2-150 -A Site Summary- Bodega Harbor

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 19	123 03
USGS Quad:	**7.5" Quad: Bodega Head**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/2000

SITE DESCRIPTION:

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

SEASONAL and SPECIAL RESOURCE CONCERN

The marshes and mudflats throughout the bay are an "A" priority all year. They are habitat for several threatened and endangered species. Heaviest use by migratory seabirds and waterfowl is during fall and winter. Wading birds and seabirds are present throughout the year.

RESOURCES OF PRIMARY CONCERN

There are eelgrass beds and mudflats throughout the bay and wetlands on the north and east shores. They provide habitat for several threatened and endangered species. Heaviest use by migratory shorebirds, seabirds and waterfowl is during fall and winter. Wading birds and seabirds are present throughout the year.

Brown pelicans, peregrine falcon and bald eagle, and the threatened black rail use the harbor. Large concentrations of shorebirds and wading birds forage on extensive mud flats, eelgrass beds, and in the salt and freshwater marshes. Loons, grebes, waterfowl (dabbling and diving ducks), gulls, cormorants, and seabirds are also common.

Harbor seals and sea lions are common inside the bay. A variety of terrestrial mammals also can be found around the bay including deer, raccoons, and river otter.

A variety of fish and invertebrates utilize the mudflats and marshes throughout the year. Herring enter the bay to spawn on eelgrass in the winter (Nov-Mar) & viable eggs (Mar-Apr) Dungeness crab use the bay as a nursery area to spawn and grow.

Dense clam beds are common throughout the mudflat and rocky intertidal areas. A variety of worms and crabs also inhabit the mudflats and sandy intertidal areas.

A rare saltmarsh plant, the northcoast birds-beak, occurs in marshes throughout the bay. Eelgrass beds are present throughout the bay and provide habitat for number of fish and invertebrates. They provide forage for Black Brandt and other waterfowl.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Bryan Much, Sonoma State College ((707) 332-1117)) for specific information on historic or cultural resources in this area.

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

Type	Name / Title	Organization	Phone
T	24hr Sanctuary Personnel	Gulf of the Farallones National Marine Sanctuary	(650) 479-5311
E	Sonoma Co. Office	Sonoma, County of, Regional Park Dept.	(707) 565-2041
E	Doran Co. Regional Park Park Office	Sonoma, County of, Regional Park Dept.	(707) 875-3540

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	Bodega and Tomales Bays 18643	3 8 19	123 03

Last Page Update : 7/1/2005

CONCERNS and ADVICE to RESPONDERS:

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

HAZARDS and RESTRICTIONS:

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

SITE STRATEGIES

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

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

BODEGA HARBOR ENTRANCE

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

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

BODEGA HARBOR ENTRANCE

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

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

BODEGA HARBOR ENTRANCE

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

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

INSIDE BODEGA HARBOR (alternative to #150.3 above)

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

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

INSIDE BODEGA HARBOR

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

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-150.1	5000				30	30 x 40lb northhill	2	0			Oil recovery from shore	10	
2-150.2	1800				12	12 x 20lb	2	1	1		shoreside skimmer	14	
2-150.3	2000				12	12 x 30lb.	2	0	0		Filter fabric or boom; sand bags or rock	8	
2-150.4	2000				12	12 x 20 lb. Danforth	2	1	1		harbor or swamp boom;	11	
2-150.5	6000			6000	40	30-40 x 20lb mud anchors	3	2	2		inchannel mobile skimmers	20	

LOGISTICS

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

From Hwy 101 in Petaluma, take Bodega Avenue west. Continue onto Petaluma Valley Road and Hwy 1 and proceed to Bodega Bay. Doran County Park and Bay Flat Road can be accessed from Hwy 1. Site includes the marshes, mudflats, beaches, piers and marinas within the confines of the harbor.

LAND ACCESS: semi-truck, no restrictions

WATER LOGISTICS: shallow water outside main channel
Limitations: depth, obstruction

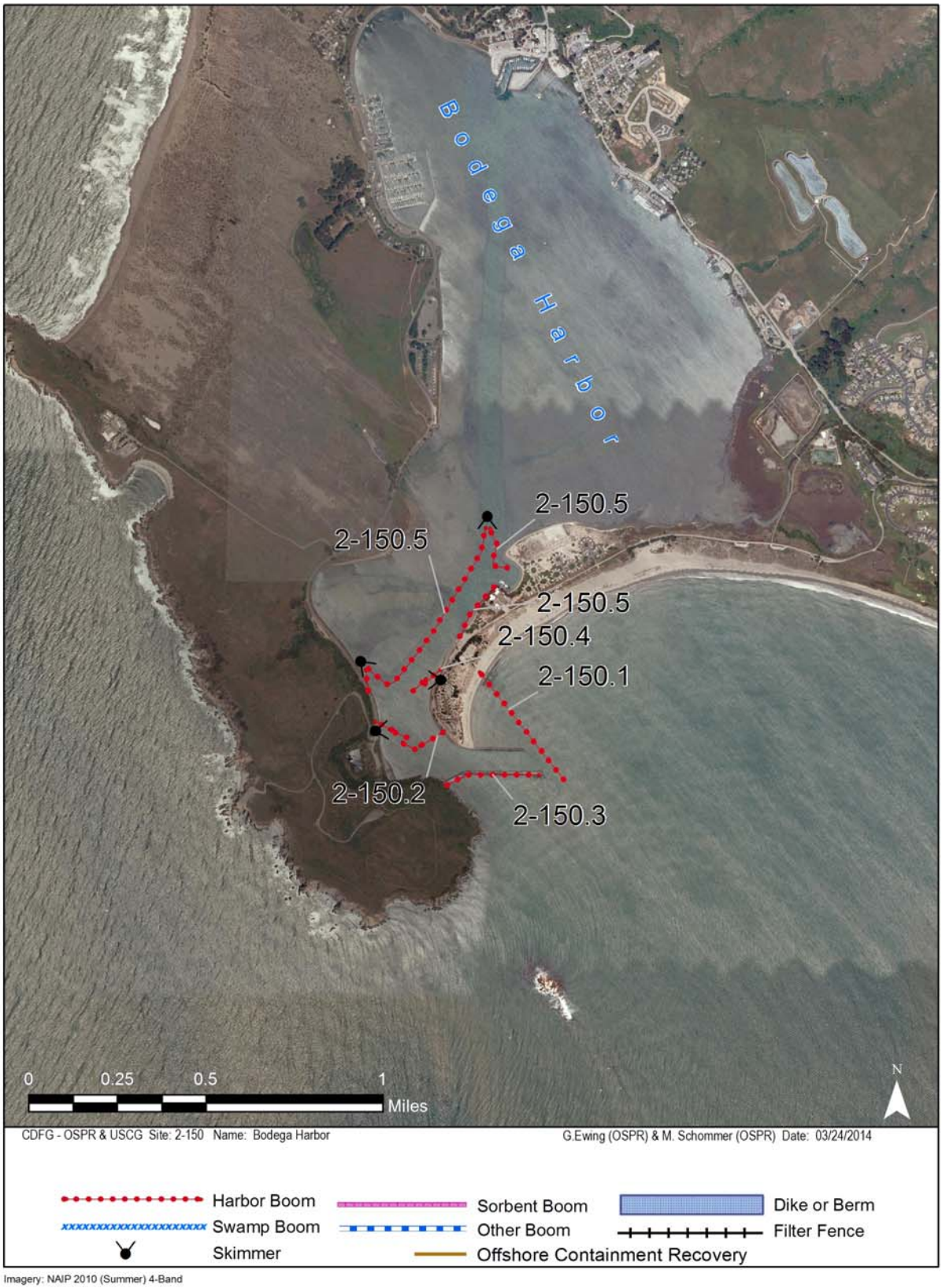
Launching, Loading, Docking and Services Available: Boat ramp on the NW shore Doran Spit and Westshore Park. Several docks and marinas for mooring. Fuel and marine hardware available locally

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

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

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS: Excellent access to all areas. Major natural and human resources.


Bodega Harbor
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Miles
N
CDFG - OSPR & USCG Site: 2-150 Name: Bodega Harbor
G.Ewing (OSPR) & M. Schommer (OSPR) Date: 03/24/2014
Harbor Boom
Swamp Boom
Skimmer
Sorbent Boom
Other Boom
Offshore Containment Recovery
Dike or Berm
Filter Fence
Imagery: NAIP 2010 (Summer) 4-Band