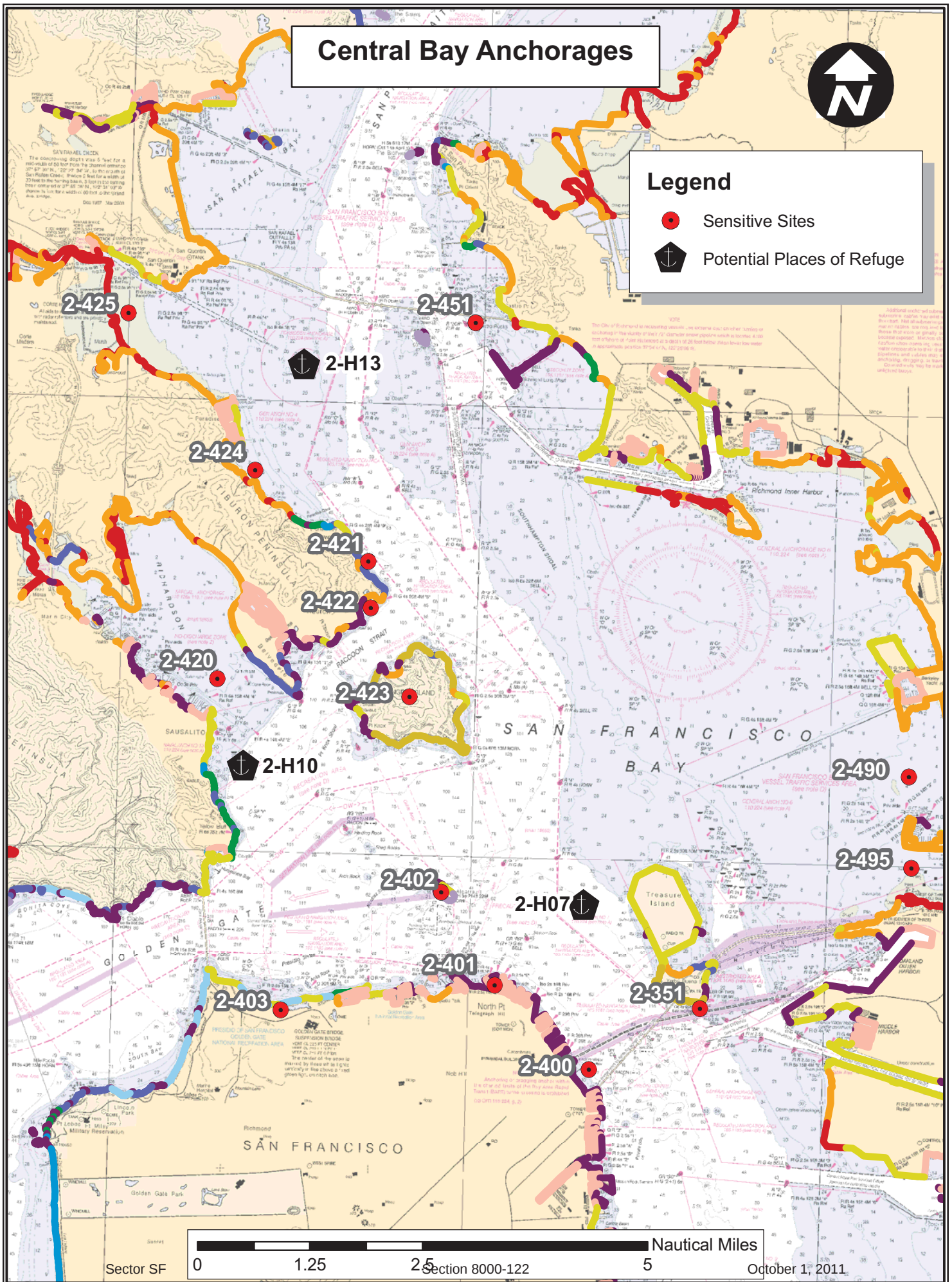


# Central Bay Anchorages



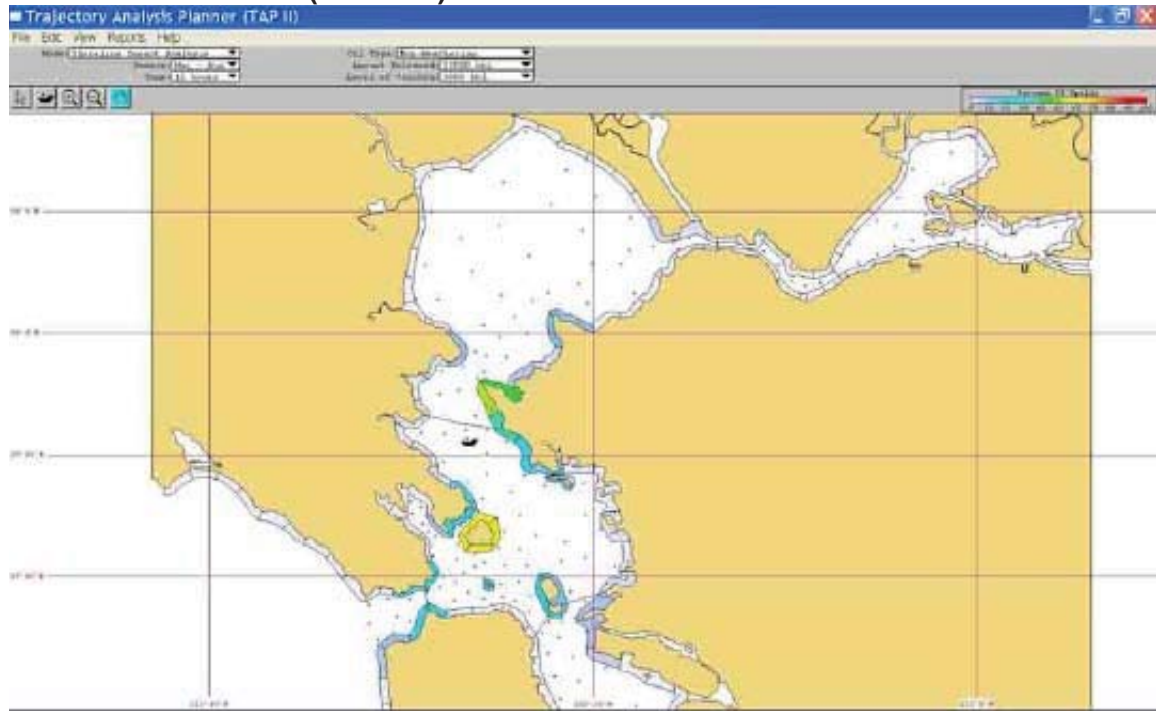
## Legend

-  Sensitive Sites
-  Potential Places of Refuge

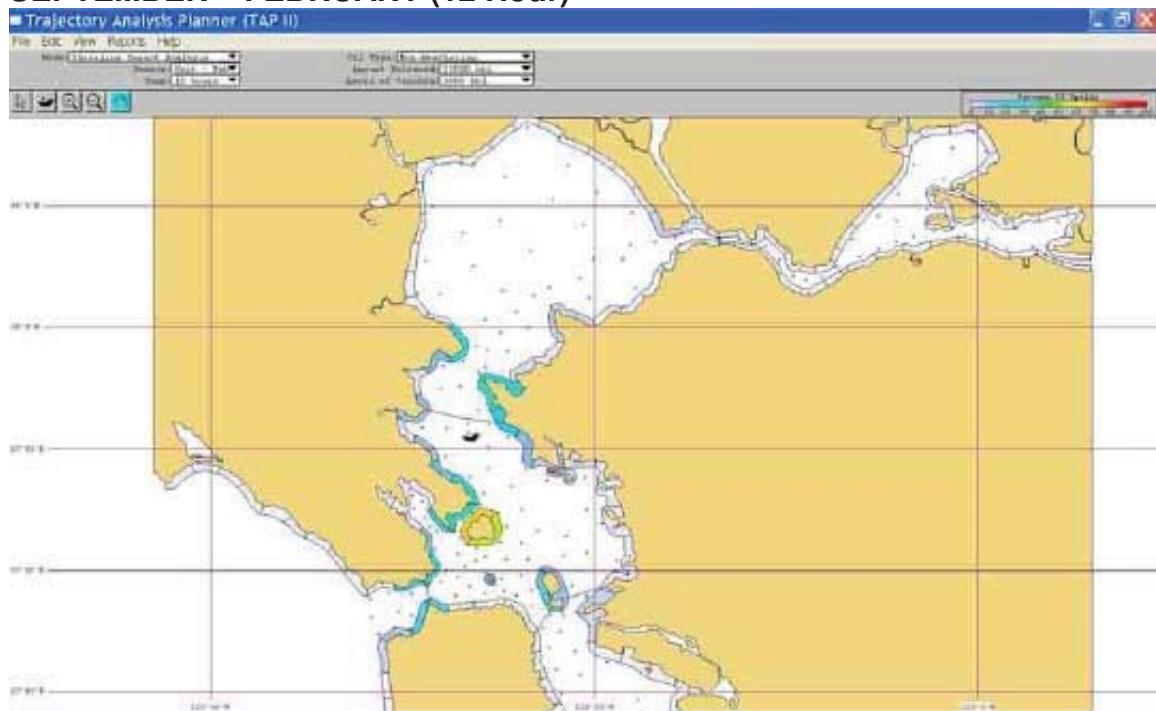


**TRAJECTORY ANALYSIS PLANNER (TAP Model)**  
**Location: 2-H13 (Anchorage 13)**

**MARCH – AUGUST (12 Hour)**



**SEPTEMBER – FEBRUARY (12 Hour)**



| PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13 |                        |         | 2-H13           |
|-------------------------------------------------------------------------|------------------------|---------|-----------------|
| Latitude 37° 55.                                                        | 122.5 Longitude 122° 2 | 122.459 | Type: Anchorage |
| County San Francisco, Marin, Alameda, Contra Costa                      |                        |         |                 |

| Location Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>. In San Francisco Bay east of the Tiburon Peninsula a circular area having a radius of 333 yards centered at latitude 37°55'26" N., longitude 122°27'27" W. A 667-yard-wide forbidden anchorage zone surrounds this anchorage except where such zone would extend beyond the limits of Anchorage No. 4.</p> <p>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.</p> |

| Natural Resource Concerns and Issues for this Place / Site              |                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Threatened and Endangered Species (TAES):                               | Critical Habitat for TAES:                                                                                                                                                                                                                                                                                                                                       |
| YBL-(S/F-E/E) peregrine falcon present year-round, nest Mar-Aug.        | 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. |
| 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      |                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Sensitive Non-protected (Non-TAES) Species:</p> <p>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</p> <p>YBL-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-</p> | <p>Critical Habitat for Non-protected (Non-TAES) Species:</p> <p>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).</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

County San Francisco, Marin, Alameda, Contra Costa

2-H13

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:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

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.

Commercial Fisheries / Species:

Recreational Species and Habitat:

Halibut spawning along eastern shores of Angel Island. Herring

Crissy Field heavy recreational use and public interest. Alcatraz and

## PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13

**Latitude** 37° 55. 122.5 **Longitude** 122° 2 122.459

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.

**2-H13**

Type:  
Anchorage

Angel Island recreational use.

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

Human Health and Safety

**Anchorage 13 near Marin County population of 247,289; near San Rafael with a population of 55,550; and Richmond is to the east with a population of 103,468.**

Economic Impact on Maritime Commerce and Shipping:

Near shipping channel. 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 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 Non-maritime Commerce:

Nothing significant other than onward movements of cargoes from ships that may be stuck at anchorages

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.

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.

### Stakeholder List for this Place / Site

| Name / Title                      | Organization                                       | Phone          | more details |
|-----------------------------------|----------------------------------------------------|----------------|--------------|
| Dispatch                          | East Bay Regional Park District                    | (510) 881-1833 |              |
| Shoreline Unit Manag              | East Bay Regional Park District                    | (510) 544-3172 |              |
| Park Supervisor                   | EBRPD-Eastshore State Park                         | (510) 544-3108 |              |
| Sarah Allen                       | US National Park Service, Pt. Reyes (NS)           | (415) 464-5187 |              |
| John Bradley Refuge Manager       | SF Bay National Wildlife Refuge Complex            | (510) 792-0222 |              |
| Chevron Long Wharf                | Chevron Corp., Operations Control Room (24hrs.)    | (510) 242-4494 |              |
| CenCom DPR DISPATCH               | CA Dept. of Parks & Recreation                     | (831) 649-2817 |              |
| Dispatch GGNRA                    | US National Park Service, Golden Gate (NRA)        | (415) 561-5505 |              |
| John Henderson FWS Biologist      | US Fish & Wildlife Service, Environmental Contami  | (916) 414-6595 |              |
| Damian Higgins                    | U.S. Fish & Wildlife Service                       | (916) 414-6548 |              |
| Marin Co Parks Dispatch           | Marin, County of, Open Space District              | (415) 499-6387 |              |
| Marin County OES (Of              | Marin, County of, Sheriff/Office of Emergency Serv | (415) 499-6584 |              |
| Dave Matthews Park Superintendent | CA Department of Parks and Recreation              | (415) 435-8339 |              |
| Brian J. Sanford                  | Marin, County of, Parks & Open Space               | (415) 499-6405 |              |
| Vika Sirova EnvProtectSpecialist  | US National Park Service, Golden Gate (NRA)        | (415) 561-4478 |              |

Sector SF

Section 8000-136

October 1, 2011

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

County San Francisco, Marin, Alameda, Contra Costa

2-H13  
Type: Anchorage

|                                      |                                            |                |
|--------------------------------------|--------------------------------------------|----------------|
| Operations State Water Project       | CA Department of Water Resources           | (916) 574-2714 |
| Brian Ullensvang Env. Programs Chief | Golden Gate National Recreation Area - NPS | (415) 561-4439 |

Characteristics and Tactical Considerations

Primary Jursidictional Contact: USCG Sector SF Marine Fire Fighting Resources SF PIER 24: 37-42.42, 122-23.24

Approximate Tug Response Time 1 HOUR

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

Coast Pilot and Navigation Chart Information

|                  |             |             |                 |                  |          |                |          |                            |                       |                          |
|------------------|-------------|-------------|-----------------|------------------|----------|----------------|----------|----------------------------|-----------------------|--------------------------|
| Prevailing Winds | Tidal Range | Bottom Type | Max Water Depth | Min Water Depths | Currents | Sea Conditions | Fog      | Shelter From Severe Storms | Navigational Approach | Pilot Requirements       |
|                  | 6           |             |                 | 28               | 0        |                | SEASONAL |                            |                       | <input type="checkbox"/> |

Specific Site Details

| Site ID                    | Site Name    | Vessel Capacities |           |          |    | Swing Room or Dock Face                                                                                                                                                                                                                                                         | Site Capacities and Facilities<br>Facilities, capabilities, and any other issues or concern                                                                                                                                                                  | ContainmentPossibilities: |
|----------------------------|--------------|-------------------|-----------|----------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                            |              | Max Size          | Mini Size | Max Draf | 25 |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                           |
| 13                         | Anchorage 13 | 1000              | Deep      | 25       |    | THIS SITE IS NEAR TRAFFIC LANE; SWING ROOM OR DOCK FACE: 1 /2 MILE<br><br>SF PIER 22 1 /2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX<br><br>SF PIER 22 1 /2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND. | 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: |              |                   |           |          |    |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                           |