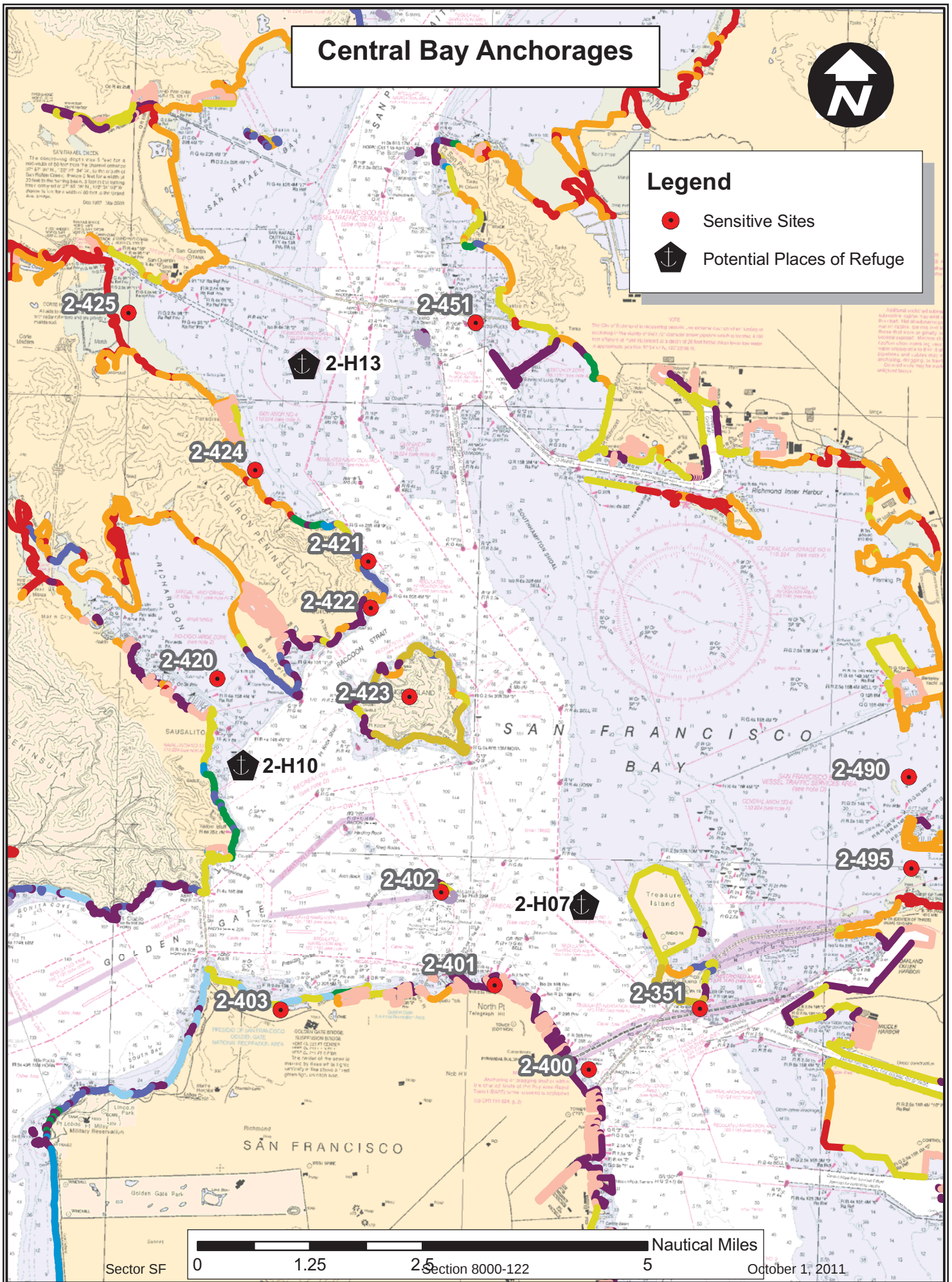


Central Bay Anchorages



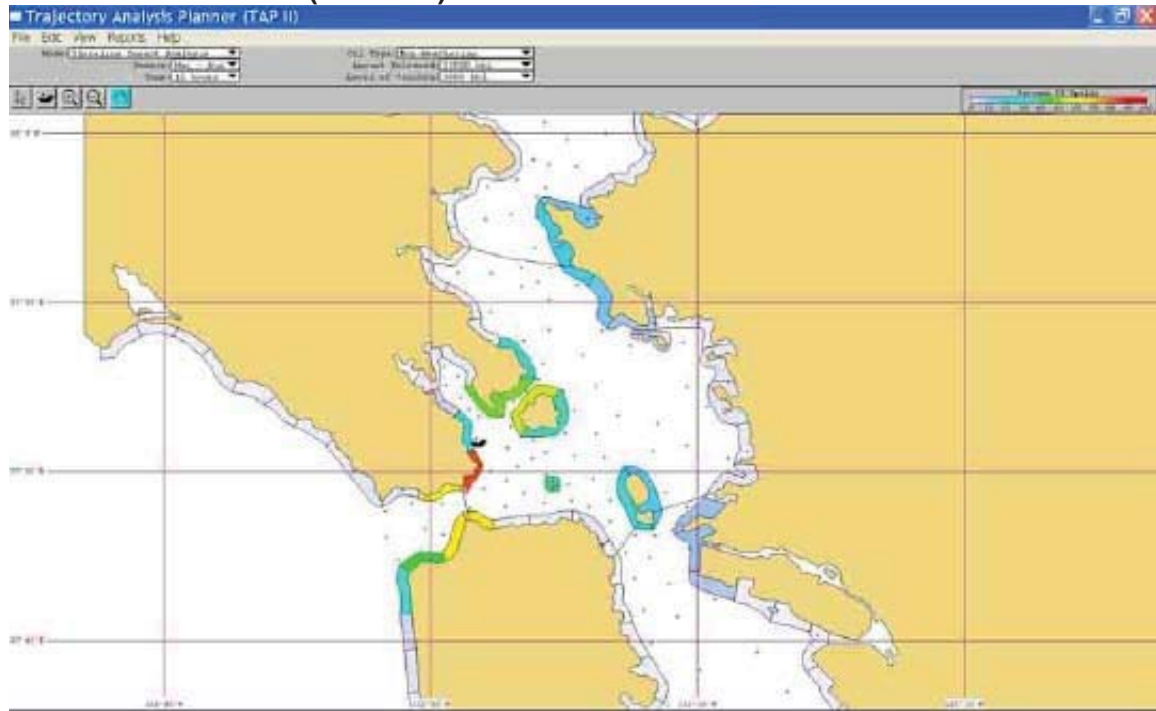
Legend

-  Sensitive Sites
-  Potential Places of Refuge

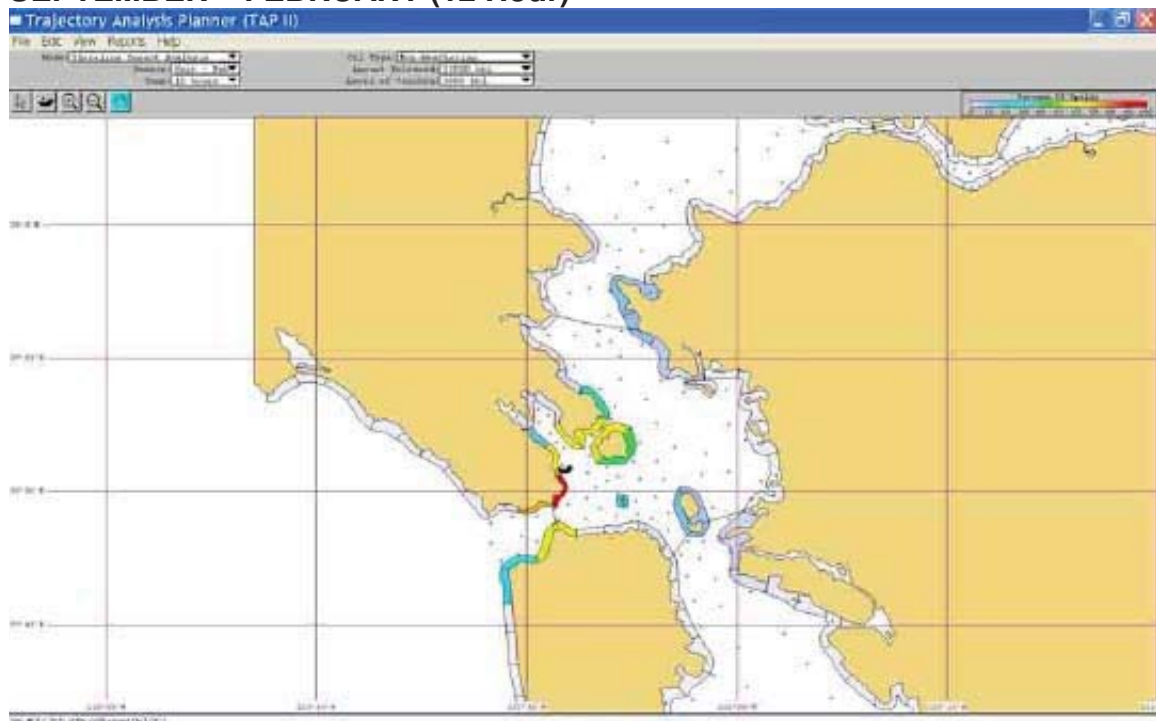


TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-H10 (Anchorage 10)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaryCentral Bay Anchorages: Anchorage 10			2-H10
Latitude 37° 51'	122.5 Longitude 122° 2	122.471	Type: Anchorage
County San Francisco, Marin, Alameda, Contra Costa			

Location Description:	In San Francisco Bay bounded by the east shore of Sausalito and the following lines: Beginning on the shore of Sausalito at latitude 37°51'20" N., longitude 122°28'38" W.; thence southeasterly to latitude 37°50'57.5" N., longitude 122°27'57" W.; thence southwesterly to the shore of Sausalito at latitude 37°50'36" N., longitude 122°28'34" W. The Central Bay of the San Francisco Estuary provides a wide array of resources both of great natural and cultural significance. It is bounded by the iconic Golden Gate Bridge and contiguous with many properties on the National Register of Historic Places including Alcatraz Island, Fort Point National Historic Site. Because of its proximity to the Pacific Ocean, the assemblage of organisms is more similar to the outer coast (e.g., attached intertidal community) than sites further upstream in the Estuary. The highest diversity of attached, native marine algae can be found at intertidal sites in the Central Bay. Because of its strategic location at the Golden Gate strait, the Central Bay is the most important migratory corridor between the Pacific Ocean and the estuarine and riverine habitats upstream in California. Many of the islands within the Central Bay have exceptional value for seabirds. Alcatraz Island, for instance, has the largest western gull breeding population in the San Francisco Estuary; Brandt's cormorants are only one of two estuarine breeding colonies, and is one of the largest in the region.
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Natural Resource Concerns and Issues for this Place / Site	Threatened and Endangered Species (TAES): YBI–(S/F–E) peregrine falcon present year–round, nest Mar–Aug. Crissy Field–(F–E) California seablite plant present year–round. (Rare) Point Reyes bird's–beak plant present year–round. Keil Cove – (F–T) California red–legged frog present year–round in lagoon. Corte Madera Marshes – (S/F–E) California clapper rail, (S–T) black rail, (S/F–E) salt marsh harvest mouse present year–round, also North Coast bird's beak,Marin knotweed (rare plants). Emeryville Lagoon/Mudflat (S/F–E) California clapper rail, (S/F–E) salt marsh harvest mouse present year–round, also North Coast bird's beak (rare plant). Critical Habitat for TAES: Rare native plants in Crissy Field restoration area. Habitat for California brown pelican at Angel Island. Alcatraz Island is also "critical habitat" for California brown pelican. Baylands Nature Preserve in Richardson Bay and Corte Madera Marsh State Ecological Reserve (CDFG). Emeryville lagoon/ mudflat provides pickleweed habitat for listed species.
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Sensitive Non–protected (Non–TAES) Species: SFACP2:351A/B,400C/X,401B,402B,403A,420A,421X/B,422A/C,423X/C,424A/EX,425A,451A,490A,495A; ESI/SFB–Maps 14,16,17 YBI–Small cobble pocket beaches south side island are pinned haulout and rookery Mar–Jun, bird roosting (double–crested cormorant) year–round, nesting. SF Waterfront herring spawning in winter, birds roost/forage year–round. Pier 39 sea lion haulout year–	Critical Habitat for Non–protected (Non–TAES) Species: Alcatraz Island is "critical habitat" for nesting and roosting seabirds (Brandt's and pelagic cormorants, western gulls, pigeon guillemots) and waders (black–crowned night herons, possibly egrets).
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PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 10

Latitude 37° 51' 122.5 Longitude 122° 2 122.471

County San Francisco, Marin, Alameda, Contra Costa

2-H10

Type:
Anchorage

round, highest numbers Aug–Mar. Alcatraz bird colony rookery/roosting year–round (Western gulls, Brandt's and pelagic cormorants, snowy egrets, black–crowned night herons, pigeon guillemots), brown pelican Mar and Dec, herring spawning in winter months, harbor seal and California sea lion haul out at small intertidal rocks NW of island. Crissy Field (in GGNRA) is high profile restored native tidal marsh, important resting/foraging habitat for waterbirds/shorebirds/seabirds in urban setting. Richardson Bay marshes support extensive pickleweed and eelgrass beds with herring spawning, extensive mudflats provide foraging for birds and fish, rocky shorelines provide roosting/haul out for birds and harbor seals. Paradise Cove/Tiburon Peninsula supports seabirds including cormorants, brown pelicans, harbor seal and sea lion foraging, herring spawning in winter. Keil Cove supports eelgrass beds, herring spawning in winter and brown pelicans, Angel Island State Park provides harbor seal/sea lion haulout, seabird (brown pelican,cormorant,gulls) nesting/foraging, herring spawning on eelgrass in winter. Paradise Cay Eelgrass and Marina support many fish species (herring) and brown pelicans, shorebirds (western gulls), wading birds, diving birds. Corte Madera Marshes and mudflats heavily used for foraging by migratory shorebirds and waterfowl fall and winter, and year–round by marsh birds, harbor seals haulout and pup in spring. East section of Richmond–San Rafael Bridge supports large double–crested cormorant colony. Castro Rocks harbor seal rookery in spring (15 Mar–10 Jun), haulout in winter, heavy bird use area (cormorants, pelicans). East span Bay Bridge supports large double–crested cormorant colony. Emeryville Lagoon/Mudflat important habitat for seabirds, shorebirds, migratory waterfowl for roost/forage, listed species, rare plants.

Subsistence–use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Halibut spawning along eastern shores of Angel Island. Herring

Sector SF

Section 8000-130

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Alcatraz–National historic prison site (NPS) with buildings. Crissy Field cultural/historic site within Golden Gate National Park. Angel Island cultural/historic site within State Park.

Recreational Species and Habitat:

Crissy Field heavy recreational use and public interest. Alcatraz and

October 1, 2011

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 10

Latitude 37° 51' 122.5 **Longitude** 122° 2 122.471

County San Francisco, Marin, Alameda, Contra Costa

spawning in several areas including shorelines of Richardson Bay, Tiburon Peninsula, Angel Island, Alcatraz, and Berkeley and Emeryville eelgrass beds. Commercial fishing from TI/YBI.

Human Health / Safety Concerns and Economic Issues for this Place / Site

Human Health and Safety

Anchorage 10 is near the east shore of Sausalito in Marin County with a population of 247,289; SF population of 764,976.

Economic Impact on Commercial Fishing and Aquaculture:

San Francisco has a large-scale commercial fishing industry Recent Cosco Busan oil spill in Nov 2007 is evidence enough to show how 50000 gals of oil can significantly affect recreational and commercial fishing.

Economic Impact on Recreational Fishing and Marine Tourism:

San Francisco has a large-scale commercial fishing industry Recent Cosco Busan oil spill in Nov 2007 is evidence enough to show how 50000 gals of oil can significantly affect recreational and commercial fishing. Marine Tourism might be affected.

Stakeholder List for this Place / Site

Name / Title		Organization
Dispatch		East Bay Regional Park District
Sarah Allen		US National Park Service, Pt. Reyes (NS)
John Bradley	Refuge Manager	SF Bay National Wildlife Refuge Complex
Chevron Long Wharf		Chevron Corp., Operations Control Room (24hrs.)
CenCom DPR	DISPATCH	CA Dept. of Parks & Recreation
Dispatch GGNRA		US National Park Service, Golden Gate (NRA)
John Henderson	FWS Biologist	US Fish & Wildlife Service, Environmental Contami
Damian Higgins		U.S. Fish & Wildlife Service
Marin Co Parks	Dispatch	Marin, County of, Open Space District
Marin County OES (Of		Marin, County of, Sheriff's Office of Emergency Serv
Dave Matthews	Park Superintendent	CA Department of Parks and Recreation
Brian J. Sanford		Marin, County of, Parks & Open Space
Vika Sirova	EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)
Operations State Water Project		CA Department of Water Resources
Brian Ullensvang	Env. Programs Chief	Golden Gate National Recreation Area - NPS

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October 1, 2011

2-H10

Type:
Anchorage

Angel Island recreational use.

Economic Impact on Maritime Commerce and Shipping:

Redundant piers and accommodations exist to counter problems that may arise as a result of a Places of Refuge incident. As long as shipping channels are clear of obstructions, most commercial shipping will continue.

Economic Impact on Non-maritime Commerce:

Usually none with respect to Anchorage 10

Other Economic Impacts:

Airborne release of a hazardous substance or a catastrophic incident will most likely impact population desire to stay away from affected areas or any large metropolitan areas due to a fear factor.

PPOR Pre-Incident Information Summary

Central Bay Anchorages: Anchorage 10

Latitude 37° 51' 122.5 Longitude 122° 2 122.471

County San Francisco, Marin, Alameda, Contra Costa

2-H10

Type: Anchorage

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: USCG Sector SF

Marine Fire Fighting Resources SF PIER 24: 37-42.42, 122-23.24

Approximate Tug Response Time 1 HOUR

Is Containment Possible? ☐

Coast Pilot and Navigation Chart Information

List of Nearby Environmentally Sensitive Sites SFACP2:351A/B,400C/X,401B,402B,403A,420A,421X/B,422A/C,423X/C,424A/EX,

Prevailing Winds	Tidal Range	Bottom Type	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W 6		MUD	70	0			SEASONAL	NO		☒

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
10	Anchorage 10	1500	Deep	50		SWING ROOM OR DOCK FACE: 1/2 MILE SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX	There is no potential for primary containment for this and most anchorages in the Central Bay due to currents exceeding 0.7 knt and turbulence. Similarly there is no significant opportunity for secondary confinement of oil escaping primary containment.

Site Contact/Leasee/Owner: VTS ON CHANNEL 14