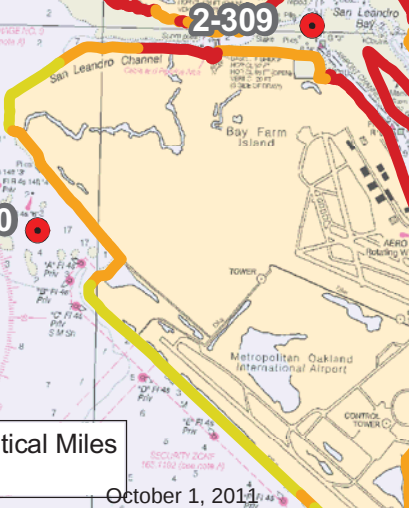




 Sensitive Sites

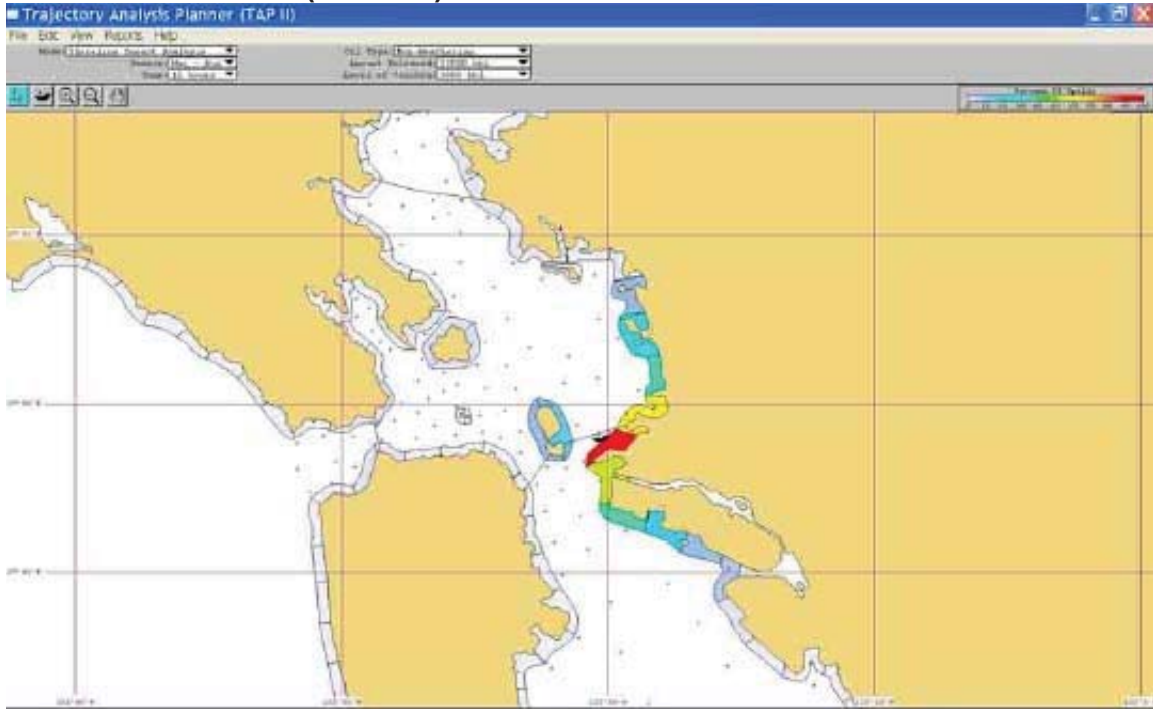
 Potential Places of Refuge

October 1, 2011

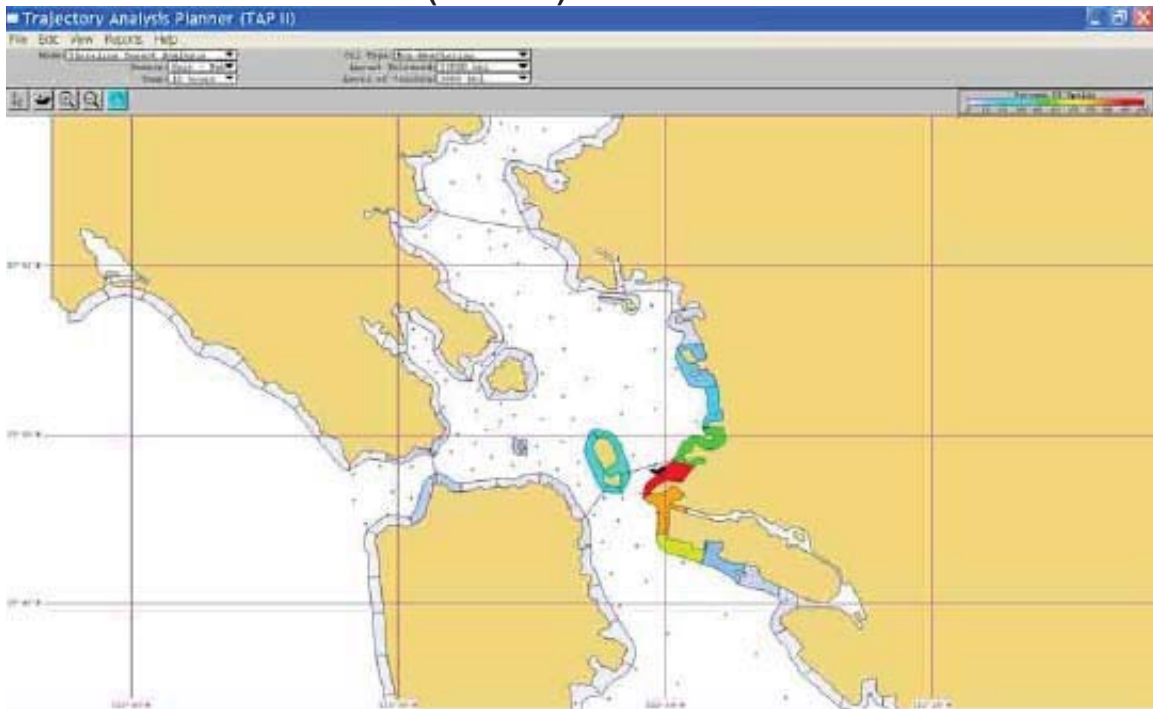
## TRAJECTORY ANALYSIS PLANNER (TAP Model)

Location: 2-C00 (Berths 55-68)  
2-C02 (Berths 20-38)

### MARCH – AUGUST (12 Hour)



### SEPTEMBER – FEBRUARY (12 Hour)



## PPOR Pre-Incident Information SummaOakland Outer Harbor: Berths 20-38

Latitude 37° 48. 122.3 Longitude 122° 1 122.325

County Alameda

2-C02

Type:

Dockage

### Location Description:

Port of Oakland is a major West Coast port for maritime commerce and shipping. Port of Oakland occupies 19 miles on the mainland shore of SF bay. There are more than 770 acres of terminal facilities, 20 deepwater container berths and 36 cranes, including 31 of the post Panamax type. APM is the operator for berths 20-23; Transbay Container Terminal operates berths 25-26; TraPac Terminal operates Berths 30-32; Ben E. Nutter Terminal operates Berths 35-37 (All berths mentioned handle containerized cargo).

### Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

Alameda NAS-(S/F E/E) California least tern, present Apr-Aug, nest May-Aug, restoration area.

San Leandro Bay/Arrowhead Marsh-(S/F E/E) California clapper rail present year-round and nests Mar-Jul, (S-T) black rail nests Mar-May,(S/F E/E) salt marsh harvest mouse, (S/F T/T) salt marsh wandering shrew present year-round, (SSC) salt marsh common yellowthroat present year-round. Also, (S/F-E/E) California least tern forage.

Bay Farm Island (F/T) Western snowy plover nest present from Feb-Sep, rare plant alkali milk-vetch present year round.

YBI-(S/F E/E) peregrine falcon present year-round, nest Mar-Aug.

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).

Sensitive Non-protected (Non-TAES) Species:

SFACP2: 307C/A,309A,310C/A,351A/B,490A,495A; ESI/SFB-Maps 17,18,21

Alameda NAS eelgrass, harbor seal haulout area. Eelgrass beds support herring spawning during winter, seabirds/shorebirds utilize area year-round, brown pelican May-Nov. San Leandro Bay/Arrowhead Marsh supports listed species, rare/sensitive plants, wading birds, shorebirds and waterfowl, brown pelican. Bay Farm Island eelgrass beds support herring spawning during winter, seabirds/ shorebirds use area year-round. YBI-Small cobble pocket beaches south side of island are pinniped haulout and rookery Mar-Jun, bird roosting (double-crested cormorant) year-round and nesting. East span Bay Bridge supports

Critical Habitat for TAES:

Arrowhead Marsh supports number of listed/sensitive species and currently has the highest density of breeding clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species.

Critical Habitat for Non-protected (Non-TAES) Species:

## PPOR Pre-Incident Information SummaOakland Outer Harbor: Berths 20-38

Latitude 37° 48. 122.3 Longitude 122° 1 122.325  
County Alameda

2-C02

Type:  
Dockage

large double-crested cormorant colony. Emeryville Lagoon/Mudflat important habitat for seabirds, shorebirds, migratory waterfowl for roost/ forage, listed species, rare plants.

Subistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Commercial fishing from TI/YBI. Herring spawning in shorelines of Berkeley and Emeryville eelgrass beds.

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

Human Health and Safety

**Oakland is the sixth-most-populous metropolitan area in the United States. Based on 2006 statistical data, Oakland is the 44th-largest city in the United States. The California Department of Finance estimates that Oakland's population on January 1, 2008 was 420,183.**

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. Port of Oakland patrons may be affected.

Economic Impact on Recreational Fishing and Marine Tourism:

Oakland is largely a container port and not normally known for recreational fishing. Jack London Square is the central tourist area with a maritime nexus. 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 as a result of a Places of Refuge incident.

Critical Habitat for Subistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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:

Collateral effects due to a disturbance in intermodal transportation systems may happen if the maritime transportation system is obstructed.

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 SummaOakland Outer Harbor: Berths 20-38**

Latitude 37° 48. 122.3 Longitude 122° 1 122.325  
County Alameda

**2-C02**  
Type:  
Dockage

**Stakeholder List for this Place / Site**

| Name / Title                      | Organization                                      | Phone          | more details |
|-----------------------------------|---------------------------------------------------|----------------|--------------|
| State Water Project               | CA Dept. of Water Resources                       | (916) 574-2714 |              |
| Dispatch                          | East Bay Regional Park District                   | (510) 881-1833 |              |
| Shoreline Unit Manag              | East Bay Regional Park District                   | (510) 544-3172 |              |
| Park Supervisor                   | EBRPD-Martin Luther King Shoreline Park           | (510) 544-3115 |              |
| Park Supervisor                   | EBRPD-Crown Memorial State Beach                  | (510) 544-3171 |              |
| City of Alameda, Parks            | City of Alameda Dept. of Parks and Recreation     | (510) 748-4565 |              |
| John Henderson FWS Biologist      | US Fish & Wildlife Service, Environmental Contami | (916) 414-6595 |              |
| Damian Higgins                    | U.S. Fish & Wildlife Service                      | (916) 414-6548 |              |
| Clif Marocetti Marina Manager     | Berkeley, City of, Dept. of Parks                 | (510) 981-6737 |              |
| Jody Zaitlin Environmental Office | Port of Oakland                                   | (510) 627-1179 |              |

**Characteristics and Tactical Considerations**

Primary Jurisdictional Contact: Port of Oakland 510-627-1100 Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Time 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2: 307C/A, 309A, 310C/A, 351A/B, 490A, 495A; ESI/SFB - Maps17,18,21 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                  |
| NW & winter      |             | MUD         | 45              | 0                |          |                | SEASONAL | vulnerable to              |                       | <input checked="" type="checkbox"/> |

**Specific Site Details**

| Site ID | Site Name    | Vessel Capacities |           |          | Site Capacities and Facilities |                                                                                                                                     | ContainmentPossibilities:                                                                                                                                                                                                                                                       |
|---------|--------------|-------------------|-----------|----------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |              | Max Size          | Mini Size | Max Draf | Swing Room or Dock Face        | Facilities, capabilities, and any other issues or concern                                                                           |                                                                                                                                                                                                                                                                                 |
| 01      | Berths 20-38 | 1200              |           | 45       | 2000                           | rail berth 30, container & heavy lift all                                                                                           | All the piers within this place have good primary containment potential since there is little current here. Due to the minimal currents, the potential for secondary confinement of oil escaping primary containment is probably better here than any other location in SF Bay. |
|         |              |                   |           |          |                                | SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX                                                                            |                                                                                                                                                                                                                                                                                 |
|         |              |                   |           |          |                                | SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND. |                                                                                                                                                                                                                                                                                 |

Site Contact /Leasee/Owner: VTS for contacts