

8000 Marine Fire Fighting and Salvage

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8000 Marine Fire Fighting

8100 Marine Firefighting

Refer to [Coast Guard Sector San Francisco Marine Fire Fighting Contingency Plan](#). This document is published as a stand alone document under a separate cover.

8200 Potential Places of Refuge (PPOR)

8210 Purpose and Scope

In accordance with Regional Response Team Region 9 (RRT9) *Guidelines for Places of Refuge Decision-Making* and COMDTINST 16451.9, this Potential Places of Refuge (PPOR) section provides information/guidance for both an effective and efficient response to requests from ships in need of assistance and seeking a place of refuge. The objective of this section is to identify docking, anchoring, mooring, and/or grounding locations that may be selected as Potential Places of Refuge and to provide decision-making tools in order to enhance the overall effectiveness of the response process. While information on possible sites is pre-inventoried, this does not imply that any of these sites will be the location of choice in a future event. Decision-makers must address both environmental and operational issues when determining where to direct a stricken vessel. The U.S. Coast Guard Captain of the Port (USCG COTP), San Francisco, has jurisdiction over approving a PPOR site for a vessel in distress. The COTP will confer with other federal, state, and local officials when deciding where and when to move a stricken vessel. Selection of a Place of Refuge by the COTP in consultation with other agencies and stakeholders will always be made on a case-by-case basis. Prior coordination and identification of PPOR sites significantly enhances the decision-making process and facilitates the overall response operation. Taking these actions helps prevent or minimize potential adverse effects to the vessel, public, environment, and resource users.

In coordination with the State of California and RRT9, workgroups were established to provide the following: A decision-making process to assist USCG COTP in determining whether a vessel needs to be moved to a place of refuge, which place of refuge to use, and a framework for developing pre-incident information on PPOR sites for inclusion in the appropriate sub-area contingency plans.

Keeping in mind that there is no perfect docking or anchoring site for all vessels and all situations, the ACP1, ACP2, and ACP3 sub-area committees convened and developed an approach to pre-survey possible PPOR sites, not pre-determine them. The data gathered was streamlined and incorporated into a California statewide PPOR database. A hard copy of this data is contained within this section as pre-incident summaries. These pre-incident summaries provide specific information for PPOR sites within the respective areas of responsibility (AOR) and identify the advantages and consequences of the use of each potential site. Pre-identified PPOR sites will be shown on an area index chart. The pre-incident summaries, the PPOR charts and/or the TAP models (where applicable), contain specific geographic and navigational data in addition to information about concerns for the potential impacts on human health and safety and natural resources, and economic consequences for all options a distressed vessel may have to mitigate their situation. Collectively these serve as a job aid designed for use during an incident.

Refer to Chapter 4, Section 4770 of this ACP for further guidance.

Additional guidance and/or job aids which may be used in the PPOR decision making process include:

COMDTINST 16451.9, *Coast Guard Places of Refuge Policy*
http://www.uscg.mil/directives/ci/16000-16999/CI_16451_9.pdf

RRT9 *Guidelines for Places of Refuge Decision-Making Appendix XXVI*
http://www.dfg.ca.gov/ospr/response/acp/marine/2005RCP/rcp_2005_index.html

The process for identification of additional geographic-specific PPOR sites within the USCG San Francisco COTP zone may be identified at a future date. Future selection and designation of PPOR sites shall be in accordance with stated policy and guidance.

8220 Definitions

Deep Draft – Vessel having a draft between 25ft – 60ft.

Environmental Sensitivity Index (ESI) Maps – NOAA and CDFG-OSPR resource that provide a concise summary of coastal resources that are at risk if an oil spill occurs nearby. Examples of at-risk resources include biological resources (such as birds and shellfish beds), sensitive shorelines (such as marshes and tidal flats), and human-use resources (such as public beaches and parks).

When an oil spill occurs, ESI maps can help responders meet one of the main response objectives: reducing the environmental consequences of the spill and the cleanup efforts. Additionally, ESI maps can be used by planners--before a spill happens--to identify vulnerable locations, establish protection priorities, and identify cleanup strategies.

Place – An area that is delineated by geographic locale, jurisdictional boundaries, environmental considerations, controlling authorities, or other such methodology that groups or links a site or many sites. A place may also be a site, where the place and site are the same and no other sites are designated within the place.

Place/Site Identification – The place identification number is composed of the ACP number, place letter designator, and two digit site number each separated by a hyphen that is assigned to a pre-incident place/site survey.

“Potential Place(s) of Refuge” (PPOR) - Is defined as a location where a vessel needing assistance can be temporarily moved to, and where actions can then be taken to stabilize the vessel, protect human life, reduce a hazard to navigation, and/or protect sensitive natural resources and other uses of the area. A place of refuge may include constructed harbors, ports, docks, anchorages, a natural embayment, potential grounding sites, or offshore waters.

Pre-Incident Summary – Site specific summary which contains detailed geographic and navigational data in addition to information about concerns for the potential impacts on human health and safety, natural resources, and economic consequences.

Site – A subdivision of a place that is a more specific location than the place itself.

ACP #	Place Letter	Site Number
2	-	B - 50

TAP II Model - The Trajectory Analysis Planner (TAP) is a statistically-valid planning tool developed by NOAA's oil spill trajectory modelers to help emergency planners understand how oil spilled from different locations will likely move and impact shorelines during different seasons. In California, TAP models only exist for San Francisco and San Diego Bays. In each version, TAP draws on a database of 1,000's of trajectories from computer-simulated oil spills from 100's of potential release locations. The model predicts how an oil spill will spread and move, based on the following bay-specific parameters: bathymetry and shoreline configuration, including channels and bays; tidal and non-tidal currents; historic, seasonal wind patterns; shoreline characteristics that determine beaching and re-floating of oil.

Data from these computer-simulated oil spills are then compiled to generate statistics for where, when, and how much oil impacts different segments of shoreline. These statistics are graphically represented to help emergency planners determine which shorelines are likely to be threatened by a spill originating from a given location.

8230 ACP 1 – North Coast Area Sub Committee

8231 Potential Places of Refuge Site Index

				Latitude/Longitude	
Site #	Place Name	Site Name	Co.	N	W
1-A02	Cresent City Outer Anchorage	Off Red #2 Whistle Buoy	Del Norte	41 43.000	124 11.803
1-B04	Trinidad Bay	Trinidad Bay-Offshore Anchorage	Humboldt	41 02.608	124 08.673
1-B09	Humboldt County	Delgada Canyon	Humboldt	40 06.162	124 08.327
1-B11	Humboldt County	Shelter Cove	Humboldt	40 01.000	124 03.600
1-C02	Humboldt Bay	Fairhaven Terminal	Humboldt	40 47.308	124 11.683
1-C03	Humboldt Bay	Simpson Chip Export Dock/ North Coast Export Dock	Humboldt	40 47.917	124 11.433
1-C04	Humboldt Bay	Redwood Marine Terminal Berth 1/ LP Dock	Humboldt	40.48.993	124 10.883
1-C05	Humboldt Bay	Samoa Turning Basin	Humboldt	40 48.977	124 10.717
1-C07	Humboldt Bay	Commercial Street Dock	Humboldt	40 48.287	124 10.483
1-C09	Humboldt Bay	Schneider Dock	Humboldt	40 47.842	124 11.200
1-C10	Humboldt Bay	Sierra Pacific/14th Street	Humboldt	40 47.687	124 11.267
1-C11	Humboldt Bay	Chevron	Humboldt	40 46.687	124 11.777
1-C12	Humboldt Bay	Fields Landing - Humboldt Bay Forest Products	Humboldt	40 43.960	124 13.150
1-D01	Mendocino County	Usal Beach	Mendocino	39 49.811	123 51.383
1-D03	Mendocino County	Fort Bragg-Noyo Bay	Mendocino	39 25.676	123 48.781
1-D06	Mendocino County	Navarro Head	Mendocino	39 11.326	123 45.795
1-D07	Mendocino County	Cuffey's Cove	Mendocino	39 08.356	123 43.908
1-D10	Mendocino County	Haven's Anchorage	Mendocino	38 47.830	123 35.230

8232 Potential Places of Refuge Chart/Pre-Incident Summary Sheets

8230 ACP 1 – North Coast Area Committee PPOR

8231 Potential Places of Refuge Site Index

Site #	Place Name	Site Name	Co.	Latitude/Longitude	
				N	W
1-A02	Cresent City Outer Anchorage	Off Red #2 Whistle Buoy	Del Norte	41 43.000	124 11.803
1-B04	Trinidad Bay	Trinidad Bay-Offshore Anchorage	Humboldt	41 02.608	124 08.673
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8232 Potential Places of Refuge Chart/Pre-Incident Summary Sheets

This section contains North Coast Places of Refuge Charts and Pre-Incident Summary Sheets.

ACP 1 - PPOR Deep Draft Sites



Additional information can be obtained at [noaa.gov](http://www.noaa.gov)

Scale 1:811,980 at Lat. 40° N

North A
Sector 20F
Section 8000-9

SOUTH B
Sector 20F
Section 8000-9

WAT
Sector 20F
Section 8000-9

Abbreviations For compilation of symbols and abbreviations, see Chart 13025.

Alpha or Noparker lights are white unless otherwise indicated.

ACTD acoustical G green

A alternating H grey

I0 measured quay I0 quay

1-A02

NORTE

1-B04

HUMBOLDT

1-C05

1-B09

1-B11

1-D01

1-D03

1-D06

1-D07

1-D10

1-C05

1-C04

1-C07

1-C03

1-C10

1-C02

1-C11

GLENNE

Radar reflectors have been placed on many
islands to aid navigation. Individual radar
reflector identification on these charts has been
omitted for clarity.

NOTE E

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the San Francisco Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 167, the Vessel Traffic Pilot, and/or the VTS User's Manual. Mariners should contact port offices for applicable rules and reporting requirements. Vessel traffic management by VTS participants is limited to the navigable waters within the VTS area. Vessels must be controlled or may not enter the VTS area as a condition of port entry, to report beyond this area to facilitate advance vessel traffic management within the VTS area.

The U.S. Coast Guard operates a mandatory Offshore Vessel Movement Monitoring System over the seaward approaches to San Francisco Bay. Vessels are requested to monitor VTS on Channel 12 at 15 to 45 minutes past each hour for broadcast reports of down shipping traffic in the area.

COLUSA SUTTER

Legend



Potential Places of Refuge

Nautical Miles

0 5 10 20 30 40 50

Section 8000-9

October 1, 2014

NORTHERN CALIFORNIA

SHORELINE HABITAT RANKINGS

- 1A EXPOSED ROCKY CLIFFS
- 1B EXPOSED SEAWALL
- 1C EXPOSED ROCKY CLIFFS WITH BOULDER TALUS BASE
- 2 WAVE CUT ROCKY PLATFORMS
- 3 FINE- TO MEDIUM-GRAINED SAND BEACHES
- 4 COARSE-GRAINED SAND TO GRANULE BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES
- 8B SHELTERED MAN-MADE STRUCTURES
- 9 SHELTERED TIDAL FLATS
- 10A SALT MARSHES

HUMAN-USE FEATURES

- | | |
|--|---|
| ■ ACCESS POINT | ■ MARINE SANCTUARY |
| ■ AIRPORT | ■ NATIONAL PARK |
| ■ AQUACULTURE | ■ STATE PARK |
| ■ ARCHAEOLOGICAL SITE | ■ RECREATIONAL FISHING AND BOATING |
| ■ BOAT RAMP | ■ RECREATIONAL BEACH |
| ■ COAST GUARD | ■ SUBSISTENCE AREA |
| ■ COMMERCIAL FISHING | ■ VILLAGE |
| ■ HISTORICAL SITE | ■ WATER INTAKE |
| ■ HOIST | ■ WILDLIFE REFUGE |
| ■ MARINA | ■ ID NUMBER |

PARK BOUNDARY

SENSITIVE BIOLOGICAL RESOURCES

BIRDS

- ALCIDS & PELAGIC BIRDS
- DIVING BIRDS
- GULLS & TERNS
- RAPTORS
- SHOREBIRDS
- WADING BIRDS
- WATERFOWL
- NESTING SITES

MAMMALS

- DOLPHINS
- MUSTELIDS & RODENTS
- SEA OTTERS
- SEALS & SEA LIONS
- WHALES

SHELLFISH

- BIVALVES
- CRABS
- ECHINODERMS
- GASTROPODS & ABALONE
- LOBSTERS
- SHRIMP
- SQUID

FISH

- FISH

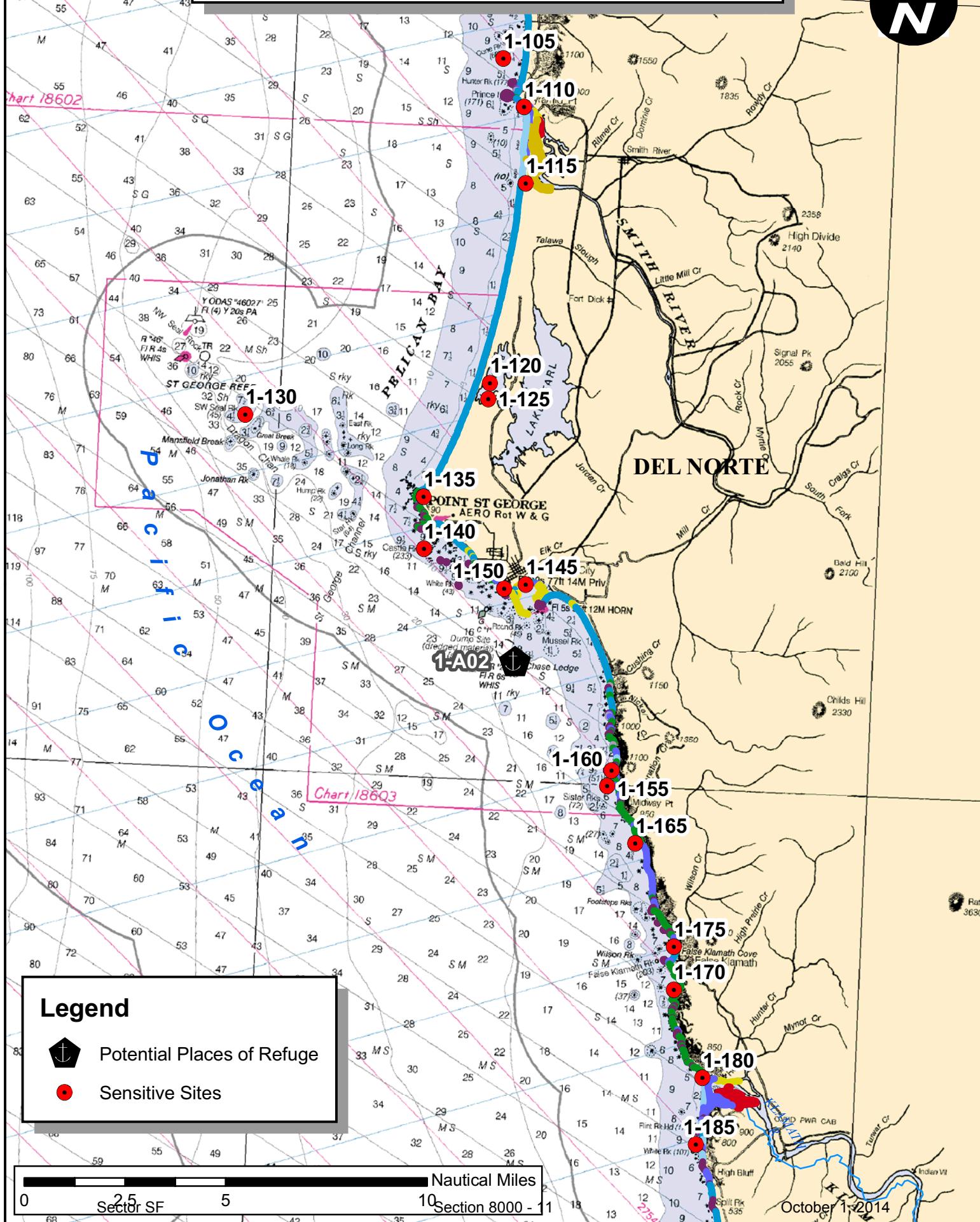
PLANTS

- KELP & SEAGRASSES
- TERRESTRIAL PLANTS

MULTI-GROUP

- THREATENED/ENDANGERED
- ID NUMBER

ACP 1- Del Norte County - PPOR Sites



PPOR Pre-Incident Information Summary for	Cresent City Outer Anchorage: Off Red # 2 Whistle Buoy			
Latitude: 414300	124.2	Longitude:	124.118	124.1967
County: Del Norte				
Sector SF				

Location Description:

Natural Resource Concerns and Issues for this Place / Site

- Threatened and Endangered Species (TAES):
California brown pelican (FPD, SE), marbled murrelet (FT,SE) and stellar sea lion (FT) in area.
- Sensitive Non-protected (Non-TAES) Species:
Offshore waters important forage areas for man bird species. Grey whales seasonally common in area.
- Subsistence-use Species:
Albacore, salmon, rockfish, lingcod and surf perch are popular seasonal recreational fisheries.
- Essential Fish Habitat:
Management plans for pelagic finfish, salmon and ground fish all identify this as Essential Fish Habitat.
- Commercial Fisheries / Species:
Cresent City Harbor has large fleet of commercial fishing vessels for crab, Dover sole, thornyhead and sable fish. Rock fish also important to local economy.

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

- Human Health and Safety:
Economic Impact on Maritime Commerce and Shipping:
Economic Impact on Commercial Fishing and Aquaculture:
Economic Impact on Recreational Fishing and Marine Tourism:
- Economic Impact on Non-maritime Commerce:
Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
--------------	--------------	-------	--------------

PPOR Pre-Incident Information Summary for	Cresent City Outer Anchorage: Off Red # 2 Whistle Buoy			
Latitude: 414300	124.2	Longitude:	124118	124.1967
County: Del Norte				

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	Cresent City Harbor Master 707-464-6174 voice		
Approximate Tug Response Time	Knutson 707-496-0749 [Ocean going, 10kts]		
List of Nearby Environmentally Sensitive Sites:	ACP 1: 1-105, 1-110, 1-115, 1-125, 1-130, 1-135, 1-140, 1-145		
Coast Pilot and Navigation Chart Information	<input type="checkbox"/> is Containment Possible? <input type="checkbox"/>		
Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth
			180
Min Water Depths	Currents	Sea Conditions	Fog
		Shelter From Severe Storms	Navigation Approach

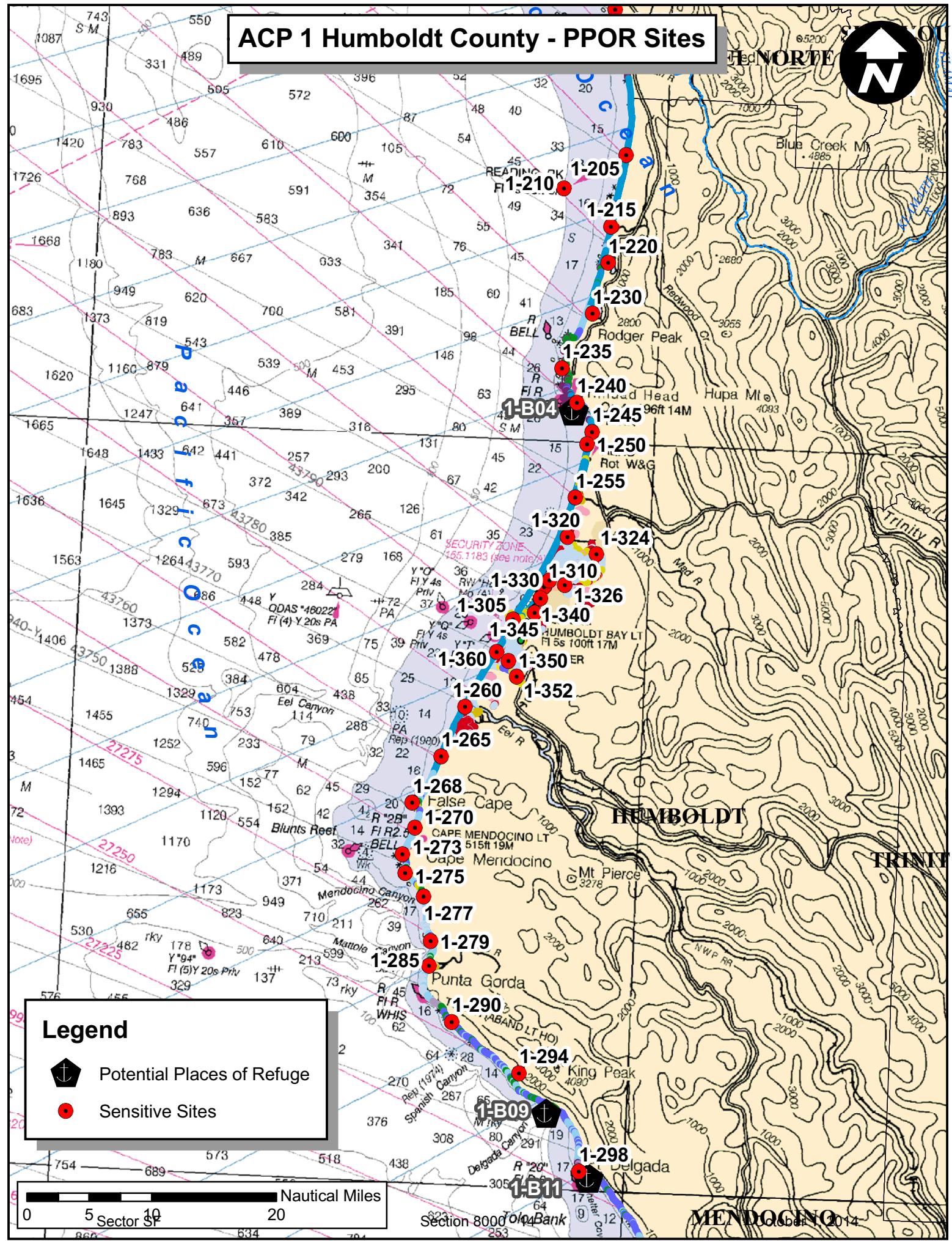
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft Deep	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
Off Red # 2 Whistle Buoy								
Site Contact/Leasee/Owner:	Cresent City Harbor Master	707-464-3535 fax						

ACP 1 Humboldt County - PPOR Sites



NED NORTE



PPOR Pre-Incident Information Summary for Trinidad Bay: Trinidad Bay Offshore Anchorage																			
1-B04	Type: Anchorage																		
Latitude: 410260	124.14 Longitude: 124086 124.1446																		
County: Humboldt																			
Location Description:																			
<p>Natural Resource Concerns and Issues for this Place / Site</p> <table border="1"> <tr> <td>Threatened and Endangered Species (TAES):</td> <td>Critical Habitat for TAES:</td> </tr> <tr> <td>California brown pelican (FPD, SE), marbled murrelet (FT, SE) and stellar sea lion (FT) in area</td> <td></td> </tr> <tr> <td>Sensitive Non-protected (Non-TAES) Species:</td> <td>Critical Habitat for Non-protected (Non-TAES) Species:</td> </tr> <tr> <td>Many non -TAES birds forage in these offshore waters and use numerous offshore rocks for nesting.</td> <td></td> </tr> <tr> <td>Subsistence-use Species:</td> <td>Critical Habitat for Subsistence Species:</td> </tr> <tr> <td>Essential Fish Habitat:</td> <td>Historic and Cultural Resources:</td> </tr> <tr> <td>Management Plans for pelagic finfish, salmon and ground fish all identify this as Essential Fish Habitat.</td> <td>Trinidad head is an important Native American site.</td> </tr> <tr> <td>Commercial Fisheries / Species:</td> <td>Recreational Species and Habitat:</td> </tr> <tr> <td>Section 8000 There is a small commercial crab fishing fleet, but most of the local fleet is out of Humboldt Bay to the south.</td> <td></td> </tr> </table>		Threatened and Endangered Species (TAES):	Critical Habitat for TAES:	California brown pelican (FPD, SE), marbled murrelet (FT, SE) and stellar sea lion (FT) in area		Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:	Many non -TAES birds forage in these offshore waters and use numerous offshore rocks for nesting.		Subsistence-use Species:	Critical Habitat for Subsistence Species:	Essential Fish Habitat:	Historic and Cultural Resources:	Management Plans for pelagic finfish, salmon and ground fish all identify this as Essential Fish Habitat.	Trinidad head is an important Native American site.	Commercial Fisheries / Species:	Recreational Species and Habitat:	Section 8000 There is a small commercial crab fishing fleet, but most of the local fleet is out of Humboldt Bay to the south.	
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Primary Jurisdictional Contact:	Marine Fire Fighting Resources:																		

PPOR Pre-Incident Information Summary for Trinidad Bay: Trinidad Bay Offshore Anchorage		1-B04															
Latitude: 410260	124.14	Longitude: 124086	124.1446														
Sector County: Humboldt																	
Approximate Tug Response Time	Knutson 707-496-0749 [Oceangoing, 10kts]																
List of Nearby Environmentally Sensitive Sites:	ACP1: 230, 235, 240, 245, 250, 255, 305, 310																
Coast Pilot and Navigation Chart Information																	
Prevailing Winds	Tidal Range	Bottom Type:	<table border="1"> <thead> <tr> <th>Max Water Depth</th> <th>Min Water Depths</th> <th>Currents</th> <th>Sea Conditions</th> <th>Fog</th> <th>Shelter From Severe Storms</th> <th>Navigational Approach</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>34</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	40	34					
Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach											
40	34																
Specific Site Details																	
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities												
	Trinidad Bay Offshore Anchorage	Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern											
		Deep			This site is directly sout of Prisoner Rock and east of Pilot Rock.	ContainmentPossibilities:											
					Shallow draft vessels (less than 15ft) could go into Trinidad Bay to use docks and anchorages there. (See 1-B05)												
Site Contact/Leasee/Owner:																	

PPOR Pre-Incident Information Summary for	Humboldt County: Delgada Canyon		
Latitude: 400616	124.14	Longitude:	124.1388
County: Humboldt			
Sector SF			

Location Description:

[Redacted]

Natural Resource Concerns and Issues for this Place / Site

- Threatened and Endangered Species (TAES):
 - California brown pelican (FPD, SE), stellar sea lion (FT)
- Sensitive Non-protected (Non-TAES) Species:
 - Common murre, surf scoter. Grey whale transit and foraging.
- Subsistence-use Species:
 - [Redacted]
- Essential Fish Habitat:
 - Management plans for pelagic finfish, salmon and ground fish identify this as Essential Fish Habitat.
- Commercial Fisheries / Species:
 - Nearshore rockfish, salmon and crab

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

- Human Health and Safety:
 - [Redacted]
- Economic Impact on Commercial Fishing and Aquaculture:
 - [Redacted]
- Economic Impact on Recreational Fishing and Marine Tourism:
 - [Redacted]

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
--------------	--------------	-------	--------------

- | | | | | |
|--|---------------------------------|---|---------------------------------|------------|
| Characteristics and Tactical Considerations | Primary Jurisdictional Contact: | [Redacted] | Marine Fire Fighting Resources: | [Redacted] |
| | Approximate Tug Response Time | Knutson 707-496-0749 (ocean-going, 10kts) | | |

1-B09

Type:
Anchorage

PPOR Pre-Incident Information Summary for	Humboldt County: Delgada Canyon			
Latitude: 400616	124.14	Longitude:	124083	124.1388
Sector County: Humboldt				
Site ID:	SF List of Nearby Environmentally Sensitive Sites:			

Coast Pilot and Navigation Chart Information

ACP 1: 285, 290, 294, 298, 400

Is Containment Possible?

Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigation Approach	Pilot Requirements
			600	180						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				Containment Possibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Delgada Canyon	Deep				-Steeper slope on north side of canyon. -Approximately 6 miles north of Point Delgada -No shoreside access				

Site Contact/Leasee/Owner:

PPOR Pre-Incident Information Summary for	Humboldt County: Shelter Cove		
Latitude: 400100	124.06	Longitude: 124036	124.06
County: Humboldt			
Sector SF			

Location Description:

[Redacted]

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):	Critical Habitat for TAES:
California brown pelican (FPD, SE), stellar sea lion (FT)	[Redacted]
Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:
Common murre, surf scoter.	[Redacted]
Subsistence-use Species:	Critical Habitat for Subsistence Species:
	[Redacted]
Essential Fish Habitat:	Historic and Cultural Resources:
Management plans for pelagic finfish, salmon and ground fish identify this as Essential Fish Habitat.	[Redacted]
Commercial Fisheries / Species:	Recreational Species and Habitat:
Nearshore rockfish, salmon and crab	Abalone, salmon, crab

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

Human Health and Safety:	Economic Impact on Maritime Commerce and Shipping:
[Redacted]	[Redacted]
Economic Impact on Commercial Fishing and Aquaculture:	Economic Impact on Non-maritime Commerce:
[Redacted]	[Redacted]
Economic Impact on Recreational Fishing and Marine Tourism:	Other Economic Impacts:
[Redacted]	[Redacted]

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations	Primary Jurisdictional Contact:	Marine Fire Fighting Resources:
[Redacted]	[Redacted]	[Redacted]
Knutson 707-496-0749 [ocean-going, 10kts]	Approximate Tug Response Time	[Redacted]

PPOR Pre-Incident Information Summary for		Humboldt County: Shelter Cove	
Sector	Latitude: 400100	Longitude: 124.06	Longitude: 124.06
County: Humboldt			
List of Nearby Environmentally Sensitive Sites:		ACP 1: 285, 290, 294, 298, 400	
		<input type="checkbox"/> Is Containment Possible? <input type="checkbox"/>	
		<input type="checkbox"/> Pilot Requirements	

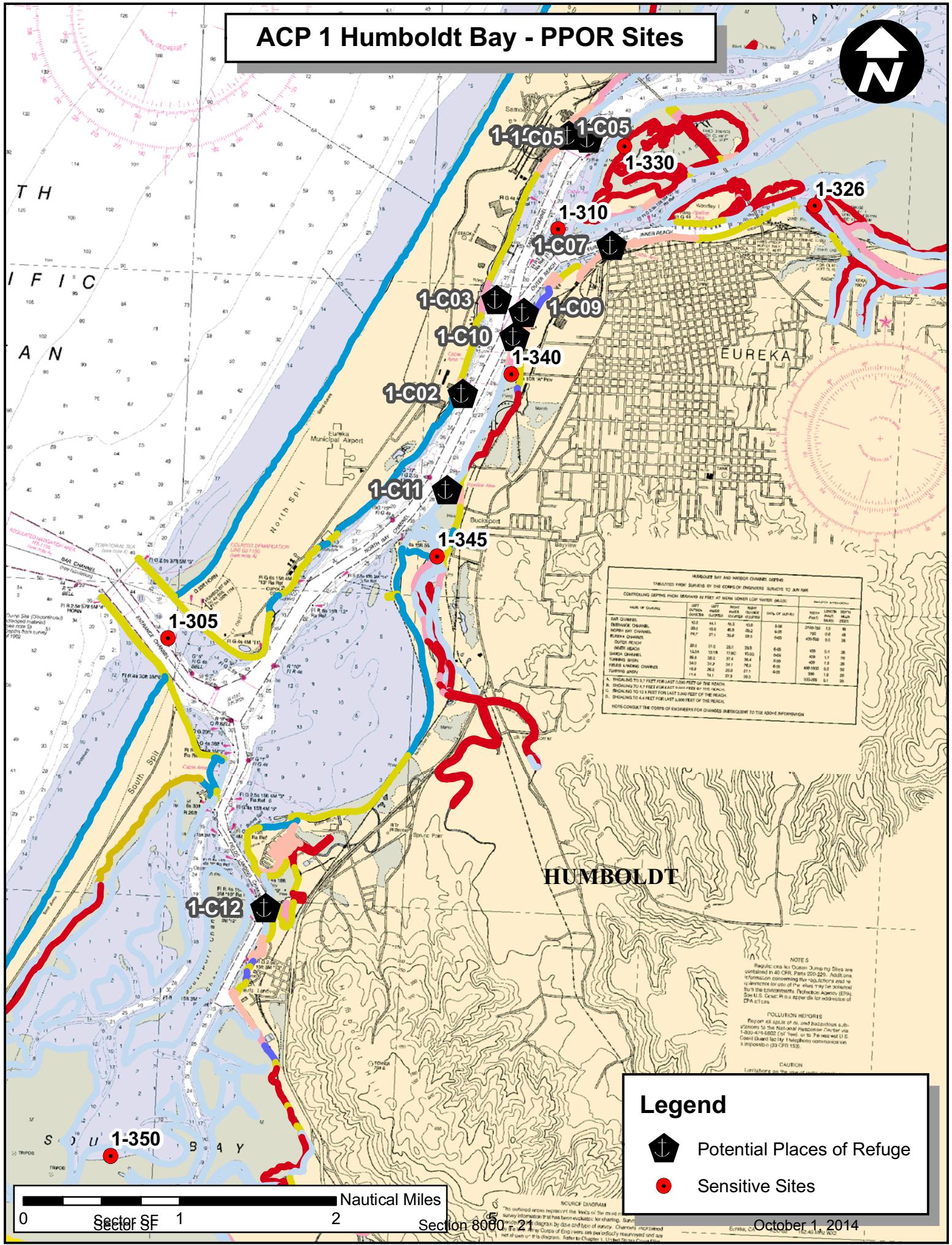
Coast Pilot and Navigation Chart Information

Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach
			72						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
	Shelter Cove	Deep				This site approximately 25mi SE of Green #1 buoy			
Site Contact/Leasee/Owner:									

ACP 1 Humboldt Bay - PPOR Sites



PPOR Pre-Incident Information Summary for Humboldt Bay: Fairhaven Terminal

Latitude: 404730

Longitude:

124.19

Latitude:

124.116

Longitude:

124.1947

County: Humboldt

Sector SF

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), Coho (FE & FT, ST) and chinook (ESU, ST) salmon, steelhead (FSS) and coastal cutthroat (FT) trouts. Salmon and trout spawning runs August through June, juveniles February through August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore typically harbor seals. Black brant and migratory waterbirds, especially shorebirds, occur in fall, winter, and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitats:

Management plans for pelagic finfish, salmon and groundfish identify the offshore areas as Essential Fish Habitat.

Commercial Fisheries / Species:

Humboldt Bay is home to a large commercial fishing fleet for crab, salmon, rockfish and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for crab, salmon, rockfish and albacore.

Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod, surf perch and crab are all popular seasonal offshore recreational fisheries.

1-C02

Type:
Dockage

Critical Habitat for TAES:

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

In addition to sandy shoreline and extensive mud flat habitat, extensive eel grass beds are exposed during low tide.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Historic and Cultural Resources:

Indian Island is a significant cultural site for Native Americans.

Recreational Species and Habitat:

Albacore, salmon, rockfish, lingcod, surf perch and crab.

Economic Impact on Maritime Commerce and Shipping:

Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fueling facilities. Shipments of petroleum products (gasoline and diesel) received every 4-10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Fairhaven Terminal

Latitude: 404730 124.19 Longitude: 124.116 124.1947

County: Humboldt

Sector SF

Humboldt Bay: Fairhaven Terminal**1-C02**Type:
Dockage**Stakeholder List for this Place / Site**

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Marine Fire Fighting Resources:

Brusco 707-498-4618; knutson 707-496-0749

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 328, 330, 340, 345

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
		Silt	38						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Fairhaven Terminal	950	950	Deep	500	Must be mindful of seasonal shoaling at harbor entrance. Local knowledge essential. Refer to Humboldt Bay Harbor of Safe Refuge Simulation Final Report Nov. 2007 (access via Port Authority). Boat hoist at Fields Landing boat yard (US EKA FLC12); 150 tons, 100'				

Site Contact/Leasee/Owner:

PPOR Pre-Incident Information Summary for		Humboldt Bay: Simpson Chip Export Dock/North Coast Export	1-C03
Latitude: 404791 Longitude: 124.19 County: Humboldt Sector SF		Type: Dockage	
Location Description:			
Natural Resource Concerns and Issues for this Place / Site			
<p>Threatened and Endangered Species (TAES):</p> <p>California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho (FE & FT, ST) and chinook (ESU, ST) salmon, steelhead trout, (FSS) and coastal cutthroat trout (FT). Salmon and trout spawning runs August through June, juvenile/smolts run February through August.</p> <p>Sensitive Non-protected (Non-TAES) Species:</p> <p>Occasionally whales offshore, typically harbor seals. Black brant and migratory waterbirds, especially shorebirds, occur in fall, winter and spring. 100,000+ birds use Bay in winter for feeding and resting. Mustrat and beaver use marsh areas.</p> <p>Subsistence-use Species:</p> <p>Some Native American subsistence gathering of seaweeds and invertebrates.</p> <p>Commercial Fisheries / Species:</p> <p>Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish, and albacore.</p>			
<p>Critical Habitat for TAES:</p> <p>Critical Habitat for Non-protected (Non-TAES) Species:</p> <p>In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.</p> <p>Critical Habitat for Subsistence Species:</p> <p>Some Native American subsistence gathering of seaweeds and invertebrates.</p> <p>Historic and Cultural Resources:</p> <p>Indian Island is a significant Native American cultural site</p> <p>Recreational Species and Habitat:</p> <p>Albacore, salmon, rockfish, lingcod, surf perch and crab.</p>			
Human Health / Safety Concerns and Economic Issues for this Place / Site			
<p>Human Health and Safety:</p> <p>Towns bordering Humboldt Bay, Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.</p> <p>Economic Impact on Commercial Fishing and Aquaculture:</p> <p>Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish, and albacore.</p> <p>Economic Impact on Recreational Fishing and Marine Tourism:</p> <p>Albacore, salmon, rockfish, lingcod, surf perch and crab are all popular seasonal offshore recreational fisheries.</p>			
<p>Economic Impact on Maritime Commerce and Shipping:</p> <p>Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fueling facilities. Shipments of petroleum products (gasoline and diesel) received every 4-10 days.</p> <p>Economic Impact on Non-maritime Commerce:</p> <p>Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) in east side of Bay.</p> <p>Other Economic Impacts:</p> <p>October 1, 2014</p>			

PPOR Pre-Incident Information Summary for**Humboldt Bay: Simpson Chip Export Dock/North Coast Export**Latitude: 404791
Longitude: 124.19
Sector SF
County: Humboldt

124.114 124.1906

Type:
Dockage**Stakeholder List for this Place / Site**

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Marine Fire Fighting Resources:

Approximate Tug Response Time Brusco 707-498-4618, Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 328, 330, 340, 345

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
			38						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Simpson Chip Export Dock/North Coast Export Dock	950	950	Deep	1350	Boat hoist at Fields Landing Boatyard (US EKA FLC12); 150 tons, 100'				

Must be mindful of seasonal shoaling at harbor entrance. Local knowledge essential. Refer to Humboldt Bay Harbor of Safe Refuge Simulation Final Report Nov. 2007 (access via Port Authority).

Site Contact/Leasee/Owner:

1-C03

PPOR Pre-Incident Information Summary for Humboldt Bay: Redwood Marine Terminal Berth 1 LP dock		
1-C04		
Latitude: 404899	124.18	Longitude: 124108 124.1814
County: Humboldt		
Location Description:		

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts -February though August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds, especially shorebirds, occur in the fall, winter, and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Essential Fish Habitat:

Albacore, rockfish, salmon, lingcod, surf perch and crab

Commercial Fisheries / Species:

Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.

Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod, surf perch and crab are all popular seasonal offshore recreational fisheries.

Critical Habitat for TAES:

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

In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Recreational Species and Habitat:

Economic Impact on Maritime Commerce and Shipping:

Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fuelling facilities. Shipment of petroleum products (gasoline and diesel) received every 4-10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on eas side of Bay.

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Redwood Marine Terminal Berth 1 LP dock

Sector SF	Latitude: 404899	124.18	Longitude:	124.108	124.1814
County: Humboldt					

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Approximate Tug Response Time Brusco 707- 498-4618; Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 328, 330, 340, 345

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
			38						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Redwood Marine Terminal Berth 1 LP dock	Deep	950			1100 Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 ton, 100'				

Must be mindful of seasonal shoaling at harbor entrance. Local knowledge essential. Refer to Humboldt Bay Harbor of Safe Refuge Simulation Final Report Nov 2007 (access via Port Authority).

Site Contact/Leasee/Owner: _____

Marine Fire Fighting Resources: _____

 Is Containment Possible? _____**1-C04**Type:
Dockage

PPOR Pre-Incident Information Summary for Humboldt Bay: Samoa Turning Basin		
Latitude: 404897	124.18	Longitude: 124.1786
County: Humboldt		

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD), SE), peregrine falcon (F delisted, SCO), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelehead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolt February through August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds -- especially shorebirds -- occur in fall, winter and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

Albacore, rockfish, salmon, lingcod, surf perch and crab.

Commercial Fisheries / Species:

Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish, and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish, and albacore.

Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod, surf perch, and crab are all popular seasonal offshore recreational fisheries.

1-C05	
Type:	Anchorage

Sector SF

Critical Habitat for TAES:

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

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Recreational Species and Habitat:

Economic Impact on Maritime Commerce and Shipping:
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Economy of area based on forest products production (export of raw finished timber products). One bulk fuel terminal (gasoline and diesel), three fueling facilities. Shipment of petroleum products (gasoline and diesel) received every 4 -10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.

Other Economic Impacts:

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PPOR Pre-Incident Information Summary for Humboldt Bay: Samoa Turning Basin

Latitude: 404897	124.18	Longitude: 124107	124.1786
County: Humboldt			

Sector SF

Humboldt Bay: Samoa Turning Basin**1-C05**Type:
Anchorage**Stakeholder List for this Place / Site**

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	Always contact Port Authority 707-443-0801
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Marine Fire Fighting Resources: _____

Approximate Tug Response Time Brusco 707-498-4618; Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 326, 328, 330, 340, 345

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
			38						

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft or Dock Face	Facilities, capabilities, and any other issues or concern			
	Samoa Turning Basin	950	950		Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 ton, 100'			

Site Contact/Lessee/Owner: _____

PPOR Pre-Incident Information Summary for	Humboldt Bay: Commercial Street Dock
Latitude: 404828	124.17 Longitude: 124.104 124.1747
County: Humboldt	
Location Description:	
Natural Resource Concerns and Issues for this Place / Site	
Threatened and Endangered Species (TAES):	Critical Habitat for TAES:
California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts February through August.	
Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:
Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds -- especially shorebirds -- occur in fall, winter, and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.	In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.
Subsistence-use Species:	Critical Habitat for Subsistence Species:
Some Native American subsistence gathering of seaweeds and invertebrates.	Some Native American subsistence gathering of seaweeds and invertebrates.
Commercial Fisheries / Species:	Historic and Cultural Resources:
Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish, and albacore.	Indian Island is a significant Native American cultural site.
	Recreational Species and Habitat:
Human Health / Safety Concerns and Economic Issues for this Place / Site	
Human Health and Safety:	Economic Impact on Maritime Commerce and Shipping:
Towns bordering Humboldt Bay; Eureka (population 25,000), Arcata (17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.	Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fuelling facilities. Shipment of petroleum products (gasoline and diesel) received every 4-10 days.
Economic Impact on Commercial Fishing and Aquaculture:	Economic Impact on Non-maritime Commerce:
Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.	Tourism in nearby cities of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.
1, Economic Impact on Recreational Fishing and Marine Tourism:	Other Economic Impacts:
Albacore, salmon, rockfish, lingcod, surf perch and crab are all seasonal offshore recreational fisheries.	

PPOR Pre-Incident Information Summary for**Humboldt Bay: Commercial Street Dock****1-C07**Type:
Dockage

Latitude: 404828 124.17 Longitude: 124.104 124.1747

County: Humboldt
Sector SF**Stakeholder List for this Place / Site**

Name / Title

Organization

Phone

more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Marine Fire Fighting Resources:

Brusco 707-498-4618; Knutson 707-496-0749

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites:



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
			26						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities			Containment Possibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
	Commercial Street Dock	Deep	400			Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 tons, 100'			

Site Contact/Lessee/Owner:

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PPOR Pre-Incident Information Summary for	Humboldt Bay: Schneider Dock
Latitude: 404784	124.19 Longitude: 124112 1867'
County: Humboldt	
Location Description:	
Natural Resource Concerns and Issues for this Place / Site	
Threatened and Endangered Species (TAES):	Critical Habitat for TAES:
California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts February through August.	
Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:
Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds --especially shorebirds-- occur in fall, winter, and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.	In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.
Subsistence-use Species:	Critical Habitat for Subsistence Species:
Some Native American subsistence gathering of seaweeds and invertebrates.	Some Native American subsistence gathering of seaweeds and invertebrates.
Essential Fish Habitats:	Historic and Cultural Resources:
Albacore, rockfish, salmon, lingcod, surf perch and crab.	Indian Island is a significant Native American cultural site.
Commercial Fisheries / Species:	Recreational Species and Habitat:
Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish and albacore.	
Human Health / Safety Concerns and Economic Issues for this Place / Site	
Human Health and Safety:	Economic Impact on Maritime Commerce and Shipping:
Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.	Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fuelling facilities. Shipment of petroleum products (gasoline and diesel) received every 4-10 days.
Economic Impact on Commercial Fishing and Aquaculture:	Economic Impact on Non-maritime Commerce:
Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.	Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.
1. Economic Impact on Recreational Fishing and Marine Tourism:	Other Economic Impacts:
Albacore, salmon, rockfish, lingcod, surf perch and crab are all popular seasonal offshore recreational fisheries.	

PPOR Pre-Incident Information Summary for**Humboldt Bay: Schneider Dock**

Latitude:	404784	124.19	Longitude:	124.112	124.1867
County:	Humboldt				

Sector SF

1-C09Type:
Dockage**Stakeholder List for this Place / Site**

Name / Title

Organization

Phone

more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 326, 328, 330, 340, 345

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
			35						

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
	Schneider Dock	Deep	950	Deep	1000	Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 tons, 100'.		

Site Contact/Leasee/Owner: Pacific Affiliates 707-445-3001

Is Containment Possible?

Pilot Requirements

PPOR Pre-Incident Information Summary for Humboldt Bay: Sierra Pacific/14th Street

Latitude: 404768 124.19 Longitude: 124112 124.1878
 County: Humboldt

Sector SF

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts February through August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds –especially shorebirds—occur in fall, winter and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

Albacore, rockfish, salmon, lingcod, surf perch and crab.

Commercial Fisheries / Species:

Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.

Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod and crab are all popular seasonal offshore recreational fisheries.

1-C10

Type:
Dockage

Location Description:

Critical Habitat for TAES:

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

In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Recreational Species and Habitat:

Economic Impact on Maritime Commerce and Shipping:

Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fueling facilities. Shipment of petroleum products (gasoline and diesel) received every 4 -10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Sierra Pacific/14th Street

Latitude: 404768 124.19 Longitude: 124.112 124.1878

County: Humboldt

Sector SF

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Approximate Tug Response Time

Brusco 707-498-4618; Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 328, 330, 340, 345
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
				38						<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Sierra Pacific/14th Street	600	600	Deep	470 Boat Hoist at Fields Landing boatyard (US EKA FLC 12), 150 tons, 100'.					

Must be mindful of seasonal shoaling at harbor entrance. Local knowledge essential. Refer to Humboldt Bay Harbor of Safe Refuge Simulation Final Report, Nov. 2007 (via Port Authority).

Site Contact/Leasee/Owner: Sierra Pacific Industries 707-443-7039

PPOR Pre-Incident Information Summary for Humboldt Bay: Chevron		
Latitude: 404668	124.2	Longitude: 124117 124.1963
County: Humboldt		

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts February through August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds –especially shorebirds—occur in fall, winter and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

Albacore, rockfish, salmon, lingcod, surf perch and crab.

Commercial Fisheries / Species:

Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay: Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.

1. Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod and crab are all popular seasonal offshore recreational fisheries.

1-C11

Type:
Dockage

Sector SF

Critical Habitat for TAES:

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

In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Recreational Species and Habitat:

Economic Impact on Maritime Commerce and Shipping:

Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fueling facilities. Shipment of petroleum products (gasoline and diesel) received every 4 -10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Chevron

Latitude: 404668 124.2 Longitude: 124.117 124.1963

County: Humboldt

Sector SF

1-C11Type:
Dockage**Stakeholder List for this Place / Site**

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Marine Fire Fighting Resources:

Approximate Tug Response Time Brusco 707-498-4618; Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 326, 328, 330, 340, 345

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
			30	24					

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
	Chevron	Deep	400		400	This is the only fuel terminal in Bay for off-loading fuel.		
						Boat hoist at Fields Landing boatyard (US EKA FLC 12); 150 tons, 100'.		

Site Contact/Leasee/Owner: Chevron 707-444-7850

PPOR Pre-Incident Information Summary for Humboldt Bay: Fields Landing - Bay Forest Products		
Latitude: 404396	124.22	Longitude: 124.131 124.2192
County: Humboldt		

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT), coho salmon (FE & FT, ST), chinook salmon (ESU, ST), steelhead trout (FSS), coastal cutthroat trout (FT). Salmon and trout spawning August through June, juvenile/smolts February through August.

Sensitive Non-protected (Non-TAES) Species:

Occasionally whales offshore, harbor seals typically present. Black brant and migratory waterbirds –especially shorebirds—occur in fall, winter and spring. 100,000+ birds use Bay in winter for feeding and resting. Muskrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

Albacore, rockfish, salmon, lingcod, surf perch and crab.

Commercial Fisheries / Species:

Humboldt Bay is home to a large offshore commercial fishing fleet for crab, salmon, rockfish and albacore.

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

Human Health and Safety:

Towns bordering Humboldt Bay; Eureka (population 25,000), Arcata (population 17,000), King Salmon, Fields Landing, Samoa, Manila, Bayside.

Economic Impact on Commercial Fishing and Aquaculture:

Humboldt Bay pacific oyster mariculture in north bay. Commercially successful oyster seed production and grow-out operation. Humboldt Bay home to commercial fishing fleet for offshore crab, salmon, rockfish and albacore.

1. Economic Impact on Recreational Fishing and Marine Tourism:

Albacore, salmon, rockfish, lingcod and crab are all popular seasonal offshore recreational fisheries.

1-C12

Type:
Dockage

Sector SF

Critical Habitat for TAES:

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

In addition to sandy shoreline, extensive mudflats and eelgrass beds are exposed during low tides.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Recreational Species and Habitat:

Economic Impact on Maritime Commerce and Shipping:

Economy of area based on forest products production (export of raw and finished timber products). One bulk fuel terminal (gasoline and diesel), three fuelling facilities. Shipment of petroleum products (gasoline and diesel) received every 4 -10 days.

Economic Impact on Non-maritime Commerce:

Tourism in nearby towns of Eureka and Arcata. Eureka is county seat. Arcata is home to CSU Humboldt. CSUH row crews and recreational kayaking in Bay. Main traffic corridor (US Highway 101) on east side of Bay.

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Fields Landing - Bay Forest Products

Latitude: 404396 124.222 Longitude: 124.131 124.2192

County: Humboldt

Sector SF

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Always contact Port Authority 707-443-0801

Approximate Tug Response Time

Brusco 707-498-4618; Knutson 707-496-0749

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 328, 330, 340, 345

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
			26						

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
	Fields Landing - Bay Forest Products	Deep	600			600 Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 tons, 100'.		

Must be mindful of seasonal shoaling at harbor entrance. Local knowledge essential. Refer to Humboldt Bay Harbor of Safe Refuge Simulation Final Report, Nov. 2007 (via Port Authority).

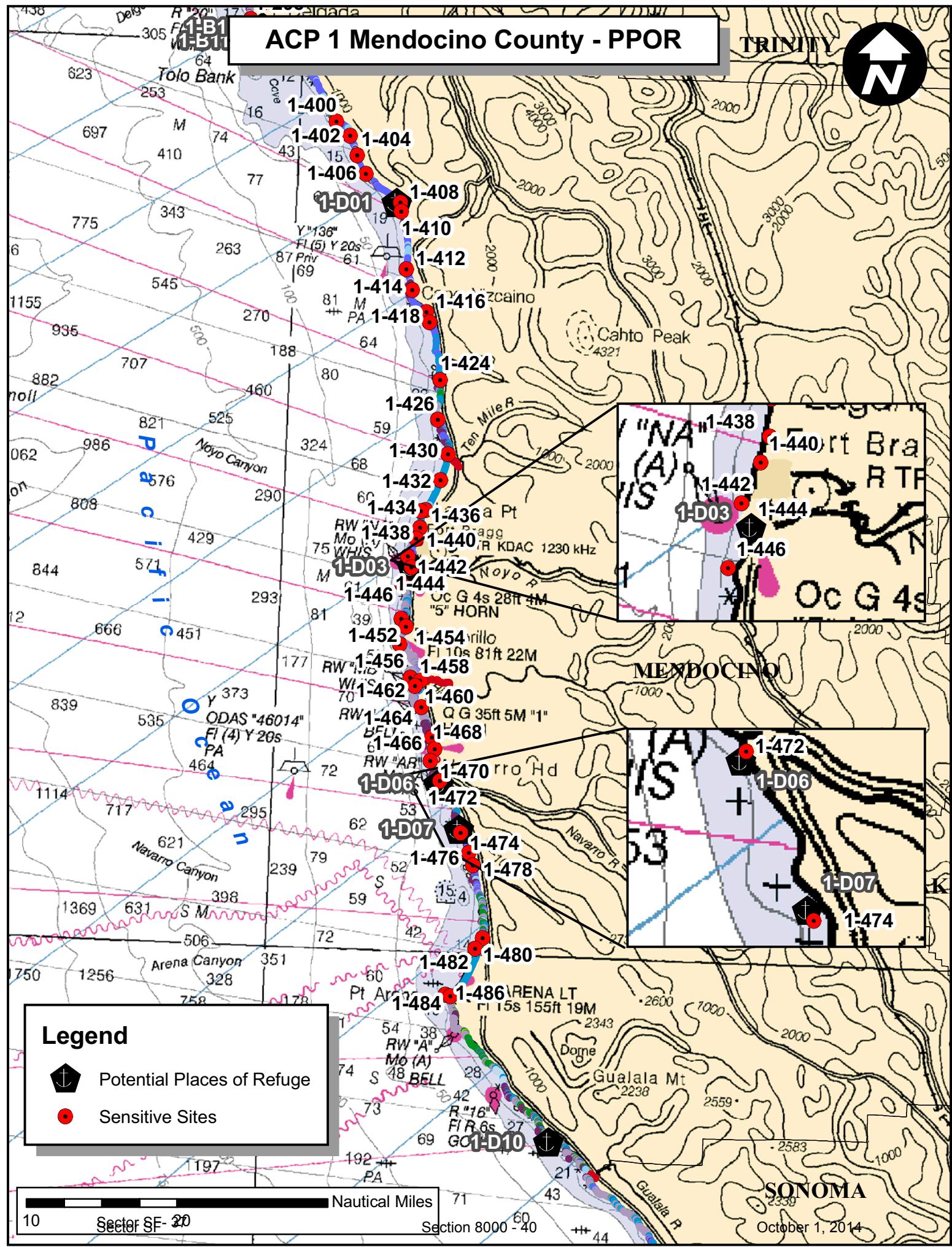
Site Contact/Leasee/Owner: Humboldt Bay Forest Products 707-443-5631

1-C12Type:
Dockage

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ACP 1 Mendocino County - PPOR

TRINITY



PPOR Pre-Incident Information Summary for	Mendocino County: Usal Beal		
Latitude: 394981	123.86	Longitude: 123513	123.8564
County: Mendocino			
Sector SF			

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):	Critical Habitat for TAES:
California brown pelican (FPD, SE), stellar sea lion (FT)	
Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:
Many	
Subsistence-use Species:	Critical Habitat for Subsistence Species:
Essential Fish Habitat:	Historic and Cultural Resources:
Essential Fish Habitat for pelagic finfish, salmon, ground fish.	
Commercial Fisheries / Species:	Recreational Species and Habitat:
Nearshore rockfish, salmon, crab.	Albacore, rockfish, salmon, crab.

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

Human Health and Safety:	Economic Impact on Maritime Commerce and Shipping:
41	
Economic Impact on Commercial Fishing and Aquaculture:	Economic Impact on Non-maritime Commerce:
Economic Impact on Recreational Fishing and Marine Tourism:	Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
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Primary Jurisdictional Contact:	State Parks, Eel River District Office 707 986-7711	Marine Fire Fighting Resources:
Approximate Tug Response Time	Knutson 707-496-0749 [ocean-going, 10kts]	



PPOR Pre-Incident Information Summary for		Mendocino County: Usal Beal			
Latitude:	394981	123.86	Longitude:	123513	123.8564
Sector County:	Mendocino				
List of Nearby Environmentally Sensitive Sites:		ACP 1: 406, 408			
<input type="checkbox"/> Is Containment Possible? <input type="checkbox"/>					

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
			55	30						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Usal Beal					This site is approximately 1.8 miles SE of Big White Rock and approximately 2 miles north of Usal Rock.				

Site Contact/Leasee/Owner: Sinkyone Wilderness State Park



PPOR Pre-Incident Information Summary for	Mendocino County: Fort Bragg- Noyo Bay	
Latitude: 392567	123.81	Longitude: 123.8113
County: Mendocino		
Sector SF		

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):	Critical Habitat for TAES:
California brown pelican (FPD, SE), stellar sea lion (FT)	
Sensitive Non-protected (Non-TAES) Species:	Critical Habitat for Non-protected (Non-TAES) Species:
Many	
Subsistence-use Species:	Critical Habitat for Subsistence Species:
Essential Fish Habitat:	Historic and Cultural Resources:
Essential Fish Habitat for pelagic finfish, salmon, ground fish.	
Commercial Fisheries / Species:	Recreational Species and Habitat:
Nearshore rockfish, salmon, crab.	Abalone, rockfish, salmon, crab.

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

Human Health and Safety:	Economic Impact on Maritime Commerce and Shipping:
43	
Economic Impact on Commercial Fishing and Aquaculture:	Economic Impact on Non-maritime Commerce:
Economic Impact on Recreational Fishing and Marine Tourism:	Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
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Primary Jurisdictional Contact:	Noyo Harbor District 707-964-4719	Marine Fire Fighting Resources:
Approximate Tug Response Time	Knutson 707-496-0749 [ocean-going, 10kts]	

Characteristics and Tactical Considerations

Characteristics and Tactical Considerations:	Noyo Harbor District 707-964-4719
Approximate Tug Response Time	Knutson 707-496-0749 [ocean-going, 10kts]



PPOR Pre-Incident Information Summary for Mendocino County: Fort Bragg- Noyo Bay		
1-D03		
Type: Anchorage	<input type="checkbox"/>	
Sector: County: Mendocino	Latitude: 392567 Longitude: 123.81 Sector SF	123487 123.813
List of Nearby Environmentally Sensitive Sites:	ACP 1: 430, 432, 440, 442, 444, 448, 452	
Is Containment Possible? <input type="checkbox"/>		

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	Navigation Approach	Pilot Requirements
			40	12						<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft Deep	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
	Fort Bragg- Noyo Bay				400				
	Site Contact/Leasee/Owner:								

PPOR Pre-Incident Information Summary for	Mendocino County: Navarro Head		
Latitude: 391132	123.76	Longitude: 123457	123.7652
County: Mendocino			
Sector SF			

Location Description:

Natural Resource Concerns and Issues for this Place / Site

- Threatened and Endangered Species (TAES):
California brown pelican (FPD, SE), peregrine falcon (F delisted, SCD), stellar sea lion (FT)
- Sensitive Non-protected (Non-TAES) Species:
Many
- Subsistence-use Species:
None
- Essential Fish Habitat:
Essential Fish Habitat for pelagic finfish, salmon, groundfish.
- Commercial Fisheries / Species:
Nearshore rockfish, salmon, crab.

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

- Human Health and Safety:
None
- Economic Impact on Commercial Fishing and Aquaculture:
None
- Economic Impact on Recreational Fishing and Marine Tourism:
None

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

- Primary Jurisdictional Contact:
Knutson 707-496-0749 [ocean-going, 10kts]
- Marine Fire Fighting Resources:
None

PPOR Pre-Incident Information Summary for		Mendocino County: Navarro Head				
Latitude:	391132	123.76	Longitude:	123457	123.7632	
County:	Mendocino					
Sector	SF	List of Nearby Environmentally Sensitive Sites:	ACP 1: 468, 470, 472, 474			
<input type="checkbox"/> Is Containment Possible? <input type="checkbox"/>						

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	Navigation Approach
				30				From NW wind	

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
	Navarro Head	Deep				Fair shelter from NW winds			
Site Contact/Leasee/Owner:									

PPOR Pre-Incident Information Summary for Mendocino County: Cuffey's Cove

Latitude: 390835

123.73

Longitude:

123439

123.7318

County: Mendocino

Sector SF

1-D07Type:
Anchorage**Location Description:****Natural Resource Concerns and Issues for this Place / Site**

Threatened and Endangered Species (TAES):

California brown pelican (FPD, SE), peregrine falcon (F delisted, SCO), stellar sea lion (FT)

Sensitive Non-protected (Non-TAES) Species:

Many

Subsistence-use Species:

Essential Fish Habitat: Essential Fish Habitat for pelagic finfish, salmon, groundfish.

Commercial Fisheries / Species:

Nearshore rockfish, salmon, crab

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Critical Habitat for TAES:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

Albacore, salmon, rockfish, crab

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

Human Health and Safety:

Economic Impact on Commercial Fishing and Aquaculture:

Economic Impact on Recreational Fishing and Marine Tourism:

Economic Impact on Maritime Commerce and Shipping:

Economic Impact on Non-maritime Commerce:

Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

Marine Fire Fighting Resources:

Approximate Tug Response Time [Knutson 707-496-0749 [ocean-going, 10kts]

PPOR Pre-Incident Information Summary for	Mendocino County: Cuffey's Cove			
Latitude: 390835	123.73	Longitude:	123439	123.7318
Sector County: Mendocino				
SF List of Nearby Environmentally Sensitive Sites:	ACP 1: 472, 474, 476, 478			
<input type="checkbox"/> Is Containment Possible? <input type="checkbox"/>				

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
			30	20						

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				ContainmentPossibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Cuffey's Cove	Deep				- Use caution with numerous rocks - Fair anchorage in NW winds - Cuffey Inlet excellent anchorage for small boats in N and W weather				

Site Contact/Leasee/Owner:

PPOR Pre-Incident Information Summary for	Mendocino County: Haven's Anchorage		
Latitude: 384783	123.59	Longitude: 123352	123.5872
County: Mendocino			
Sector SF			

Location Description:

[Redacted]

Natural Resource Concerns and Issues for this Place / Site

- Threatened and Endangered Species (TAES):
 - [Redacted]
 - California brown pelican (FPD, SE) peregrine falcon (F delisted, SCD), stellar sea lion (FT)
- Sensitive Non-protected (Non-TAES) Species:
 - [Redacted]
 - [Redacted]
 - [Redacted]
- Many
- Subsistence-use Species:
 - [Redacted]
 - [Redacted]
- Essential Fish Habitat:
 - [Redacted]
 - Essential Fish Habitat for pelagic finfish, salmon, ground fish.
- Commercial Fisheries / Species:
 - [Redacted]

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

- Human Health and Safety:
 - [Redacted]
 - [Redacted]
- Economic Impact on Commercial Fishing and Aquaculture:
 - [Redacted]
- Economic Impact on Recreational Fishing and Marine Tourism:
 - [Redacted]

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

- | | | |
|--|--|--|
| Characteristics and Tactical Considerations | Primary Jurisdictional Contact: [Redacted] | Marine Fire Fighting Resources: [Redacted] |
| | Knutson 707-496-0749 [ocean-going, 10kts] | |

PPOR Pre-Incident Information Summary for		Mendocino County: Haven's Anchorage			
Latitude:	384783	123.59	Longitude:	123352	123.5872
County:	Mendocino				
Sector	SF	List of Nearby Environmentally Sensitive Sites:			
<input type="checkbox"/> Is Containment Possible? <input type="checkbox"/>					

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	Navigation Approach
			60						
<input type="checkbox"/> Pilot Requirements <input type="checkbox"/>									

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			ContainmentPossibilities:
		Max Size	Max Lgth	Max Deep	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
	Haven's Anchorage			0				
	Site Contact/Lessee/Owner:							

8240 ACP 2 – San Francisco Bay and Delta Area Committee

8241 Pre-Incident Summary Background

8241.1 Potential Places of Refuge Subcommittee

The SFBD PPOR Workgroup has met since June 2007 to identify PPOR sites and work through PPOR job aids in accordance with references (a) and (b). During the period June 2007 to August 2007, 94 SFBD PPOR sites were identified to be included in the California Statewide PPOR Database. These 94 sites were chosen by a Workgroup consisting of representatives from various SFBD Area Committee members, including pilots, natural resource agencies, and port authorities.. Primary Participants included: U.S. Coast Guard Sector San Francisco's Planning Department, Vessel Traffic Service, San Francisco Bar Pilots, U.S. Department of the Interior (DOI), California Department of Fish and Game, Office of Spill Prevention and Response (CDFG-OSPR), California Coastal Commission, San Francisco Bay Conservation and Development Commission (BCDC), and National Oceanic and Atmospheric Administration (NOAA). Representatives from these agencies were involved with providing physical, navigational, health and human safety, and economic information for the designated 22 deep draft PPOR for the SFBD AOR. If the need arises, a detailed assessment of the remaining 72 SFBD sites may be conducted at a future date for consideration and inclusion in the list of PPOR sites pre-identified in this section of the ACP

All sites identified within the SFBD AOR were selected solely based on their capability to accommodate a deep draft vessel. This initial PPOR effort did not evaluate the ability of a vessel to safely transit to a particular site, nor was the potential environmental impact used as a basis for site selection. Instead, PPOR sites within this AOR addressed the high risk vessels and potential oil spill scenarios, specifically deep draft vessels. PPOR sites were determined solely based on suitability to house a deep draft vessel. Detailed physical, navigational, health and human safety, economic and natural resource information was provided for 22 deep draft sites within the ACP 2 AOR.

During May 2008 to July 2008, a workgroup branched off from this SFBD PPOR subcommittee to handle all natural resource concerns for these 22 PPOR deep draft sites, ensuring validation of this information with natural resource trustees within the SFBD AOR.

All other operational considerations must be taken into account when determining where to place a vessel in peril. Currently, only the 22 sites identified in this section will be deemed operationally viable options for a PPOR. These 22 PPOR sites are strategically located throughout the SFBD area which account for “Place of Refuge” incidents that might result in the release of oil within the SFBD AOR.

8241.2 Natural Resources Workgroup

Involvement of local natural resource trustee agencies occurred at three levels: 1) the PPOR Natural Resources Workgroup included trustees from NOAA – Gulf of the Farallones National Marine Sanctuary, DOI, and CDFG-OSPR; and 2) draft PPOR Pre-Incident Information Summaries were forwarded to other trustee agencies including National Park Service and U.S. Fish & Wildlife Service for review and comment, which was incorporated into the final PPOR draft; and 3) the final draft was posted for review and comment by the entire Area Committee which includes representatives of local resource agencies such as California State Parks and East Bay Regional Park District.

The Natural Resources Workgroup of the PPOR subcommittee was tasked with providing natural resource information for the 22 deep draft PPOR identified for the SFBD-ACP 2 area of concern. Natural Resource information was entered directly into the PPOR Database for these sites.

The NOAA TAP II model was utilized for the PPOR effort. TAP II was run in the Shoreline Impact Analysis mode to assess shorelines likely to be impacted in the event of a petroleum release from each of the modeled PPORs, except for Drakes Bay (2-DD01), Port of Stockton (2-Q00) and Port of Sacramento (2-S01). TAP Modeling input parameters for each location were:

Season	Time	Oil Type	Amount Released	Amount of Concern
March-August	12 hours	Non-Weathering	13,000 barrels	1000 barrels
September-February	12 hours	Non-Weathering	13,000 barrels	1000 barrels

Results of TAP II modeling were combined for PPOR Sites within the following areas: San Francisco South, Oakland Outer Harbor, South Bay Anchorages, South Bay East Shore, Central Bay Anchorages, Richmond Harbor/Santa Fe Channel, Carquinez Strait West, and Carquinez Strait East. Areas likely to be impacted by releases from any of the grouped PPOR sites were identified and natural resource data for these areas compiled.

Geographic Information Systems (GIS) maps were generated by the CDFG-OSPR GIS Unit for each of the listed PPOR areas, including the three sites not modeled (Drakes Bay, Port of Stockton and Port of Sacramento). These maps are included at the beginning of each PPOR site cluster and include graphical natural resource information from two primary sources.

The two natural resource information sources for shorelines likely to be impacted were: SFBD-ACP sensitive site and resource descriptions (Section 9800); and Environmental Sensitivity Index (ESI) Maps developed by NOAA and CDFG-OSPR which show environmental sensitivity of shorelines and species to oiling. The ESI Map legend is included as an attachment in this section

Identification and assessment of appropriate PPOR sites within the SFBD area is ongoing and will continue to be refined.

References:

(a) COMDTINST 16451.9, *Coast Guard Places of Refuge Policy*
http://www.uscg.mil/directives/ci/16000-16999/CI_16451_9.pdf

(b) RRT9 *Guidelines for Places of Refuge Decision-Making Appendix XXVI*
http://www.dfg.ca.gov/ospr/response/acp/marine/2005RCP/rcp_2005_index.html

8242 Potential Places of Refuge Site Index

Site #	Place Name	Site Name	Co.	Deg/Min/Sec	
				N	W
2-B50	San Francisco South	Pier 50	SF	37 46 25	-122 22 58
2-B62	San Francisco South	SF Dry Dock	SF	37 45 45	-122 22 48
2-B80	San Francisco South	Army Street Terminal/Pier 80	SF	37 45 00	-122 22 36
2-B92	San Francisco South	Piers 92/94/96	SF	37 44 36	-122 22 15
2-B99	San Francisco South	Hunters Point	SF	37 43 00	-122 21 30
2-C00	Oakland Outer Harbor	Berths 55-68	A	37 49 12	-122 19 00
2-C02	Oakland Outer Harbor	Berths 20-38	A	37 48 42	-122 19 30
2-E00	South Bay Anchorages	Any Other Anchorage	SF/A	37 41 00	-122 21 15
2-E08	South Bay Anchorages	Anchorage 8	SF/A	37 47 23	-122 21 18
2-E09	South Bay Anchorages	Anchorage 9	SF/A	37 46 00	-122 21 00
2-E12	South Bay Anchorages	Anchorage 12	SF/A	37 44 32	-122 20 30
2-E14	South Bay Anchorages	Anchorage 14	SF/A	37 43 60	-122 19 48
2-F01	South Bay East Shore	Alameda Point/Naval Station	A	37 46 17	-122 18 30
2-H07	Central Bay Anchorages	Anchorage 7	SF/M	37 49 30	-122 23 23
2-H10	Central Bay Anchorages	Anchorage 10	M	37 50 57	-122 28 13
2-H13	Central Bay Anchorages	Anchorage 13	M	37 55 25	-122 27 31
2-J00	RichmondHarb/SFChannel	PARR 3	CC	37 54 47	-122 21 41
2-M21	Carquinez Strait West	Anchorage 21	Sol	38 03 47	-122 15 30
2-M23	Carquinez Strait East	Anchorage 23	Sol	38 02 00	-122 00 51
2-Q00	Port of Stockton/SJ River	Any Site	SJ	37 57 90	-121 19 60
2-S01	Port of Sacramento	Sacramento	Y	38 33 47	-121 33 00
2-DD01	Drakes Bay	Deep Anchorage	M	38 00 00	-122 55 00

ACP 2 - PPOR Deep Draft Sites



2-M21

2-M23

2-DD01

2-S01

Sacramento

2-H13

2-J00

2-H10

2-H07

2-C00

2-C02

2-E08

2-B50

2-B62

2-B80

2-B92

2-B99

2-E09

2-F01

2-E12

2-E00

2-E14

NOTE
IMO - adopted Re
for vessels carrying
bulk (including ore con
munitions, chemical
refined products, dist
persistent cargo). Vess
should use the 'West
or leaving San Francisc

NOTE
IMO - adopted
Tracks for vessels
and above (except
hazardous cargo in

SUPPLEMENTAL
Consult U.S. Coast
supplemental informati

2-Q00

Legend



Potential Places of Refuge

Nautical Miles
0 1.25 2.5 5

October 1, 2014

Section 8000 55

SAN FRANCISCO BAY

SHORELINE HABITAT RANKINGS

- 1A EXPOSED ROCKY SHORES
1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
3B SCARPS AND STEEP SLOPES IN SAND
- 4 COARSE-GRAINED SAND BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES
- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
9B VEGETATED LOW RIVERINE BANKS
- 10A SALT- AND BRACKISH-WATER MARSHES
- TIDAL MARSHES
- MUTED TIDAL MARSHES
- MANAGED MARSHES
- DIKED MARSHES
- SALT PONDS

HUMAN-USE FEATURES

- | | | |
|--|---|--|
| ● ACCESS | ● FERRY | ● NATIONAL PARK |
| ● AIRPORT | ● HOIST | ● RECREATIONAL BEACH |
| ● BOAT RAMP | ● HISTORICAL SITE | ● RECREATIONAL FISHING |
| ● COAST GUARD | ● LOCK/DAM | ● STATE/REGIONAL PARK |
| ● COMMERCIAL FISHING | ● MARINA | ● WATER INTAKE |
| — — — — — | | |
| — — — — — PARK/REFUGE BOUNDARY | | — — — — — HUMAN-USE NUMBER |
| — — — — — BRIDGE | | |

SENSITIVE BIOLOGICAL RESOURCES

- | | | |
|--|---|--|
| ■ BIRD <ul style="list-style-type: none"> ● OCCURRENCE AND NEST SITE ● ALCID ● DIVING BIRD ● GULL AND TERN ● PASSERINE BIRD ● RAPTOR ● SHOREBIRD ● WADING BIRD ● WATERFOWL | ■ FISH <ul style="list-style-type: none"> ■ FISH STREAM ● OCCURRENCE ● FISH | ■ INVERTEBRATE <ul style="list-style-type: none"> ● OCCURRENCE ● BIVALVE ● CRAB ● INSECT ● SHRIMP |
| — — — — — | | |
| ■ MARINE MAMMAL <ul style="list-style-type: none"> ■ SEAL/SEA LION | ■ HABITAT/PLANT <ul style="list-style-type: none"> ● OCCURRENCE ● EELGRASS/ALGAE ● RARE PLANT | ■ REPTILE/AMPHIBIAN <ul style="list-style-type: none"> ■ AMPHIBIAN ● TURTLE |
| — — — — — | | |
| ■ MULTI-GROUP <ul style="list-style-type: none"> ■ THREATENED/ENDANGERED ■ RAR NUMBER | | |

San Francisco South



2-401

2-351

2-400

2-B50

2-B62

2-350

2-B80

2-354

2-B92

2-353

2-B99

2-352

Legend

● Sensitive Sites

◆ Potential Places of Refuge

Sector SF

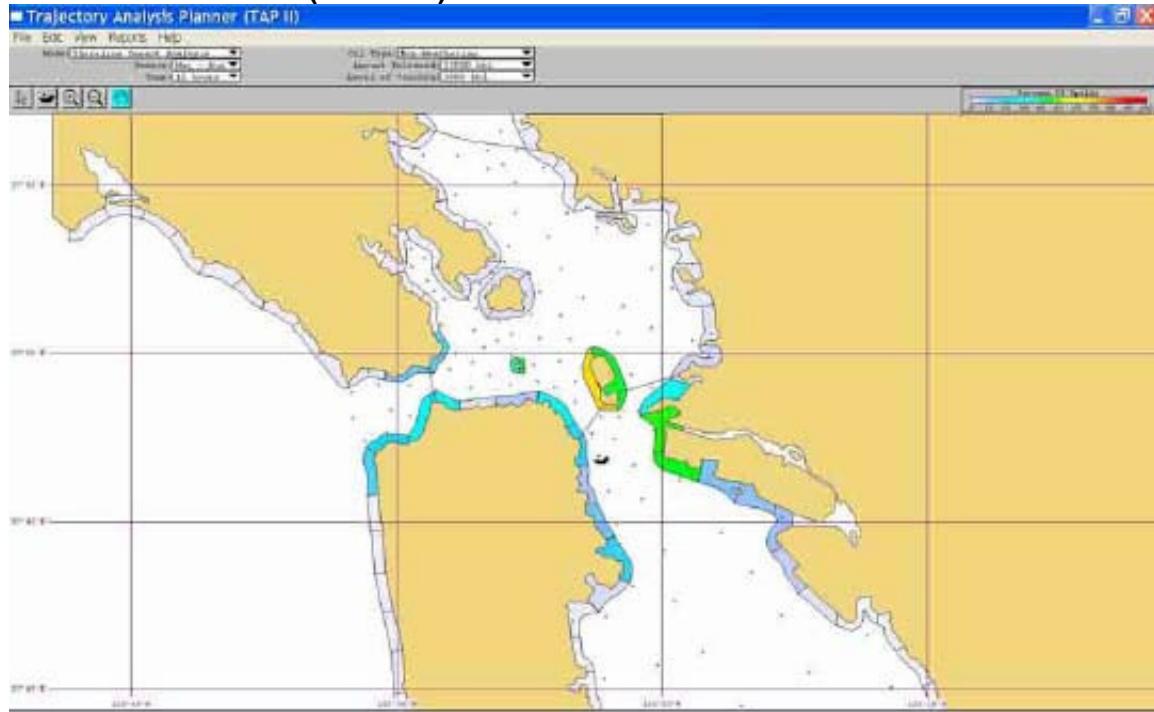
0 0.5 Nautical Miles
Section 8000 - 57 2

October 1, 2014

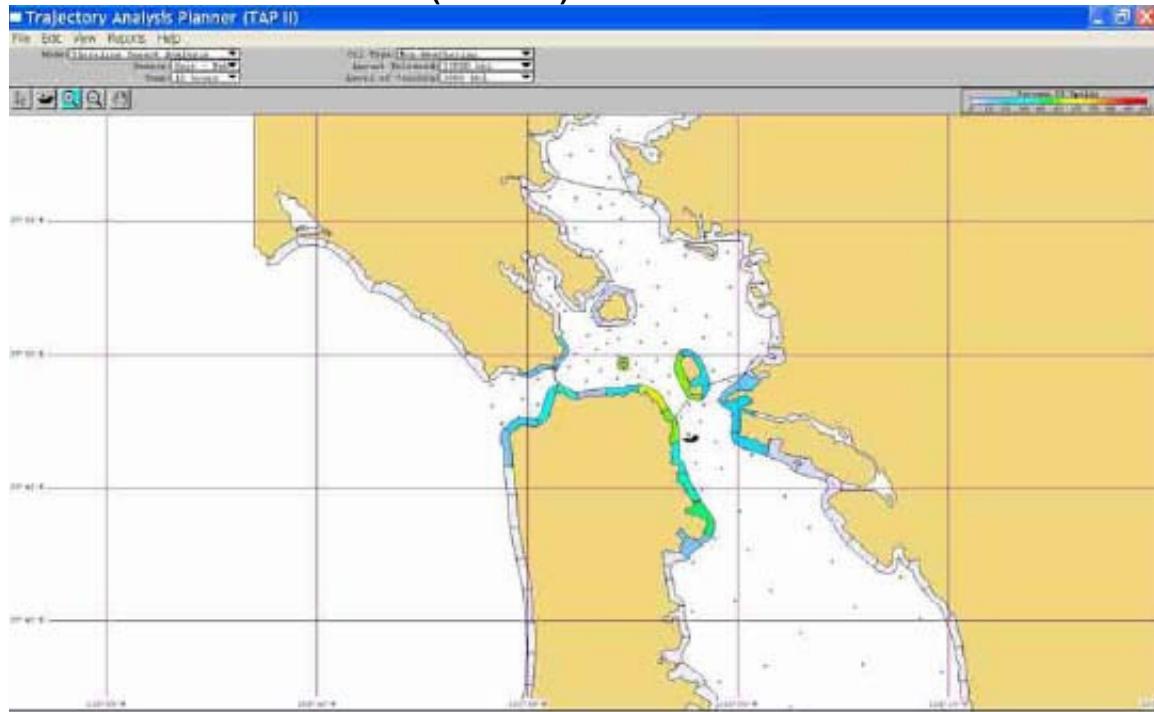
TRAJECTORY ANALYSIS PLANNER (TAP Model)

Location: 2-B50 (Pier 50)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary San Francisco South: Pier 50

Latitude 37° 46. 122.4 Longitude 122° 2 122.383
County San Francisco

2-B50

Type:
Dockage

Location Description:

Pier 50 (Mission Rock Terminal) is a comparatively good characteristics for docking distressed vessels. It is in a highly industrial area with few residences or commercial activities in the immediate area. Prevailing winds are from west and north and away from land. There are relatively few nearby natural resources of concern or fisheries and significant opportunities for containment on the north and south sides but not on the east face. Use of this pier is for breakbulk and lay berth.

37 deg 46' 24" N., 122 deg 22' 50"W: N side is 1575 feet long; S side is 1480 feet long; 35 feet alongside; face is 1000 feet, 45 feet alongside; 6 berths; four transit sheds, 231,000 square feet of covered storage; mooring vessels; various operators.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F E/E) peregrine falcon present year-round, nest March–August.

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablitz plant present year round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:350E/X,351A/B,352B,353A,354A,400C/X,401B; ESI/SFB-Maps 16,19,20

SF South Collection—herring spawn during winter, seabirds and fish present year-round. YBI—Small cobble pocket beaches south side of island are pinniped haulout and rookery March–June, bird roosting (double-crested cormorant) year-round and nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, with concentrations of waterfowl, shorebirds present year round and in higher numbers (1000s) during winter, brown pelicans May–Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 are wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety of water birds, shorebirds and upland songbirds. SF Waterfront herring spawning in winter, birds roost and forage year-round. Pier 39 sea lion haulout year-round, highest numbers August–March.

Subsistence-use Species:

[Redacted]

Essential Fish Habitat:

[Redacted]

Critical Habitat for TAES:

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

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

[Redacted]

Critical Habitat for Subsistence Species:

[Redacted]

Historic and Cultural Resources:

[Redacted]

PPOR Pre-Incident Information Summary San Francisco South: Pier 50

2-B50

Latitude 37° 46. 122.4 Longitude 122° 2 122.383

Type:

County San Francisco

Dockage

Commercial Fisheries / Species:

Commercial fishing from TI/YBI.

Recreational Species and Habitat:

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

Human Health and Safety

Approximately 55,000 people live, work or play near this site.

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 Commercial Fishing and Aquaculture:

Port of 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:

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

Economic Impact on Recreational Fishing and Marine Tourism:

Port of 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
E/T	Carol Bach	Port of San Francisco	(415) 274-0568	
E/C	Bill Doll Chief of Resources	San Francisco Maritime National Historical Park	(415) 859-6779	
O	City of San Francisco	San Francisco, City and County of	(415) 556-8371	
E	Sidonie Sansom DirHomeland Security	Port of San Francisco	(415) 274-0544	
O	Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
T	Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
T	Brian Ullensvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Port of San Francisco

Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Time: 1 HOUR

PPOR Pre-Incident Information Summary San Francisco South: Pier 50

2-B50

Latitude 37° 46. 122.4 Longitude 122° 2 122.383

County San Francisco

Type:

Dockage

List of Nearby Environmentally Sensitive Site SFACP2: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B; ESI/SFB – Maps 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
W	6	MUD	38	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

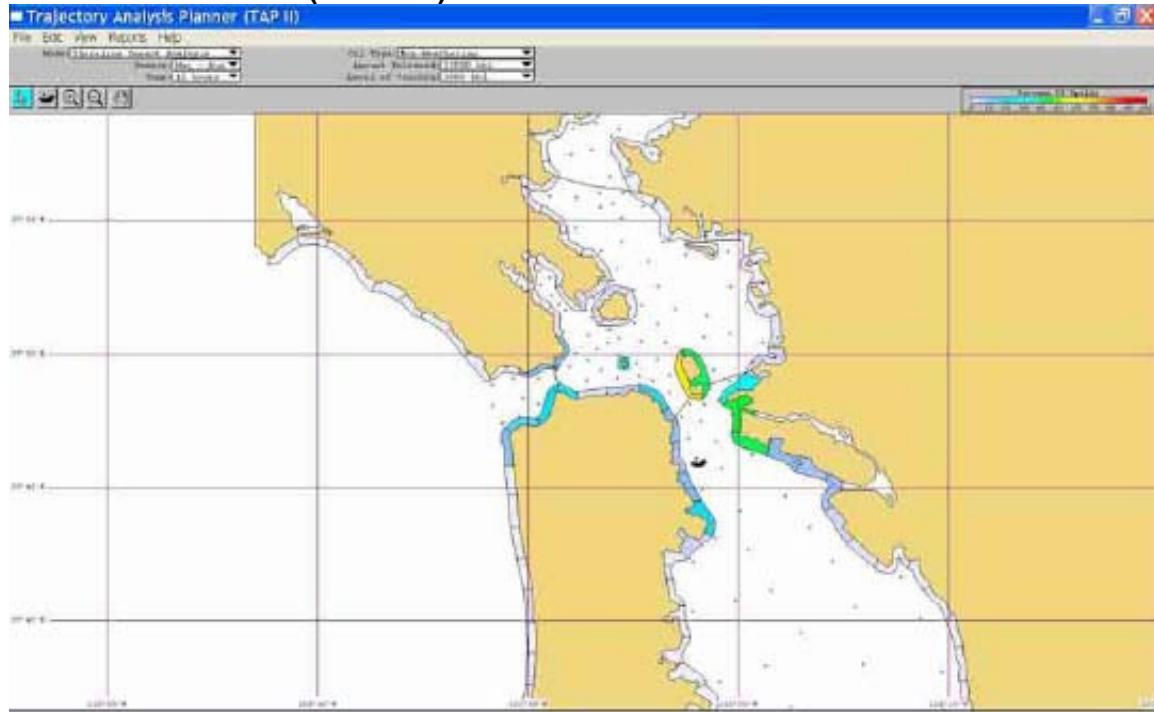
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
50	Pier 50	Deep	1100	38	1000	1000 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE. 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.			All the piers within this place have poor containment on the ends exposed to the Bay currents, but have significant potential for containment on the north and south sides of the piers, particularly if other vessels are already positioned on the opposite side of the warf. Secondary confinement of oil escaping containment is variable and not particularly good except at the SF Dry Dock.

Site Contact/Leasee/Owner:

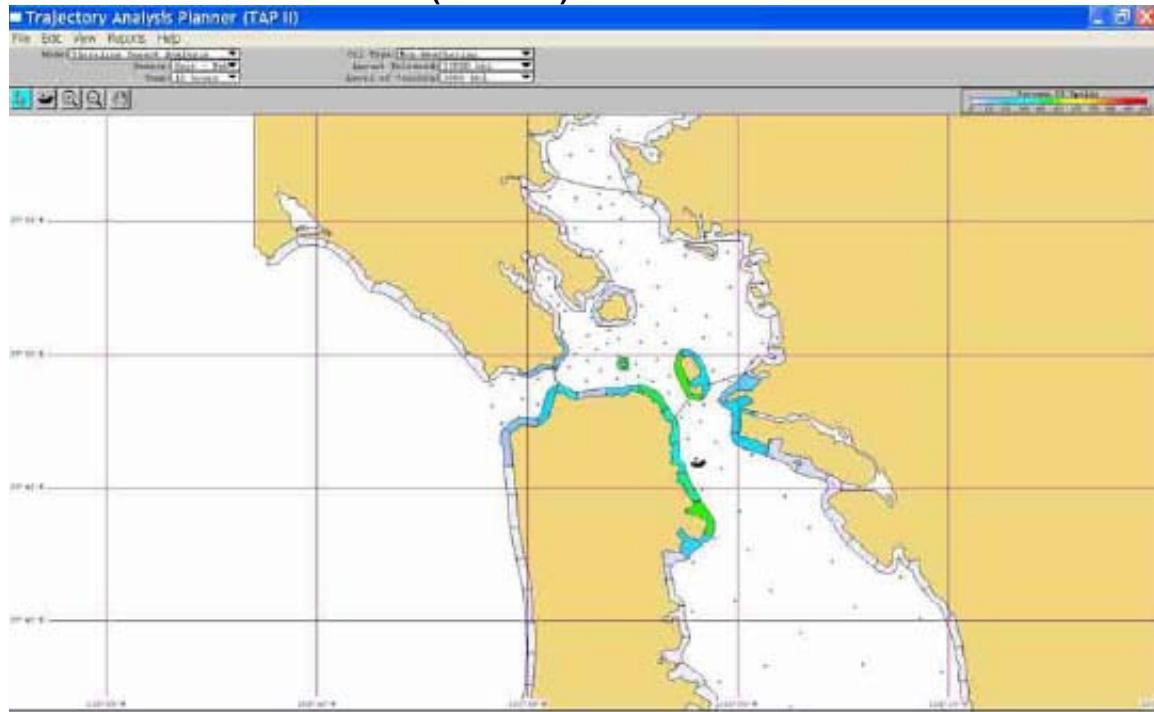
TRAJECTORY ANALYSIS PLANNER (TAP Model)

Location: 2-B62 (SF Dry Dock)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary San Francisco South: SF Dry Dock

2-B62

Latitude 37° 45. 122.4 Longitude 122° 2 122.38
County San Francisco

Type:
Dockage

Location Description:

Pier 70, San Francisco at Potrero Point; One of the largest ship repair yards on west coast. Has 30 acres of prime bay front land. Past uses: Shipyard and industrial site since the Gold Rush. Built first steel ships on Pacific. Oldest working civilian shipyard in U.S. In addition, to being the location of one of the largest ship repair yards on the west coast, Pier 70 is used by numerous other businesses that lease buildings and outdoor areas from the Port of San Francisco. One of the largest of these operations is operated by Auto Return, which is the exclusive operator of towing and car return services for the city of San Francisco.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F E/E) peregrine falcon present year-round, nest March–August.

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablitz plant present year round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:350E/X,351A/B,352B,353A,354A,400C/X,401B; ESI/SFB-Maps 16,19,20

SF South Collection—herring spawn during winter, seabirds and fish present year-round. YBI—Small cobble pocket beaches south side of island are pinniped haulout and rookery March–June, bird roosting (double-crested cormorant) year-round and nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, with concentrations of waterfowl, shorebirds present year round and in higher numbers (1000s) during winter, brown pelicans May–Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 are wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety of water birds, shorebirds and upland songbirds. SF Waterfront herring spawning in winter, birds roost and forage year-round. Pier 39 sea lion haulout year-round, highest numbers August–March.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Commercial fishing from TI/YBI.

Critical Habitat for TAES:

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

PPOR Pre-Incident Information SummaSan Francisco South: SF Dry Dock

2-B62

Latitude 37° 45. 122.4 Longitude 122° 2 122.38
County San Francisco

Type:
Dockage

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

Human Health and Safety

6536 people per square mile are near this site.

Economic Impact on Commercial Fishing and Aquaculture:

This site has no impact on commercial fishing. This is a ship repair yard.

Economic Impact on Recreational Fishing and Marine Tourism:

This site is not used for rec fishing or marine tourism. It has some historical value as being the Oldest working civilian shipyard in U.S. In addition, to being the location of one of the largest ship repair yards on the west coast.

Economic Impact on Maritime Commerce and Shipping:

This site is a ship repair yard; it is designed to conduct repairs of large commercial and military ships.

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.

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
E Carol Bach	Port of San Francisco	(415) 274-0568	
E/C Bill Doll Chief of Resources	San Francisco Maritime National Historical Park	(415) 859-6779	
O City of San Francisco	San Francisco, City and County of	(415) 556-8371	
E Sidonie Sansom DirHomeland Security	Port of San Francisco	(415) 274-0544	
O Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
T Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
T Brian Ullensvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Port of San Francisco at 415-274-0400

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: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B; ESI/SFB – Maps 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
W	6	MUD	36	0		SEASONAL	YES			<input checked="" type="checkbox"/>

PPOR Pre-Incident Information Summary San Francisco South: SF Dry Dock**2-B62**

Latitude 37° 45. 122.4 Longitude 122° 2 122.38

Type:

County San Francisco

Dockage

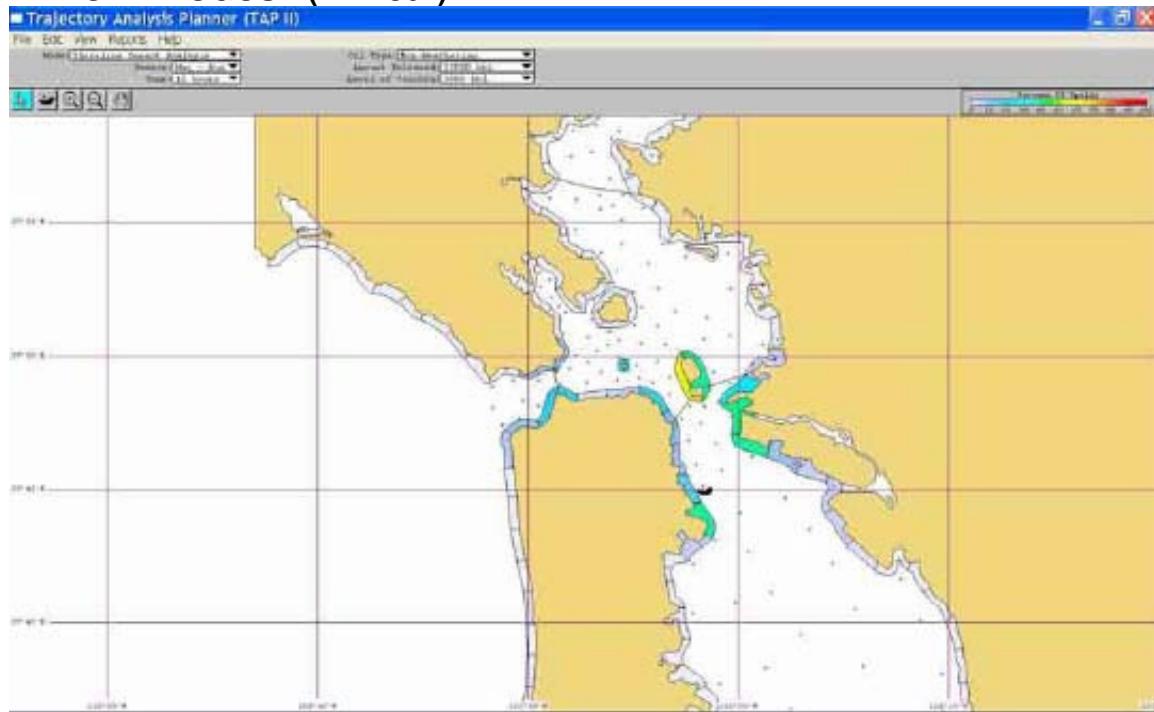
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
62	SF Dry Dock	Deep		36	1200	2 DRYDOCKS: 800 X 150 & 528 X 84; and 2 piers at 528 X 84 each pier; 1200 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE. 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.	All the piers within this place have poor containment on the ends exposed to the Bay currents, but have significant potential for containment on the north and south sides of the piers, particularly if other vessels are already positioned on the opposite site of the wharf. Secondary confinement of oil escaping containment is variable and but possible at the SF Dry Dock. Side tied vessels at Pier 50 enhance the likelihood of secondary confinement.

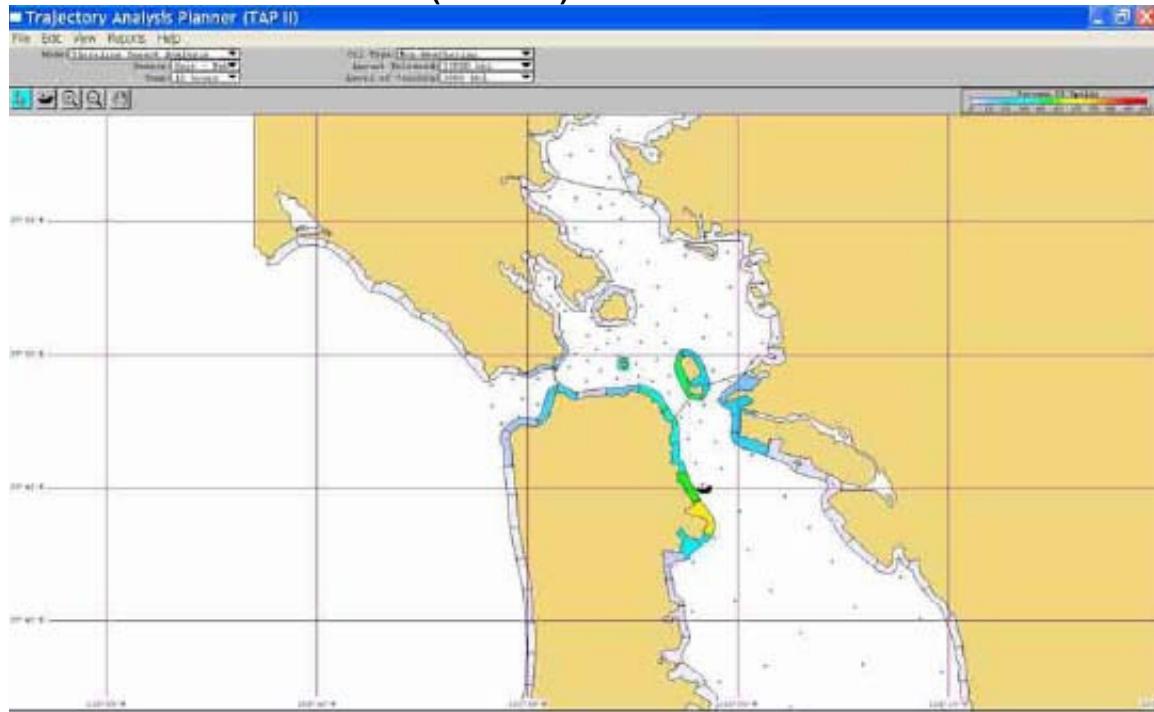
Site Contact/Leasee/Owner: BAE Systems SF Ship Repair at 415-861-7447

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-B80 (Army Street Terminal/Pier 80)
2-B92 (Piers 92/94/96)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary San Francisco South: Army Street Terminal Pier 80

Latitude 37° 45' 122.4 Longitude 122° 2 122.377
County San Francisco

2-B80

Type:
Dockage

Location Description:

OPERATED BY PORTS AMERICA, THIS PIER 80 HAS 3 BERTHS AND A TOTAL ACREAGE OF 69 ACRES; THIS PIER 80 HANDLES BREAKBULK (STEEL, LUMBER, YACHTS); SHIPPING LINES ARE SAGA FOREST CARRIERS AND STAR SHIPPING; PIER 80 IS LOCATED At the foot of Cesar Chavez Street. Access from 3rd Street off Highways 101 and 280 using the Cesar Chavez Street exit; PIER 80 HAS 3 (40 feet MLLW) berths Total length of 2,700 feet (Wharf design load of 1,000 lbs./sq.ft.); Pier 80 represents the most diverse terminal on the West Coast. Pier 80 can work break bulk cargoes such as steel, paper and lumber as well as containers. And we have access to on-dock warehouse space, staging area for project cargo as well as 4 deep-water berths and 4 gantry cranes.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F E/E) peregrine falcon present year-round, nest March–August.

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablitz plant present year round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:350E/X,351A/B,352B,353A,354A,400C/X,401B; ESI/SFB-Maps 16,19,20

SF South Collection—herring spawn during winter, seabirds and fish present year-round. YBI—Small cobble pocket beaches south side of island are pinniped haulout and rookery March–June, bird roosting (double-crested cormorant) year-round and nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, with concentrations of waterfowl, shorebirds present year round and in higher numbers (1000s) during winter, brown pelicans May–Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 are wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety of water birds, shorebirds and upland songbirds. SF Waterfront herring spawning in winter, birds roost and forage year-round. Pier 39 sea lion haulout year-round, highest numbers August–March.

Subsistence-use Species:

[Redacted]

Essential Fish Habitat:

[Redacted]

Critical Habitat for TAES:

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

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

[Redacted]

Critical Habitat for Subsistence Species:

[Redacted]

Historic and Cultural Resources:

[Redacted]

PPOR Pre-Incident Information Summary San Francisco South: Army Street Terminal Pier 80

2-B80

Latitude 37° 45' 122.4 Longitude 122° 2 122.377

County San Francisco

Type:

Dockage

Commercial Fisheries / Species:

Commercial fishing from TI/YBI.

Recreational Species and Habitat:

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

Human Health and Safety

The City and County of San Francisco is the fourth most populous city in California and the 14th most populous city in the United States, with a 2007 estimated population of 764,976.

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 Commercial Fishing and Aquaculture:

This site has no impact on commercial fishing.

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.

Economic Impact on Recreational Fishing and Marine Tourism:

This site is not used for rec fishing or marine tourism.

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
E Carol Bach	Port of San Francisco	(415) 274-0568	
E/C Bill Doll Chief of Resources	San Francisco Maritime National Historical Park	(415) 859-6779	
O City of San Francisco	San Francisco, City and County of	(415) 556-8371	
E Sidonie Sansom DirHomeland Security	Port of San Francisco	(415) 274-0544	
O Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
T Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
T Brian Ullensvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

PORT OF SAN FRANCISCO AT 415-274-0400

Marine Fire Fighting Resources

SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Time

1 HOUR

PPOR Pre-Incident Information Summary San Francisco South: Army Street Terminal Pier 80

2-B80

Latitude 37° 45' 122.4 Longitude 122° 2 122.377

County San Francisco

Type:

Dockage

List of Nearby Environmentally Sensitive Site SFACP2: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B; ESI/SFB – Maps 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
W	6	MUD	37	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
80	Army Street Terminal Pier 80	Deep		37	1500	1500 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE. 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.		All the piers within this place have poor containment on the ends exposed to the Bay currents, but have significant potential for containment on the north and south sides of the piers, particularly if other vessels are already positioned on the opposite side of the wharf. Secondary confinement of oil escaping containment is variable and not particularly good except at the SF Dry Dock.	

Site Contact/Leasee/Owner: PORTS AMERICA AT 415-695-2400

PPOR Pre-Incident Information Summary San Francisco South: PIER 92/94/96

Latitude 37° 44. 122.4 Longitude 122° 2 122.371
County San Francisco

2-B92Type:
Dockage**Location Description:**

On Cargo Way off Third Street on San Francisco's Southern Waterfront. Easy access by Highways 101 and 280 usng the Cesar Chavez Street exit. 76 Acres; 3 (40 feet MLLW) berths Total length of 2,450 feet; Wharf design load of 800 lbs./sq.ft. Piers 94/96 handles containerized and non-containerized cargos, whereas Pier 92 can handle breakbulk and liquid cargoes.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F E/E) peregrine falcon present year-round, nest March–August.

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablitz plant present year round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:350E/X,351A/B,352B,353A,354A,400C/X,401B; ESI/SFB-Maps 16,19,20

SF South Collection—herring spawn during winter, seabirds and fish present year-round. YBI—Small cobble pocket beaches south side of island are pinniped haulout and rookery March–June, bird roosting (double-crested cormorant) year-round and nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, with concentrations of waterfowl, shorebirds present year round and in higher numbers (1000s) during winter, brown pelicans May–Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 are wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety of water birds, shorebirds and upland songbirds. SF Waterfront herring spawning in winter, birds roost and forage year-round. Pier 39 sea lion haulout year-round, highest numbers August–March.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Commercial fishing from TI/YBI.

Critical Habitat for TAES:

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

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

PPOR Pre-Incident Information Summary San Francisco South: PIER 92/94/96

2-B92

Latitude 37° 44. 122.4 Longitude 122° 2 122.371
County San Francisco

Type:
Dockage

Human Health and Safety

The City and County of San Francisco is the fourth most populous city in California and the 14th most populous city in the United States, with a 2007 estimated population of 764,976.

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 Commercial Fishing and Aquaculture:

This site has no impact on commercial fishing.

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.

Economic Impact on Recreational Fishing and Marine Tourism:

This site is not used for rec fishing or marine tourism.

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
E Carol Bach	Port of San Francisco	(415) 274-0568	
E/C Bill Doll Chief of Resources	San Francisco Maritime National Historical Park	(415) 859-6779	
O City of San Francisco	San Francisco, City and County of	(415) 556-8371	
E Sidonie Sansom DirHomeland Security	Port of San Francisco	(415) 274-0544	
O Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
T Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
T Brian Ullensvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Port of San Francisco at 415-274-0400

Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Time: 1 HOUR

List of Nearby Environmentally Sensitive Sites: SFACP2: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B; ESI/SFB – Maps

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
W	6	MUD	38	0		SEASONAL				<input checked="" type="checkbox"/>

PPOR Pre-Incident Information SummaSan Francisco South: PIER 92/94/96**2-B92**

Latitude 37° 44. 122.4 Longitude 122° 2 122.371

Type:

County San Francisco

Dockage

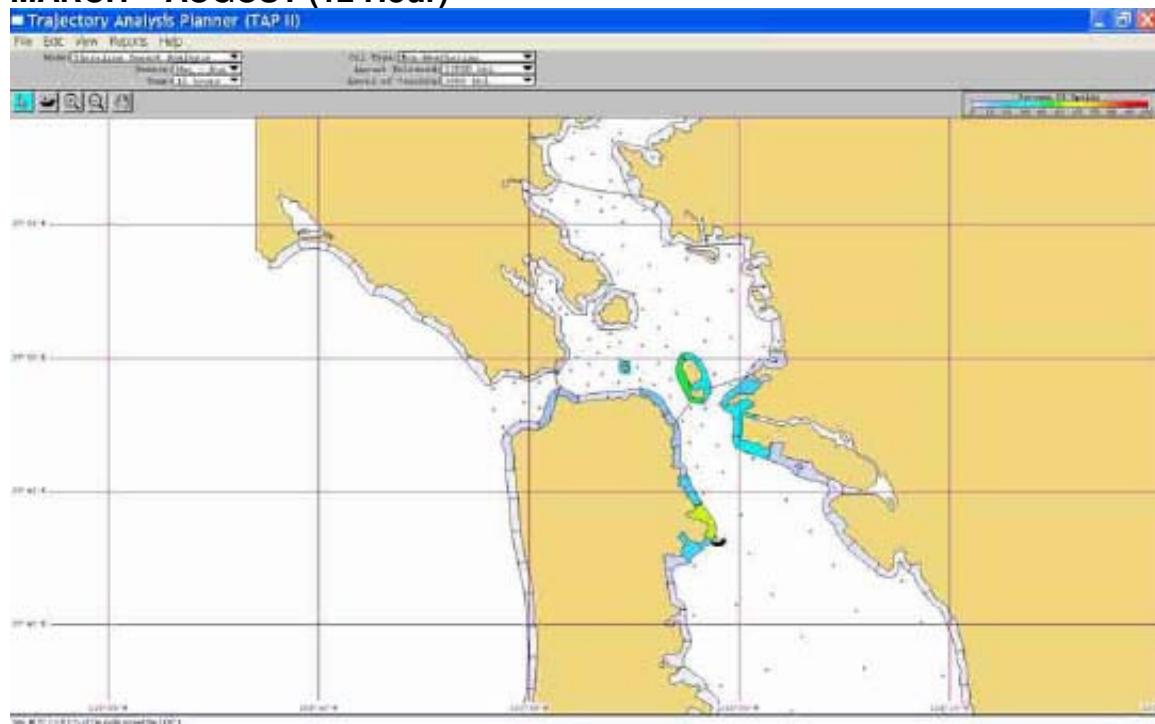
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
92	PIER 92/94/96	Deep		38	2450	1200 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE. 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.	All the piers within this place have poor containment on the ends exposed to the Bay currents, but have significant potential for containment on the north and south sides of the piers, particularly if other vessels are already positioned on the opposite site of the wharf. Secondary confinement of oil escaping containment is variable and not particularly good except at the SF Dry Dock.

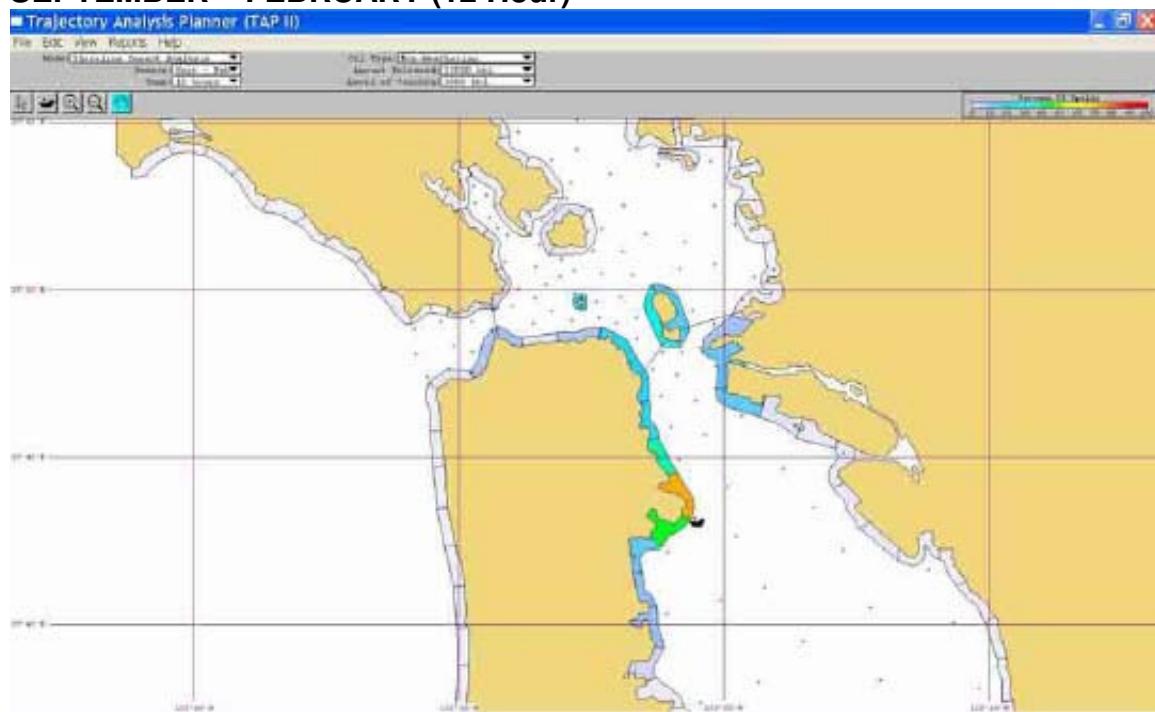
Site Contact/Leasee/Owner: Ports America at 415-695-2400

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-B99 (Hunters Point)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary San Francisco South: Hunters Point (y-HL)

2-B99

Latitude 37° 43' 122.4 Longitude 122° 2 122.358

Type:

County San Francisco

Location Description:

In the past, San Francisco Naval Shipyard at Hunters Point, San Francisco was located on 638 acres of waterfront. The Bayview–Hunters Point area is rapidly morphing the old infrastructure of factories and shipyards in some of the last available land in San Francisco is being torn down. The land was again appropriated by the United States Navy at the onset of World War II and became one of the major shipyards of the west coast. After the war, the area remained a naval base and commercial shipyard, as many blue collar industries moved here. The Navy closed the shipyard and Naval base in 1974 and gave it back to the city. It is a deactivated Navy shipyard that was selected and approved for closure and disposition by the Base Realignment and Closure (BRAC) Commission in 1991. Operational base closure was 1 April 1994. Closure of Hunters Point has left behind San Francisco's worst toxic waste dump and a legacy of nuclear and chemical pollution that residents fear may have a long-term effect on health in their low-income neighborhoods. The fiscal year 1991 House Armed Services Committee defense authorization report required the Secretary of the Navy to enter into a lease with the City of San Francisco for not less than 260 acres of the Hunters Point Naval Shipyard. This lease constituted exactly half of this land and would be for a period not less than 30 years. This action permitted the City of San Francisco to execute a development plan for Hunters Point to bring employment to the area. Hunters Point is bordered by the most depressed area of the city.

Development on Hunters Point could bring jobs and prosperity to this community. The committee's intent was to turn this defunct shipyard land over to the city for the purpose of economic benefit to the region. On October 5, 1994, the US Navy was sued by a coalition of environmentalist, sports fishing, and public interest groups who alleged that toxic discharges from Hunters Point Naval Shipyard are contaminating San Francisco Bay. The lawsuit filed against the Navy with the US District Court in San Francisco charges the Navy with 19,000 violations of the Clean Water Act. The violations are based on the Navy's own self-monitoring reports to the EPA and the San Francisco Bay Regional Water Quality Control Board.

According to Michael Herz of the San Francisco BayKeeper, the suit claims that toxic discharges of polychlorinated biphenyls (PCBs), acids, bases, organic solvents, paints, waste oils, and vinyl chlorides wash into the bay daily through broken tidal gates and leaking storm drains at the shipyard. Herz said that these chemicals are not only toxic to fish, but a health hazard to thousands of low-income people who consume contaminated seafood from the bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F E/E) peregrine falcon present year-round, nest March–August.

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:350E/X,351A/B,352B,353A,354A,400C/X,401B; ESI/SFB-Maps 16,19,20

SF South Collection-herring spawn during winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side of island are pinniped haulout and rookery March–June, bird roosting (double-crested cormorant) year-round and nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass,

Critical Habitat for TAES:

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

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

PPOR Pre-Incident Information Summary San Francisco South: Hunters Point (y-HL)**2-B99**

Latitude 37° 43' 122.4 Longitude 122° 2 122.358

Type:

County San Francisco

with concentrations of waterfowl, shorebirds present year round and in higher numbers (1000s) during winter, brown pelicans May–Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 are wetland restoration sites with high ground vegetation,pickleweed marsh,saltmarsh ponds/lagoons,mudflats supporting variety of water birds, shorebirds and upland songbirds. SF Waterfront herring spawning in winter, birds roost and forage year-round. Pier 39 sea lion haulout year-round, highest numbers August–March.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Commercial fishing from TI/YBI.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

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

Human Health and Safety

population of 764,976 within SF.

Economic Impact on Commercial Fishing and Aquaculture:

none

Economic Impact on Recreational Fishing and Marine Tourism:

none

Economic Impact on Maritime Commerce and Shipping:

none

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.

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
E Carol Bach	Port of San Francisco	(415) 274-0568	
E/C Bill Doll Chief of Resources	San Francisco Maritime National Historical Park	(415) 859-6779	
O City of San Francisco	San Francisco, City and County of	(415) 556-8371	
E Sidonie Sansom Dir Homeland Security	Port of San Francisco	(415) 274-0544	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
T Vika Sirova EnvProtect Specialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
T Brian Ullensvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	

PPOR Pre-Incident Information Summary San Francisco South: Hunters Point (y-HL)

2-B99

Type:

Latitude 37° 43' 122.4 Longitude 122° 2 122.358

County San Francisco

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: **City of San Francisco**

Marine Fire Fighting Resources **SF PIER 24: 37-47.42, 122-23.24**

Approximate Tug Response Time **2 HOURS**

List of Nearby Environmentally Sensitive Site **SFACP2: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B ESI/SFB – Maps 1** 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
W	6	MUD	30	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
99	Hunters Point (y-HL)			30	800	800 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE. 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.		All the piers within this place have poor containment on the ends exposed to the Bay currents, but have significant potential for containment on the north and south sides of the piers, particularly if other vessels are already positioned on the opposite side of the warf. Hunters Point has particularly good opportunities for containment within the finger piers where there is little current. Secondary confinement of oil escaping containment is variable and not particularly good except at the SF Dry Dock.	

Site Contact/Leasee/Owner:

Oakland Outer Harbor

B-C 200 FT, D-E 204 FT

CAUTION - Mid-Bay clearance under the long spans of the Bay Bridge and Bay Bridge Approach is 50'.

These clearances due to existing bridge height limit.

Vertical clearance 50'.



of tower, a fixed red light each side of the bridge at the foot of the tower.

Plants L, J, and K. A fixed red light each side of the bridge at the foot of the tower.

noted lights at each corner of the pier and red mast lights.

4' apart on each side.

DC, H, I, and JK. Fixed green light with 3 white lights in vertical row obtained through open lantern deck of bridge.

A fixed red light on each side of the bridge marking the NE corner of the channel.

CD, H, J, and JK. Fixed green lights on each side of the center of the channel.

Spirals L, K, KL, LM, and MU. A light occulting red every 5 seconds.

Fog signals.

Bells on the east or west sides of pier C and pier D. Horns on piers A, B, D, E, G, and H.

TOWER (CAMBRALE)

OAKLAND OUTER AND INNER HARBORS							
EMULATED FROM ELEMENTS IN THE COPIES OF ENHANCED - OAKLAND TO MUGU POINT							
NAME OF CHANNEL	CONTROLLING DEPTHS FROM BEAMWOOD IN FEET AT MAIN LOWER LOW WATER LEVEL		POINT		PROJECT		
	DEPTHS	OUTSIDE	RIGHT	LEFT	OUTSIDE	PROJECT	
BAR CHANNEL	40.0	40.0	40.0	40.0	1000-020	0.57	
DRAFT HARBOR ENTRANCE CHANNEL	26.0	40.0	40.0	40.0	1000-020	0.57	
DRAFT HARBOR	16.5	40.0	40.0	40.0	155-400	1.00	
RAVENSBURG							
ENTRANCE CHANNEL	44.0	45.0	45.0	45.0	8-07	2100-050	1.13
INNER HARBOR BEACH	46.0	45.0	45.0	45.0	9-07	1820-050	2.27
GENERAL ANCHORAGE TO BROOKLYN PARK							
BROOKLYN HARBOR SOUTH CHANNEL	13.0	20.0	20.0	20.0	2-07	800-030	0.99
PARK BY BRIDGE PARK	13.0	20.0	20.0	20.0	7-060	500-020	0.42

A. A DEPTH OF 80 FEET WAS PROVIDED FOR THE INSIDE HALF OF THE QUARTER.

B. A DEPTH OF 40 FEET WAS PROVIDED FOR THE INSIDE HALF OF THE QUARTER.

C. A DEPTH OF 24 FEET WAS PROVIDED FOR THE INSIDE HALF OF THE QUARTER.

D. A DEPTH OF 10 FEET WAS PROVIDED FOR THE INSIDE HALF OF THE QUARTER.

NOTE - CONSULT THE COPIES OF CHARTERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION.

NOTE X

Within the 12-nautical mile Territorial Sea established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the Three Nautical Miles, is now continued to depict the "jurisdictional limit" of the other laws. The territorial waters of the United States extend from the outer limit of the Three Nautical Miles to the Three Nautical Mile line established by Presidential Proclamation, or to the outer limit of Federal fisheries jurisdiction and the "outer" limit of the International Maritime Organization's (IMO) Exclusive Economic Zone and the 200-mile International Boundary between the United States and Canada.

Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

NOTE Y

Within the 12-nautical mile Territorial Sea established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the Three Nautical Miles, is now continued to depict the "jurisdictional limit" of the other laws. The territorial waters of the United States extend from the outer limit of the Three Nautical Miles to the Three Nautical Mile line established by Presidential Proclamation, or to the outer limit of Federal fisheries jurisdiction and the "outer" limit of the International Maritime Organization's (IMO) Exclusive Economic Zone and the 200-mile International Boundary between the United States and Canada.

Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

TIDAL INFORMATION						
Name	Place	Height referred to datum in seconds (MILLIS)	Mean Higher High Water	Mean Low Water	Extra Low Water	Extra High Water
San Francisco Gold Gate	AT ALONG	157-00N / 129-00W	5.9	0.0	1.1	10.0
San Francisco (Point 42.0)			8.0	0.0	1.1	10.0
Oakland Inner Harbor		32-00N / 122-00W	5.7	0.0	1.1	10.0
Point Orient		32-00N / 122-00W	6.0	0.0	1.1	10.0
Munich Point		32-00N / 122-00W	6.4	0.0	1.1	10.0
Yerba Buena Island		32-00N / 122-00W	6.7	0.0	1.1	10.0

4-Jan-2009

NOTE F

Rain range light is a private aid operated for ships using the Ninth Avenue Turning Basin or by Port of Oakland personnel for any other transiting vessels and should not be used.

COURT HOUSE

NOTE G

FIRESTAFF AND FIRESTAFF BELL

FIRESTAFF AND FIRESTAFF BELL

CAUTION

Flood and Wasting observations, being submitted, may exist as far inland as the bridge structure on route. Motorists are advised to proceed with caution.

Legend

● Sensitive Sites

◆ Potential Places of Refuge

Sector SF

0 1 2 4 Nautical Miles

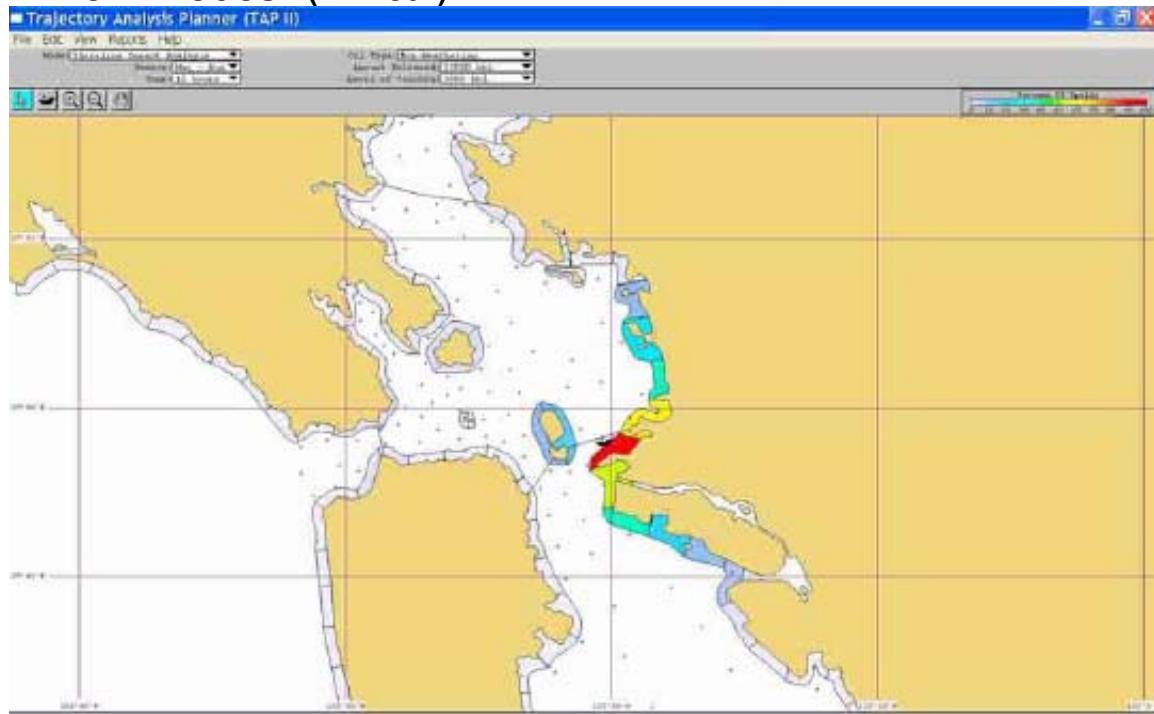
Section 8000 - 77

October 1, 2014

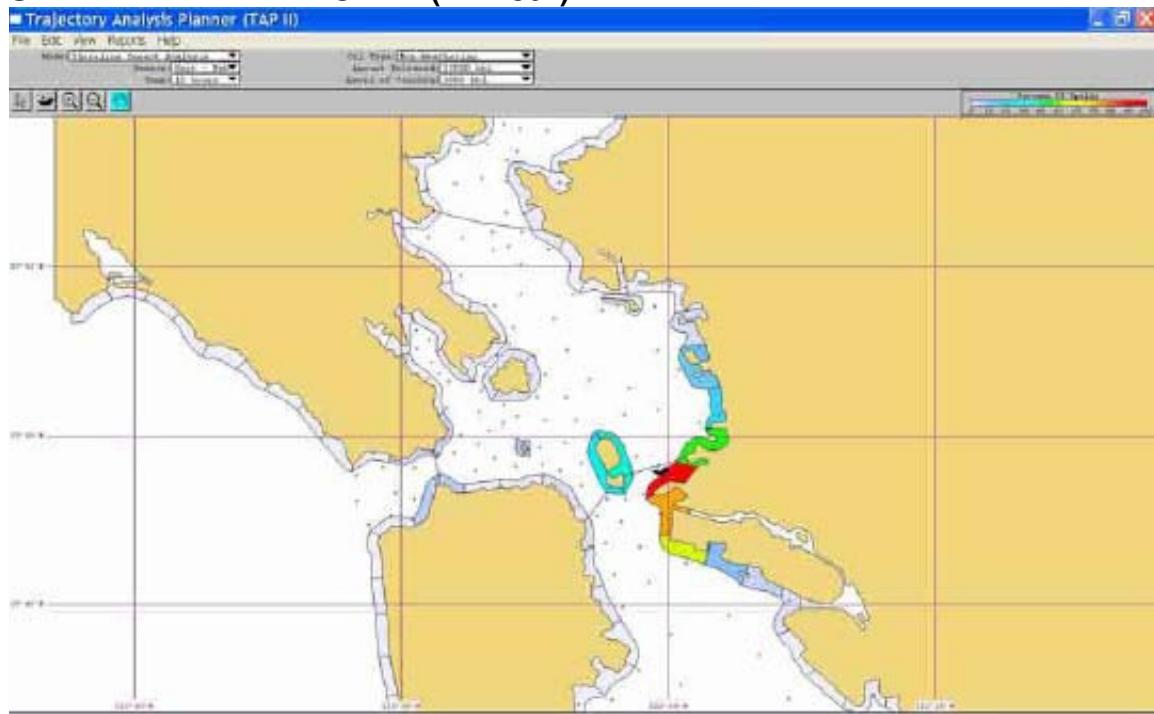
TRAJECTORY ANALYSIS PLANNER (TAP Model)

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summa**Oakland Outer Harbor: any site**

Latitude 37° 49. 122.3 Longitude 122° 1 122.317
County Alameda

2-COO

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.

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 large double-crested cormorant colony. Emeryville Lagoon/Mudflat important habitat for seabirds, shorebirds, migratory waterfowl for

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: any site**2-COO**

Latitude 37° 49. 122.3 Longitude 122° 1 122.317

County Alameda

Type:

Dockage

roost/forage, listed species, rare plants.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

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

Critical Habitat for Subsistence 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.

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 ruin 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 ruin recreational and commercial fishing. Marine Tourism might be affected as a result of a Places of Refuge incident.

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.

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
State Water Project	CA Dept. of Water Resources	(916) 574-2714	

PPOR Pre-Incident Information SummaOakland Outer Harbor: any site

2-COO

Latitude 37° 49. 122.3 Longitude 122° 1 122.317

Type:
Dockage

County Alameda

Dispatch	East Bay Regional Park District	(510) 881-1833
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565
T John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contami	(916) 414-6595
E Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548
E Clif Marcetti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737
E Jody Zaitlin Environmental Office	Port of Oakland	(510) 627-1179

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Port of Oakland at (510) 272-1100

Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Ti 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2: 307C/A, 309A, 310C/A, 351A/B, 490A, 495A; ESI/SFB – Maps 17,18,21 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
W	6		45	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
00	any site	Deep		45	2000	1500 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE.	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.	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.

Site Contact/Leasee/Owner:

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

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

2-CO2Type:
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-CO2

Type:
Dockage

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:

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

Critical Habitat for Subsistence 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.

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 Oaklands 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.

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

2-C02

Latitude 37° 48. 122.3 Longitude 122° 1 122.325

County Alameda

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 Marcetti 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 Ti 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2: 307C/A, 309A, 310C/A, 351A/B, 490A, 495A; ESI/SFB – Maps 17,18,21 Is Containment Possible?

Coast Pilot and Navigation Chart Information

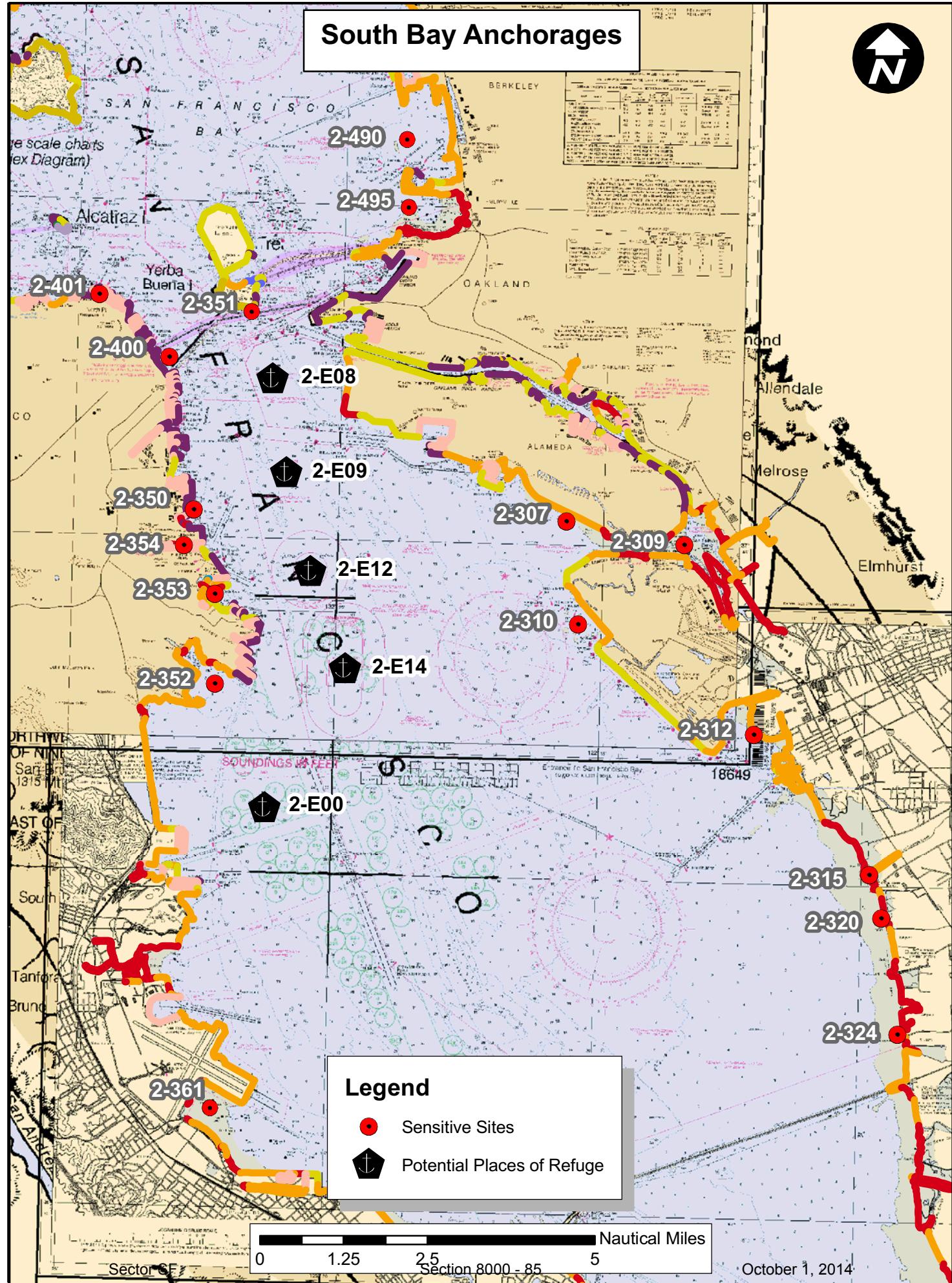
Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
NW & winter	MUD		45	0			SEASONAL	vulnerable to		<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		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 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.			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.

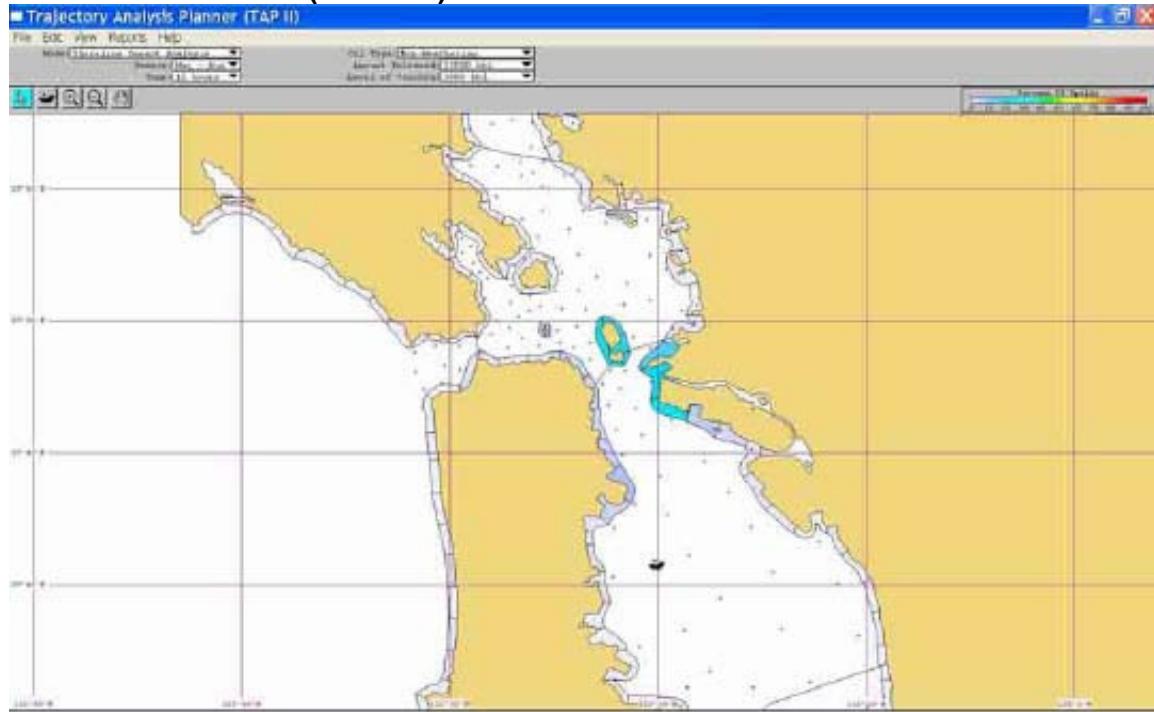
Site Contact/Leasee/Owner: VTS for contacts

South Bay Anchorages

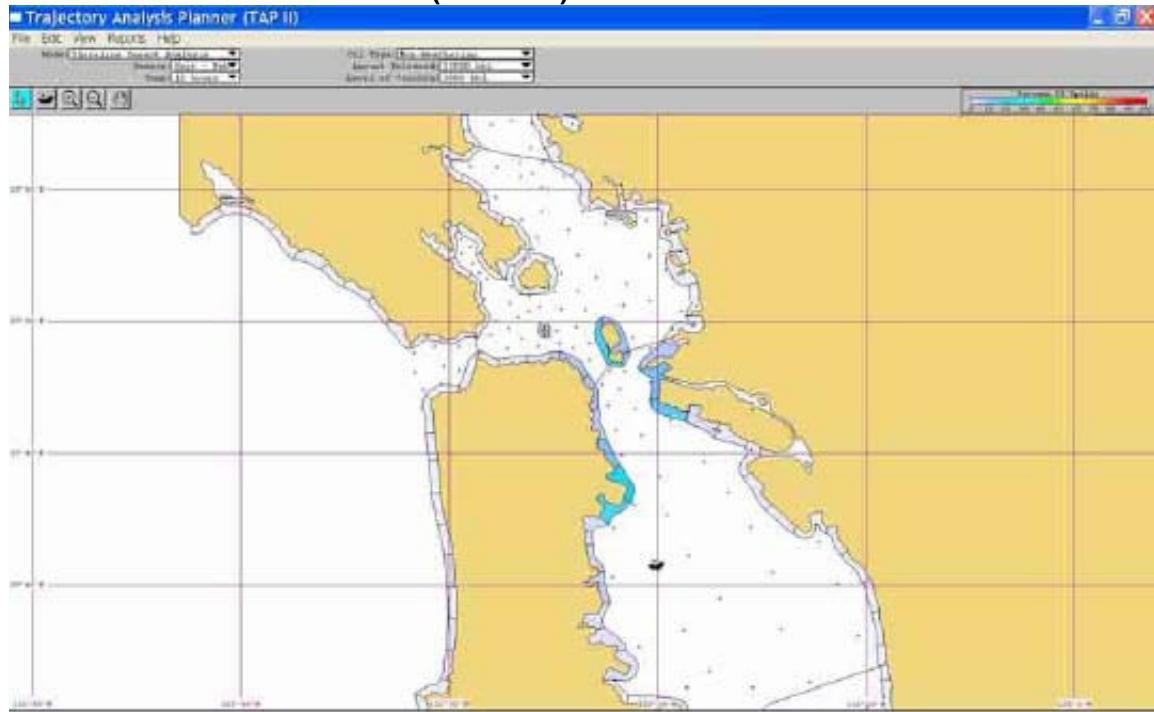


TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E00 (Undesignated Anchorages)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay Anchorages: any other Anchorage

2-E00

Latitude 37° 41' 122.4 Longitude 122° 2 122.354
County San Francisco-Alameda

Type:
Anchorage

Location Description:

This is the most desirable of all the open water anchorages because it is isolated from populations and because the currents are less aggressive here and permit less threat of pollution spreading and greater opportunity for open water containment than most places in the Bay. This characterization is based on historic spills and computer models which indicate that this trend more pronounced as you move south in the Anchorage. The middle of the bay is relatively isolated from populations under most conditions and because it is a traditional location for anchorage, is not visually objectionable.

Marshes in this area support large populations of endangered California clapper rails and salt marsh harvest mice, and managed ponds support the largest population of Western snowy plovers in San Francisco Bay. The Bair Island Restoration Project and the South Bay Salt Pond Restoration Project (the largest tidal marsh restoration project on the west coast of the United States) are being implemented within this area by the USFWS and the California Department of Fish and Game. Almost 20,000 acres of former commercial salt ponds are targeted for restoration in the South Bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

(East Shoreline)

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 present Feb-Sep, also rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover nest present from Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species. East Bay Regional Park District shoreline salt marshes support number of listed species.

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

PPOR Pre-Incident Information Summary South Bay Anchorages: any other Anchorage

2-E00

Latitude 37° 41' 122.4 Longitude 122° 2 122.354

County San Francisco-Alameda

Type:
Anchorage

clapper rail and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage and nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr-Aug, nests May-Aug; (F/T) western snowy plover forage/nest in salt-pond area.

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).

(West Shoreline)

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

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year-round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Colma Creek area marshes – (S/F E/E) California clapper rail present year-round, nesting Mar-Jul.

Airport Mudflat – (S/F E/E) California clapper rail present year-round in marsh in back of cove, nesting Mar-Jul.

(S/F E/E) California clapper rail present year-round in several small strip marshes between Colma Creek and Bair/Greco area, nesting Mar-Jul.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,:
52B,353A,354A,361A,400C/X,401B,490A,495A; ESI/SFB-Maps
16,17,18,19,20, 21,22

(East Bay Shoreline) Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round, brown pelican May-Nov.

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

In general, extensive mudflats on both east and west bay shorelines support heavy use by variety of shorebirds (e.g., herons and egrets), wading and diving birds, and harbor seals. Open waters support heavy use by migratory waterfowl. Sloughs, mudflats support fish, shellfish,

PPOR Pre-Incident Information Summary

Latitude 37° 41' 122.4 Longitude 122° 2' 122.354
County San Francisco-Alameda

2-E00Type:
Anchorage

San Leandro Bay/Arrowhead Marsh supports listed species, rare/sensitive plants, wading birds, shorebirds, waterfowl, brown pelican forage. Bay Farm Island eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round. Oyster Bay marshes and mudflats support migratory waterfowl, shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds. 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.

(West Bay Shoreline) SF South Collection-herring spawn in winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side island are pinniped haulout/rookery Mar-Jun, bird roosting (double-crested cormorant) year-round, nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, concentrations waterfowl/shorebirds present year-round, higher numbers (1000s) in winter, brown pelican May-Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety water birds, shorebirds, upland songbirds. Airport Mudflat and cove serve as feeding/resting area for waterfowl, wading birds, shorebirds, highest use in winter. SF Waterfront herring spawning in winter, birds roost/forage year-round. Pier 39 sea lion haulout year-round, highest numbers Aug-Mar.

Subsistence-use Species:

Essential Fish Habitat:

Bay fish species move in/out of channels and ponds in these areas.

Commercial Fisheries / Species:

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

infauna.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

Sector SF

Section 8000 - 89

October 1, 2014

PPOR Pre-Incident Information SummaSouth Bay Anchorages: any other Anchorage

2-E00

Latitude 37° 41' 122.4 Longitude 122° 2 122.354

County San Francisco-Alameda

Type:

Anchorage

Human Health and Safety

South Bay Anchorages are near population centers of San Francisco (764,976), Oakland (420,183) and Alameda (72,259)--population are provided in parenthesis.

Economic Impact on Maritime Commerce and Shipping:

May affect shipping lanes to Alameda Point, Entrance to Oakland Inner Harbor Channel and the Port of Redwood City. 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
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
Park Supervisor	EBRPD-Hayward Regional Shoreline Park	(510) 544-3082	
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565	
Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222	
Carol Bach	Port of San Francisco	(415) 274-0568	
Baylands Nature Pres Office	Baylands Nature Preserve	(650) 329-2506	
John Bradley Refuge Manager	SF Bay National Wildlife Refuge Complex	(510) 792-0222	
DPR Dispatch	US National Park Service, Golden Gate (NRA)	(415) 561-4620	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Clif Marcetti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737	
Butch Paredes	Cargill Salt	(510) 790-8165	
City of San Francisco	San Francisco, City and County of	(415) 556-8371	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
Operations State Water Project	CA Department of Water Resources	(916) 574-2714	

PPOR Pre-Incident Information SummaSouth Bay Anchorages: any other Anchorage

2-E00

Latitude 37° 41' 122.4 Longitude 122° 2 122.354

Type:

County San Francisco-Alameda

Anchorage

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	USCG Sector SF	Marine Fire Fighting Resources	SF PIER 24: 37-47.42, 122-23.24
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Approximate Tug Response Ti	2 HOURS
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List of Nearby Environmentally Sensitive Sit	SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A	Is Containment Possible?	<input type="checkbox"/>
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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
W	6	MUD	26	0		SEASONAL	YES			<input checked="" type="checkbox"/>

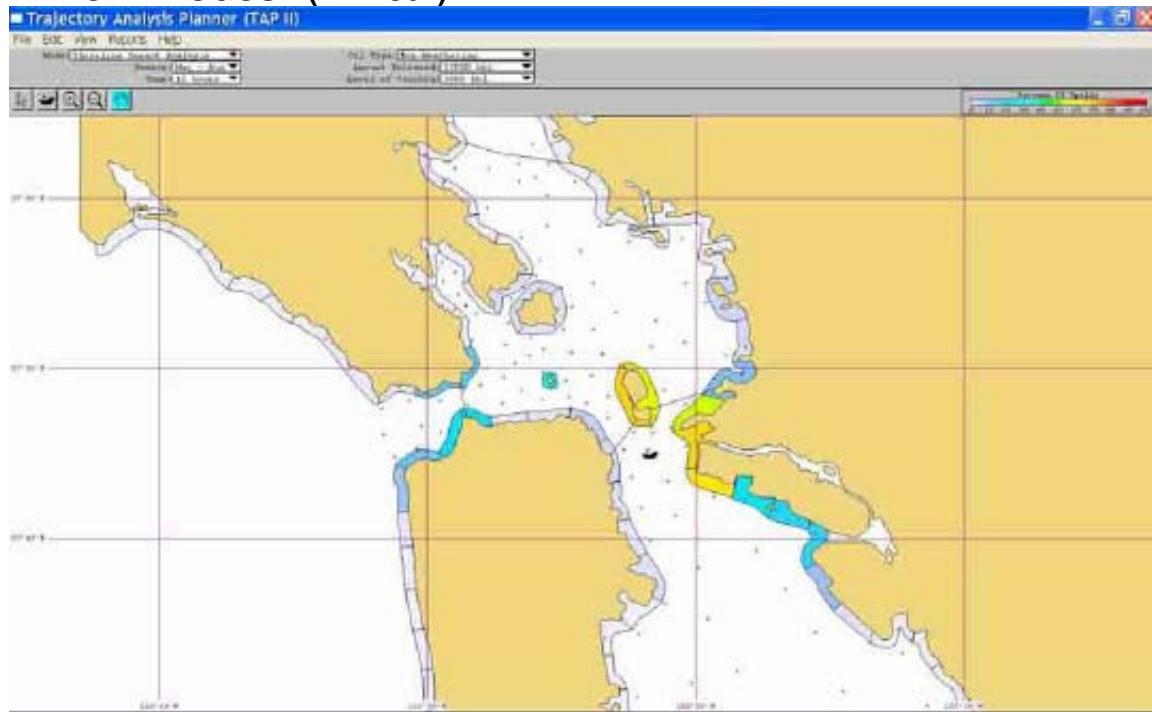
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
03	any other Anchorage	1000	Deep	80		SWING ROOM OR DOCK FACE: 1/2 MILE SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.	Potential for successful primary containment increases the further south one goes in the Bay because currents significantly diminish to the south. Anchorage 8 is not likely to have good primary containment. Potential for secondary confinement of oil escaping primary containment is minimal because the only opportunity is the openwater which is problematic due to spreading even if there is no current exceeding 0.7 knt.	

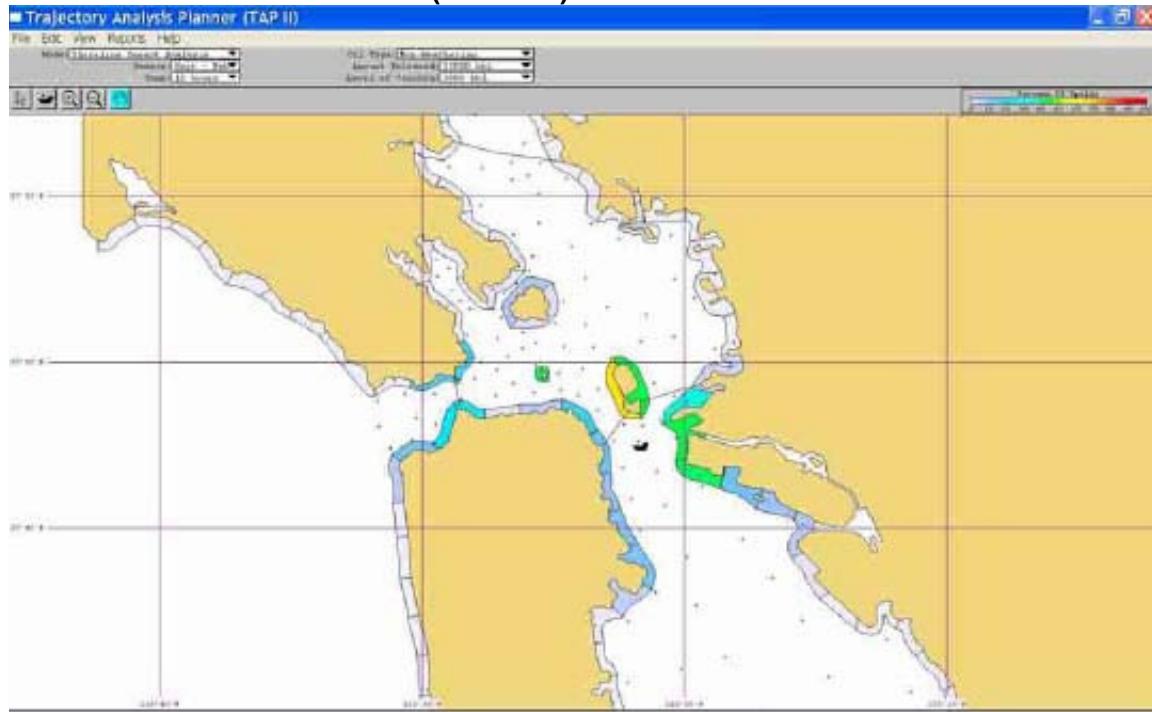
Site Contact/Leasee/Owner: VTS

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E08 (Anchorage 8)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 8

Latitude 37° 47. 122.4 Longitude 122° 2 122.355
County San Francisco-Alameda

2-E08

Type:
Anchorage

Location Description:

In San Francisco Bay bounded by the west shore of Alameda Island and the following lines: Beginning at 37°47'52" N, 122°19'58" W; thence west-northwesterly to 37°48'02.5" N 122°21'01.5" W; thence west-southwesterly to 37°47'51.5" N, 122°21'40" W; thence south-southwesterly to 37°47'35.5" N, 122°21'50" W; thence south-southeasterly to 37°46'40" N, 122°21'23" W; thence easterly to 37°46'36.5" N, 122°19'52" W; thence northerly to shore at 37°46'53" N, 122°19'53.5" W (NAD 83).

Marshes in this area support large populations of endangered California clapper rails and salt marsh harvest mice, and managed ponds support the largest population of Western snowy plovers in San Francisco Bay. The Bair Island Restoration Project and the South Bay Salt Pond Restoration Project (the largest tidal marsh restoration project on the west coast of the United States) are being implemented within this area by the USFWS and the California Department of Fish and Game. Almost 20,000 acres of former commercial salt ponds are targeted for restoration in the South Bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

(East Shoreline)

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 present Feb-Sep, also rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover nest present from Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California clapper rail and (S-T) black rail forage and nest, (S/F E/E) salt marsh

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species. East Bay Regional Park District shoreline salt marshes support number of listed species.

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 8

Latitude 37° 47. 122.4 Longitude 122° 2 122.355
County San Francisco-Alameda

2-E08

Type:
Anchorage

harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage and nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr-Aug, nests May-Aug; (F/T) western snowy plover forage/nest in salt-pond area.

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).

(West Shoreline)

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

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year-round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Colma Creek area marshes – (S/F E/E) California clapper rail present year-round, nesting Mar-Jul.

Airport Mudflat – (S/F E/E) California clapper rail present year-round in marsh in back of cove, nesting Mar-Jul.

(S/F E/E) California clapper rail present year-round in several small strip marshes between Colma Creek and Bair/Greco area, nesting Mar-Jul.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:307C/A,309A,310C/A,A,312A,315A,320A,324A,350E/X,351A/B,52B,353A,354A,361A,400C/X,401B,490A,495A; ESI/SFB-Maps 16,17,18,19,20, 21,22

(East Bay Shoreline) Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round, brown pelican May-Nov. San Leandro Bay/Arrowhead Marsh supports listed species,

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

In general, extensive mudflats on both east and west bay shorelines support heavy use by variety of shorebirds (e.g., herons and egrets), wading and diving birds, and harbor seals. Open waters support heavy use by migratory waterfowl. Sloughs, mudflats support fish, shellfish, infauna.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 8

Latitude 37° 47. 122.4 Longitude 122° 2 122.355

County San Francisco-Alameda

2-E08

Type:
Anchorage

rare/sensitive plants, wading birds, shorebirds, waterfowl, brown pelican forage. Bay Farm Island eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round. Oyster Bay marshes and mudflats support migratory waterfowl, shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds. 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.

(West Bay Shoreline) SF South Collection-herring spawn in winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side island are pinniped haulout/rookery Mar-Jun, bird roosting (double-crested cormorant) year-round, nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, concentrations waterfowl/shorebirds present year-round, higher numbers (1000s) in winter, brown pelican May-Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety water birds, shorebirds, upland songbirds. Airport Mudflat and cove serve as feeding/resting area for waterfowl, wading birds, shorebirds, highest use in winter. SF Waterfront herring spawning in winter, birds roost/forage year-round. Pier 39 sea lion haulout year-round, highest numbers Aug-Mar.

Subsistence-use Species:

Essential Fish Habitat:

Bay fish species move in/out of channels and ponds in these areas.

Commercial Fisheries / Species:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 8

2-E08

Latitude 37° 47. 122.4 Longitude 122° 2 122.355

County San Francisco-Alameda

Type:
Anchorage

Human Health and Safety:

Anchorage 8 are near population centers of San Francisco (764,976), Oakland (420,183) and Alameda (72,259)--population are provided in parenthesis.

Economic Impact on Maritime Commerce and Shipping:

May affect shipping lanes to Alameda Point, Entrance to Oakland Inner Harbor Channel and the Port of Redwood City. 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
Park Supervisor	EBRPD-Hayward Regional Shoreline Park	(510) 544-3082	
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
State Water Project	CA Dept. of Water Resources	(916) 574-2714	
Dispatch	East Bay Regional Park District	(510) 881-1833	
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565	
Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222	
Carol Bach	Port of San Francisco	(415) 274-0568	
Baylands Nature Pres Office	Baylands Nature Preserve	(650) 329-2506	
John Bradley Refuge Manager	SF Bay National Wildlife Refuge Complex	(510) 792-0222	
Dispatch GGNRA	US National Park Service, Golden Gate (NRA)	(415) 561-5505	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Thomas Lindenmeyer	East Bay Regional Park District		
Clif Marceatti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737	
Butch Paredes	Cargill Salt	(510) 790-8165	
City of San Francisco	San Francisco, City and County of	(415) 556-8371	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 8

2-E08

Latitude 37° 47. 122.4 Longitude 122° 2 122.355

County San Francisco-Alameda

Type:
Anchorage

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: USCG Sector SF Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Ti 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A 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
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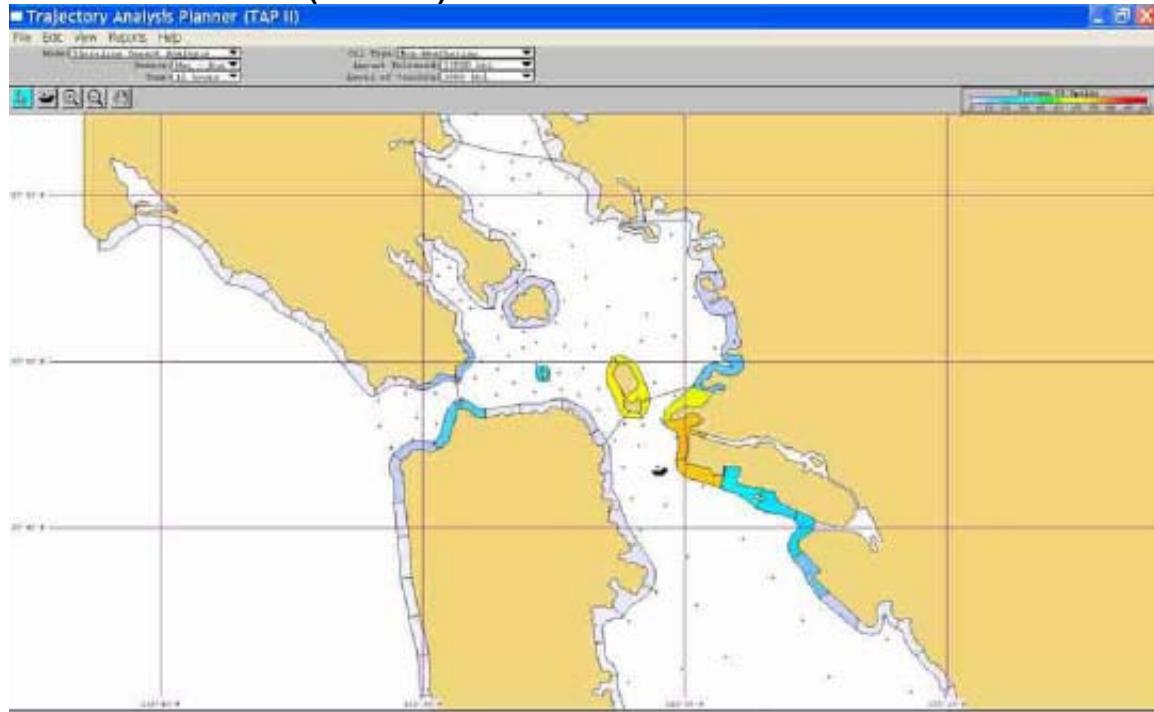
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
08	Anchorage 8	1500	Deep	50		SWING ROOM OR DOCK FACE: 1/2 MILE 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.		Potential for successful primary containment increases the further south one goes in the Bay because currents significantly diminish to the south. Anchorage 8 is not likely to have good primary containment. Potential for secondary confinement of oil escaping primary containment is minimal because the only opportunity is the openwater which is problematic due to spreading even if there is no current exceeding 0.7 knt.

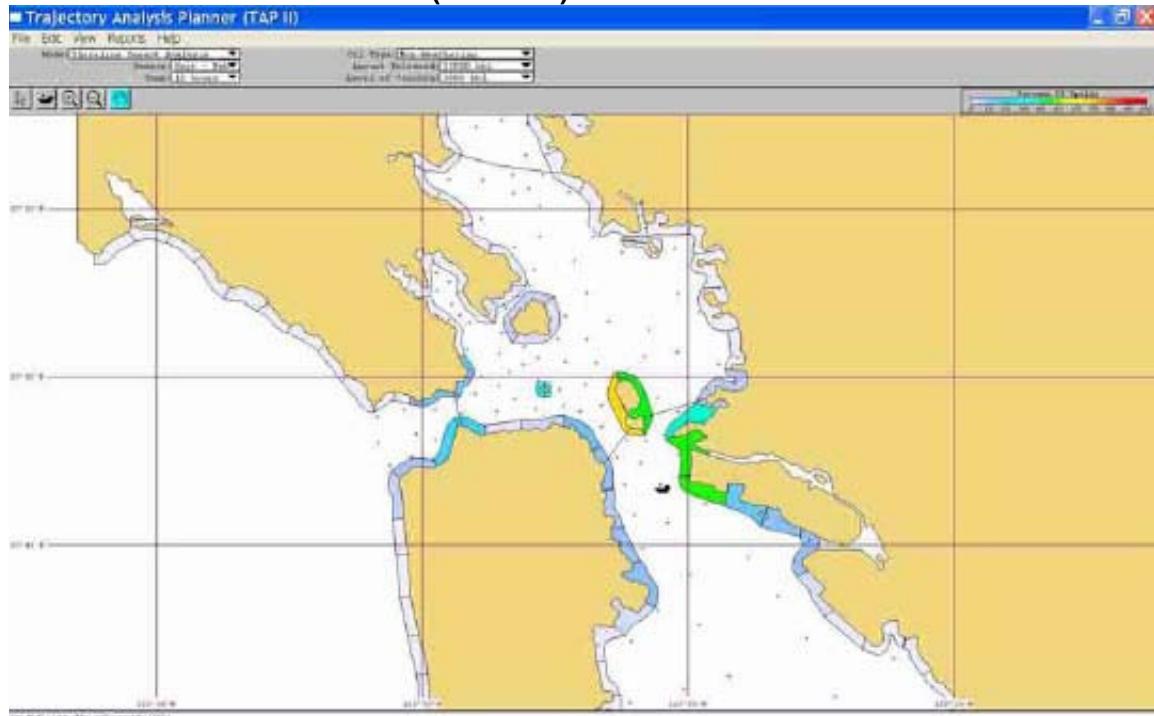
Site Contact/Leasee/Owner: VTS ON CHANNEL 14

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E09 (Anchorage 9)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 Longitude 122° 2 122.35
County San Francisco-Alameda

Type:
Anchorage

Location Description:

Anchorage No. 9. In San Francisco Bay bounded on the east by the eastern shore of San Francisco Bay and on the north by the southern shore of Alameda Island and a line beginning at 37°46'21.5" N, 122°19'07" W; thence westerly to 37°46'30" N, 122°21'56" W; thence south-southeasterly to 37°41'45" N, 122°20'22" W (San Bruno Channel Light 1); thence south-southeasterly to 37°38'38.5" N, 122°18'48.5" W (San Bruno Channel Light 5); thence southeasterly to 37°36'05" N, 122°14'18" W; thence northeasterly to shore at 37°37'38.5" N, 122°09'06.5" W (NAD 83).

Marshes in this area support large populations of endangered California clapper rails and salt marsh harvest mice, and managed ponds support the largest population of Western snowy plovers in San Francisco Bay. The Bair Island Restoration Project and the South Bay Salt Pond Restoration Project (the largest tidal marsh restoration project on the west coast of the United States) are being implemented within this area by the USFWS and the California Department of Fish and Game. Almost 20,000 acres of former commercial salt ponds are targeted for restoration in the South Bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

(East Shoreline)

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 present Feb-Sep, also rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover nest present from Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California clapper rail and (S-T) black rail forage and nest, (S/F E/E) salt marsh

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species. East Bay Regional Park District shoreline salt marshes support number of listed species.

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 Longitude 122° 2 122.35

County San Francisco-Alameda

Type:
Anchorage

harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage and nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr-Aug, nests May-Aug; (F/T) western snowy plover forage/nest in salt-pond area.

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).

(West Shoreline)

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

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year-round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Colma Creek area marshes – (S/F E/E) California clapper rail present year-round, nesting Mar-Jul.

Airport Mudflat – (S/F E/E) California clapper rail present year-round in marsh in back of cove, nesting Mar-Jul.

(S/F E/E) California clapper rail present year-round in several small strip marshes between Colma Creek and Bair/Greco area, nesting Mar-Jul.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B, 52B,353A,354A,361A,400C/X,401B,490A,495A; ESI/SFB-Maps 16,17,18,19,20, 21,22

(East Bay Shoreline) Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round, brown pelican May-Nov. San Leandro Bay/Arrowhead Marsh supports listed species,

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

In general, extensive mudflats on both east and west bay shorelines support heavy use by variety of shorebirds (e.g., herons and egrets), wading and diving birds, and harbor seals. Open waters support heavy use by migratory waterfowl. Sloughs, mudflats support fish, shellfish, infauna.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 9**2-E09**

Latitude 37° 46' 122.4 Longitude 122° 2 122.35

County San Francisco-Alameda

Type:
Anchorage

rare/sensitive plants, wading birds, shorebirds, waterfowl, brown pelican forage. Bay Farm Island eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round. Oyster Bay marshes and mudflats support migratory waterfowl, shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds. 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.

(West Bay Shoreline) SF South Collection-herring spawn in winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side island are pinniped haulout/rookery Mar-Jun, bird roosting (double-crested cormorant) year-round, nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, concentrations waterfowl/shorebirds present year-round, higher numbers (1000s) in winter, brown pelican May-Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety water birds, shorebirds, upland songbirds. Airport Mudflat and cove serve as feeding/resting area for waterfowl, wading birds, shorebirds, highest use in winter. SF Waterfront herring spawning in winter, birds roost/forage year-round. Pier 39 sea lion haulout year-round, highest numbers Aug-Mar.

Subsistence-use Species:

Essential Fish Habitat:

Bay fish species move in/out of channels and ponds in these areas.

Commercial Fisheries / Species:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 Longitude 122° 2 122.35

County San Francisco-Alameda

Type:
Anchorage

Human Health and Safety

Anchorage 9 are near population centers of San Francisco (764,976), Oakland (420,183) and Alameda (72,259)--population are provided in parenthesis.

Economic Impact on Maritime Commerce and Shipping:

May affect shipping lanes to Alameda Point, Entrance to Oakland Inner Harbor Channel and the Port of Redwood City. 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
Park Supervisor	EBRPD-Hayward Regional Shoreline Park	(510) 544-3082	
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565	
Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222	
Carol Bach	Port of San Francisco	(415) 274-0568	
Baylands Nature Pres Office	Baylands Nature Preserve	(650) 329-2506	
John Bradley Refuge Manager	SF Bay National Wildlife Refuge Complex	(510) 792-0222	
Dispatch GGNRA	US National Park Service, Golden Gate (NRA)	(415) 561-5505	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Clif Marocetti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737	
Butch Paredes	Cargill Salt	(510) 790-8165	
City of San Francisco	San Francisco, City and County of	(415) 556-8371	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
Operations State Water Project	CA Department of Water Resources	(916) 574-2714	

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 Longitude 122° 2 122.35

County San Francisco-Alameda

Type:
Anchorage

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: USCG Sector SF Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Ti 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A 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
W	6	MUD	60	0		SEASONAL	NO			<input checked="" type="checkbox"/>

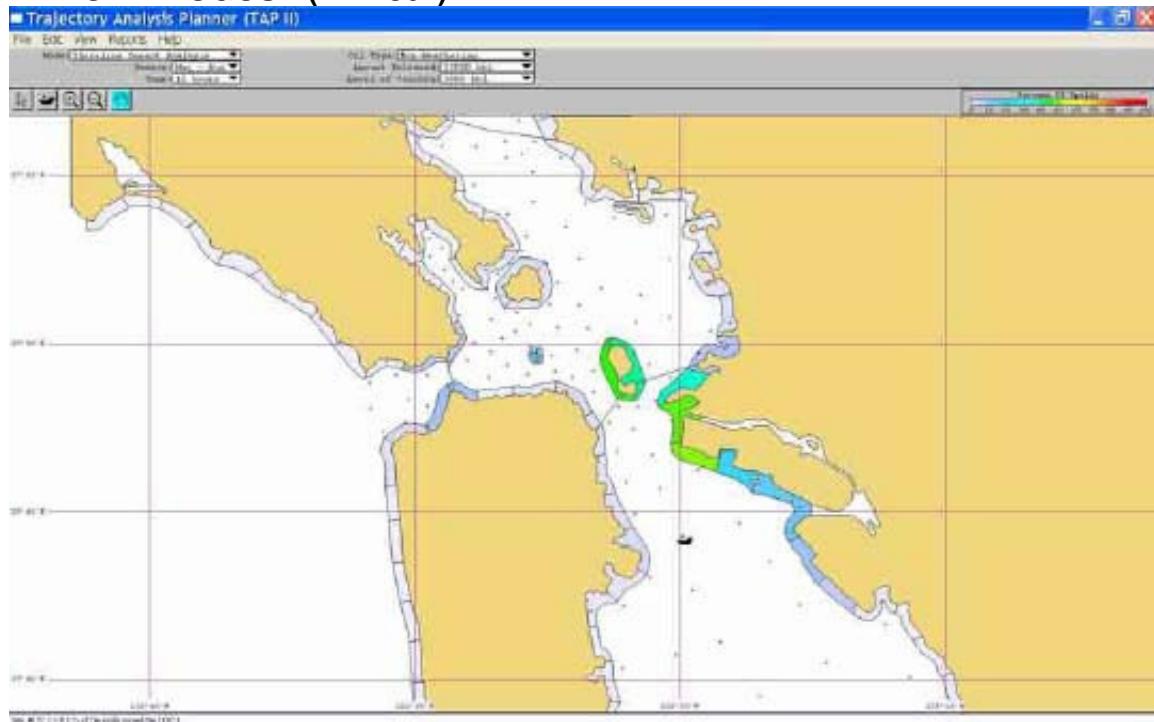
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
09	Anchorage 9	1500	Deep	55		SWING ROOM OR DOCK FACE: 1/2 MILE 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.	Potential for successful primary containment increases the further south one goes in the Bay because currents significantly diminish to the south. Anchorage 8 is not likely to have good primary containment. Potential for secondary confinement of oil escaping primary containment is minimal because the only opportunity is the openwater which is problematic due to spreading even if there is no current exceeding 0.7 knt.	

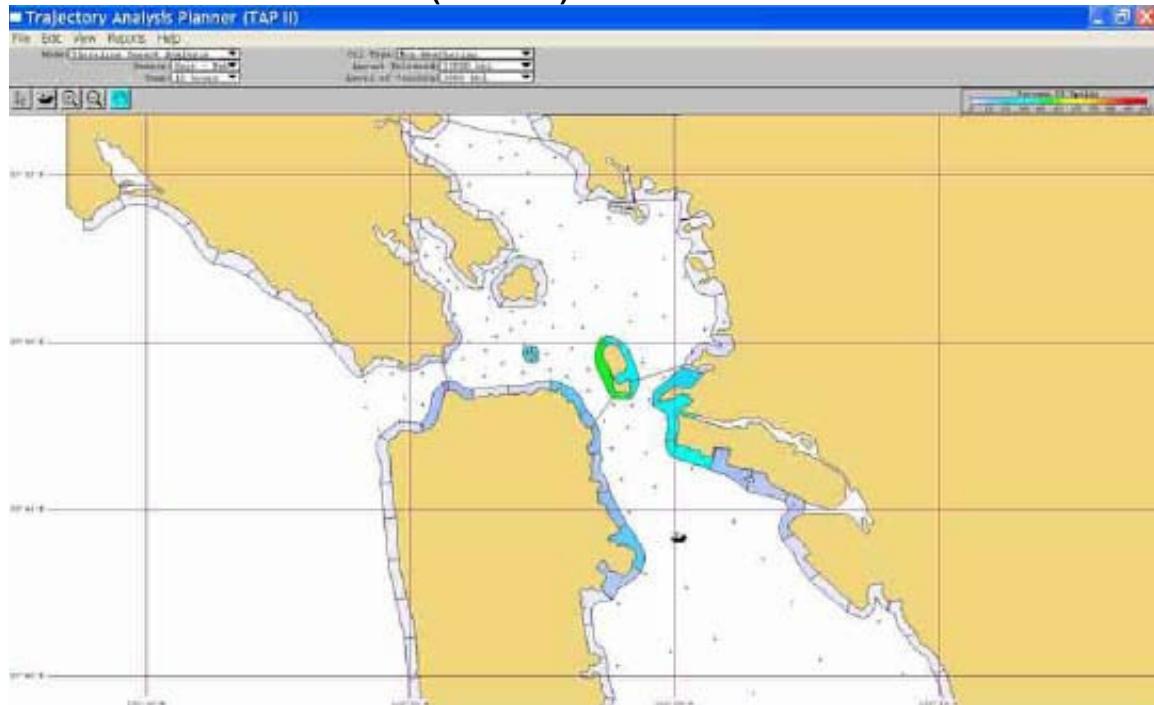
Site Contact/Leasee/Owner: VTS ON CHANNEL 14

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E12 (Anchorage 12)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

County San Francisco-Alameda

Type:
Anchorage

Location Description:

In San Francisco Bay east of the city of San Francisco a circular area having a radius of 500 yards centered at latitude 37°44'32.5" N., longitude 122°20'27.5" W. A 667-yard-wide forbidden anchorage zone surrounds this anchorage.

Marshes in this area support large populations of endangered California clapper rails and salt marsh harvest mice, and managed ponds support the largest population of Western snowy plovers in San Francisco Bay. The Bair Island Restoration Project and the South Bay Salt Pond Restoration Project (the largest tidal marsh restoration project on the west coast of the United States) are being implemented within this area by the USFWS and the California Department of Fish and Game. Almost 20,000 acres of former commercial salt ponds are targeted for restoration in the South Bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

(East Shoreline)

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 present Feb-Sep, also rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover nest present from Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California clapper rail and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species. East Bay Regional Park District shoreline salt marshes support number of listed species.

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

County San Francisco-Alameda

Type:

Anchorage

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage and nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr-Aug, nests May-Aug; (F/T) western snowy plover forage/nest in salt-pond area.

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).

(West Shoreline)

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

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year-round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Colma Creek area marshes – (S/F E/E) California clapper rail present year-round, nesting Mar-Jul.

Airport Mudflat – (S/F E/E) California clapper rail present year-round in marsh in back of cove, nesting Mar-Jul.

(S/F E/E) California clapper rail present year-round in several small strip marshes between Colma Creek and Bair/Greco area, nesting Mar-Jul.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B, 52B,353A,354A,361A,400C/X,401B,490A,495A; ESI/SFB-Maps 16,17,18,19,20, 21,22

(East Bay Shoreline) Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in 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, waterfowl, brown pelican forage. Bay Farm Island eelgrass beds support herring

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

In general, extensive mudflats on both east and west bay shorelines support heavy use by variety of shorebirds (e.g., herons and egrets), wading and diving birds, and harbor seals. Open waters support heavy use by migratory waterfowl. Sloughs, mudflats support fish, shellfish, infauna.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

County San Francisco-Alameda

Type:
Anchorage

spawning in winter, seabirds/shorebirds utilize area year-round. Oyster Bay marshes and mudflats support migratory waterfowl, shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds. 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.

(West Bay Shoreline) SF South Collection-herring spawn in winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side island are pinniped haulout/rookery Mar-Jun, bird roosting (double-crested cormorant) year-round, nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, concentrations waterfowl/shorebirds present year-round, higher numbers (1000s) in winter, brown pelican May-Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety water birds, shorebirds, upland songbirds. Airport Mudflat and cove serve as feeding/resting area for waterfowl, wading birds, shorebirds, highest use in winter. SF Waterfront herring spawning in winter, birds roost/forage year-round. Pier 39 sea lion haulout year-round, highest numbers Aug-Mar.

Subsistence-use Species:

Essential Fish Habitat:

Bay fish species move in/out of channels and ponds in these areas.

Commercial Fisheries / Species:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

Human Health and Safety

Anchorage 12 is near the east shore of Sausalito in Marin County with a

Economic Impact on Maritime Commerce and Shipping:

Redundant piers and accommodations exist to counter problems that

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

County San Francisco-Alameda

Type:

Anchorage

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.

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:

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

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
Park Supervisor	EBRPD-Hayward Regional Shoreline Park	(510) 544-3082	
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
Shoreline Unit Manag	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565	
Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222	
Carol Bach	Port of San Francisco	(415) 274-0568	
Baylands Nature Pres Office	Baylands Nature Preserve	(650) 329-2506	
John Bradley Refuge Manager	SF Bay National Wildlife Refuge Complex	(510) 792-0222	
Dispatch GGNRA	US National Park Service, Golden Gate (NRA)	(415) 561-5505	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Clif Marccetti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737	
Butch Paredes	Cargill Salt	(510) 790-8165	
City of San Francisco	San Francisco, City and County of	(415) 556-8371	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
Operations State Water Project	CA Department of Water Resources	(916) 574-2714	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

USCG Sector SF

Marine Fire Fighting Resources

SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Ti

1 HOUR

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

County San Francisco-Alameda

Type:
Anchorage

List of Nearby Environmentally Sensitive Sit SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A 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
W	6	MUD	60	0			SEASONAL			<input type="checkbox"/>

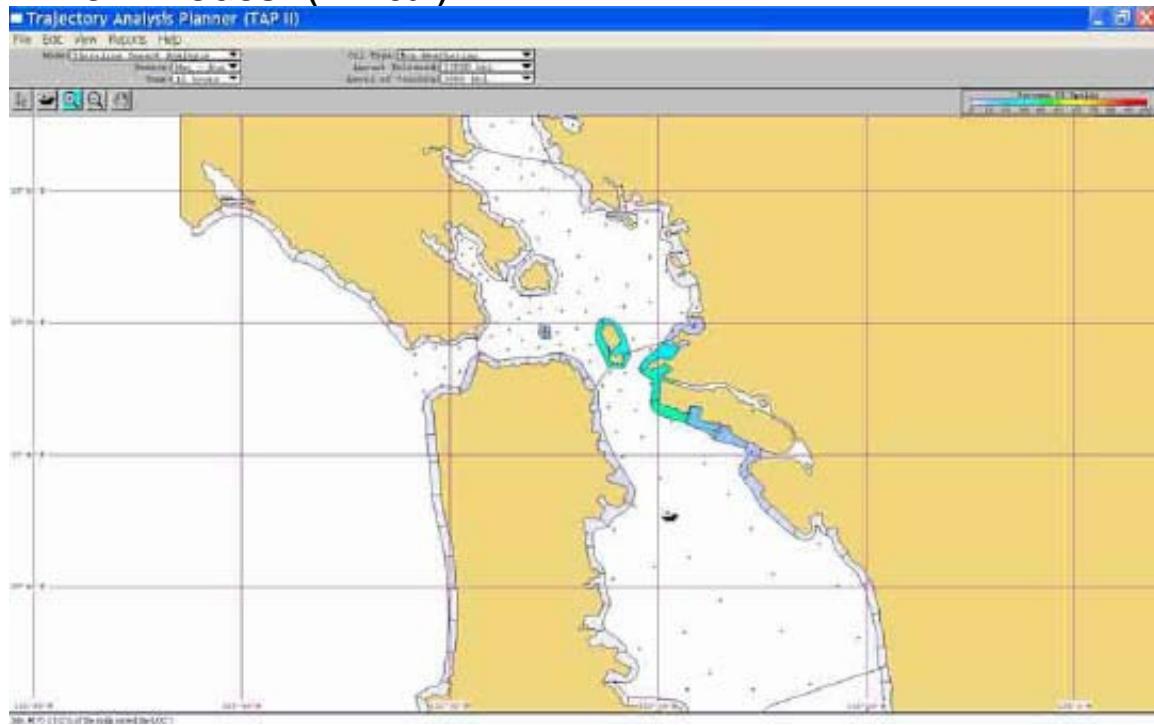
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
12	Anchorage 12	1500	Deep	50		SWING ROOM OR DOCK FACE: 1/2 MILE 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.	Potential for successful primary containment increases the further south one goes in the Bay because currents significantly diminish to the south. Anchorage 8 is not likely to have good primary containment. Potential for secondary confinement of oil escaping primary containment is minimal because the only opportunity is the openwater which is problematic due to spreading even if there is no current exceeding 0.7 knt.	

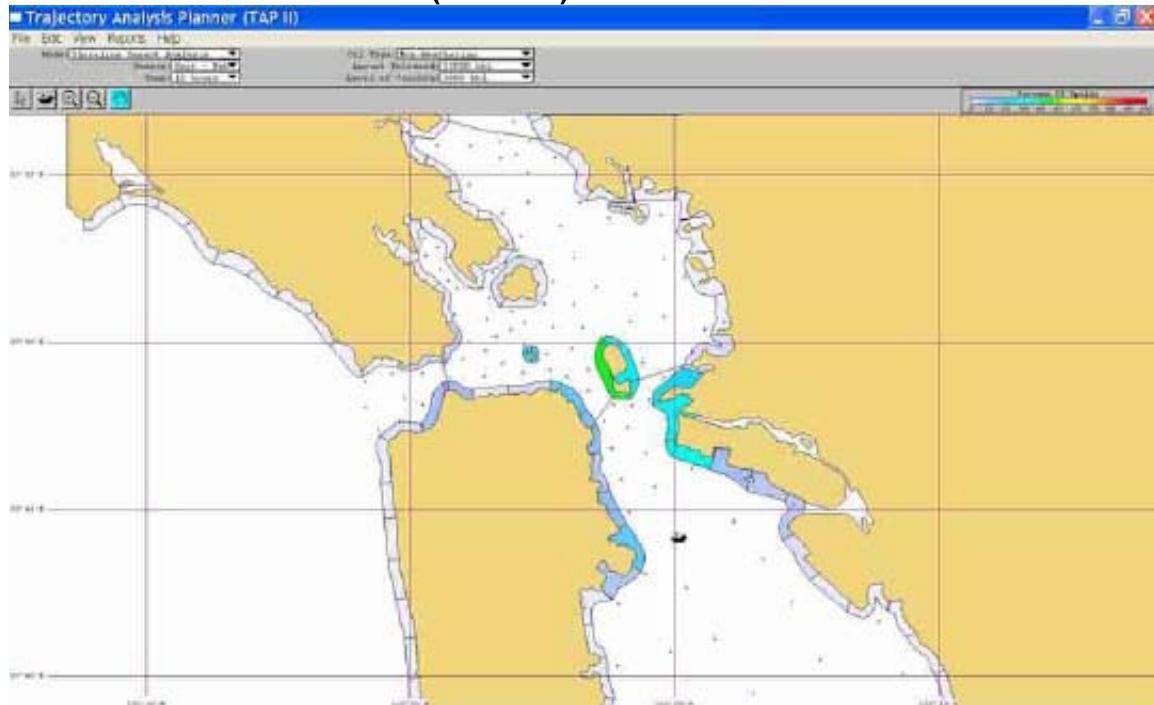
Site Contact/Leasee/Owner: _____

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E14 (Anchorage 14)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 Longitude 122° 1 122.33
County San Francisco-Alameda

Type:
Anchorage

Location Description:

Anchorage No. 14. In San Francisco Bay east of Hunters Point an area 1,000 yards wide and 2,760 yards long, the end boundaries of which are semicircles, with a radii of 500 yards and center, respectively at latitude 37°42'37" N., longitude 122°19'48" W. and latitude 37°43'29" N., longitude 122°19'48" W. (NAD 83); and the side boundaries of which are parallel tangents joining the semicircles. A forbidden anchorage zone extends 667 yards out from the perimeter on each side.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

(East Shoreline)

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 present Feb-Sep, also rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover nest present from Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California clapper rail and (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage and nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr-

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. Emeryville lagoon/mudflat provides pickleweed habitat for listed species. East Bay Regional Park District shoreline salt marshes support number of listed species.

Heron's Head Park/India Basin and Islais Creek/Pier 94 have high value as salt marsh habitat on industrialized SF Peninsula. Also suitable habitat for presence of (S/F-E/E) salt marsh harvest mouse.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 Longitude 122° 1 122.33

County San Francisco-Alameda

Type:
Anchorage

Aug, nests May-Aug; (F/T) western snowy plover forage/nest in salt-pond area.

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).

(West Shoreline)

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

Heron's Head Park/India Basin and Islais Creek/Pier 94: (F/E) California seablite plant present year-round at HHP. Both potential suitable habitat for (S/F-E/E) salt marsh harvest mouse.

Colma Creek area marshes – (S/F E/E) California clapper rail present year-round, nesting Mar-Jul.

Airport Mudflat – (S/F E/E) California clapper rail present year-round in marsh in back of cove, nesting Mar-Jul.

(S/F E/E) California clapper rail present year-round in several small strip marshes between Colma Creek and Bair/Greco area, nesting Mar-Jul.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:307C/A,309A,310C/A,A,312A,315A,320A,324A,350E/X,351A/B,:
52B,353A,354A,361A,400C/X,401B,490A,495A; ESI/SFB-Maps
16,17,18,19,20, 21,22

(East Bay Shoreline) Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in 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, waterfowl, brown pelican forage. Bay Farm Island eelgrass beds support herring spawning in winter, seabirds/shorebirds utilize area year-round. Oyster Bay marshes and mudflats support migratory waterfowl, shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

In general, extensive mudflats on both east and west bay shorelines support heavy use by variety of shorebirds (e.g., herons and egrets), wading and diving birds, and harbor seals. Open waters support heavy use by migratory waterfowl. Sloughs, mudflats support fish, shellfish, infauna.

PPOR Pre-Incident Information Summary South Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 Longitude 122° 1 122.33

County San Francisco-Alameda

Type:
Anchorage

marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds. 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.

(West Bay Shoreline) SF South Collection-herring spawn in winter, seabirds and fish present year-round. YBI-Small cobble pocket beaches south side island are pinniped haulout/rookery Mar-Jun, bird roosting (double-crested cormorant) year-round, nesting. South Basin/Hunters Point important fringe marshes, tidal mudflats, eelgrass, concentrations waterfowl/shorebirds present year-round, higher numbers (1000s) in winter, brown pelican May-Nov. Heron's Head Park/India Basin and Islais Creek/Pier 94 wetland restoration sites with high ground vegetation, pickleweed marsh, saltmarsh ponds/lagoons, mudflats supporting variety water birds, shorebirds, upland songbirds. Airport Mudflat and cove serve as feeding/resting area for waterfowl, wading birds, shorebirds, highest use in winter. SF Waterfront herring spawning in winter, birds roost/forage year-round. Pier 39 sea lion haulout year-round, highest numbers Aug-Mar.

Subsistence-use Species:

Essential Fish Habitat:

Bay fish species move in/out of channels and ponds in these areas.

Commercial Fisheries / Species:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

Human Health and Safety

Anchorage 14 are near population centers of San Francisco (764,976), Oakland (420,183) and Alameda (72,259)--population are provided in parenthesis.

Economic Impact on Maritime Commerce and Shipping:

May affect shipping lanes to Alameda Point, Entrance to Oakland Inner Harbor Channel and the Port of Redwood City. 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.

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 Longitude 122° 1 122.33

County San Francisco-Alameda

Type:
Anchorage

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.

Economic Impact on Non-maritime Commerce:

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

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
Park Supervisor	EBRPD-Hayward Regional Shoreline Park	(510) 544-3082	
Park Supervisor	EBRPD-Martin Luther King Shoreline Park	(510) 544-3115	
Park Supervisor	EBRPD-Crown Memorial State Beach	(510) 544-3171	
Shoreline Unit Manag	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
City of Alameda, Parks	City of Alameda Dept. of Parks and Recreation	(510) 748-4565	
Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222	
Carol Bach	Port of San Francisco	(415) 274-0568	
Baylands Nature Pres Office	Baylands Nature Preserve	(650) 329-2506	
John Bradley Refuge Manager	SF Bay National Wildlife Refuge Complex	(510) 792-0222	
Dispatch GGNRA	US National Park Service, Golden Gate (NRA)	(415) 561-5505	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Clif Marcetti Marina Manager	Berkeley, City of, Dept. of Parks	(510) 981-6737	
Butch Paredes	Cargill Salt	(510) 790-8165	
City of San Francisco	San Francisco, City and County of	(415) 556-8371	
Linda Scourtis	SF Bay Conservation and Development Commission	(415) 352-3644	
Operations State Water Project	CA Department of Water Resources	(916) 574-2714	

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 Ti **1 HOUR**

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 Longitude 122° 1 122.33

County San Francisco-Alameda

Type:
Anchorage

List of Nearby Environmentally Sensitive Sit SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A 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
W	6	MUD	45	0		SEASONAL	NO			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
14	Anchorage 14	1500	Deep	40		SWING ROOM OR DOCK FACE: 1/2 MILE 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.		Potential for successful primary containment increases the further south one goes in the Bay because currents significantly diminish to the south. Anchorage 8 is not likely to have good primary containment. Potential for secondary confinement of oil escaping primary containment is minimal because the only opportunity is the openwater which is problematic due to spreading even if there is no current exceeding 0.7 knt.

Site Contact/Leasee/Owner: VTS ON CHANNEL 14

South Bay East Shore



2-F01

2-307

2-309

2-310

2-312

2-315

2-320

2-324

Legend



Potential Places of Refuge



Sensitive Sites

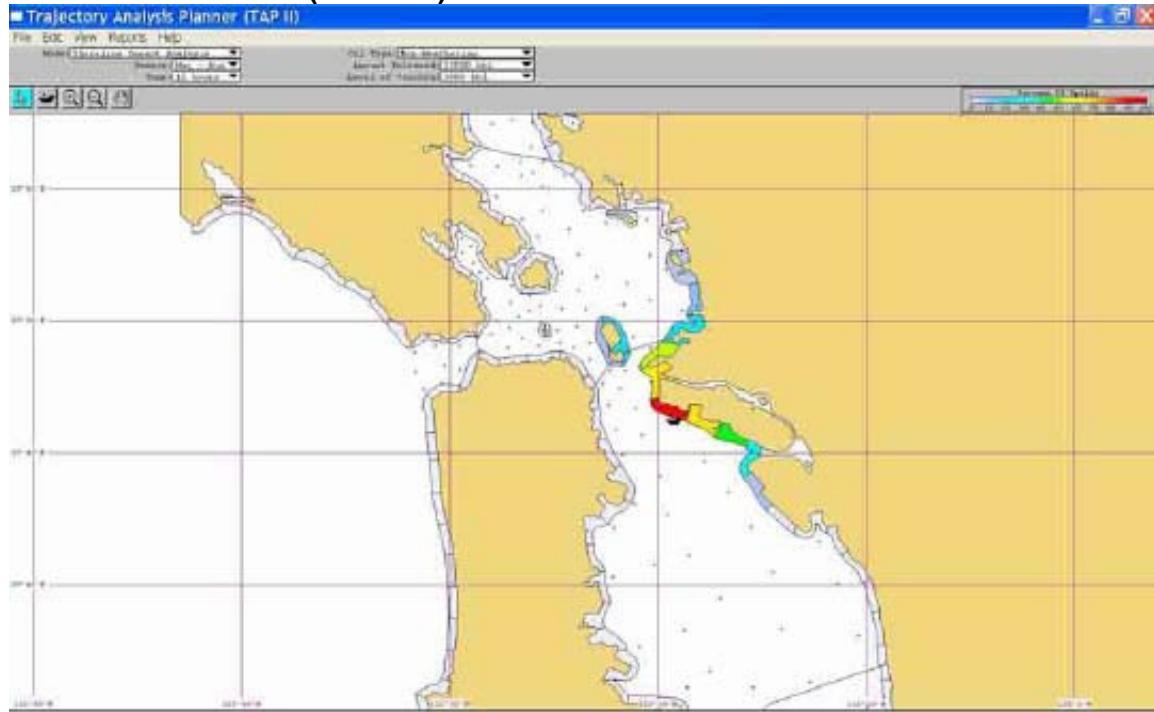
Sector SF

Nautical Miles
0 1 2 3 4
Section 8000 - 116

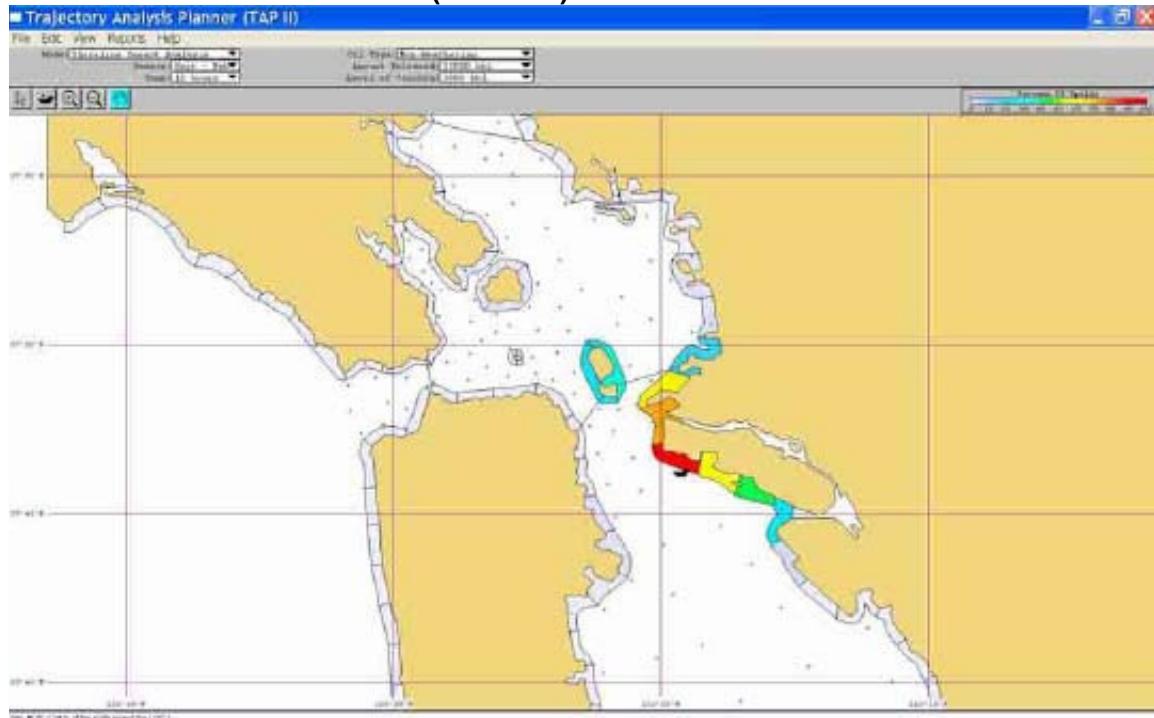
October 1, 2014

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-F01 (Alameda Point/Naval Station)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary South Bay East Shore: Alameda Point

2-F01

Latitude 37° 46. 122.3 Longitude 122° 1 122.308

Type:

County Alameda

Location Description:

After more than 50 years of naval use, Alameda Point is moving forward to becoming the newest Alameda neighborhood. A reuse plan has been created and SunCal Companies has been selected as the master developer. Alameda Point is on its way to becoming a new recreational, commercial, and residential asset for our community. In 1993, Congress decided to close the Alameda Naval Air Station (NAS), and the base was decommissioned in 1997. A year prior to its closure, in January of 1996, the City of Alameda adopted the NAS Alameda Community Reuse Plan, a 'roadmap' for the conversion of the former Naval Air Station to civilian use.

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 present Feb-Sep, rare plant alkali milk-vetch present year-round.

Oyster Bay Marshes-(F/T) Western snowy plover present Feb-Sep; (S/F T/T) salt marsh wandering shrew present year-round.

San Lorenzo Creek/Bunker & North marshes – (S/F E/E) California clapper rail present year-round, (S-T) black rail forage/nest, (S/F E/E) salt marsh harvest mouse present year-round. (S/F E/E) California least tern forage.

Oro Loma, Frank's Dump West & Triangle marshes – (S/F E/E) California clapper rail, (S-T) black rail forage and nest, (S/F E/E) salt marsh harvest mouse present year-round. S/F E/E California least tern and (F/T) western snowy plover forage.

Critical Habitat for TAES:

Arrowhead Marsh supports a number of listed/sensitive species and currently has the highest density of breeding California clapper rails in San Francisco Bay. East Bay Regional Park District shoreline salt marshes support number of listed species.

PPOR Pre-Incident Information Summary South Bay East Shore: Alameda Point

2-F01

Type:

Latitude 37° 46. 122.3 Longitude 122° 1 122.308

County Alameda

Cogswell, Hayward & HARD marshes – (S/F E/E) California clapper rail present year-round, forage/nest; (S/F E/E) salt marsh harvest mouse present year-round; (S/F E/E) California least tern present Apr–Aug, nests May–Aug; (F/T) western snowy plover forage/nest in salt-pond area.

Sensitive Non-protected (Non-TAES) Species:

SFACCP2:307C/A,309A,310C/A,312A,315A,320A,324A; ESI/SFB-Maps 17,18,21,23

Alameda NAS eelgrass, harbor seal haulout area. Alameda eelgrass beds support herring spawning in winter, seabirds/shorebirds use area year-round, brown pelican May–Nov. San Leandro Bay/Arrowhead Marsh supports listed species, rare/sensitive plants, wading birds, shorebirds, waterfowl, brown pelicans forage. Bay Farm Island eelgrass beds support herring spawning in winter, seabirds/shorebirds use area year-round. Oyster Bay marshes and mudflat support migratory waterfowl and shorebirds. San Lorenzo Creek/Bunker & North marshes and Oro Loma, Frank's Dump West & Triangle marshes and Cogswell, Hayward, HARD marshes support heavy use by migratory waterfowl, shorebirds, wading (e.g., heron, egret nesting), and diving (Caspian terns) birds.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

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

East Bay Regional Park District shoreline salt marshes have extensive cordgrass and mudflats which support listed and non-listed species.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Cultural/historic resources likely present in/around Arrowhead Marsh and Bay Farm Island. EBRPD shoreline Ohlone cultural sites in area. Hayward Landing is historic site.

Recreational Species and Habitat:

Elsie Roemer Bird Sanctuary located southeast end of Crown Beach.

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

Human Health and Safety

Population for Oakland (420,183) and for Alameda (72,259)—
population are provided in parenthesis.

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.

PPOR Pre-Incident Information SummaSouth Bay East Shore: Alameda Point

2-F01

Type:

Latitude 37° 46. 122.3 Longitude 122° 1 122.308

County Alameda

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. Marine Tourism might be affected.

Economic Impact on Recreational Fishing and Marine Tourism:

City of Alameda is currently redeveloping the Old Naval Air Station into a civilian community (some of the land will become a National Wildlife Refuge and a golf course). Places of Refuge incident may slow this development down. 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.

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.

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
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	
Dispatch	East Bay Regional Park District	(510) 881-1833	
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	
John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050	
Butch Paredes	Cargill Salt	(510) 790-8165	
Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	
Brian Ullenvang Env. Programs Chief	Golden Gate National Recreation Area - NPS	(415) 561-4439	
Jody Zaitlin Environmental Office	Port of Oakland	(510) 627-1179	

Characteristics and Tactical Considerations

Primary Jursidictional Contact: City of Alameda

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

Approximate Tug Response Ti 1.5 HOURS

List of Nearby Environmentally Sensitive Sit SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A; ESI/SFB-Maps 17,18,21,23 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
W	6	MUD	30	0		SEASONAL	YES			<input checked="" type="checkbox"/>

PPOR Pre-Incident Information SummaSouth Bay East Shore: Alameda Point**2-F01**

Latitude 37° 46. 122.3 Longitude 122° 1 122.308

Type:

County Alameda

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
01	Alameda Point	800		30	800	Must work with City of Alameda. The MARAD Ready Reserve Fleet is also stationed at Alameda Point (POC: "Tom Schneider Alameda Office 510-749-0903 O-510-786-7323 C-510-749-8351) 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 very good potential for primary containment within this basin due to the low currents and protectedness of the site. There is also good potential for secondary confinement by deflecting oil to the northside of the basin on the ebb tide.

Site Contact/Leasee/Owner: U.S. Maritime Administration (MARAD)

Central Bay Anchorages



Legend

● Sensitive Sites

◆ Potential Places of Refuge

2-425

2-451

2-424

2-421

2-422

2-420

2-423

2-H10

2-402

2-401

2-403

2-400

2-351

2-490

2-495

Sector SF

0 1.25

2.5

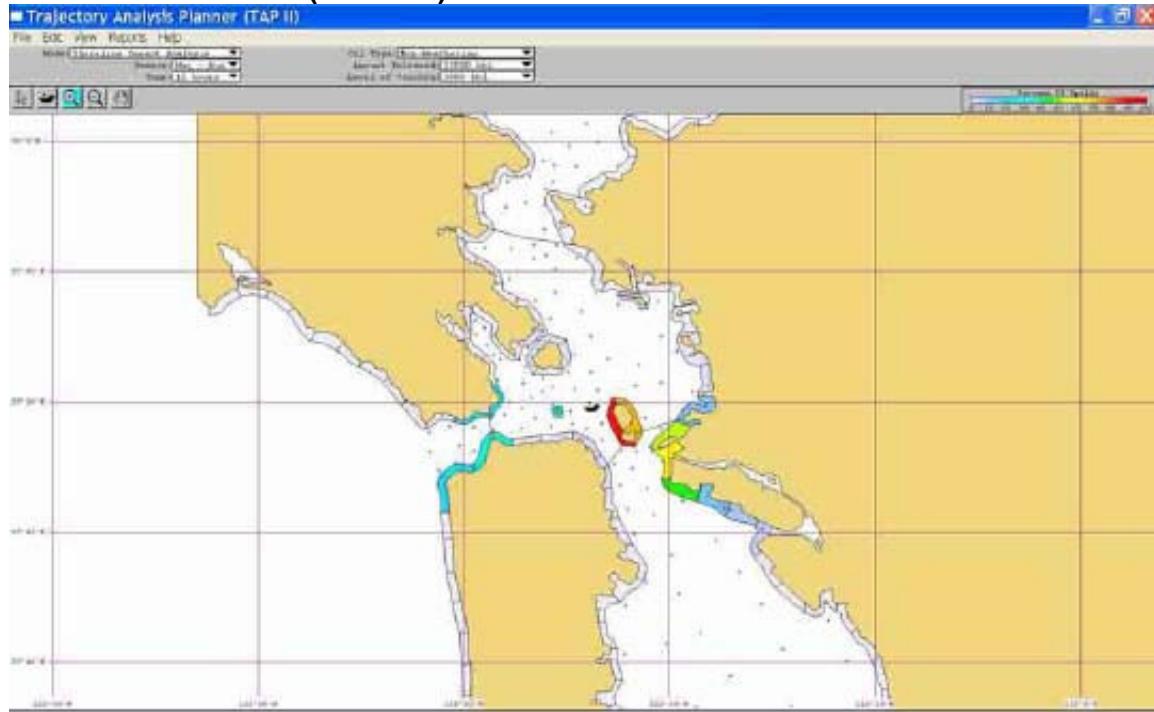
Nautical Miles

October 1, 2014

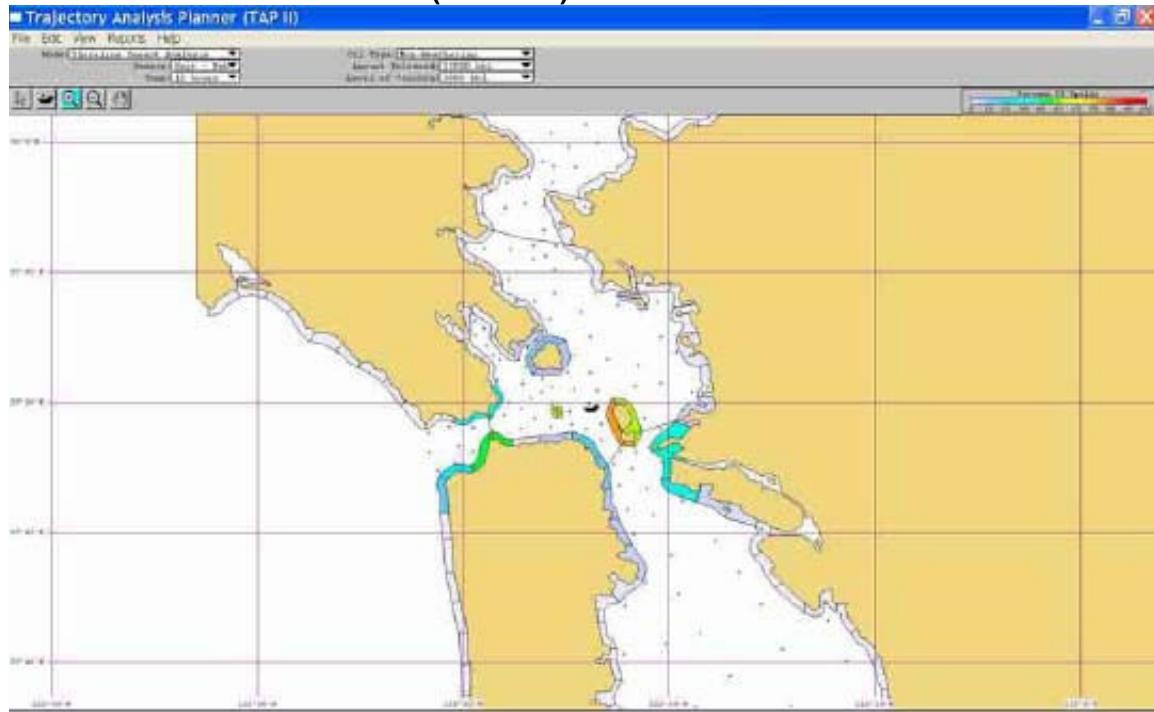
Section 8000 - 122

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-H07 (Anchorage 7)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary Central Bay Anchorages: Anchorage 7

2-H07

Latitude 37° 49. 122.4 Longitude 122° 2 122.39

County San Francisco, Marin, Alameda, Contra Costa

Type:

Anchorage

Location Description:

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.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F-E/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).

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 pinniped 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-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

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.

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

PPOR Pre-Incident Information Summary

Latitude 37° 49. 122.4 Longitude 122° 2. 122.39

County San Francisco, Marin, Alameda, Contra Costa

2-H07Type:
Anchorage

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 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.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

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.

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

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 7

2-H07

Latitude 37° 49. 122.4 Longitude 122° 2 122.39

County San Francisco, Marin, Alameda, Contra Costa

Type:
Anchorage

Human Health and Safety:

Economic Impact on Maritime Commerce and Shipping:

Economic Impact on Commercial Fishing and Aquaculture:

Economic Impact on Non-maritime Commerce:

Economic Impact on Recreational Fishing and Marine Tourism:

Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
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	
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	
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 Jurisdictional Contact: **USCG SECTOR SF** Marine Fire Fighting Resources **SF PIER 24: 37-47.42, 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
W	6		70	0		SEASONAL	NO			<input checked="" type="checkbox"/>

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 7**2-H07**

Latitude 37° 49. 122.4 Longitude 122° 2 122.39

Type:

County San Francisco, Marin, Alameda, Contra Costa

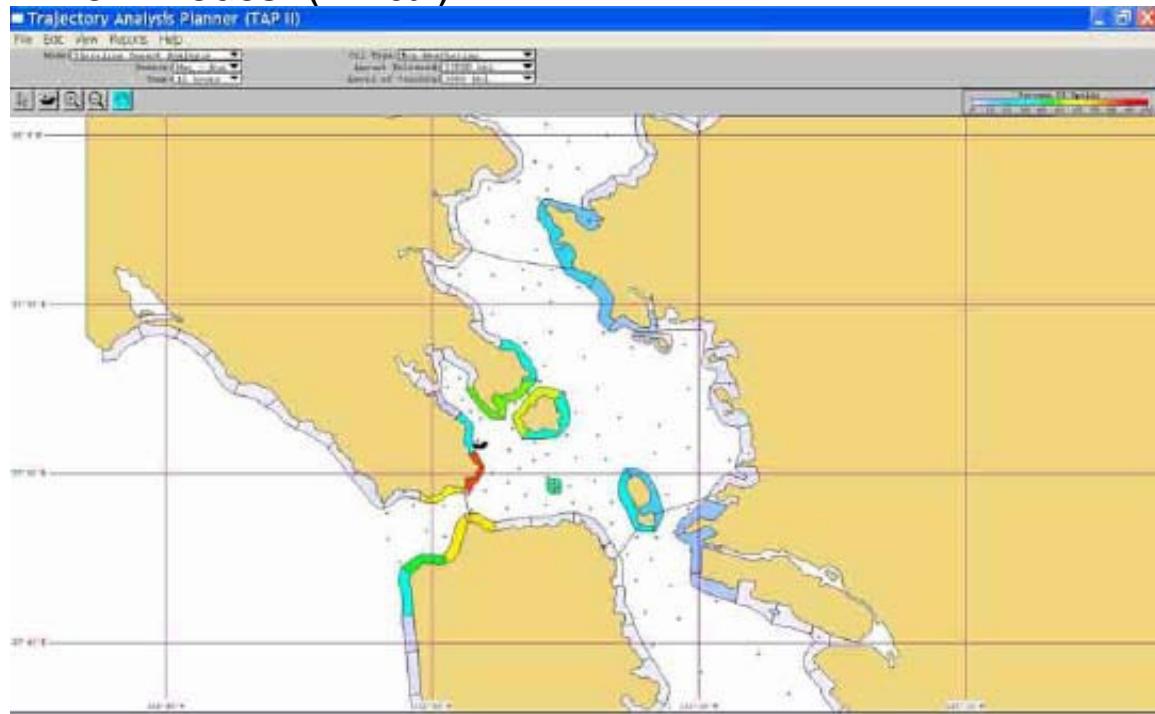
Anchorage

Specific Site Details

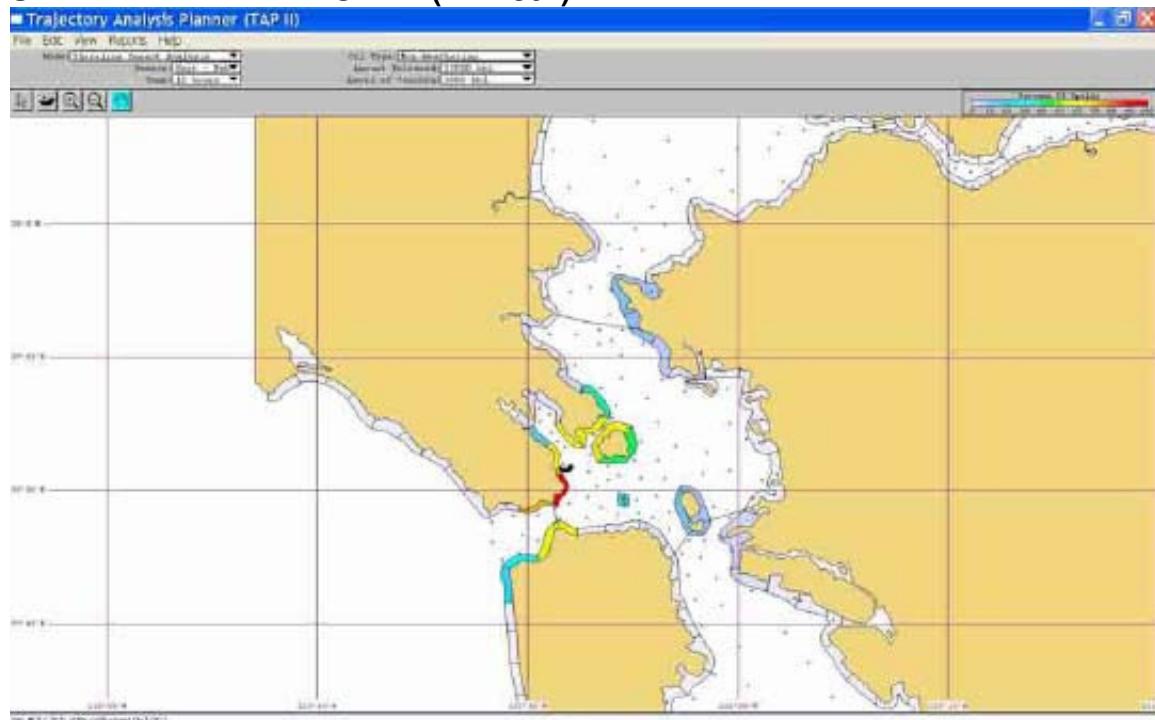
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
07	Anchorage 7	1500		50	0	THIS SITE IS NEAR TRAFFIC LANE; THIS SITE IS A 12 HOUR ANCHORAGE; SWING ROOM OR DOCK FACE: 1/2 MILE	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:							

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary Central Bay Anchorages: Anchorage 10

2-H10

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

County San Francisco, Marin, Alameda, Contra Costa

Type:

Anchorage

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.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F-E/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).

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 pinniped 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 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.

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).

PPOR Pre-Incident Information Summary Central Bay Anchorages: Anchorage 10**2-H10**

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

County San Francisco, Marin, Alameda, Contra Costa

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

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

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 10

2-H10

Latitude 37° 51' 122.5 Longitude 122° 2 122.471

County San Francisco, Marin, Alameda, Contra Costa

Type:
Anchorage

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.

Angel Island recreational use.

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 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 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:

Usually none with respect to Anchorage 10

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

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 10

2-H10

Latitude 37° 51' 122.5 Longitude 122° 2 122.471

County San Francisco, Marin, Alameda, Contra Costa

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
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Approximate Tug Response Ti	1 HOUR
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List of Nearby Environmentally Sensitive Sit **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
W	6	MUD	70	0		SEASONAL	NO			<input checked="" type="checkbox"/>

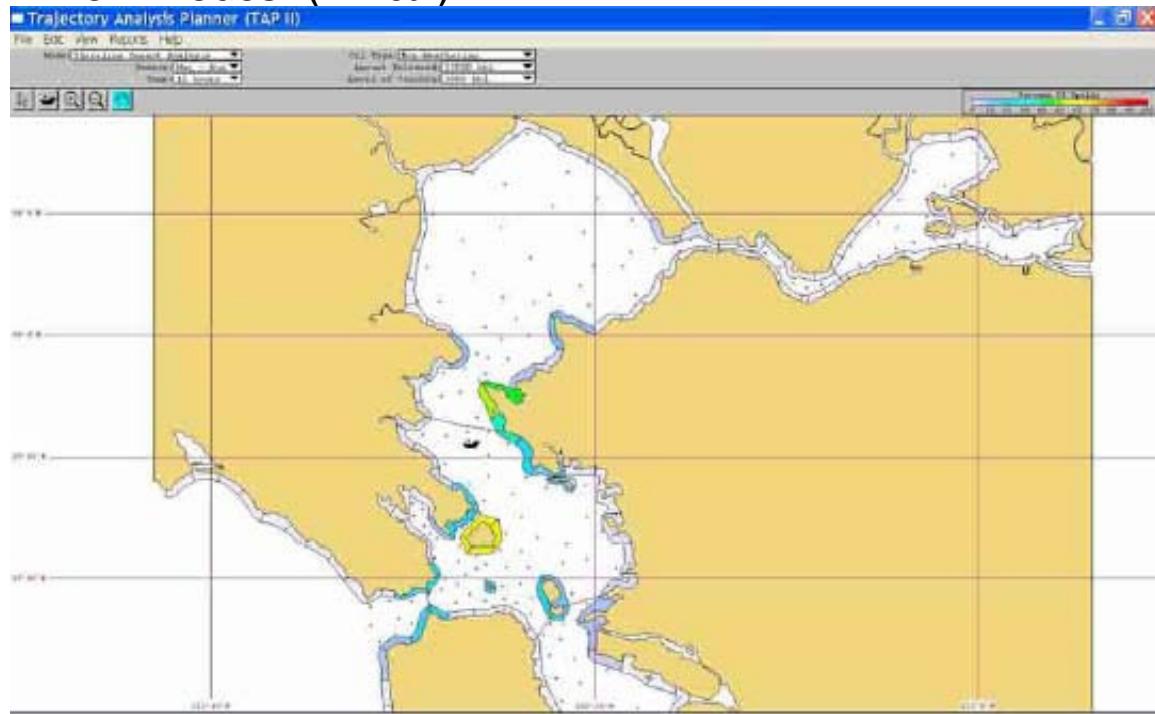
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	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	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.

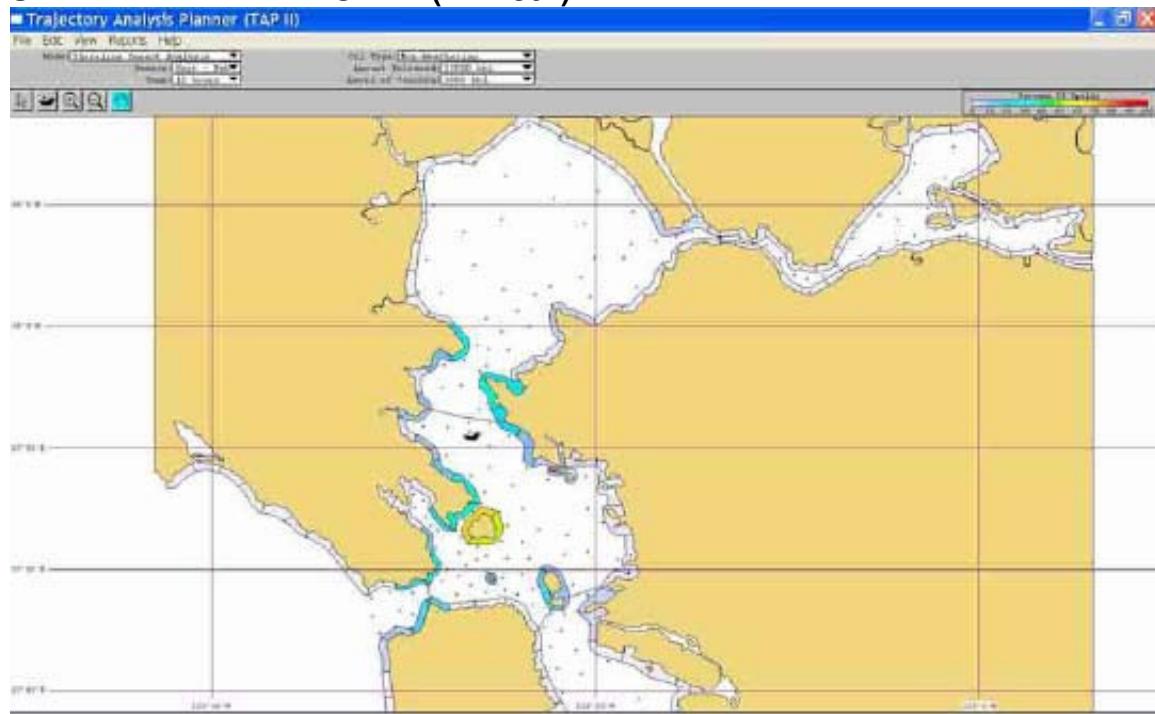
Site Contact/Leasee/Owner: VTS ON CHANNEL 14

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information Summary Central Bay Anchorages: Anchorage 13

2-H13

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

County San Francisco, Marin, Alameda, Contra Costa

Type:

Anchorage

Location Description:

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.

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.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

YBI-(S/F-E/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).

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 pinniped 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 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.

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).

PPOR Pre-Incident Information Summary

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

County San Francisco, Marin, Alameda, Contra Costa

2-H13Type:
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

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

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13

2-H13

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

County San Francisco, Marin, Alameda, Contra Costa

Type:

Anchorage

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.

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 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.

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 Non-maritime Commerce:

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

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 Manager	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	

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13

2-H13

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

Type:

County San Francisco, Marin, Alameda, Contra Costa

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 Jurisdictional Contact: USCG Sector SF

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

Approximate Tug Response Ti 1 HOUR

List of Nearby Environmentally Sensitive Sit 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
W	6		28	0		SEASONAL				<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
13	Anchorage 13	1000	Deep	25		THIS SITE IS NEAR TRAFFIC LANE; SWING ROOM OR DOCK FACE: 1/2 MILE 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.	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:

Richmond Harbor Santa Fe Channel



ENTRANCE

2-452

2-451

2-455

2-J00

2-453

2-454

2-480

S A N F R A N C I S C O
B A Y

Legend



Potential Places of Refuge



Sensitive Sites

Sector SF

0

1

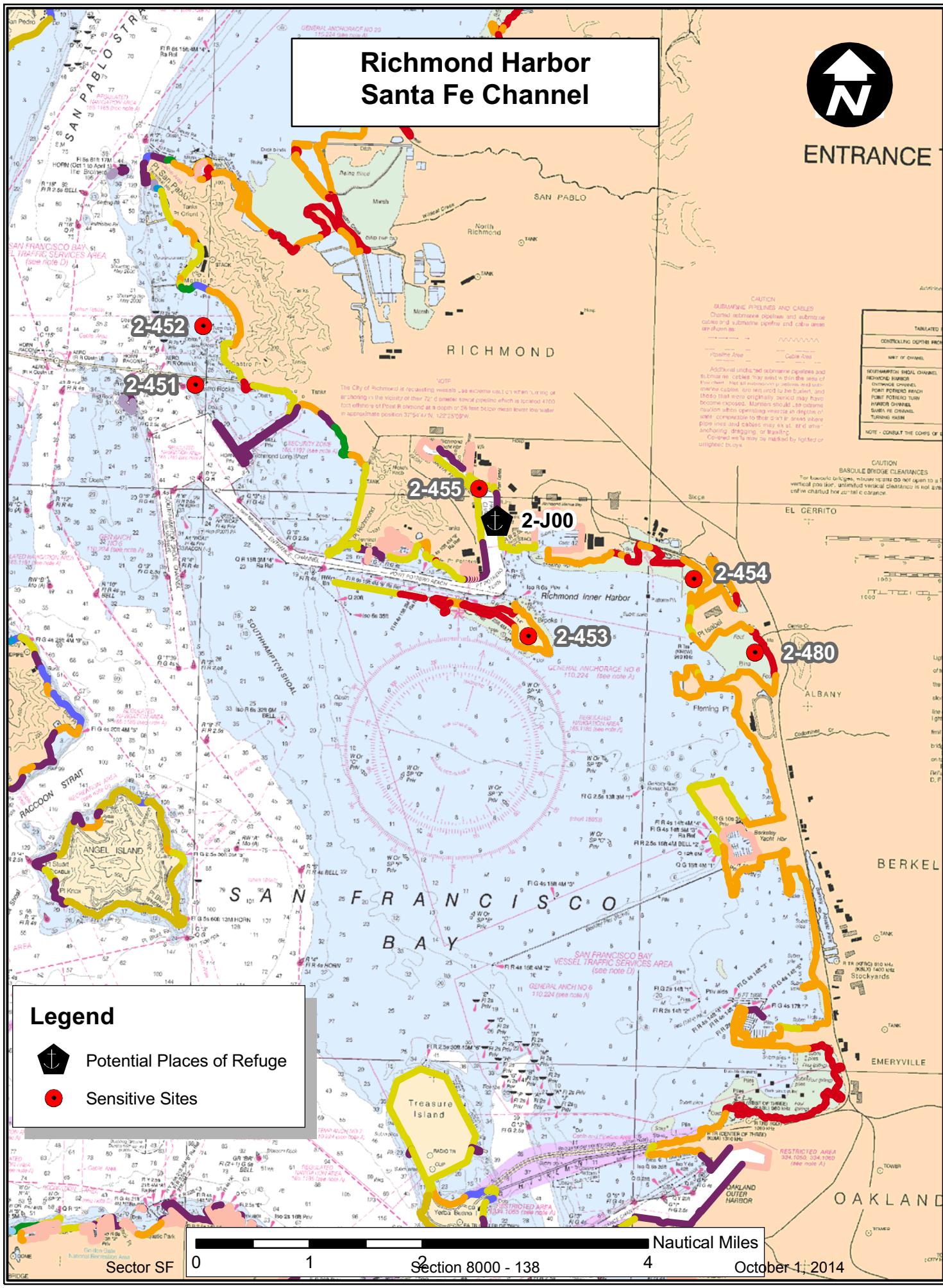
2

Nautical Miles

Section 8000 - 138

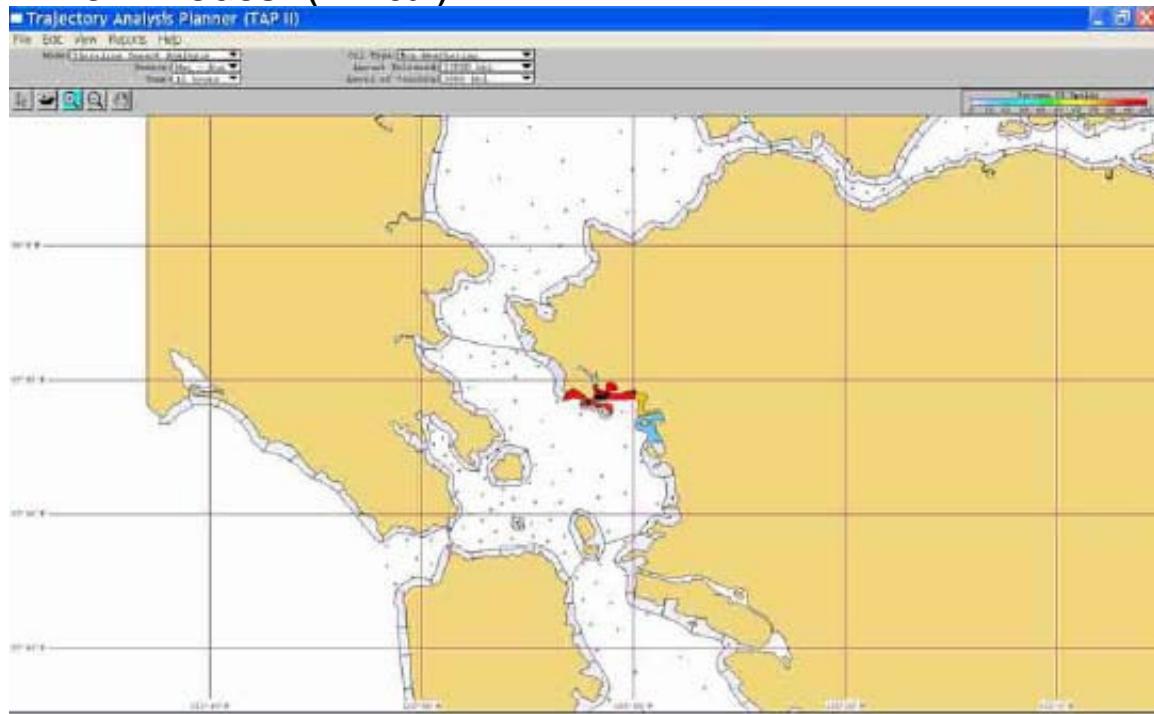
4

October 1, 2014

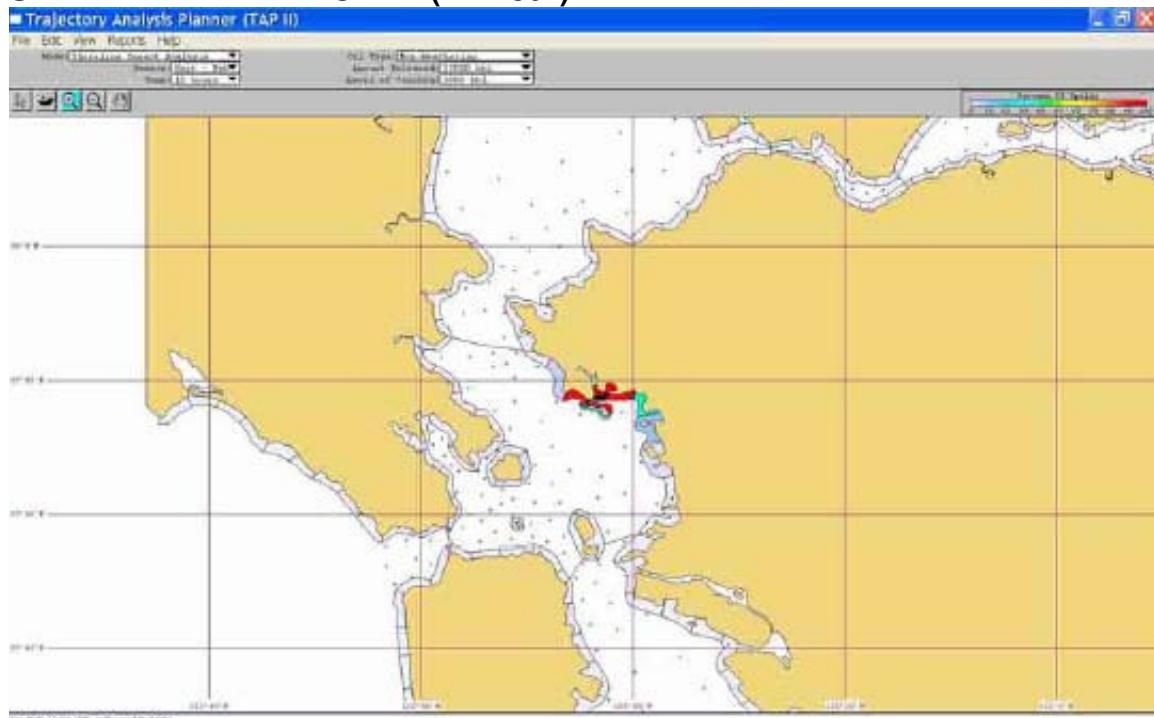


TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-J00 (Port of Richmond: Terminals 2-7)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaRichmond Harbor / Santa Fe Channel-PARR3: any site**2-JOO**

Latitude 37° 54. 122.4 Longitude 122° 2 122.362

Type:

County Contra Costa

Location Description:

FROM AN ARMY CORPS OF ENGINEERS 1996 PRESS RELEASE: The Richmond Harbor Navigation Improvement Project located in Richmond, California, will create a safe navigation channel of sufficient depth for modern bulk carriers scheduled to use the Port's terminal facilities. The project area includes a channel extending from the Long Wharf Maneuvering Area through the Richmond Entrance Channel, the Potreto Reach and Sharp Turn with a turning basin at Point Potreto, the Inner Harbor, and the Santa Fe Channel. Furthermore, the existing 35-foot-deep channel has sharp turns that are increasingly difficult for large vessels to navigate, especially against strong winds, waves and currents, at night and under foggy conditions. The recommended plan for navigation improvement would deepen the existing 4.0 nautical miles of the Richmond Harbor channel from 35 feet mean lower low water (MLLW) to 38 feet MLLW. The plan includes a new 1,200-foot turning basin at the Potreto Sharp. The Corps proposed a two-phase channel improvement plan to meet the Port's present and future needs, while avoiding the expenditure of funds before the full dimensions of the project are required. The recommended Phase I of the project, is designed for bulk vessels (38 feet MLLW), while Phase 2 will be designed for containerships (41 feet MLLW). Construction of Phase 2 has been deferred indefinitely. The Port of Richmond is northern California's most diversified cargo handler. With its roots in petroleum and liquid bulk cargos, Richmond has expanded its dry bulk, break-bulk, and containerized cargo handling capabilities and has increased its automobile processing facilities. Today, Richmond ranks Number One in liquid bulk and automobile tonnage among ports on San Francisco Bay.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California clapper rail (S/F-E): Hoffman/Stege marshes – Nest March–July, present year-round; Albany Marsh: present year-round.

Saltmarsh harvest mouse (S/F-E): Hoffman/Stege marshes; present year-round.

Sensitive Non-protected (Non-TAES) Species:

SFACP2:451A,452A,453A,454A,455C/X,480A; ESI/SFB-Maps 14,15
The east section of the Richmond-San Rafael Bridge supports a large double-crested cormorant colony. Castro Rocks used as harbor seal rookery in spring (15 March–10 June), haulout in winter, heavy bird use area (e.g.,cormorants, pelicans). Extensive eelgrass beds present in shallow (<10 foot) nearshore areas, most vulnerable during spring/summer at low tides and provide for spawning of herring in winter, food for waterfowl in spring, nursery area for fish and invertebrates summer and fall. Brook's Island high ecological sensitivity of marsh and mudflat (invertebrate) sites, especially March–June during breeding of ground nesting species (e.g. Caspian tern restoration), harbor seal haulout. Albany Marsh extensive mudflats and baywaters important habitat for foraging/resting birds. Abundant waterfowl and waterbirds (some migratory), including ducks, loons, grebes, scoters, and gulls use area during wintering period (September–April).

Critical Habitat for TAES:

Hoffman/Stege and Albany marshes provide habitat for listed species.

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

PPOR Pre-Incident Information SummaRichmond Harbor / Santa Fe Channel-PARR3: any site**2-JOO**

Type:

Latitude 37° 54. 122.4 Longitude 122° 2 122.362

County Contra Costa

Subsistence-use Species:

Essential Fish Habitat:

Mudflats have extensive infauna and wide variety of fish forage in area during high tides.

Commercial Fisheries / Species:

Eelgrass beds extremely valuable habitat for herring spawning (fishery) in winter.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Ohlone cultural sites nearby, historic buildings on former Point Molate Naval Fuel Depot. Historic use of entire Richmond shoreline, including use as Chinese fishing village. Brook's Island high cultural, historic sensitivity.

Recreational Species and Habitat:

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

Human Health and Safety

CITY OF RICHMOND POPULATION IS 103,818.

Economic Impact on Maritime Commerce and Shipping:

Port of Richmond has a large scale automobile processing facility receiving Roll-on/Roll-off ships. 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 ruin recreational and commercial fishing.

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.

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 ruin recreational and commercial fishing.

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
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Dispatch	East Bay Regional Park District	(510) 881-1833	
Park Supervisor	EBRPD-Eastshore State Park	(510) 544-3108	
Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187	
John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contamination	(916) 414-6595	
Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548	
Cyndy Shafer	CA Department of Parks and Recreation	(916) 358-1300	
Vika Sirova EnvProtectSpecialist	US National Park Service, Golden Gate (NRA)	(415) 561-4478	

PPOR Pre-Incident Information SummaRichmond Harbor / Santa Fe Channel-PARR3: any site

2-J00

Type:

Latitude 37° 54. 122.4 Longitude 122° 2 122.362

County Contra Costa

Brian Ullensvang Env. Programs Chief

Golden Gate National Recreation Area - NPS

(415) 561-4439

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: PORT OF RICHMOND AND CITY OF RICHMOND

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

Approximate Tug Response Ti 30 MINUTES

List of Nearby Environmentally Sensitive Sit SFACP2:451A,452A,453A,454A,455C/X,480A; ESI/SFB – Maps 14,15 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
W	6	MUD	37	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
00	any site	900		37	1000	SF PIER 22 1/2 IS FIRE BOAT GUARDIAN AND PHOENIX; OTHER FF RESOURCES MAY COME FROM OAKLAND, CHEVRON AND RICHMOND.	SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.	Primary containment is variable due to local currents and topography. Secondary confinement to the channel is better than in most locals in SF bay.

Site Contact/Leasee/Owner:

Carquinez Strait West



2-583

2-582

2-M21

2-505

2-504

Legend

- Potential Places of Refuge
- Sensitive Sites

Sector SF

Section 8000 - 143



October 1, 2014

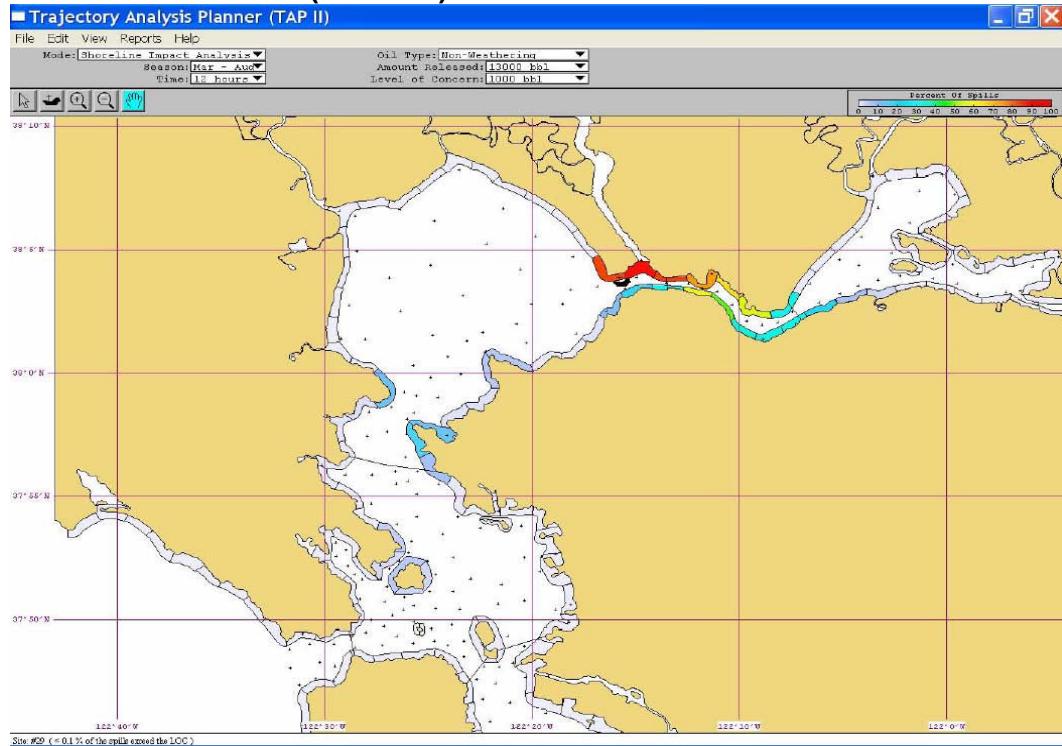
MARINE INLAND STRAIT CHANNEL DEPTHS TAKEN FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO DEC 2004						
CONTROLLING DEPTH FROM DEMAND R. PHT AT MEAN LOWER LOW WATER (FATHOMS)	MEAN LOWER LOW WATER (FATHOMS)				DATE OF SURVEY	YEAR
	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER		
A	ABD 0	27.0	26.0	24.0	17.04	405
B	ABD 0	26.0	25.0	24.0	17.04	406
C	ABD 0	21.0	20.0	20.0	17.04	407
D	CDZ 0	24.5	23.0	21.0	17.04	408-409
E	CDZ 0	23.0	22.0	21.0	17.04	410-411
F	CDZ 0	21.0	20.0	20.0	17.04	412-413
G	CDZ 0	20.0	19.0	19.0	17.04	414-415

A. A DEPTH OF 25.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE CHANNEL.
B. A DEPTH OF 26.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE CHANNEL.
C. A DEPTH OF 20.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE CHANNEL.

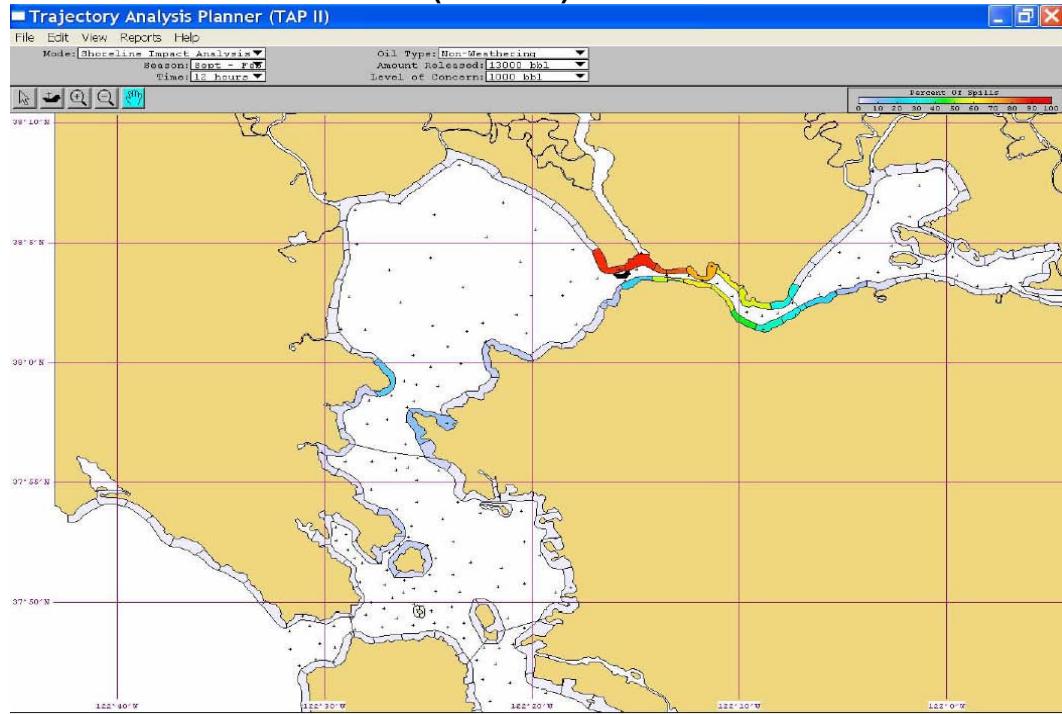
TRAJECTORY ANALYSIS PLANNER (TAP Model)

Location: 2-M21 (Carquinez Strait West: Anchorage 21)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaCarquinez Strait West: Anchorage 21 Navy

Latitude 38° 3.8' 122.3 Longitude 122° 1 122.258
County Solano

2-M21

Type:
Anchorage

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

Pinole Point Marshes-North – (S/F E/E) California clapper rail, (S-T) black rail, (F-E) soft bird's beak present.

Pinole Creek and Wetlands – (F-T) steelhead in creek, (S-T) black rail in wetlands.

NE San Pablo Bay – (S/F E/E) California clapper rail, (S-T) black rail, (S/F E/E) salt marsh harvest mouse, (SOSC) Suisun shrew, (F-E) soft bird's beak, (Rare plant) Suisun marsh aster.

Napa River Marshes – (S/F E/E) California clapper rail, (S-T) black rail, (S/F E/E) salt marsh harvest mouse, (F E) soft bird's beak, (Rare plants) Marin knotweed, Delta tule pea, Suisun marsh aster, Mason's lilaeopsis.

West Carquinez Strait supports (S/F E/E) winter-run Chinook salmon and (S/F T/T) delta smelt.

Sensitive Non-protected (Non-TAES) Species:

SFACP2: 504A,505A,582A,583A; ESI/SFB-Maps 3 & 8.

Pinole Point Marshes north and mudflats support migratory shorebirds abundant in spring and fall, waterfowl abundant winter, and San Pablo vole. Cordgrass, salt marsh, mudflat, eelgrass in vicinity of Pinole Creek support shorebirds, waterfowl, gulls, clam beds. NE San Pablo Bay supports abundance resting/feeding shorebirds, during fall/winter thousands of waterfowl, double-crested cormorants present year-round. Napa River marshes support abundant resting/feeding shorebirds, Sacramento split-tail.

Subsistence-use Species:

Essential Fish Habitat:

Variety of fish including surf perch, flatfish, sturgeon, striped bass, salmon present in waters over mudflats at Pinole Point. Fish inhabit Pinole Creek.

Critical Habitat for TAES:

California clapper rails are present year-round in many marshes in this area. There are high densities of salt marsh harvest mice in many marshes within this area.

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Historic sites on uplands at Pinole Point.

PPOR Pre-Incident Information SummaCarquinez Strait West: Anchorage 21 Navy

2-M21

Latitude 38° 3.8' 122.3 Longitude 122° 1 122.258

County Solano

Type:

Anchorage

Commercial Fisheries / Species:

Pacific rock and red rock crab found offshore of Pinole Point. Juvenile Dungeness crab found west end Carquinez Strait (April–February).

Recreational Species and Habitat:

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

Human Health and Safety:

Economic Impact on Maritime Commerce and Shipping:

Economic Impact on Commercial Fishing and Aquaculture:

Economic Impact on Non-maritime Commerce:

Economic Impact on Recreational Fishing and Marine Tourism:

Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
Dispatch	East Bay Regional Park District	(510) 881-1833	
Park Supervisor	EBRPD-Martinez Regional Shoreline	(510) 544-3123	
Shoreline Unit Manager	East Bay Regional Park District	(510) 544-3172	
Michael Bloom BRAC Env. Coord.	Mare Island Naval Shipyard	(619) 532-0967	
Jim Ferris Environmental	Conoco Phillips Rodeo Refinery	(510) 245-4517	
John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contami	(916) 414-6595	
Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

VTS

Marine Fire Fighting Resources

None

Approximate Tug Response Time:

List of Nearby Environmentally Sensitive Sites SFACP2: 504A,505A,582A,583A; ESI/SFB-Maps 3 & 8.

Is Containment Possible?

Coast Pilot and Navigation Chart Information

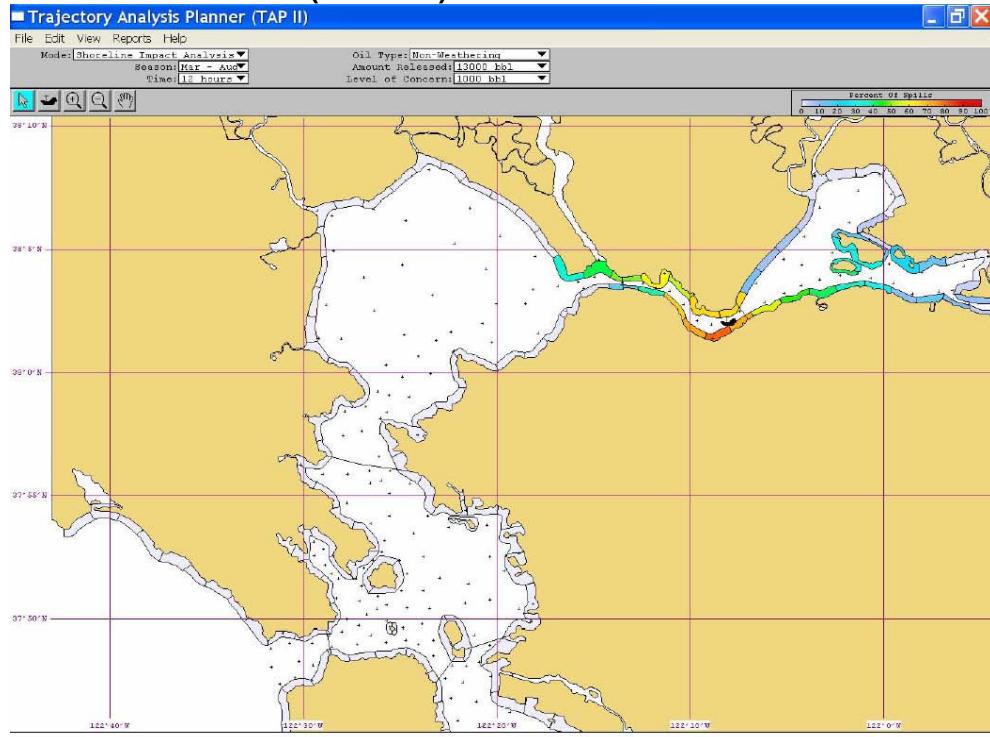
Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
NW	5'	Mud/Sand	73	40	3 Knots	Minimum	Yes – Winter	Minimum	East-West	<input checked="" type="checkbox"/>

Specific Site Details

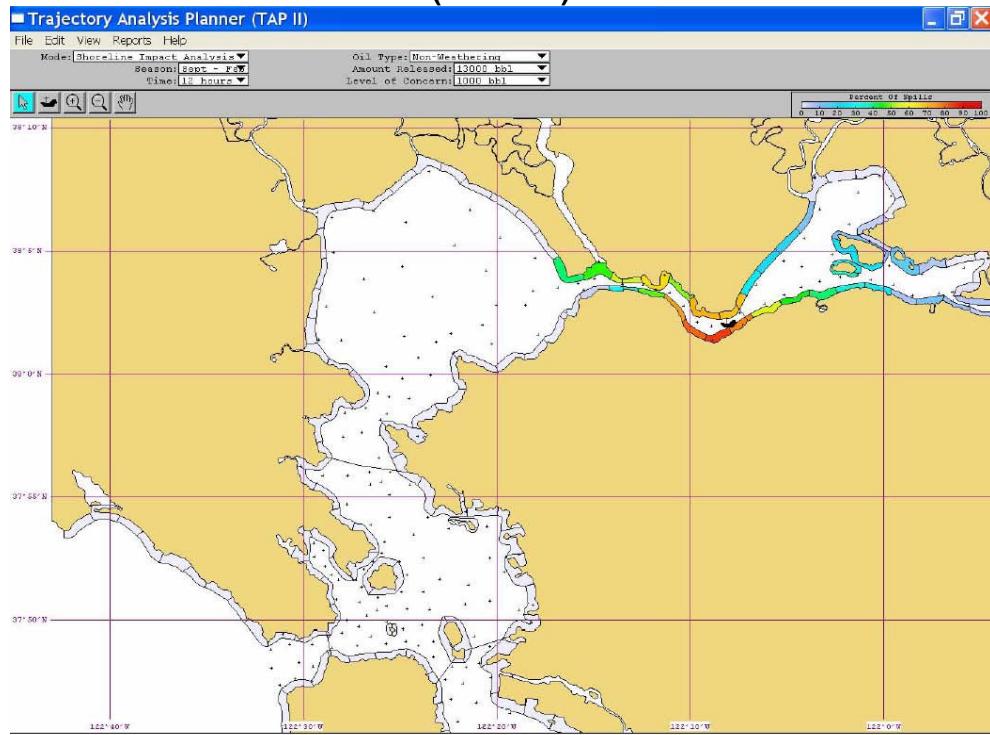
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
21	Anchorage 21 Navy	Deep	38	1100	Limited by Pinole Shoal @ 38' for transit. Check current on NOAA Ports located at Tesoro Pier				

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-M23 (Carquinez Strait East: Anchorage 23)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaCarquinez Strait East: Anchorage 23

Latitude 38° 2' 122.1 Longitude 122° 8' 122.142
County Solano

2-M23Type:
Anchorage**Location Description:****Natural Resource Concerns and Issues for this Place / Site**

Threatened and Endangered Species (TAES):

Martinez Marsh – (S/F E/E) California clapper rail and (S-T) black rail may use marshes occasionally, (S/F E/E) salt marsh harvest mouse and (S/F E/E) salt marsh wandering shrew, (F-E) soft bird's beak, (Rare plant) Delta tule pea.

Bull's Head Marsh and Pacheco Creek – (S/F E/E) California clapper rail, (S/F E/E) salt marsh harvest mouse, (S/F E/E) salt marsh ornate shrew. Hastings Slough and Point Edith Marshes – (S/F E/E) California clapper rail, (S-T) black rail, (S/F E/E) salt marsh harvest mouse, (SOSCs) salt marsh common yellowthroat and Suisun song sparrow, (F-E) soft bird's beak, (Rare plants) Mason's lilaeopsis, Delta tule pea on Seal Islands. Southampton Bay – (S/F E/E) California clapper rail, (S-T) black rail, (S/F E/E) salt marsh harvest mouse, (F-E) soft bird's beak.

Benicia Marsh – (S/F E/E) salt marsh harvest mouse may occur, (SOSCs) Suisun common yellowthroat and Suisun song sparrow, (Rare plants) Suisun marsh aster may occur.

Goodyear Marsh – (S/F E/E) California clapper rail, (S-T) black rail, (S/F E/E) salt marsh harvest mouse, (SOSCs) Suisun common yellowthroat and Suisun song sparrow, (F-E) soft bird's beak, (Rare plants) Suisun marsh aster, Delta tule pea. Goodyear sloughs support (S/F T/T) delta smelt.

East Carquinez Strait support (S/F E/E) winter-run Chinook salmon and (S/F T/T) delta smelt. (S/F E/E) peregrine falcon present at Benicia Bridge (March–August) and found in waters off Goodyear Marsh (November–February)

Sensitive Non-protected (Non-TAES) Species:

SFACP2: 601A,603A,605A,630B/C,651A,652A,654A; ESI/SFB-Maps 9 & 10.

Martinez Marsh supports marsh birds, ducks, shorebirds, and winter migratory waterfowl. Sheltered tidal flats support infauna and bird and fish foraging. Bull's Head Marsh/Pacheco Creek show habitat variation and support variety of wading and marsh birds year-round and migratory birds and ducks in winter, salt marsh ornate shrew.

Critical Habitat for TAES:

Goodyear Marsh designated wildlife refuge.

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

PPOR Pre-Incident Information SummaCarquinez Strait East: Anchorage 23**2-M23**

Latitude 38° 2' 122.1 Longitude 122° 8' 122.142

County Solano

Type:

Anchorage

Hastings Slough and Point Edith marshes of highest concern – immediate vulnerability to spreading due to large tidal prism, and show habitat variation. Suisun Shoal provides feeding habitat for fish when covered, resting/feeding habitat for water and shorebirds when exposed. Southampton Bay provides breeding/wintering habitat for many bird species (e.g., canvasback ducks in winter) with mudflats that extend more than 100 yards, salt marsh ornate shrew. Benicia Marsh and tidal flats provide habitat for marsh birds and waterfowl with 100 mallards and a dozen Canada geese at west end, and 400–1000 golden eye, scaups, and other birds in winter. The extensive Goodyear Marsh supports waterfowl, shorebirds, marsh birds for breeding, feeding, wintering and is managed as a waterfowl refuge. Goodyear also supports variety of semi-aquatic mammals including muskrat, beaver, mink, river otter and raccoon.

Subsistence-use Species:

Essential Fish Habitat:

Commercial Fisheries / Species:

Juvenile California bay shrimp (March–October; adults present year-round. Juvenile Dungeness crab found east end Carquinez Strait (April–December).

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

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

Human Health and Safety:

Economic Impact on Commercial Fishing and Aquaculture:

Economic Impact on Recreational Fishing and Marine Tourism:

Economic Impact on Maritime Commerce and Shipping:

Economic Impact on Non-maritime Commerce:

Other Economic Impacts:

PPOR Pre-Incident Information SummaCarquinez Strait East: Anchorage 23

2-M23

Latitude 38° 2' Longitude 122° 8' 122.142

County Solano

Type:

Anchorage

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-Martinez Regional Shoreline	(510) 544-3123	
City Of Benicia	Benicia, City of		
Blade Benson Environmental	Tesoro Golden Eagle Refinery	(925) 372-3042	
John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contami	(916) 414-6595	
Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548	
Tom Kellogg Engineer	MOTCO - US Army	(925) 246-4110	
Steve Overman Environmental	Shell Martinez Refinery	(925) 313-3281	
Nick Stubblefield Environmental	Valero Refining Company - Benicia	(707) 745-7883	
Barry Wysling	Martinez, City of	(510) 313-0938	

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	VTS	Marine Fire Fighting Resources	None
Approximate Tug Response Ti			

List of Nearby Environmentally Sensitive Sit ACP Sites: 2-601A,2-603A,2-605A,2-630B/C,2-651A,2-652A,2-654A ESI/SFB Ma 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	5'	Mud	49	31	3 Knots	Minimal	Yes – Winte	Minimal	East-West	<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
23	Anchorage 23	Deep		38	1100	Limited by Pinole Shoal @ 38' for transit. Check current on NOAA Ports located at Tesoro Pier (Martinez 5). Carquinez Bridge vertical clearance limit is 102'.			

Site Contact/Leasee/Owner:

Chart No. 18640
Sector SF
Approaches to San Francisco Bay
and Stockton

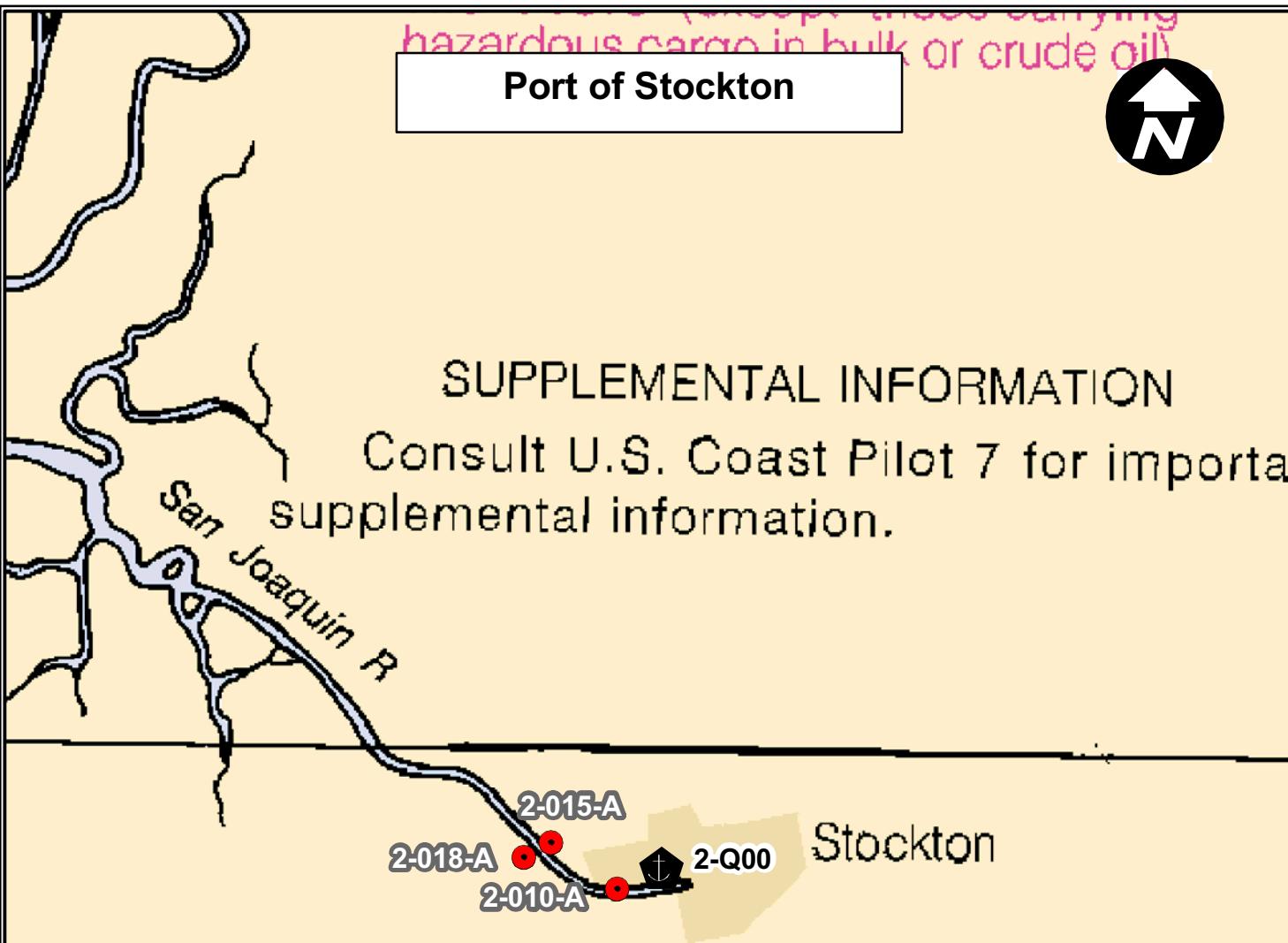
hazardous cargo in bulk or crude oil

Port of Stockton



SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.



NOTE B

TRAFFIC SEPARATION SCHEME

Recommended traffic lanes have been established for the approaches to San Francisco Bay. See charts 18645, 18680, and 18640.

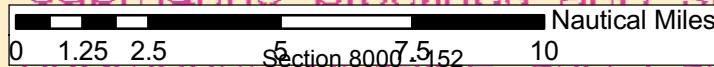
Legend

- Potential Places of Refuge
- Sensitive Sites

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and other marine structures and variable areas



October 1, 2014

PPOR Pre-Incident Information SummaPort of Stockton & San Joaquin River: any site

2-QOO

Latitude 37° 57. 121.3 Longitude 121° 1 121.318

Type:

County San Joaquin

Location Description:

Located on the Stockton Deepwater Ship Channel, 75 nautical miles (120 km) due east of the Golden Gate Bridge, the Port of Stockton, California, owns and operates a diversified and major transportation center that encompasses a 2000-acre (809 hectares) operating area. The Port has berthing space for 17 vessels, 1.1 million square feet (102,000 sq. meters) of dockside transit sheds and shipside rail trackage, 7.7 million square feet (715,000 sq. meters) of warehousing for both dry bulk and general cargoes, including steel. Each warehouse is also served by rail.

Stockton's deepwater channel has an average depth of 37 feet (11 meters) at average low tide (35 feet MLLW), and an average depth at high tide of 40 feet (12 meters) – PANAMAX.

Vessels in the 45,000 to 55,000 ton class, and maximum 60,000 ton class (for certain wide-beam vessels) can use the channel fully loaded. Up to 80,000 ton class vessels can transit the channel partially loaded. There is no width restriction of vessels, and ships up to 900 feet (275 meters) in length can navigate the Stockton Ship Channel.

The Port is one-mile from Interstate 5, and all interconnecting major highway systems. Rail service is provided by two transcontinental railroads, Union Pacific and the Burlington Northern Santa Fe.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

San Joaquin River, Port of Stockton – (F/S T/T) Swainson's hawk, (SOSC) burrowing owl nest and forage north of and along harbor, (F/S E/E) Small numbers Delta smelt present (November–December).

Calaveras River Mouth at San Joaquin River – (F/S T/T) Swainson's hawk, (SOSC) burrowing owl nest and forage along river, (F/S E/E) Small numbers Delta smelt present (November–December), (F/S E/E) Winter run Chinook salmon (October–May), (Rare plant) California hibiscus.

Burns Cutoff at Rough & Ready Island – (F/S E/E) Small numbers Delta smelt present (November–December), (F/S E/E) winter-run Chinook salmon smolts pass through (October–May), (Rare plant) historical record of Delta tule pea.

San Joaquin River, Stockton to Lathrop Reach – (F/S T/T) Swainson's hawk, (SOSC) tri-colored blackbird nest and forage along reach, (Rare plant) slough thistle.

Sensitive Non-protected (Non-TAES) Species:

SFACP2: 010A,015A,018A,020A; ESI/SFB-No maps for this area. San Joaquin River, Port of Stockton – Freshwater invertebrates are those typical of low-salinity Delta waters. Calaveras River Mouth supports waterbirds and marsh birds. Burns Cutoff functions as throughway for

Critical Habitat for TAES:

Calaveras River Mouth,Burns Cutoff, Lathrop Reach, San Joaquin River contain marshy margins, islands, and riparian growth that may support the (SOSC) western pond turtle.

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

PPOR Pre-Incident Information SummaPort of Stockton & San Joaquin River: any site**2-Q00**

Type:

Latitude 37° 57. 121.3 Longitude 121° 1 121.318

County San Joaquin

salmon smolts and juvenile/adult striped bass, and supports waterbirds and marsh birds. San Joaquin River, Lathrop Reach salmonids migrate through area, other vertebrates include riparian and semi-aquatic species such as deer, fox, raccoon, mink, muskrat, beaver, snakes, lizards, amphibians, etc.

Subsistence-use Species:

Essential Fish Habitat:

Calaveras River supports small salmon run.

Commercial Fisheries / Species:

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

Juvenile/adult striped bass and other warm water species present in area including San Joaquin River and Burns Cut. Calaveras River supports small salmon run.

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

Human Health and Safety

STOCKTON HAS A POPULATION OF 243771

Economic Impact on Commercial Fishing and Aquaculture:

San Francisco and Stockton have 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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.

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.

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800	
Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260	
John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contam	(916) 414-6595	
Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548	

PPOR Pre-Incident Information SummaPort of Stockton & San Joaquin River: any site

2-Q00

Type:

Latitude 37° 57. 121.3 Longitude 121° 1 121.318

County San Joaquin

Kent Nelson	CA Dept. of Water Resources	(916) 227-7581
Dab Nomellini President	Central Delta Water Agency	(209) 465-5883
Operations State Water Project	CA Department of Water Resources	(916) 574-2714

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: **CITY OF STOCKTON** Marine Fire Fighting Resources **SF PIER 24: 37-47.42, 122-23.24**

Approximate Tug Response Ti **4 HOURS**

List of Nearby Environmentally Sensitive Sit **ACP Sites: 2-010A,2-015A,2-018A,2-020A** 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
W	6	MUD	32	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
00	any site	800		32	800	SF PIER 22 1/2 IS FIRE BOAT GUARDIAN AND PHOENIX; OTHER FF RESOURCES MAY COME FROM OAKLAND, CHEVRON AND RICHMOND.		

Site Contact/Leasee/Owner:

Port of Sacramento



2-S01 Sacramento

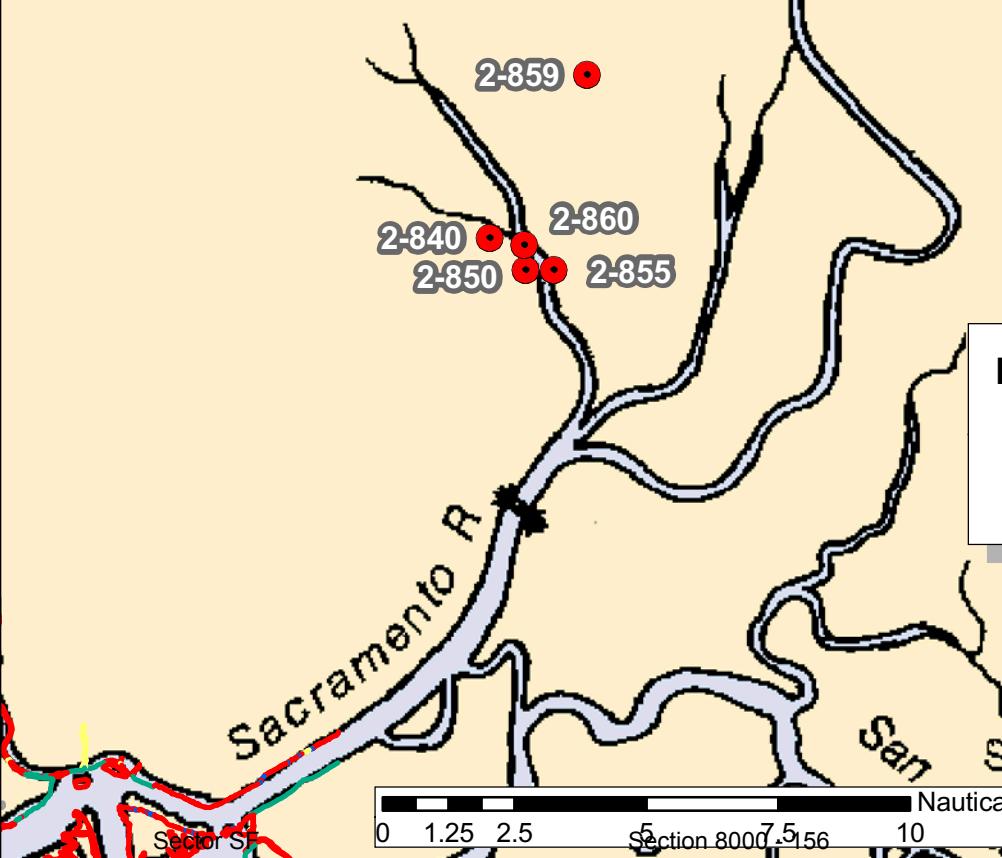
IMO - adopt
for vessels car-
bulk (including o-
munition, che-
refined product
persistent cargo)
should use the
or leaving San F

2-859
2-840
2-850
2-860
2-855

IMO - ad-
Tracks for ve-
and above (/
hazardous ca

Legend

- Potential Places of Refuge
- Sensitive Sites



SUPPLEME
Consult U.S.
supplemental info

PPOR Pre-Incident Information SummaPort of Sacramento: Sacramento US SAC 1 – 8, and**2-S01**

Latitude 38° 33. 121.6 Longitude 121° 3 121.55

CHEM

Type:

County Yolo

Location Description:

The inland Port of Sacramento opened in 1963. It is located 79 nautical miles northeast of San Francisco, and is centered in one of the richest agricultural and industrial regions in the world.

Facilities and Terminals

Depth Alongside: Project Depth 35ft'

Five (5) berths: Each 600 ft. (183 m.) long

Trucking: More than 50 companies provide a versatile range of services and equipment

Railroads: A 200 railcar terminal area marshaling yard. BNSF Railway, Union Pacific, and Sierra Northern service the Port

Commodity handling capabilities: Bulk rice and bulk grain elevators, bulk commodities bagging facility, dry bulk cargo warehousing

Fugitive dust, washwater, and stormwater control systems

Three (3) transit sheds

Paved open storage area

Water Depth

(Main entrance channel)

Project Depth 30 ft. (9.1 m)

Natural Resource Concerns and Issues for this Place / Site**Threatened and Endangered Species (TAES):**

Lindsey Slough – Prime (F/S E/E) Delta smelt spawning area and in zone for (F/S E/E) winter-run Chinook salmon (September–June).

Cache Slough – Prime (F/S E/E) Delta smelt spawning area and in zone for (F/S E/E) winter-run Chinook salmon (September–June).

Miner Slough – (F/S T/T) Swainson's hawk, (F/S E/E) critical habitat for winter-run Chinook salmon, (Rare plant) Mason's lilaeopsis.

Sacramento River Deep Water Ship Channel – Artificially constructed channel, no listed species.

Prospect Slough and Liberty Island – Prospect Slough major (F/S E/E) Delta smelt spawning area and in zone for (F/S E/E) winter-run Chinook salmon (September–June).

Sensitive Non-protected (Non-TAES) Species:

SFACP2: 840A,850A,855A,859A,860A; ESI/SFB-No maps for this area.

Subsistence-use Species:**Essential Fish Habitat:**

Critical habitat to many migratory fish species, including high

Sector SF

Critical Habitat for TAES:

Lower Prospect Island Wildlife Area owned and managed by DFG.

Area sloughs are part of designated natural resource area with significant habitat values (Delta Master Recreational Plan), and DFG designated significant natural area.

Critical Habitat for Non-protected (Non-TAES) Species:**Critical Habitat for Subsistence Species:****Historic and Cultural Resources:**

PPOR Pre-Incident Information SummaPort of Sacramento: Sacramento US SAC 1 – 8, and**2-S01**

Latitude 38° 33. 121.6 Longitude 121° 3 121.55

CHEM

Type:

County Yolo

proportion of salmonid stocks for Sacramento Valley: all steel head and salmon runs, striped bass, American shad, Sacramento split-tail, white and green sturgeon. Salmon and other migratory species concentrate in the Deep Water channel during migratory periods. Prospect Slough important smolt rearing area when Yolo Bypass floods.

Commercial Fisheries / Species:

Miner Slough supports crayfish fishery.

Recreational Species and Habitat:

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

Human Health and Safety

POPULATION OF SACRAMENTO IS 1796857

Economic Impact on Commercial Fishing and Aquaculture:

APRIL 2008 HEADLINE: State of Emergency: Sacramento River Fall Run Chinook Salmon PROCLAMATION by the Governor of the State of California

Economic Impact on Recreational Fishing and Marine Tourism:

APRIL 2008 HEADLINE: State of Emergency: Sacramento River Fall Run Chinook Salmon PROCLAMATION by the Governor of the State of California

WHEREAS California's salmon runs are a vital component of our great State's resources and contribute significant environmental, recreational, commercial, and economic benefits to the people; and

WHEREAS the Sacramento River Fall Run Chinook Salmon have been significantly impacted by poor ocean conditions, and other environmental factors; and

WHEREAS the Sacramento River Fall Run Chinook Salmon, traditionally a mainstay salmon population for the West Coast, have declined in abundance to a level where California's and Oregon's recreational and commercial fisheries are being provisionally closed;

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 SummaPort of Sacramento: Sacramento US SAC 1 – 8, and

2-S01

Latitude 38° 33. 121.6 Longitude 121° 3 121.55

CHEM

Type:

County Yolo

Stakeholder List for this Place / Site

Name / Title	Organization	Phone	more details
Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800	
Robert Clark	North Delta Water Agency	(916) 446-0197	
Brenda Grewell Restoration Ecologis	US Dept. of Agriculture	(530) 752-6260	
John Henderson FWS Biologist	US Fish & Wildlife Service, Environmental Contam	(916) 414-6595	
Damian Higgins	U.S. Fish & Wildlife Service	(916) 414-6548	
Kent Nelson	CA Dept. of Water Resources	(916) 227-7581	
Operations State Water Project	CA Department of Water Resources	(916) 574-2714	

Characteristics and Tactical Considerations

Primary Jursidictional Contact: Port of Sacramento Marine Fire Fighting Resources SF PIER 24: 37-47.42, 122-23.24

Approximate Tug Response Ti 4 HOURS

List of Nearby Environmentally Sensitive Sit ACP Sites: 2-840A,2-850A,2-855A,2-859A,2-860A Is Containment Possible?

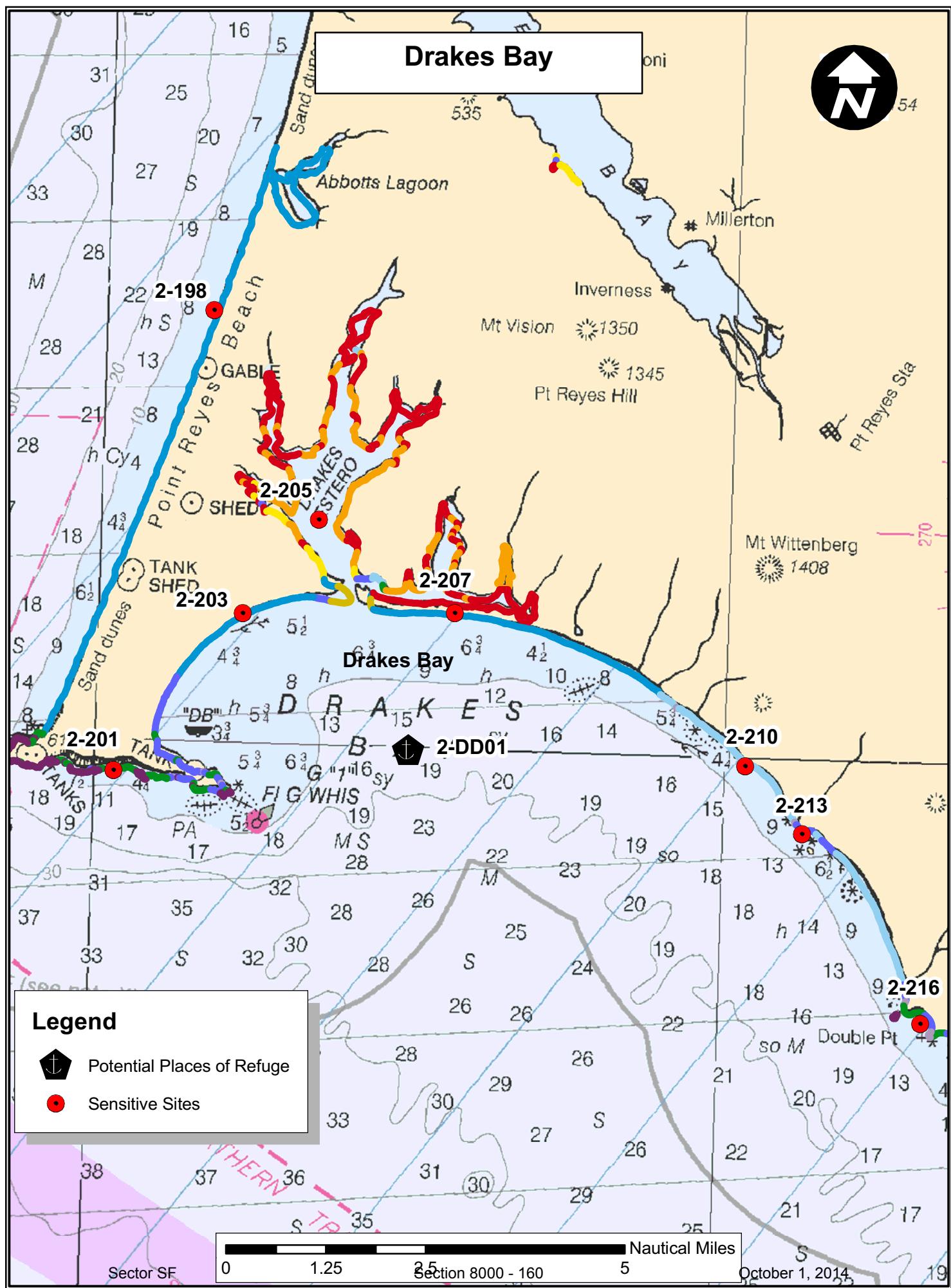
Coast Pilot and Navigation Chart Information

Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W	6	MUD	30	0		SEASONAL	YES			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
01	Sacramento US SAC 1 – 8, and CHEM	800		30	800	SALMON RUN THROUGH THIS AREA. SF PIER 22 1/2 IS FIRE BOAT GUARDIAN AND PHOENIX; OTHER FF RESOURCES MAY COME FROM OAKLAND, CHEVRON AND RICHMOND.		

Site Contact/Leasee/Owner:



PPOR Pre-Incident Information SummaDrakes Bay: Deep Anchorage

2-DD01

Latitude 38° 0' 122.9 Longitude 122° 5' 122.917
County Marin

Type:
Anchorage

Location Description:

Drakes Bay is a small bay on the coast of northern California in the United States, approximately 30 miles (48 km) northwest of San Francisco at approximately 38 degrees North latitude.[1] The bay is approximately 8 miles (13 km) wide. It is formed on the lee side of the coastal current by Point Reyes.

Drakes Bay has one of the highest concentrations of TAES and sensitive species in California. Drakes Bay Shoreline and Estero is the only Marine Wilderness south of Alaska. Largest mainland breeding concentration of harbor seals in California. Largest and most diverse mainland seabird breeding area in the region. High diversity of marine mammals, shorebirds and waterbirds. Unique oceanographic conditions result in a high concentration of species and make this an especially high-value commercial and recreational fishing area. CA State Marine Protected Areas are proposed here and two already are designated. The oldest known marine shipwreck of US West Coast (San Augustin) is located in Drakes Bay. Common recreational uses are surfing, wildlife viewing, and other beach activities. Shoreline contains preserved archaeological sites dating back to first European-Native American encounters and unique paleontological resources including paleo dunes and fossils are vulnerable to shoreline contamination and/or cleanup activities.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

17 TAES species common/known to be present in the area and likely to be impacted; additional seasonal and rare TAES species present as well.

Western snowy plover (F-T); Pt. Reyes Great Beach, Limantour Spit, Drakes Beach; nest spring/summer upper beach, present year-round, highest numbers in winter.

Peregrine falcon (S-E); Breed at Pt. Reyes Headland and on cliffs around Drakes Bay; forage year-round.

California sea otter (S/F-E); occasional to area.

Steller sea lion (F-T); Pt. Reyes National Seashore is one of remaining haul-outs; year-round.

Leatherback turtle (F-E); common seasonally.

Guadalupe fur seal (F-T); rare.

Marbled murrelets (F-T,S-E); major concentration in winter.

Humpback whales (F-E); forage spring to fall.

Critical Habitat for TAES:

Red-legged frog; Drakes Bay upper tributaries for steelhead trout (Home Ranch, East Schooner and Creamery Bay).

PPOR Pre-Incident Information SummaDrakes Bay: Deep Anchorage

Latitude 38° 0' 122.9 Longitude 122° 5' 122.917
County Marin

2-DD01Type:
Anchorage

Blue whales (F-E); rare, forage spring to fall.

Central California coho salmon (S/F-E); winter and spring use.

Chinook salmon (F-E,S-T); winter and spring use.

Central California steelhead trout (F-T); winter and spring use, spawning.

Green sturgeon (F-T); use coastal bays with regularity.

California clapper rail (F-E); seasonal.

California red-legged frog (F-T); fresh water species found in streams, estuaries flowing into Drakes Bay; year-round and breeding; can occur in brackish water.

2 (S/F-E) Dune plant species vulnerable to shoreline contamination/cleanup.

Sensitive Non-protected (Non-TAES) Species:

SFACCP2:198A,201A,203A,205A,207A,210B,213B,216A; ESI/Central Coast-Maps 39, 40

Extremely sensitive and important area along Bay headlands on offshore rocks, cliffs, pocket beaches for: seabird colonies (Brandt's/pelagic cormorants, common murre, pigeon guillemot, tufted puffin, ashystorm-petrel [proposed for listing], western gulls) and roosting and foraging area for wintering birds; largest numbers of shorebirds on North Coast (black oystercatcher, willets, colonial nesting egrets and herons); large numbers of waterbirds (brown pelican, white pelican, brant, osprey, western grebes, loons, scoters) and waterfowl (scaup, scoters); pinniped rookeries (northern elephant seal year-round, northern-most breeding area and pupping Dec-Mar, CA sea lion haul-out year-round, harbor seal highest concentration in state on mainland breeding season and molt year-round, and pupping Mar-Jun); other marine mammals (CA gray whale – nearshore Dec-Feb and Apr-May, killer whale, northern fur seal, minke whale, harbor porpoise). Also, black abalone (candidate for TAES listing), white

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

Elephant seals, harbor seals, Dungeness crab, eelgrass beds, herring.

PPOR Pre-Incident Information SummaDrakes Bay: Deep Anchorage

2-DD01

Latitude 38° 0' 122.9 Longitude 122° 5' 122.917

County Marin

Type:

Anchorage

sharks feed in Bay, river otters occur in Drakes Estero, sensitive dune and wetland plants as well as insects vulnerable to contamination/cleanup operations.

Subsistence-use Species:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

Drakes Bay is essential fish habitat for species in all three federal fishery management plans (FMP), the Coastal Pelagics FMP (Northern anchovy, Pacific sardine, market squid, Pacific mackerel and Jack mackerel), the Pacific Salmon FMP (which covers chinook and coho salmon as well as pink salmon) and most importantly for Drakes Bay, the Pacific Groundfish FMP. A wide variety of rockfish and flat fish utilize Drakes Bay.

Commercial Fisheries / Species:

Wide variety of rockfish, Pacific herring, halibut, sand dabs, clams, crabs, abalone, oysters.

Sensitivity of spawning habitat for Pacific herring on eelgrass or kelp (Oct-Mar). Sensitivity of Drake's Bay as nursery area for Dungeness crab (egg laying Nov-Feb; hatching Dec-March).

Historic and Cultural Resources:

Culturally sensitive area. Native American archaeological sites; archaeological sunken vessels (San Augustin – oldest ship wreck on the west coast); paleontological resources – rich area for fossilized whales; rare paleontological coastal dunes.

Recreational Species and Habitat:

Wide variety of rockfish, Pacific herring, halibut, sand dabs, clams, crabs, abalone.

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

Human Health and Safety

Pt. Reyes Station (Basic Medical Services) – 15 miles

Petaluma (Basic and Emergency Medical Services – 40 miles

The main town of Drake Bay is Agujitas and has a population of about 1,000 residents. Drake Bay is not on the beaten track and can only be reached by highway during the dry season.

Economic Impact on Commercial Fishing and Aquaculture:

Potential impacts to oyster mariculture in Drake's Estero.

Potential impacts to Dungeness crab fishery.

Potential impacts to Pacific herring fishery.

Potential impacts to salmon fishery.

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.

PPOR Pre-Incident Information SummaDrakes Bay: Deep Anchorage

2-DD01

Latitude 38° 0' 122.9 Longitude 122° 5 122.917
County Marin

Type:
Anchorage

Economic Impact on Recreational Fishing and Marine Tourism:

Potential impacts to recreational beach use in Pt. Reyes area. High use for surfing, fishing and sunbathing.

Potential impacts to marine wildlife viewing eco-tourism.

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
Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187	
NPS-PRNS Dispatch	Pt. Reyes National Seashore - NPS	(415) 464-5170	
Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallone	(415) 561-6622	
Sara Koenig	US National Park Service, Pt. Reyes (NS)	(415) 663-8525	
Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261	
PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221	
Bill Shook Chief Nat. Resources	US National Park Service, Pt. Reyes (NS)	(415) 464-5188	
Gerald White Chief Cult.Resources	Point Reyes National Seashore - NPS	(415) 464-5127	

Characteristics and Tactical Considerations

Primary Jursidictional Contact: **Gulf of the Farallones National Marine Sanctuary** Marine Fire Fighting Resources **Bodega Bay OR SF PIER 24: 37-42.42, 122-23.24**

Approximate Tug Response Ti **4 HOURS FROM SF PIER 24**

List of Nearby Environmentally Sensitive Sit **SFACP 2: 198A, 201A, 203A, 205A, 207A, 210B, 213B, 216A (Pt. Reyes Great Beach)** 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(Apr-Oct)	6	sandy bott	100	0	MINIMA		SEASONAL;	YES; NW storm	SOUTH	<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities				Containment Possibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
01	Deep Anchorage	1500	NA	75	0	Heavy fog periodically during summer months; SWING ROOM OR DOCK FACE: 1 MILE SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.		The anchorages within this place have good primary containment potential since there are few significant currents exceeding 0.7 knts. However, the local topography minimize the potential for secondary confinement of oil escaping primary containment.	

Site Contact/Leasee/Owner: **National Park Service, U.S.Fish & Wildlife Service**

8250 ACP 3 – Central Coast Area Committee PPOR

8251 Pre-Incident Summary Background

8251.1 Potential Places of Refuge Subcommittee

The Central Coast PPOR subcommittee formally met in June 2007 to ascertain and identify PPOR sites in accordance with references (a) and (b) within the Central Coast AOR. The subcommittee identified 35 Central Coast PPOR sites to be included in the California Statewide PPOR Database. These 35 sites were chosen by a subcommittee consisting of representatives from various Central Coast Area Committee members, including pilots, natural resource agencies, and port authorities. In July and August of 2008, the subcommittee identified six deep draft sites within the ACP 3 AOR and provided detailed physical, navigational, health and human safety, economic and natural resource information on each site. All sites identified within the Central Coast AOR were selected solely based on their capability to accommodate a deep draft vessel. This PPOR effort did not evaluate the ability of a vessel to safely transit to a particular site, nor was the potential environmental impact used as a basis for site selection. Instead, PPOR sites within this AOR addressed the high risk vessels and potential oil spill scenarios, specifically deep draft vessels. PPOR sites were determined solely based on suitability to house a deep draft vessel. All other operational considerations must be taken into account when determining where to place a vessel in peril. Currently, only the six sites identified in this section will be deemed operationally viable options for a PPOR. These six PPOR sites are strategically located throughout the Central Coast area which account for "Place of Refuge" incidents that might result in the release of oil within the Central Coast AOR. If the need arises, a detailed assessment of the remaining 29 Central Coast sites may be conducted at a future date for consideration and inclusion in the list of PPOR sites pre-identified in this section of the ACP. Primary Participants included: U.S. Coast Guard Sector San Francisco's Planning Department, Francisco Bar Pilots, California Department of Fish and Game, Office of Spill Prevention and Response (CDFG-OSPR), California Coastal Commission, and Monterey Bay National Marine Sanctuary (NOAA). Representatives from these agencies were involved with providing physical, navigational, health and human safety, natural resources, and economic information for the designated six deep draft PPOR for the Central Coast AOR.

Potential natural resource impacts for the six PPOR sites were analyzed by the committee using two natural resource information sources for shorelines: Central Coast ACP sensitive site and resource descriptions (Section 9800); and Environmental Sensitivity Index (ESI) Maps developed by NOAA and CDFG-OSPR which show environmental sensitivity of shorelines and species to oiling. The NOAA TAP II model was not utilized for assessing impacts to natural resources within the PPOR effort as the model does not address sites within the Central Coast AOR.

Geographic Information Systems (GIS) maps were generated by the CDFG-OSPR GIS Unit for each of the listed PPOR areas. Identification and assessment of appropriate PPOR sites within the Central Coast area is ongoing and will continue to be refined.

8252 Potential Places of Refuge Site Index

Site #	Place Name	Site Name	Co.	Deg/Min/Sec	
				N	W
3-MY01	MY01	Moss Landing	MO	36 48 40	-121 47 65
3-MY02	MY02	Monterey Harbor Offshore Anchorage	MO	36 36 37	-121 53 06
3-MY03	MY03	Stillwater	MO	36 33 58	-121 56 71
3-MY04	MY04	Carmel Canyon	MO	36 31 57	-121 56 04
3-SC01	SC01	Santa Cruz Whistle Buoy	SC	36 56 89	-122 00 04
3-SC02	SC02	Soquel Cove	SC	36 57 70	-121 55 89

8253 Potential Places of Refuge Chart/Pre-Incident Summary Sheets

This section contains Central Coast Places of Refuge Charts and Pre-Incident Summary Sheets.

is not shown on this chart. See Charts 18645 and 18649.

and above (except those carrying hazardous cargo in bulk or liquid).

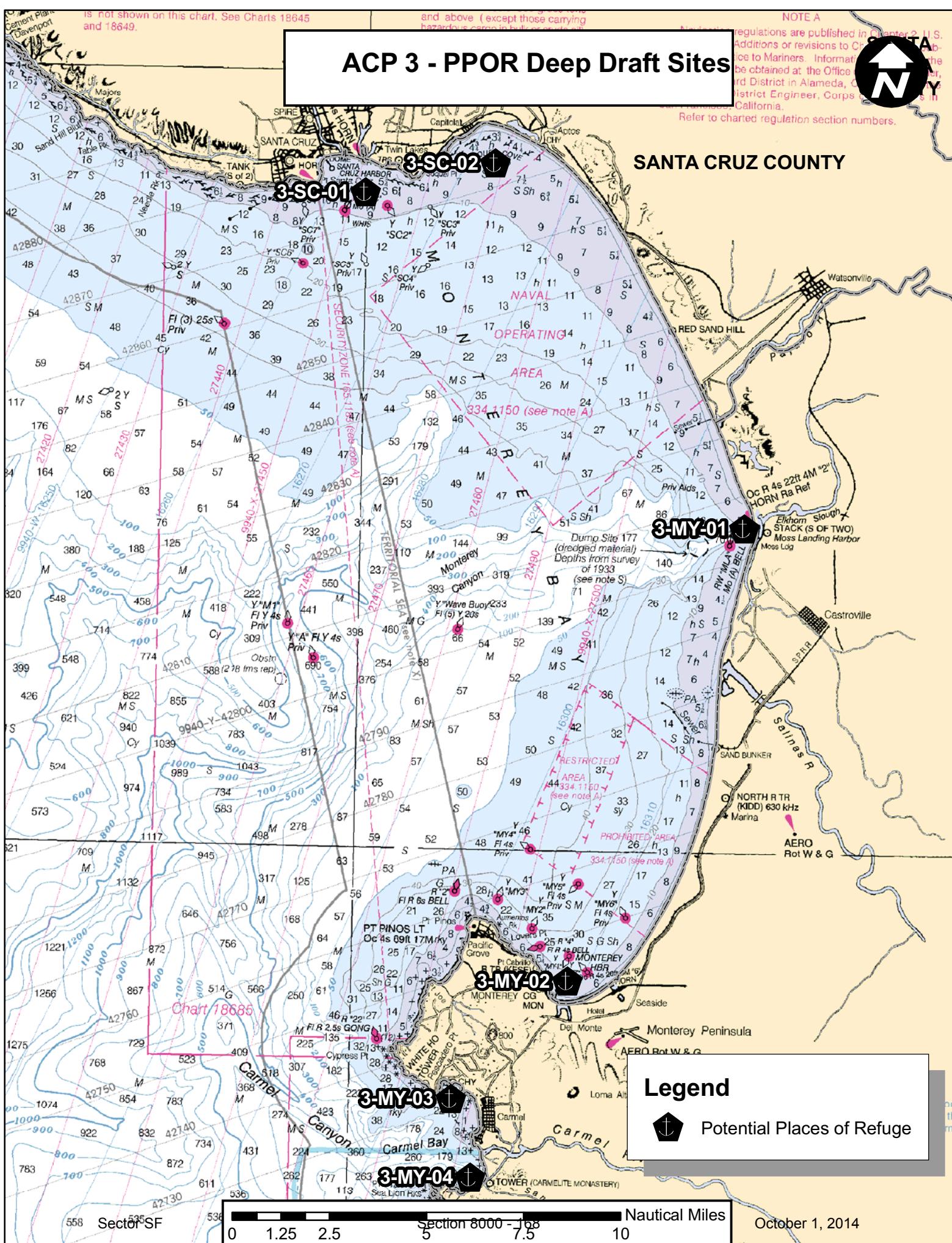
NOTE A



ACP 3 - PPOR Deep Draft Sites

Refer to charted regulation section numbers.

SANTA CRUZ COUNTY



Legend



Potential Places of Refuge

ACP 3 MY-01 PPOR Site



ACP 3 MY-01 PPOR Site

MONTEREY COUNTY

Legend

- Potential Places (Black Diamond)
- Sensitive Sites (Red Circle)

Nautical Miles

Section 8000 - 169

0 0.25 0.5 1 1.5 2

October 1,

Legend

-  Potential Places of Refuge
 -  Sensitive Sites

 Nautical Miles
0 0.250.5 1 1.5 2

October 1, 2014

PPOR Pre-Incident Information Summary for Monterey County: Moss Landing		
Latitude: 36° 48.40'	36.8066	Longitude: 121° 47.65' 121.7942
County: Monterey		

Location Description:

Undesignated anchorage off Moss Landing Harbor has charted depths to approximately 420+ feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.

Prevailing winds NW, with currents generally weak and variable.

This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources. Populations include threatened and endangered species including Brown Pelicans, Snowy plover, Xantus murrelet, Marbled Murrelet, Steller sea lion, Tidewater goby, Steelhead, and Southern sea otters. Numerous ACP-designated sensitive sites are located throughout the area and may be threatened by releases from this PPOR.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

Brown Pelicans (F/S-E), Snowy plover (F-T), Xantus murrelet (offshore F-T), Marbled Murrelet (offshore F-T) and Steller sea lion (FT), Tidewater goby (F-Section E), Steelhead (F-T), Southern sea otters (F-E), and various FE whale species (blue/fin/humpback).

Sensitive Non-protected (Non-TAES) Species:

More than 400 species of invertebrates, 80 species of fish and 200 species of birds have been identified in Elkhorn Slough (just inside Moss Landing).

Critical Habitat for TAES:

Extensive pickleweed marshes and fragile dune systems provide critical habitat for numerous threatened and endangered species. Within California, these broad salt marshes are second in size only to San Francisco Bay.

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

The channels and tidal creeks of the slough are nurseries for many species of fish. The slough is on the Pacific Flyway, providing an important feeding and resting ground for many types of migrating waterfowl and shorebirds. Fish nursery areas especially important for several species of skates, rays and flatfish.

Subsistence-use Species:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

The channels and tidal creeks of the slough are nurseries for many species of fish. A large ocean EFH zone exists immediately to the west of Moss Landing.

Commercial Fisheries / Species:

The channels and tidal creeks of the slough are nurseries for many commercial species of fish. Adjacent ocean waters support market squid, groundfish, crab, rockfish, salmon, anchovy, and sardines.

Recreational Species and Habitat:

The channels and tidal creeks of the slough are nurseries for many recreational species of fish. Adjacent ocean waters support rockfish, groundfish, and salmon.

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

Human Health and Safety:

Moss Landing Harbor is a significant historical coastal community in Monterey Bay where a major regional transport artery (Hwy 1) crosses the harbor channel. Resident population of ~300 and working population of several

Economic Impact on Maritime Commerce and Shipping:

This area has minor influence on maritime commerce and shipping.

PPOR Pre-Incident Information Summary for Monterey County: Moss Landing

3-MY-01

Type:
Anchorage

Latitude: 36° 48.40' 36.8066 Longitude: 121° 47.65' 121.7942
Sector SF

thousand. Anything impacting the major power plant located adjacent to the harbor could affect human health and safety.

Economic Impact on Commercial Fishing and Aquaculture:

This harbor shelters the largest number of commercial fishing vessels in Monterey Bay as well as fish processing services. An environmental emergency here would have significant impacts on the commercial fishing fleet, particularly if harbor access were restricted.

Economic Impact on Recreational Fishing and Marine Tourism:

These waters are part of the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. State Park recreational beaches border the harbor to the north and south, and wildlife tours are staged from the harbor. The majority of the beaches from Santa Cruz to Monterey are city, county, or state park beaches that support marine tourism. Whale watching tours, Elkhorn Slough tours, and kayak rentals all work out of this harbor. Kirby Park (in Elkhorn Slough) is also an important launch site for small boats using the slough.

Stakeholder List for this Place / Site

Name / Title

Organization

[more details](#)

Phone

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

Moss Landing Harbor District

Approximate Tug Response Time

Marine Fire Fighting Resources:

Monterey Harbor (fire boat and CG 47' boat)

List of Nearby Environmentally Sensitive Sites:

3-301, 3-305, 3-310, 3-325; Also see ESI Maps 26.

Is Containment Possible?

Coast Pilot and Navigation Chart Information

Pilot Requirements	West	MINIMUM	Strong d	30	420	Max Water Depth	Bottom Type:	Tidal Range	Site ID	Site Name	Vessel Capacities
<input checked="" type="checkbox"/>											

Specific Site Details

Site ID	Site Name	Max Vessel Size	Min Vessel Size	Max Swing Room Draft or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Moss Landing	Deep	1000	48	1000	The currents within Moss Landing are exceptionally

PPOR Pre-Incident Information Summary for		Monterey County: Moss Landing
Latitude:	36° 48.40'	36.8066
Longitude:	121° 47.65'	121.7942
County:	Monterey	
Sector SF		

3-MY-01

Type:
Anchorage

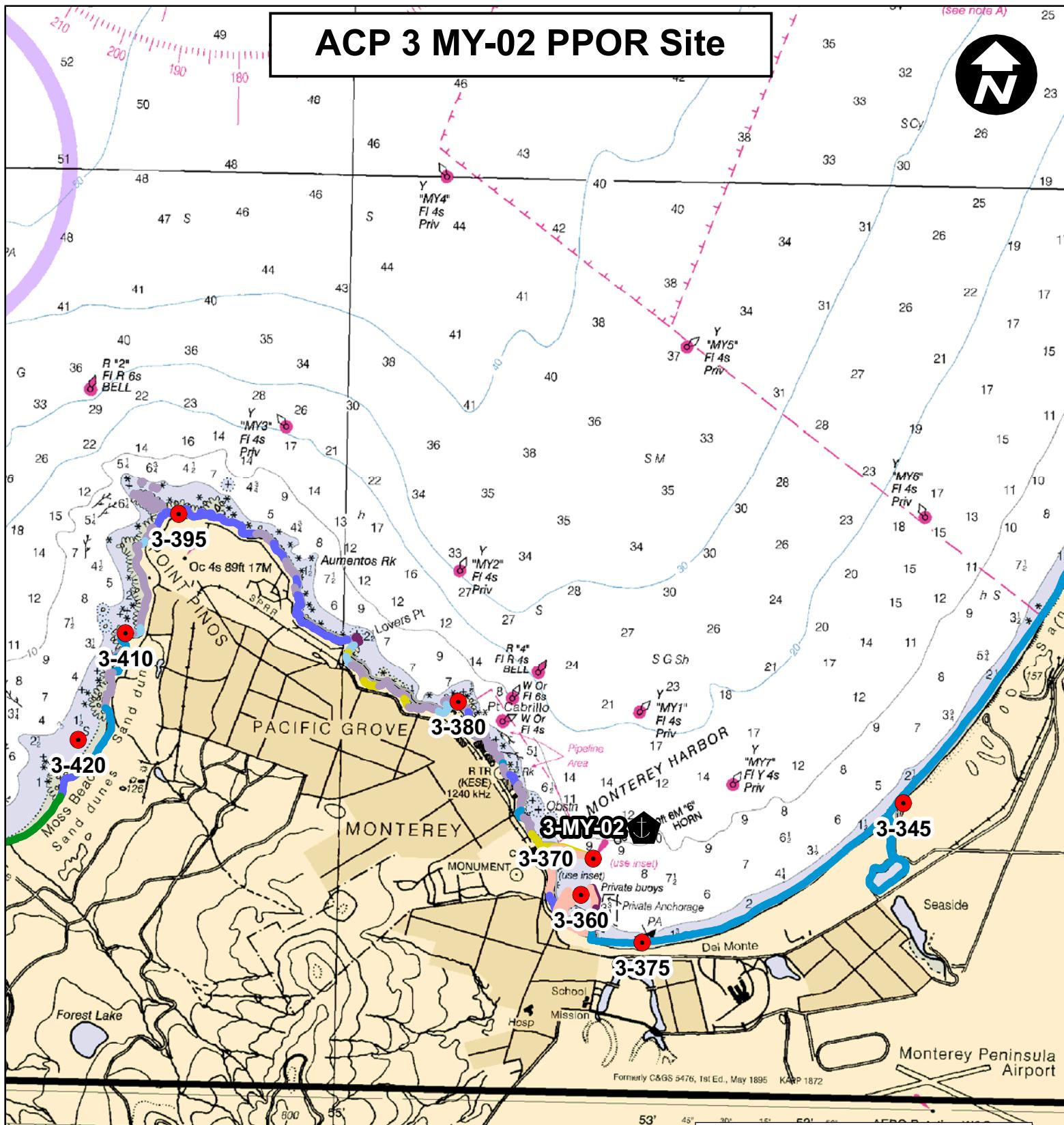
strong due to the opening of Elkhorn Slough.

The anchorage off Moss Landing Harbor is unprotected but the holding ground is good for larger vessels in fair weather.

An offshore deep draft vessel mooring and fueling facility is 0.8 nautical miles NW from Moss Landing Harbor Entrance.

Site Contact/Leasee/Owner: Monterey Bay National Marine Sanctuary

ACP 3 MY-02 PPOR Site



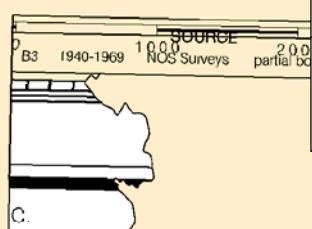
Legend



Potential Places of Refuge



Sensitive Sites



3-450 Sector SF

0 0.25 0.5 Section 8000 - 173

Nautical Miles October 1, 2014

PPOR Pre-Incident Information Summary for Monterey County: Monterey Harbor Offshore Anchorage

Latitude: 36° 36.67' Longitude: 121° 53.06' Sector SF
County: Monterey

3-MY-02

Type:
Anchorage

Location Description:

Undesignated and designated anchorages off Monterey Harbor have charted depths to approximately 120+ feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.

Pervailing winds NW, with currents generally weak and variable.

This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources. Populations include threatened and endangered species including Brown pelican, Southern sea otter, Steller sea lion, Steelhead, xantus' murrelet, and Western snowy plover. Numerous ACP-designated sensitive sites are located throughout the area and may be threatened by releases from this PPOR.

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

Brown pelican (FPD, SE), Southern sea otter (FT), Steller sea lion (FT), Steelhead (FT), xantus' murrelet (ST), Western snowy plover (FT), various FE whale species (blue/fin/humpback).

Sensitive Non-protected (Non-TAES) Species:

Many seabirds & marine mammals in the area.

Subsistence-use Species:

Essential Fish Habitats:

Much of the area is designated as EFH. Also, local kelp forests & lagoon habitats serve as critical nursery & adult habitat for many species.

Commercial Fisheries / Species:

Crab, rockfish, groundfish, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.

Critical Habitat for TAES:

Kelp forests, water column habitats. Shoreline and water column critical supporting habitat for all species listed under TAES species list. Area is within the Monterey Bay National Marine Sanctuary.

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

This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Monterey is one the most important historical communities in California and served as its seat of government through the Spanish, Mexican, and early American periods. The community has extensive historical and cultural upland and submerged resources.

Recreational Species and Habitat:

Salmon, rockfish, groundfish all in area. Consider sea food tainting issues.

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

Human Health and Safety:

Largest coastal population center in Monterey Bay with approximately 100,000 residents plus an additional 60,000 potential tourists during peak tourism season. Prevailing NW winds tend to blow across Monterey Harbor anchorage and into town.

Economic Impact on Maritime Commerce and Shipping:

This area has minor influence on maritime commerce and shipping. The harbor is home to the only USCG station and cutter between San Francisco and Morro Bay, and any negative impact to the USCG mission at Monterey could significantly affect maritime commerce in the area.

PPOR Pre-Incident Information Summary for Monterey County: Monterey Harbor Offshore Anchorage**3-MY-02**

Latitude: 36° 36.67' 36.6112 Longitude: 121° 53.06' 121.8843

Sector SF
County: MontereyType:
Anchorage

Economic Impact on Commercial Fishing and Aquaculture:

A longstanding abalone aquaculture facility operates beneath Wharf II (commercial wharf) immediately adjacent to the Monterey Harbor anchorage. An environmental emergency at the harbor could impact 10-20 commercial fishing boats in the harbor, particularly if harbor access were limited.

Economic Impact on Recreational Fishing and Marine Tourism:

These waters are part of the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. Many sport fishing, dive boat charters, marine wildlife tours, pier fishing and kayak tours are based in Monterey Harbor. The majority of the beaches from Monterey to Santa Cruz are city, county, or state park beaches that support marine tourism.

Economic Impact on Non-maritime Commerce:

Other Economic Impacts:

The Monterey Bay Aquarium is one of the top 5 aquaria in the United States and draws its raw seawater from intakes at -50 ft less than 2 miles from the Monterey Harbor anchorage. A small desalination plant is located on Cannery Row in Monterey and draws raw seawater to service a hotel/retail complex.

Stakeholder List for this Place / Site

Name / Title

Organization

more details

Phone

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:

Monterey Bay National Marine Sanctuary

Marine Fire Fighting Resources:

Monterey Harbor (fire boat and CG 47' boat)

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites:

ES

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	Mean: 3.6	Sand	102	36	Strong	Yes	Minimum			<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities	Site Capacities and Facilities	Containment Possibilities:
October 1, 2014	Monterey Harbor Offshore Anchorage	Max Size Deep	Min Size 1000	Swing Room or Dock Face 1000

PPOR Pre-Incident Information Summary for Monterey County: Stillwater		3-MY-03
Latitude: 36° 33.58'	Longitude: 121° 56.71	Type: Anchorage
County: Monterey	Sector SF	
Location Description:		
Undesignated anchorage off coast of Carmel has charted depths to approximately 70 feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.		
Prevailing winds NW, with currents generally weak and variable.		
Natural Resource Concerns and Issues for this Place / Site		
<p>Threatened and Endangered Species (TAES):</p> <p>Brown pelican (FPD, SE) and Southern sea otter (FT).</p>		
<p>Sensitive Non-protected (Non-TAES) Species:</p> <p>Many seabirds & marine mammals in the area. Area also includes important subtidal diversity.</p>		
<p>Commercial Fisheries / Species:</p> <p>Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.</p>		
Human Health / Safety Concerns and Economic Issues for this Place / Site		
<p>Human Health and Safety:</p> <p>Pebble Beach and Carmel communities have a resident population of ~9,000 plus several thousand tourists during peak tourism season.</p>		
<p>Economic Impact on Commercial Fishing and Aquaculture:</p> <p>The most prominent commercial fishery in Carmel Bay is spot prawn. Environmental impacts here could significantly impact this local fishery.</p>		
<p>Economic Impact on Recreational Fishing and Marine Tourism:</p> <p>October 1, 2014</p>		
<p>Other Economic Impacts:</p> <p>The Carmel/Pebble Beach area is a world-wide resort destination that hosts</p>		

PPOR Pre-Incident Information Summary for Monterey County: Stillwater

3-MY-03		
Type:		Anchorage
Latitude: 36° 33.58' Longitude: 121° 56.71' 121.9452'		Sector: Monterey
(MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. Carmel Bay is accessed regularly by fishing and dive boat charters and marine wildlife tours.		major events such as PGA tournaments and exclusive auto shows.

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Monterey Bay National Marine Sanctuary

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites:

Numerous sites in area; closest are: 3-440, 3-448, 3-450, 3-460; Also see ESI Maps 23 - 2

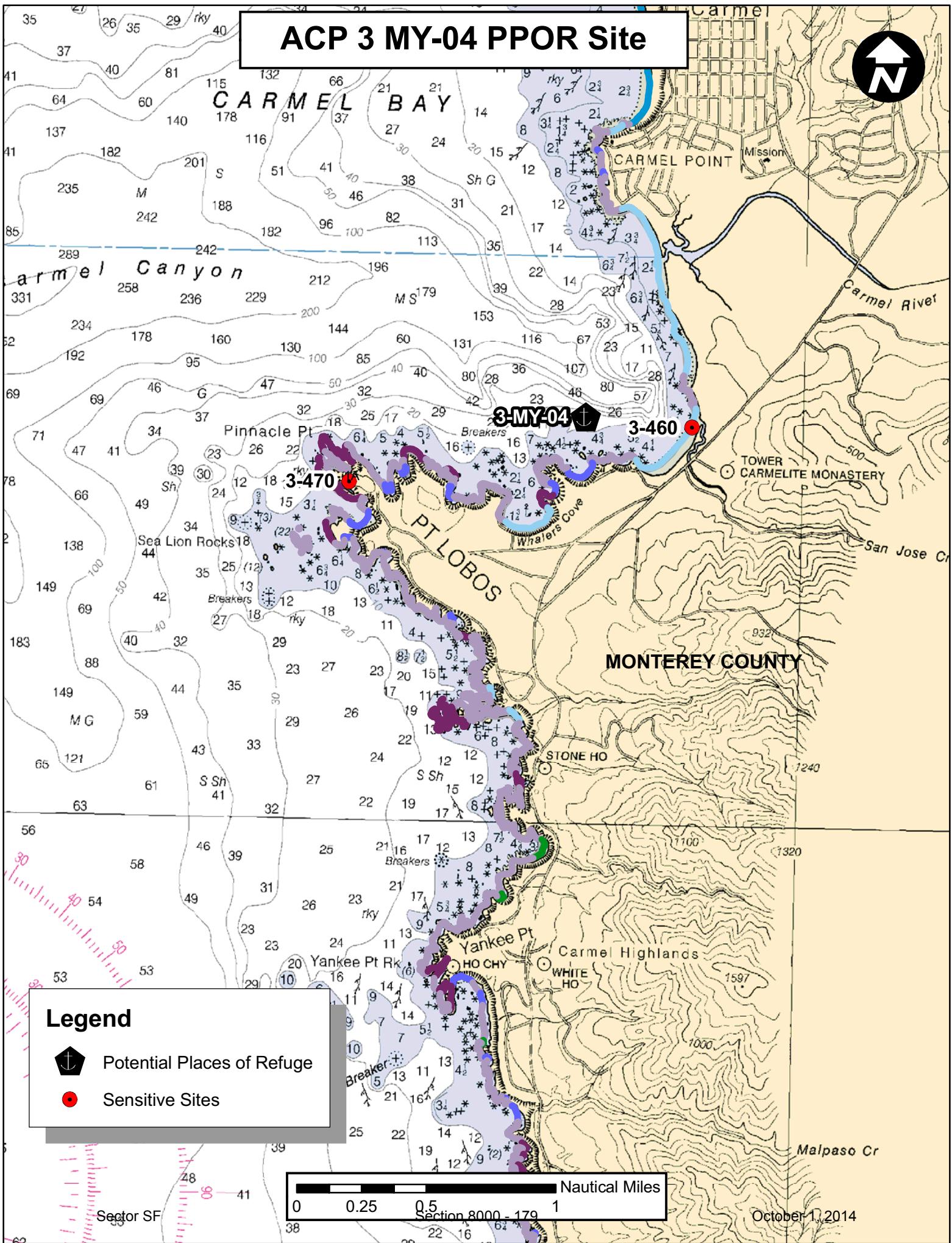
Coast Pilot and Navigation Chart Information

Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigation Approach	Pilot Requirements
N, NW	3.54	Sand	90	45	Weak an	Yes	Minimum	East		<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities				Containment Possibilities:
		Max Size	Min Size	Max Draft Deep	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern				
	Stillwater	1000	45	1000	1000					
	Site Contact/Lessee/Owner:									

ACP 3 MY-04 PPOR Site



PPOR Pre-Incident Information Summary for Monterey County: Carmel Canyon		3-MY-04
Sector SF	Latitude: 36° 31.57' Longitude: 121° 56.04' 121.934 County: Monterey	Type: Anchorage
Location Description:	Undesignated anchorage off coast of Carmel has charted depths to approximately 600+ feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.	
Prevailing winds NW, with currents generally weak and variable.	This area is part of the Monterey Bay National Marine Sanctuary and the Carmel Bay State Marine Conservation Area. Area is known for its high biodiversity and productivity for many shore and ocean based resources. Populations include threatened and endangered species (Brown pelican and Southern sea otter). Numerous ACP-designated sensitive sites are located throughout the area and may be threatened by releases from this PPOR.	
Natural Resource Concerns and Issues for this Place / Site		
Threatened and Endangered Species (TAES):		
Brown pelican (FPD, SE) and Southern sea otter (FT).	Kelp forests, water column habitats. Shoreline and water column critical supporting habitat for all species listed under TAES species list. Area is within the Monterey Bay National Marine Sanctuary.	Critical Habitat for TAES:
Sensitive Non-protected (Non-TAES) Species:		
Many seabirds & marine mammals in the area. Area also includes important subtidal diversity.	This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources. Site is within the Carmel Bay State Marine Conservation Area.	Critical Habitat for Non-protected (Non-TAES) Species:
Subsistence-use Species:		
		Historic and Cultural Resources:
	Point Lobos Reserve contains several historical and cultural upland and submerged sites.	Economic Impact on Maritime Commerce and Shipping:
	Recreational Species and Habitat:	This area has minor influence on maritime commerce and shipping.
	Commercial Fisheries / Species:	Economic Impact on Non-maritime Commerce:
	Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.	The Carmel/Pebble Beach area is a world-wide resort destination that hosts Other Economic Impacts:
Human Health / Safety Concerns and Economic Issues for this Place / Site		
Human Health and Safety:		
Pebble Beach and Carmel communities have a resident population of ~9,000 plus several thousand tourists during peak tourism season.	October 1, 2014	Economic Impact on Commercial Fishing and Aquaculture:
		The most prominent commercial fishery in Carmel Bay is spot prawn. Environmental impacts here could significantly impact this local fishery.
Economic Impact on Recreational Fishing and Marine Tourism:		
These waters are part of the Monterey Bay National Marine Sanctuary		

PPOR Pre-Incident Information Summary for Monterey County: Carmel Canyon

3-MY-04	
Type:	Anchorage
Sector:	Monterey
Latitude:	36° 31.57'
Longitude:	121° 56.04'
Longitude:	121.934

(MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. Carmel Bay is accessed regularly by fishing and dive boat charters and marine wildlife tours.

Stakeholder List for this Place / Site

Name / Title

Organization

Phone

more details

Characteristics and Tactical ConsiderationsPrimary Jurisdictional Contact:
Monterey Bay National Marine Sanctuary

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sites:
Numerous sites in area; closest are: 3-440, 3-448, 3-450, 3-460; Also see ESI Maps 23 - 2
 Is Containment Possible? **Coast Pilot and Navigation Chart Information**

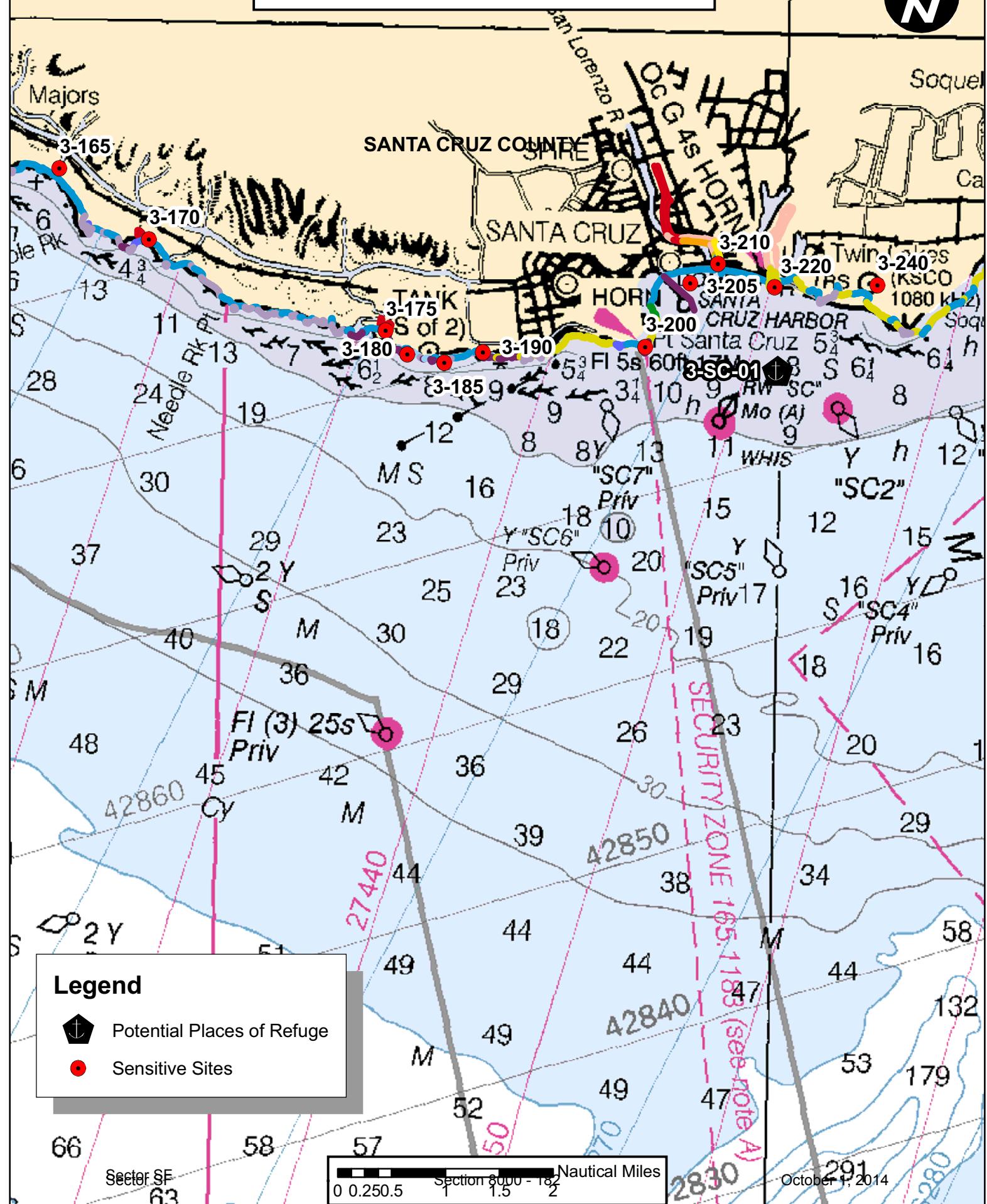
Prevailing Winds	Tidal Range	Bottom Type:	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W 7 knots	3.5	Mud/Sand	288	42	weak an	Common Jul/Minimum				<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities			Containment Possibilities:
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern			
	Carmel Canyon	Deep	1000	42	1000	Carmel Canyon, a deep submarine valley, heads in the SE part of Carmel Bay and has depths of 50 fathoms less than .2 miles from the beach.			

Site Contact/Leasee/Owner:

ACP 3 SC-01 PPOR Site



PPOR Pre-Incident Information Summary for		Santa Cruz County: Santa Cruz Whistle Buoy	3-SC-01
Latitude: 36° 56.89'	36.9481	Longitude: 122° 00.04	122.00007
County: Santa Cruz	Sector SF	Type: Anchorage	
Location Description:		Undesignated anchorage outside of Santa Cruz Harbor have charted depths to approximately 60 feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.	
Prevailing winds W to NW, with currents generally variable and weak.		This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources. Populations include threatened and endangered species such as Brown pelican, Southern sea otter, marbled murrelet, and Snowy plover. Numerous ACP-designated sensitive sites are located throughout the area and may be threatened by releases from this PPOR.	
Natural Resource Concerns and Issues for this Place / Site			
Threatened and Endangered Species (TAES):		Critical Habitat for TAES:	
Brown pelican (FPD, SE), Southern sea otter (FT), marbled murrelet (FT, SE), Snowy plover (FT), Stellar sea lion (FT), Tidewater goby (FE), Steelhead (FT), various FE whale species (blue/fin/humpback).		Kelp forests, water column habitats. Shoreline and water column critical supporting habitat for all species listed under TAES species list. Area is within the Monterey Bay National Marine Sanctuary. Designated critical habitat for snowy plover and tidewater goby in area. San Lorenzo River critical habitat for steelhead.	
Sensitive Non-protected (Non-TAES) Species:		Critical Habitat for Non-protected (Non-TAES) Species:	
Many seabirds & marine mammals in the area. Of special concern are common murres (Jul - Dec) & sooty shearwater (Apr - Sep).		This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources.	
Subsistence-use Species:		Critical Habitat for Subsistence Species:	
Commercial Fisheries / Species:		Historic and Cultural Resources:	
Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.		Historic structures exist within the area as well as various cultural/archaeological resources. These include but are not limited to Santa Cruz Boardwalk & Pier, the Cement Ship, and various other water side structures.	
Recreational Species and Habitat:		Recreational Species and Habitat:	
Salmon, rockfish, groundfish all in area. Consider sea food tainting issues.		Salmon, rockfish, groundfish all in area. Consider sea food tainting issues.	
Human Health / Safety Concerns and Economic Issues for this Place / Site			
Human Health and Safety:		Economic Impact on Maritime Commerce and Shipping:	
55,000 people live within the city of Santa Cruz and 250,000 people live within county lines.		This area has minor influence on maritime commerce and shipping.	

PPOR Pre-Incident Information Summary for Santa Cruz County: Santa Cruz Whistle Buoy	
Latitude: 36° 56.89'	36.9481 Longitude: 122° 00.04' 122.00007
Sector County: Santa Cruz	Type: Anchorage
Economic Impact on Commercial Fishing and Aquaculture:	

Economic Impact on Non-maritime Commerce:

Santa Cruz Harbor shelters a small number of commercial fishing vessels.

Economic Impact on Recreational Fishing and Marine Tourism:

These waters are part of the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. The majority of the beaches from Santa Cruz to Monterey are city, county, or state park beaches that support marine tourism. Surfing is a major recreational sport in the area. Fishing charters and marine wildlife tours operate from Santa Cruz Harbor. Fishing boat rentals operate from Santa Cruz and Capitola wharfs.

Intake for desalination plant at Terrace Point.

The Santa Cruz Boardwalk is a major coastal attraction in the area and any environmental emergency could significantly affect that tourism enterprise.

Other Economic Impacts:

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	Monterey Bay National Marine Sanctuary	Marine Fire Fighting Resources:	Monterey Harbor (fire boat and CG 47' boat)
Approximate Tug Response Time			

List of Nearby Environmentally Sensitive Sites:

Numerous sites in area; closest are 3-205 & 3-210. Also see ESI Maps 27 - 29.

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
W to NW	~ 5 ft.	Sandy	60	45	Variable	NW swell, 4 ft.	Common Jul Very limited	S/SE	

Specific Site Details

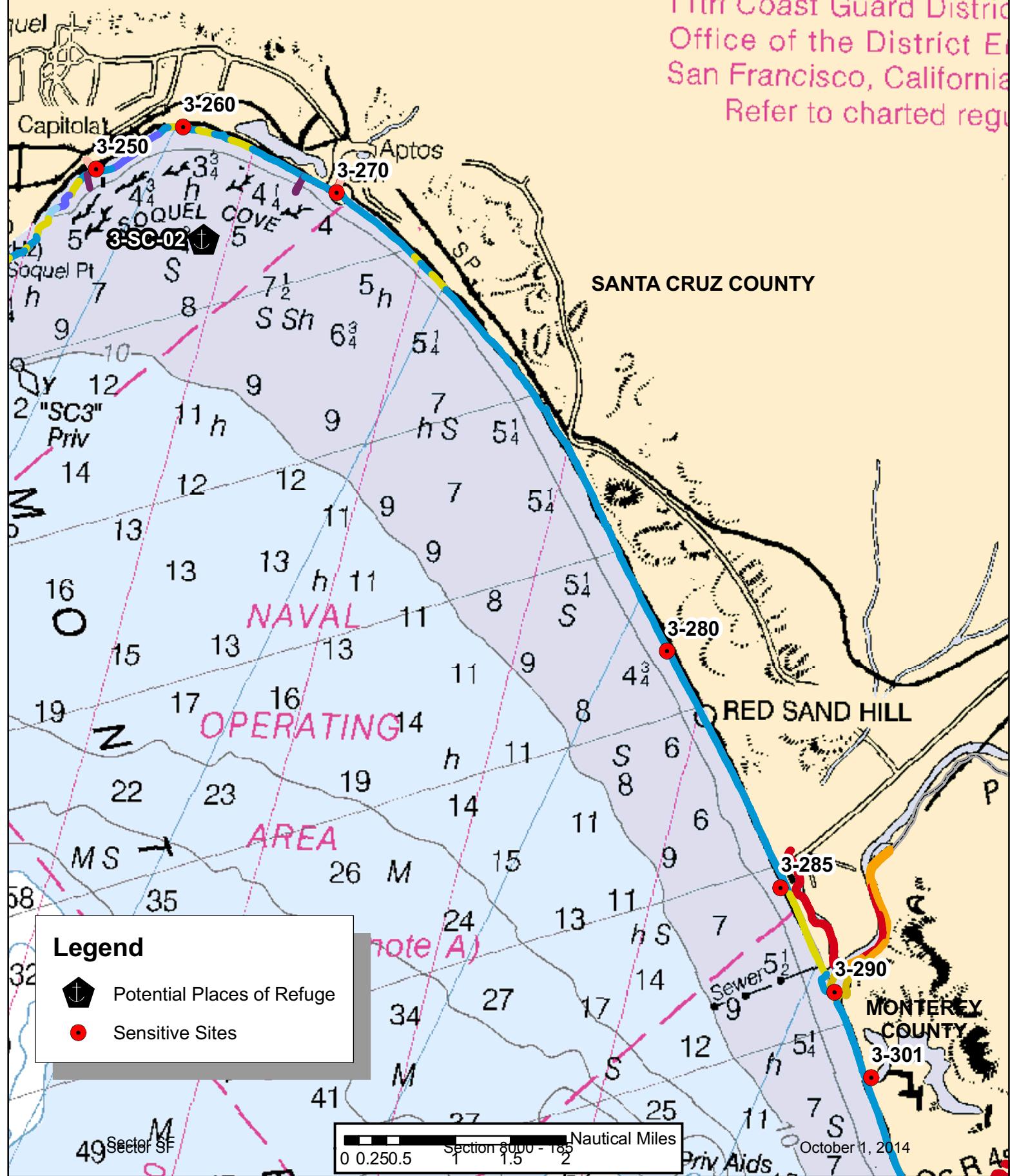
Site ID	Site Name	Vessel Capacities	Site Capacities and Facilities
	Santa Cruz Whistle Buoy	Max Size Deep	Facilities, capabilities, and any other issues or concern This area can be used either as an anchorage or possibly as a mooring location on the nearby navigation buoy.

Site Contact/Lessee/Owner:	Santa Cruz Port District
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ACP 3 SC-02 PPOR Site



Navigation regulation
st Pilot 7. Additions
d in the Notice Ma
regulations may be obtain
11th Coast Guard District
Office of the District E
San Francisco, California
Refer to charted regu



PPOR Pre-Incident Information Summary for		Santa Cruz County: Soquel Cove	3-SC-02
Latitude: 36° 57.70'	36.9617	Longitude: 121° 55.89	121.9315
County: Santa Cruz			Type: Anchorage
Location Description:	Undesignated anchorage outside of Santa Cruz Harbor have charted depths to approximately 60 feet (MLLW). Area is relatively unprotected and provides limited protection from severe storms.		
Precipitation:			
Prevailing winds W to NW, with currents generally variable and weak.			
This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources. Populations include threatened and endangered species such as Brown pelican, Southern sea otter, marbled murrelet, and Snowy plover. Numerous ACP-designated sensitive sites are located throughout the area and may be threatened by releases from this PPOR.			
Natural Resource Concerns and Issues for this Place / Site			
Threatened and Endangered Species (TAES):			
Brown pelican (FPD, SE), Southern sea otter (FT), marbled murrelet (FT, SE), Snowy plover (FT), Stellar sea lion (FT), Tidewater goby (FE), Steelhead (FT), various FE whale species (blue/fin/humpback).			Critical Habitat for TAES: Kelp forests, water column habitats. Shoreline and water column critical supporting habitat for all species listed under TAES species list. Area is within the Monterey Bay National Marine Sanctuary. Designated critical habitat for snowy plover and tidewater goby in area. San Lorenzo River critical habitat for steelhead.
Sensitive Non-protected (Non-TAES) Species:			Critical Habitat for Non-protected (Non-TAES) Species: This area is part of the Monterey Bay National Marine Sanctuary and is known for its high biodiversity and productivity for many shore and ocean based resources.
Many seabirds & marine mammals in the area. Of special concern are common murres (Jul - Dec) & sooty shearwater (Apr - Sep).			Critical Habitat for Subsistence Species: Recreational Species and Habitat: Historic and Cultural Resources: Commercial Fisheries / Species:
Subsistence-use Species:			Salmon, rockfish, groundfish all in area. Consider sea food tainting issues. This area has minor influence on maritime commerce and shipping. Economic Impact on Non-maritime Commerce: Economic Impact on Commercial Fishing and Aquaculture:
Essential Fish Habitat:			
Much of the area is designated as EFH. Also, local kelp forests & lagoon habitats serve as critical nursery & adult habitat for many species			
Commercial Fisheries / Species:			
Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.			
Human Health / Safety Concerns and Economic Issues for this Place / Site			
Human Health and Safety:			
250,000 people live within the Santa Cruz county lines.			Economic Impact on Maritime Commerce and Shipping: This area has minor influence on maritime commerce and shipping. Economic Impact on Non-maritime Commerce: Economic Impact on Commercial Fishing and Aquaculture:
Section 8000 - 186			October 1, 2014

PPOR Pre-Incident Information Summary for Santa Cruz County: Soquel Cove

3-SC-02	
Type:	Anchorage
Latitude:	36° 57.70'
Longitude:	121° 55.89' 121.9315
County:	Santa Cruz
Economic Impact on Recreational Fishing and Marine Tourism:	

These waters are part of the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS is an international tourist attraction and supports a high level of marine tourism. The majority of the beaches from Santa Cruz to Monterey are city, county, or state park beaches that support marine tourism. Surfing is a major recreational sport in the area. Fishing charters and marine wildlife tours operate from Santa Cruz Harbor. Fishing boat rentals operate from Santa Cruz and Capitol wharfs.

Stakeholder List for this Place / Site

Name / Title Organization

Phone more details

Characteristics and Tactical Considerations	
Primary Jurisdictional Contact:	Monterey Bay National Marine Sanctuary
Approximate Tug Response Time	
List of Nearby Environmentally Sensitive Sites:	

Coast Pilot and Navigation Chart Information	
Prevailing Winds	Tidal Range
W 7 knots	~ 5 ft.
Bottom Type:	
	Sandy
Max Water Depth	Min Water Depths
48	30
Sea Conditions	Fog
Variable	Shelter From Severe Storms
NW swell, 4ft.	Common Jul Very limited S/SE
Navigational Approach	

Specific Site Details

Site ID	Site Name	Vessel Capacities				Site Capacities and Facilities	
		Max Size	Min Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Soquel Cove	Deep	1000	48	1000		
Site Contact/Lessee/Owner:							

Stakeholders:**3-MY-01**

Type	Name/Title	Organization	Phone
T		Elkhorn Slough National Estuarine Reserve (NOAA)	831-728-2822
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T		CA Dept. of Fish & Game (Moss Landing Wildlife Area)	831-649-2870
T		Moss Landing Harbor District	831-633-2461
T		Monterey County	831-755-5115

3-MY-02

Type	Name/Title	Organization	Phone
T	City Manager	City of Monterey	831-646-3760
T	City Manager	City of Pacific Grove	831-648-3106
T	City Manager	City of Seaside	831-899-6700
	City Administrator	Sand City	831-394-6700 xt. 12
	City Manager	City of Marina	831-884-1278
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T		Monterey Bay Aquarium	831-648-4800
T		Monterey County	831-755-5115

3-MY-03

Type	Name/Title	Organization	Phone
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T	City Administrator	City of Carmel	831-620-2000
T		Monterey County	831-755-5115
T	Susan Ashcraft, MPA Project Supervisor	CA Dept. of Fish & Game (Carmel Bay SMCA)	916-651-7670

3-MY-04

Type	Name/Title	Organization	Phone
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T	City Administrator	City of Carmel	831-620-2000
T		Monterey County	831-755-5115
T	Susan Ashcraft, MPA Project Supervisor	CA Dept. of Fish & Game (Carmel Bay SMCA)	916-651-7670

3-SC-01

Type	Name/Title	Organization	Phone
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T	City Manager	City of Santa Cruz	831-420-5010
T		Santa Cruz Port District	831-475-6161
T	Administrative Officer	Santa Cruz County	831-454-3420

3-SC-02

Type	Name/Title	Organization	Phone
T	Scott Kathey, MBNMS Enforcement Coordinator	Monterey Bay National Marine Sanctuary (NOAA)	831-647-4251
T	Administrative Officer	Santa Cruz County	831-454-3420
T	Dispatch	CA Dept. of Parks & Recreation	916-358-1300
T	City Manager	City of Capitola	831-475-7300

8300 Salvage and Lightering

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8400 Reserve