

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. 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:

	Resource Name	Status	Presence	Sensitivity
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

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, 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.

