</p>	<p>Public Marinas and Harbors <b>D</b> Lat/Long: 37.5 -122.49</p>

Economic Sites - GRA 2

**Site Information**

**Site Number & Location**

**Lat/Long & Priority**

**San Mateo County Public Beaches**

Site Number: 2-2-SM-120-D  
Operational Division:

Parks, Beaches, Recreational Areas **D**  
Lat/Long: 37.24 -122.44

Phone:

**Site Description:** Public beaches between Half Moon Bay and Santa Cruz County line include: Marin's, Tunitas Creek, San Gregorio, Pomponio, Bean Hollow, Ano Nuevo State Reserve

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