
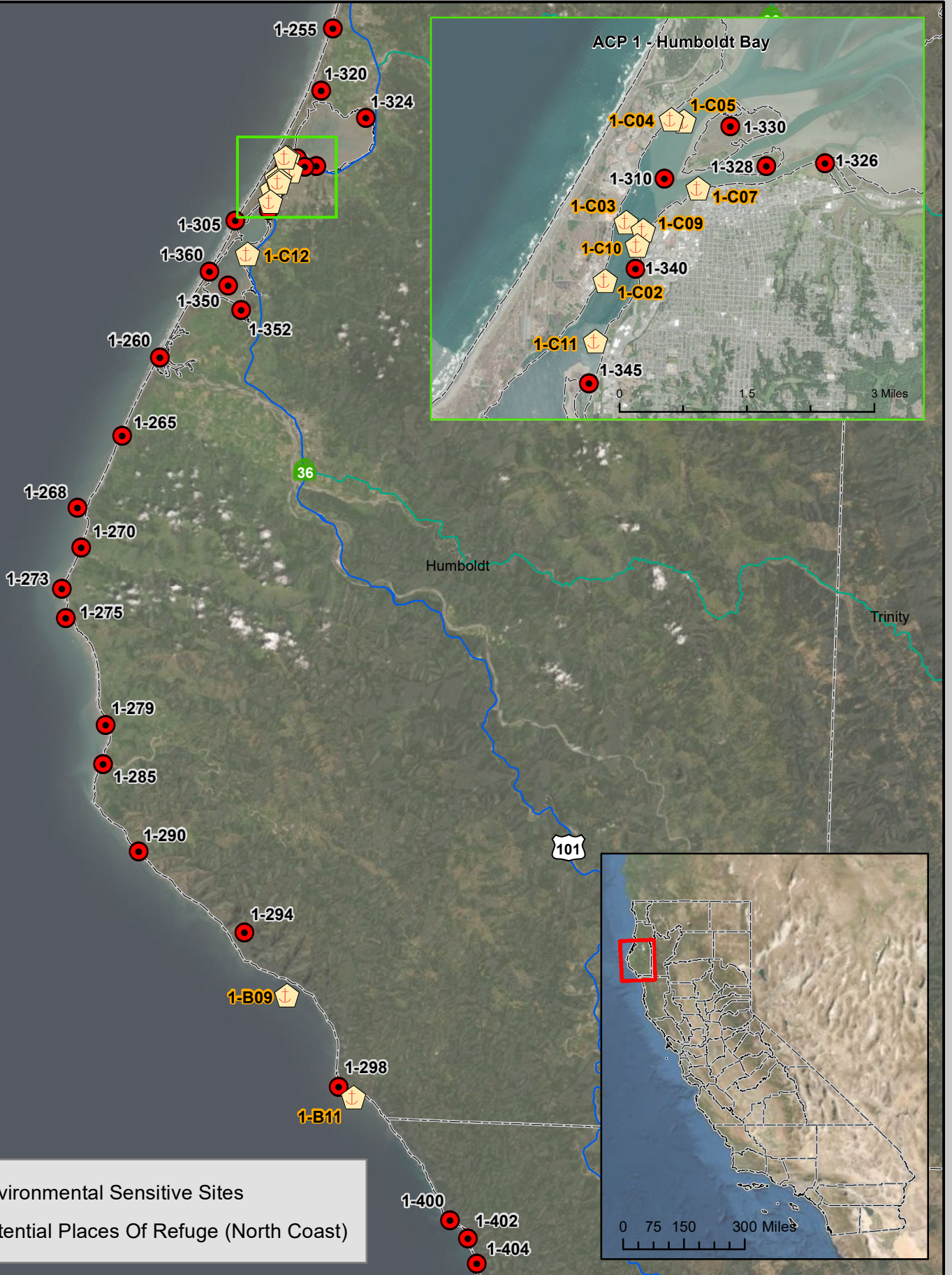
 Potential Places Of Refuge (North Coast)
 Environmental Sensitive Sites

ACP 1 - Del Norte / Humboldt Co. Environmental Sensitive Sites and Potential Places of Refuge

N

0 2.5 5 10 Miles

0 3.75 7.5 15 Kilometers

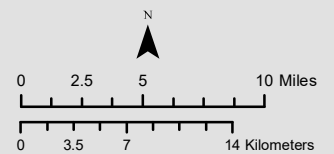


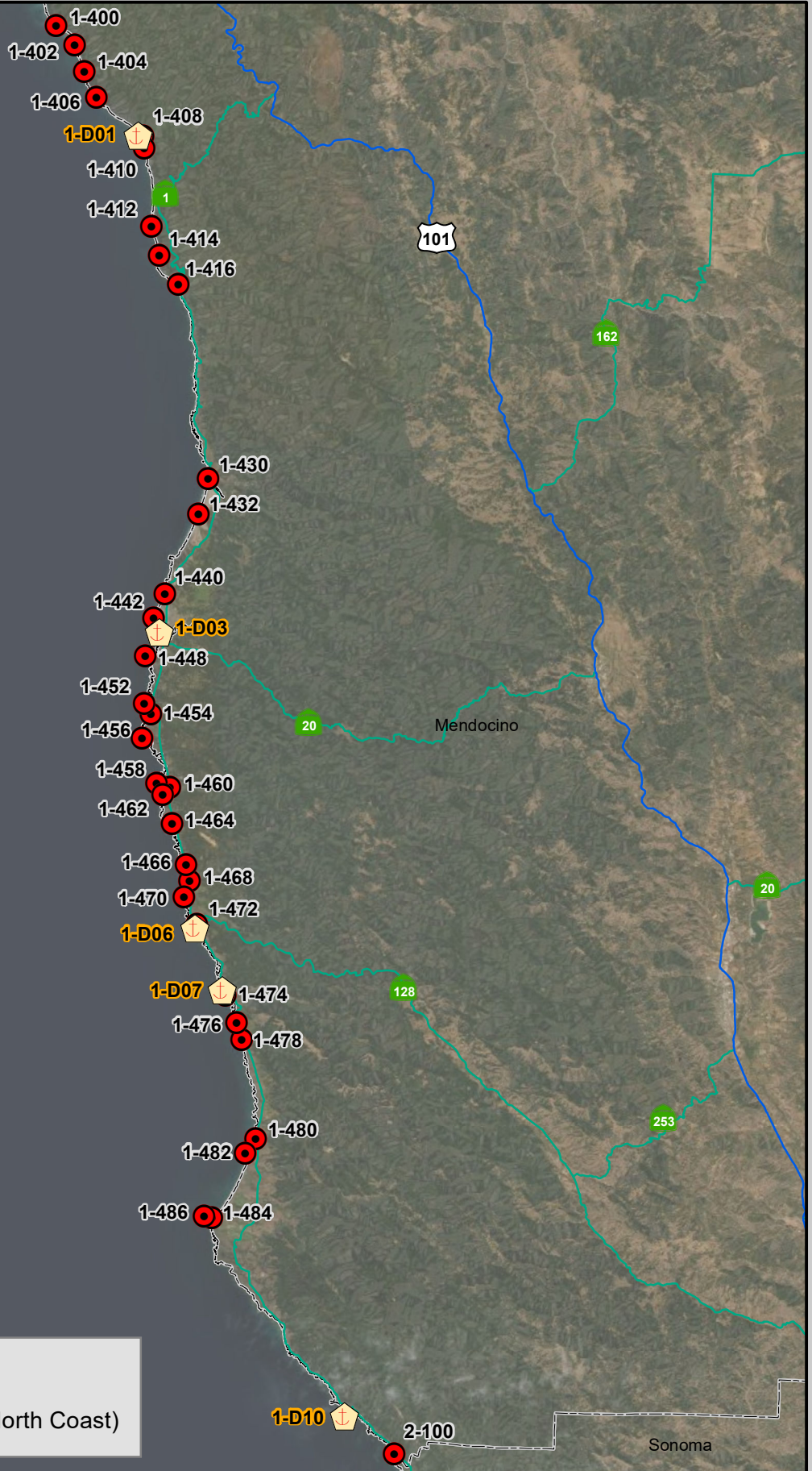
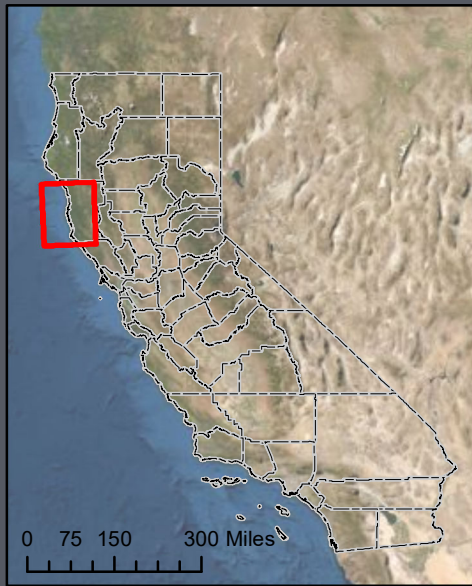
Calif. Dept. of Fish and Wildlife
Office of Spill Prevention and Response



Data Source: OSPR GIS
Requestor: C. Shinn
Author: G. Ewing
Date Created: 5/19/2022

NAD_1983_California_Teale_Albers


ACP 1 - Humboldt County Environmental Sensitive Sites and Potential Places of Refuge

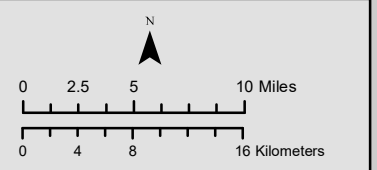




-  Environmental Sensitive Sites
-  Potential Places Of Refuge (North Coast)

ACP 1 - Mendocino County Environmental Sensitive Sites and Potential Places of Refuge


Calif. Dept. of Fish and Wildlife
 Office of Spill Prevention and Response
 Data Source: OSPR GIS NAD_1983_California_Teale_Albers
 Requestor: C. Shinn
 Author: G. Ewing
 Date Created: 5/20/2022



PPOR Pre-Incident Information Summary for Cresent City Outer Anchorage: Off Red # 2 Whistle Buoy			1-A02
Latitude: 414300	124.2 Longitude: 124118	124.1967	Type: Anchorage
County: Del Norte			

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:

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.

Critical Habitat for TAES:

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

St. Georges reef to the north is an important fisheries area.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

No offshore historic or cultural issues. Prince Isle near the mouth of the Smith River is culturally important to Native Americans.

Recreational Species and Habitat:

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

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

PPOR Pre-Incident Information Summary for			Crescent City Outer Anchorage: Off Red # 2 Whistle Buoy			1-A02
Latitude: 414300		124.2	Longitude: 124118		124.1967	Type: Anchorage
County: Del Norte						

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Marine Fire Fighting Resources:

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	Pilot Requirements
			180							<input type="checkbox"/>

Specific Site Details

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

PPOR Pre-Incident Information Summary for Trinidad Bay: Trinidad Bay Offshore Anchorage

1-B04

Latitude: 410260 124.14 Longitude: 124086 124.1446

Type:
Anchorage

County: Humboldt

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:

Many non -TAES birds forage in these offshore waters and use numerous offshore rocks for nesting.

Subsistence-use Species:

Essential Fish Habitat:

Management Plans for pelagic finfish, salmon and ground fish all identify this as Essential Fish Habitat.

Commercial Fisheries / Species:

There is a small commercial crab fishing fleet, but most of the local fleet is out of Humboldt Bay to the south.

Critical Habitat for TAES:

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

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Trinidad head is an important Native American site.

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:

Stakeholder List for this Place / Site

Name / Title

Organization

Phone

more details

Characteristics and Tactical Considerations

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
 County: Humboldt

Type:
 Anchorage

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

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
			40	34					

Pilot Requirements

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Trinidad Bay Offshore Anchorage	Deep				This site is directly south of Prisoner Rock and east of Pilot Rock. 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

1-B09

Latitude: 400616 124.14 Longitude: 124083 124.1388

Type:
Anchorage

County: Humboldt

Location Description:

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:

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

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:

Abalone, salmon, 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 Humboldt County: Delgada Canyon			1-B09
Latitude: 400616 124.14 Longitude: 124083 124.1388			Type:
County: Humboldt			Anchorage

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	Pilot Requirements
			600	180						<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Facilities, capabilities, and any other issues or concern	Containment Possibilities:
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face				
	Delgada Canyon	Deep						-Steeper slop on north side of canyon. -Approximately 6 miles north of Point Delgada -No shoreside access	
Site Contact/Leasee/Owner: <input style="width: 800px;" type="text"/>									

PPOR Pre-Incident Information Summary for Humboldt County: Shelter Cove

1-B11

Latitude: 400100 124.06 Longitude: 124036 124.06

Type:
Anchorage

County: Humboldt

Location Description:

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.

Subsistence-use Species:

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

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:

Abalone, salmon, 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 Humboldt County: Shelter Cove

1-B11

Latitude: 400100 124.06 Longitude: 124036 124.06

Type:
Anchorage

County: Humboldt

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	Pilot Requirements
			72							<input type="checkbox"/>

Specific Site Details

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

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

1-C02

Latitude: 404730 124.19 Longitude: 124116 124.1947

Type:

County: Humboldt

Dockage

Location Description:

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

California bown 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.

Critical Habitat for TAES:

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.

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.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant cultural site for Native Americans.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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

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

Human Health and Safety:

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

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 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 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

1-C02

Latitude: 404730 124.19 Longitude: 124116 124.1947

Type:

County: Humboldt

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 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
		Silt	38							<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Fairhaven Terminal	Deep	950		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 124.19 Longitude: 124114 124.1906

Dock

Type:

County: Humboldt

Dockage

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 trout, (FSS) and coastal cutthroat trout (FT). Salmon and trout spawning runs August through June, juvenile/smolts run 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. Mustrat and beaver use marsh areas.

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

Management plans for pelagic finfish, salmon and ground fish identify this as Essential Fish Habitat.

Commercial Fisheries / Species:

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

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:

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

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.

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) in east side of Bay.

Other Economic Impacts:

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

Type:

County: Humboldt

Dockage

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.

Critical Habitat for TAES:

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.

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

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

Subsistence-use Species:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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 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 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 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

1-C05

Latitude: 404897 124.18 Longitude: 124107 124.1786

Type:
Anchorage

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/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.

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 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:

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.

Economic Impact on Maritime Commerce and Shipping:

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:

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

1-C05

Latitude: 404897 124.18 Longitude: 124107 124.1786

Type:
Anchorage

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 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 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		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	ContainmentPossibilities:
	Samoa Turning Basin	Deep	950			Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 ton, 100'	
Site Contact/Leasee/Owner:							

PPOR Pre-Incident Information Summary for Humboldt Bay: Commercial Street Dock

1-C07

Latitude: 404828 124.17 Longitude: 124104 124.1747

Type:

County: Humboldt

Dockage

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.

Critical Habitat for TAES:

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.

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

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

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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

Human Health and Safety:

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

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 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 Non-maritime Commerce:

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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

PPOR Pre-Incident Information Summary for Humboldt Bay: Commercial Street Dock

1-C07

Latitude: 404828 124.17 Longitude: 124104 124.1747
 County: Humboldt

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: 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
			26							<input checked="" type="checkbox"/>

Specific Site Details

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

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

1-C09

Latitude: 404784 124.19 Longitude: 124112 124.1867

Type:

County: Humboldt

Dockage

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.

Critical Habitat for TAES:

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.

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

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

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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 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 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 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

1-C09

Latitude: 404784 124.19 Longitude: 124112 124.1867

Type:

County: Humboldt

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

List of Nearby Environmentally Sensitive Sites: ACP 1: 305, 310, 320, 324, 326, 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
			35							<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Schneider Dock	Deep	950		1000	Boat hoist at Fields Landing boatyard (US EKA FLC12); 150 tons, 100'.	
Site Contact/Leasee/Owner:		Pacific Affiliates 707-445-3001					

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

1-C10

Latitude: 404768 124.19 Longitude: 124112 124.1878

Type:

County: Humboldt

Dockage

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.

Critical Habitat for TAES:

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.

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

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

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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 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 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 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

1-C10

Latitude: 404768 124.19 Longitude: 124112 124.1878

Type:

County: Humboldt

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 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		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Sierra Pacific/14th Street	Deep	600		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

1-C11

Latitude: 404668 124.2 Longitude: 124117 124.1963

Type:

County: Humboldt

Dockage

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.

Critical Habitat for TAES:

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.

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

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

Subsistence-use Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Critical Habitat for Subsistence Species:

Some Native American subsistence gathering of seaweeds and invertebrates.

Essential Fish Habitat:

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

Historic and Cultural Resources:

Indian Island is a significant Native American cultural site.

Commercial Fisheries / Species:

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

Recreational Species and Habitat:

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 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 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 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.

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

1-C12

Latitude: 404396 124.22 Longitude: 124131 124.2192
County: Humboldt

Type:
Dockage

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.

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:

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.

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: Fields Landing - Bay Forest Products

1-C12

Latitude: 404396 124.22 Longitude: 124131 124.2192
 County: Humboldt

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, 326, 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
			26							<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	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					

PPOR Pre-Incident Information Summary for Mendocino County: Usal Beal

1-D01

Latitude: 394981 123.86 Longitude: 123513 123.8564

Type:
Anchorage

County: Mendocino

Location Description:

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:

Many

Subsistence-use Species:

Essential Fish Habitat:

Essential Fish Habitat for pelagic finfish, salmon, ground fish.

Commercial Fisheries / Species:

Nearshore rockfish, salmon, crab.

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, rockfish, salmon, 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:

State Parks, Eel River Distric 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

1-D01

Latitude: 394981 123.86 Longitude: 123513 123.8564

Type:
Anchorage

County: Mendocino

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
			55	30					

Pilot Requirements
<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	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:

PPOR Pre-Incident Information Summary for Mendocino County: Fort Bragg- Noyo Bay

1-D03

Latitude: 392567 123.81 Longitude: 123487 123.813

Type:
Anchorage

County: Mendocino

Location Description:

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:

Many

Subsistence-use Species:

Essential Fish Habitat:

Essential Fish Habitat for pelagic finfish, salmon, ground fish.

Commercial Fisheries / Species:

Nearshore rockfish, salmon, crab.

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:

Abalone, rockfish, salmon, 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: Noyo Harbor District 707-964-4719

Marine Fire Fighting Resources:

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
Latitude: 392567 123.81 Longitude: 123487 123.813				Type: Anchorage
County: Mendocino				

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	Pilot Requirements
			40	12				No protection		<input type="checkbox"/>

Specific Site Details

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

PPOR Pre-Incident Information Summary for Mendocino County: Navarro Head

1-D06

Latitude: 391132 123.76 Longitude: 123457 123.7632

Type:
Anchorage

County: Mendocino

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)

Critical Habitat for TAES:

Sensitive Non-protected (Non-TAES) Species:

Many

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

Subsistence-use Species:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

Essential Fish Habitat for pelagic finfish, salmon, groundfish.

Historic and Cultural Resources:

Commercial Fisheries / Species:

Nearshore rockfish, salmon, crab.

Recreational Species and Habitat:

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:

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

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: Navarro Head			1-D06
Latitude: 391132 123.76 Longitude: 123457 123.7632			Type: Anchorage
County: Mendocino			

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	Pilot Requirements
				30				From NW wind		<input type="checkbox"/>

Specific Site Details

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

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

1-D07

Latitude: 390835 123.73 Longitude: 123439 123.7318

Type:
Anchorage

County: Mendocino

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

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

1-D07

Latitude: 390835 123.73 Longitude: 123439 123.7318

Type:
Anchorage

County: Mendocino

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
			30	20					

Pilot Requirements

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Max Lgth	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	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

1-D10

Latitude: 384783 123.59 Longitude: 123352 123.5872

Type:
Anchorage

County: Mendocino

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:

Essential Fish Habitat:

Essential Fish Habitat for pelagic finfish, salmon, ground fish.

Commercial Fisheries / Species:

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, rockfish, salmon, 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: Haven's Anchorage

1-D10

Latitude: 384783 123.59 Longitude: 123352 123.5872

Type:
Anchorage

County: Mendocino

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
			60						

Pilot Requirements

Specific Site Details

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

ACP 2 – San Francisco Bay and Delta

Pre-Incident Summary Background

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.

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*

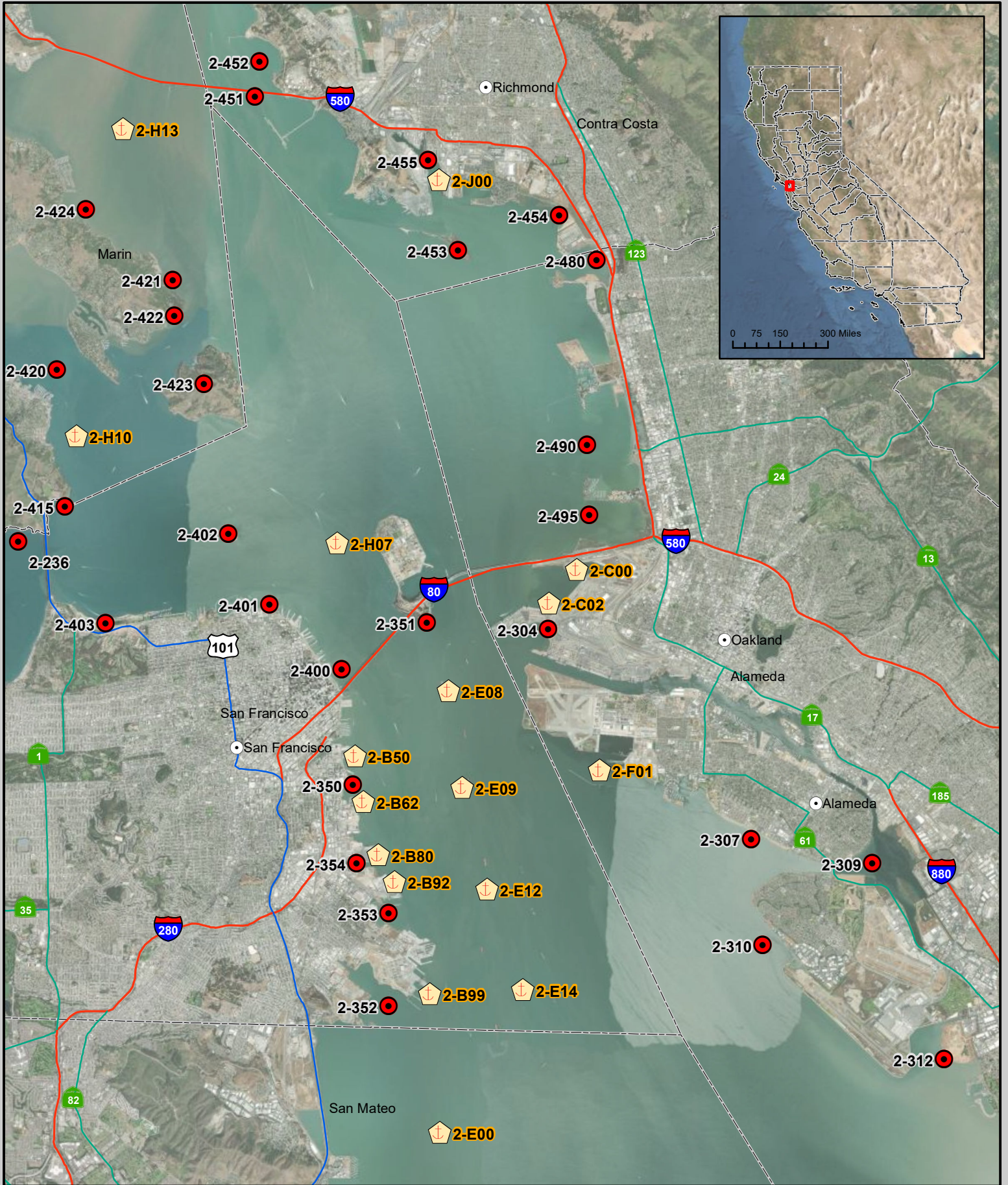
http://www.uscg.mil/directives/ci/16000-16999/CI_16451_9.pdf

(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

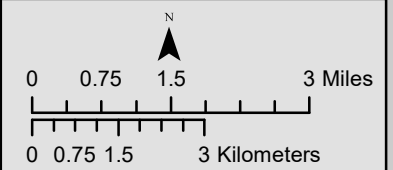
Potential Places of Refuge Site Index

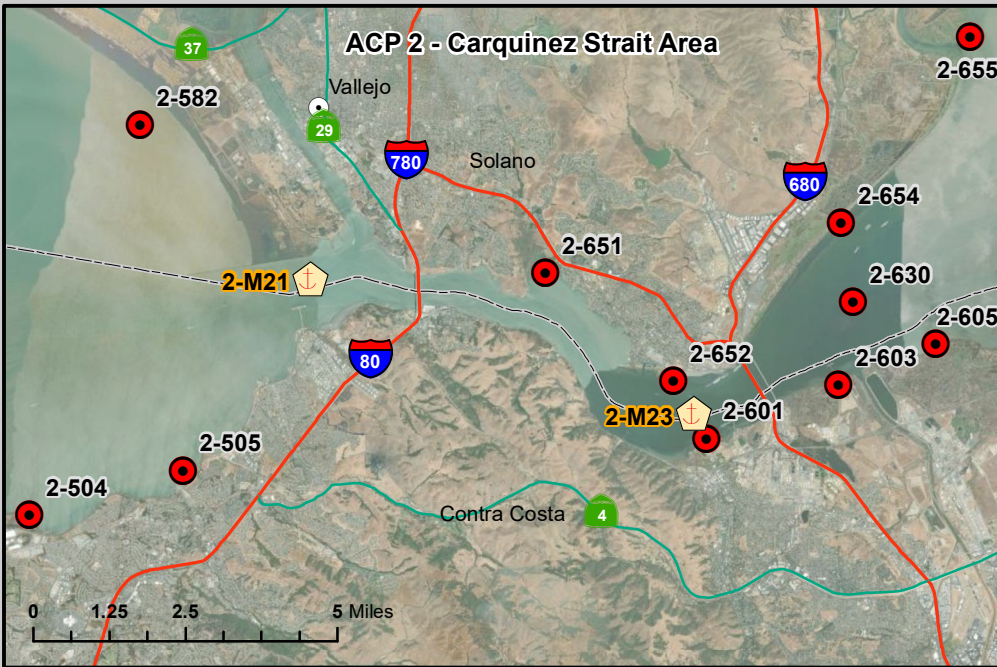
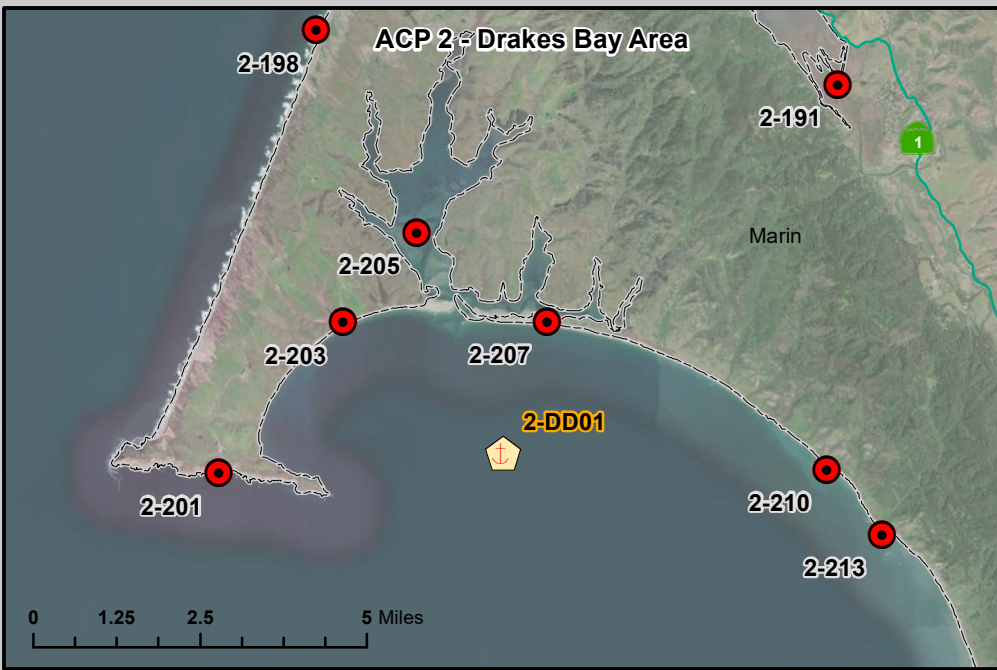
Site #	Place Name	Site Name	Co.	Deg/Min/Sec	
				N	W
2-B50	San Francisco South	Pier 50	SF	37 46 25	-122 22 58
2-B62	San Francisco South	SF Dry Dock	SF	37 45 45	-122 22 48
2-B80	San Francisco South	Army Street Terminal/Pier 80	SF	37 45 00	-122 22 36
2-B92	San Francisco South	Piers 92/94/96	SF	37 44 36	-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



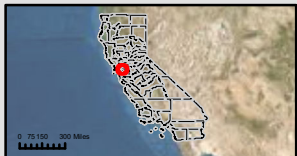
ACP 2 - Central / South SF Bay Environmental Sensitive Sites and Potential Places of Refuge


Calif. Dept. of Fish and Wildlife
 Office of Spill Prevention and Response
 Data Source: OSPR GIS
 Requestor: C. Shinn
 Author: G. Ewing
 Date Created: 5/20/2022
 NAD_1983_California_Teale_Albers






ACP 2 Environmental Sensitive Sites and Potential Places of Refuge





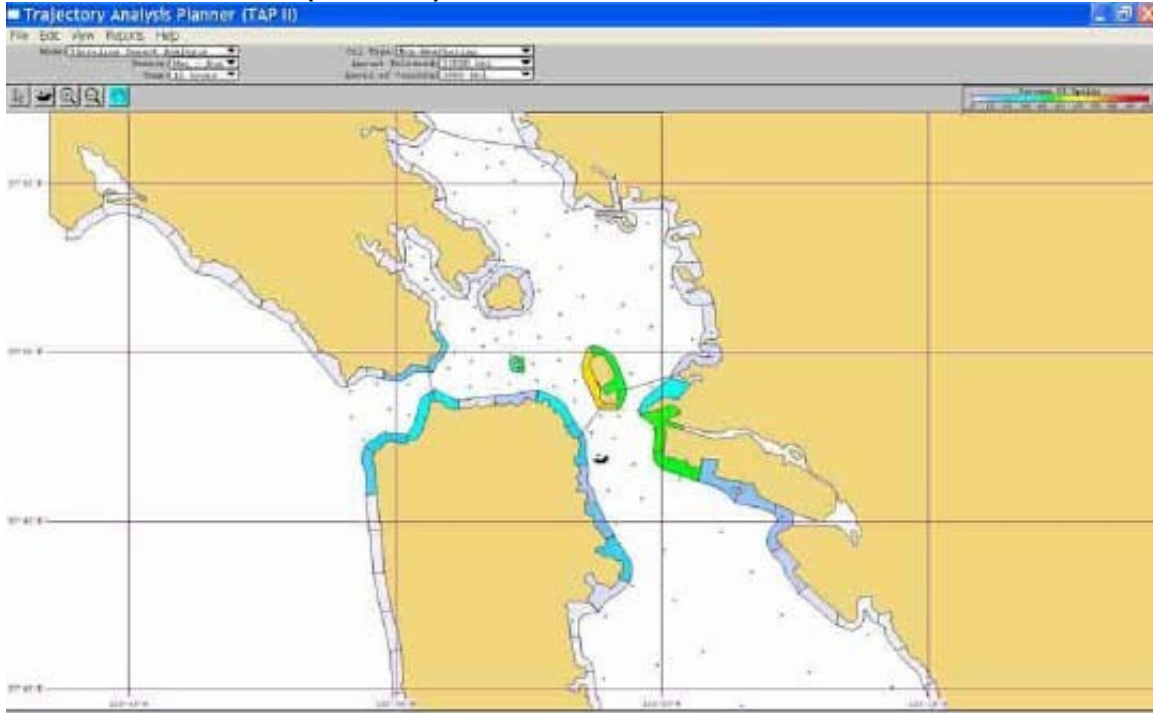
N

- 
Environmental Sensitive Sites
- 
Potential Places of Refuge

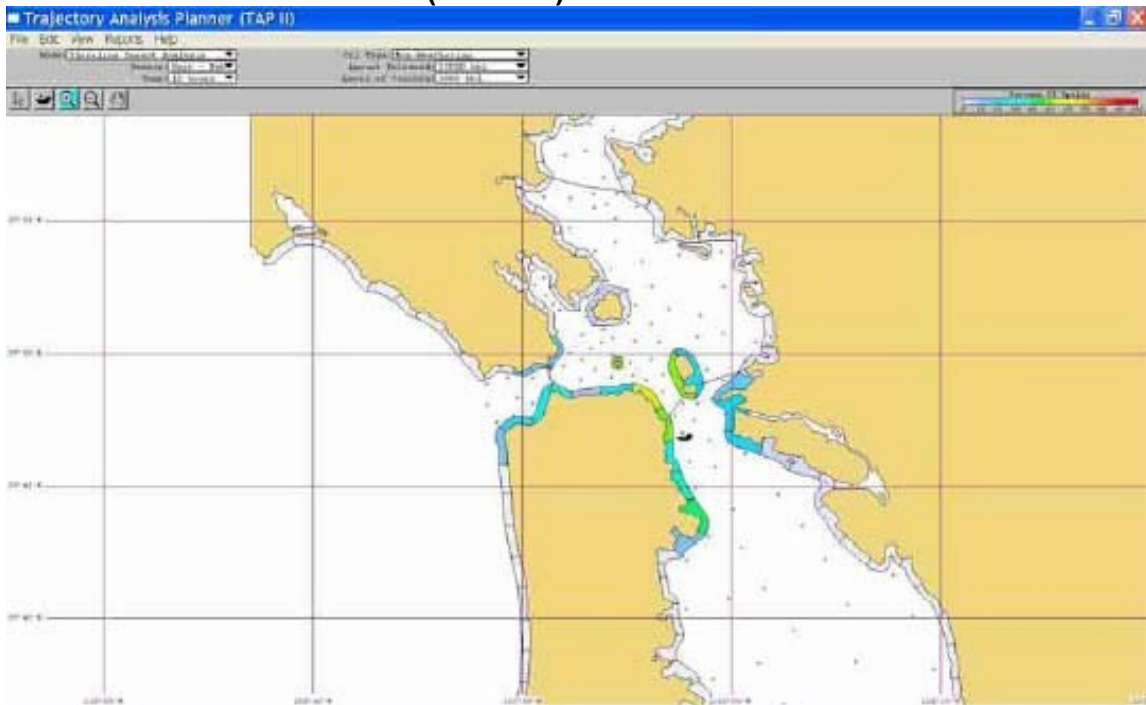
TRAJECTORY ANALYSIS PLANNER (TAP Model)

Location: 2-B50 (Pier 50)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaSan Francisco South: Pier 50

2-B50

Latitude 37° 46. 122.4 **Longitude** 122° 2 122.383

Type:

County San Francisco

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 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, 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:

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:

PPOR Pre-Incident Information SummaSan Francisco South: Pier 50**2-B50**

Latitude 37° 46. 122.4 Longitude 122° 2 122.383

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 Safet

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 Commissio	(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 Ti 1 HOUR

PPOR Pre-Incident Information SummaSan Francisco South: Pier 50			2-B50
Latitude 37° 46. 122.4 Longitude 122° 2 122.383			Type:
County San Francisco			Dockage

List of Nearby Environmentally Sensitive Sit 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"/>

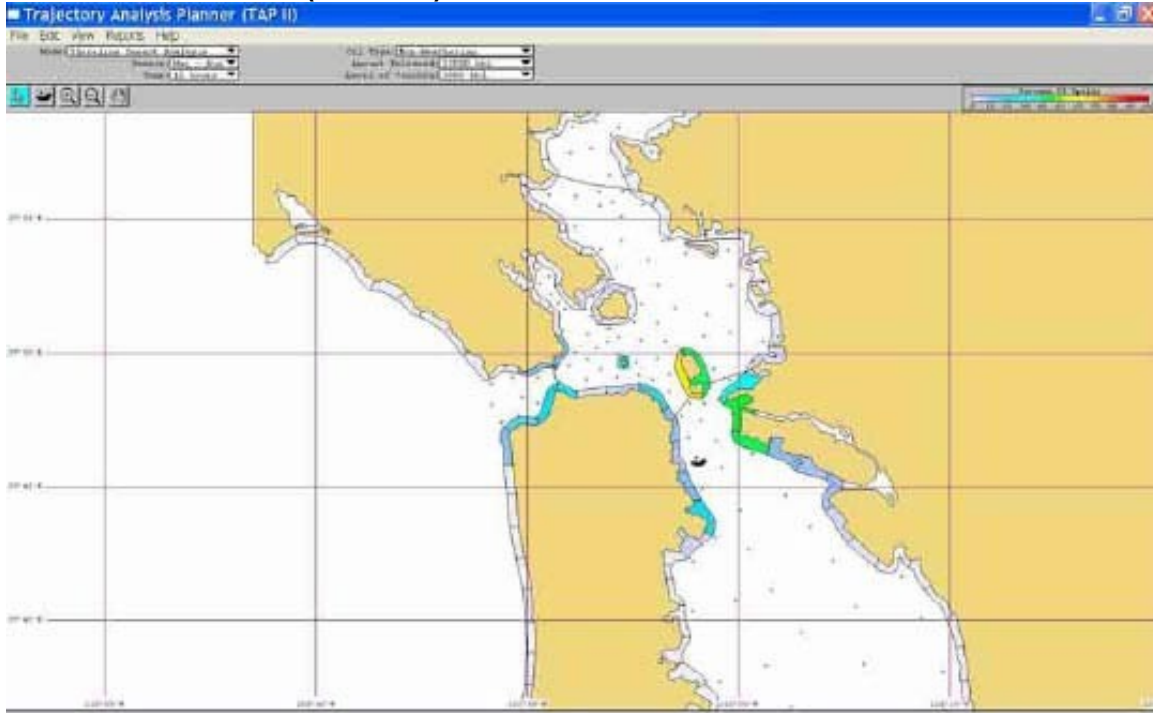
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
50	Pier 50	Deep	1100		1000	<p>1000 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE.</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.</p>	<p>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.</p>

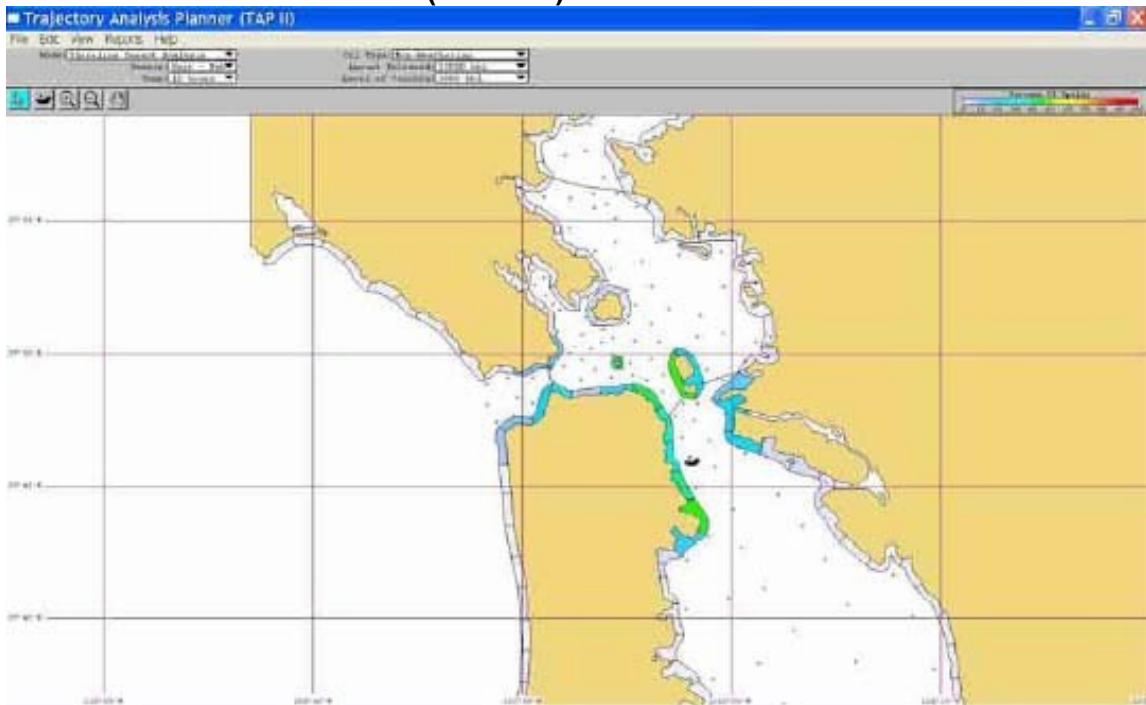
Site Contact/Leasee/Owner:

TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-B62 (SF Dry Dock)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



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

2-B62

Latitude 37° 45. 122.4 **Longitude** 122° 2 122.38

Type:

County San Francisco

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 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, 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 Safet

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 Commissio	(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

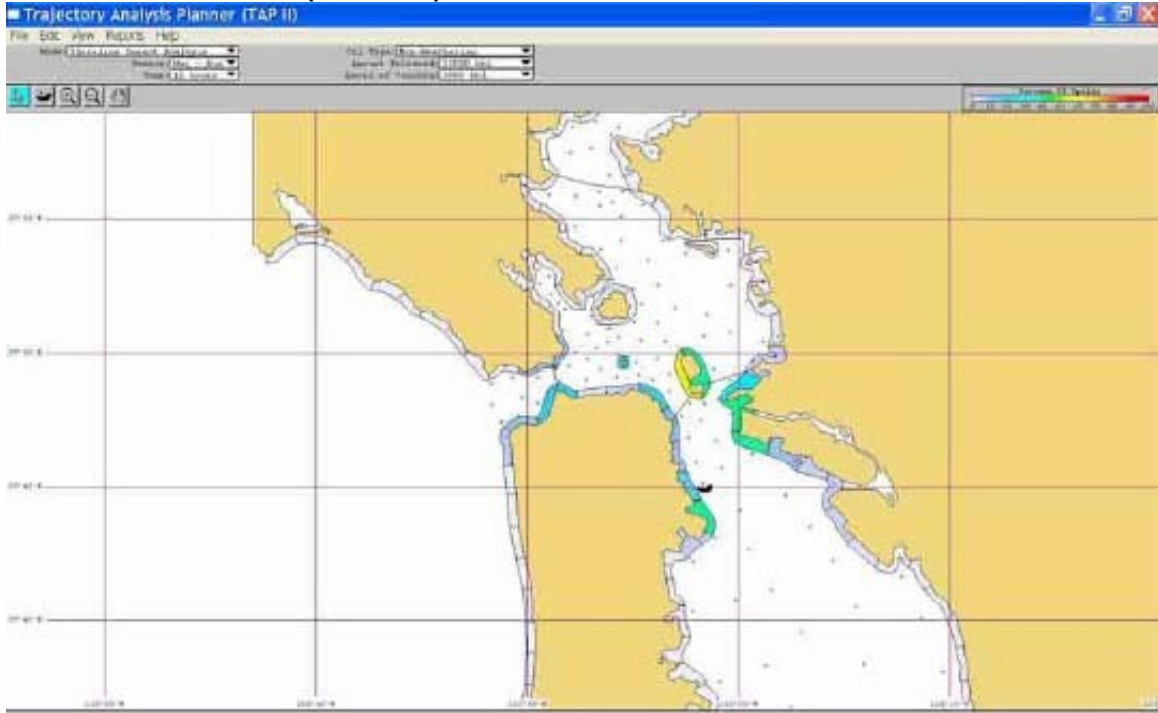
Dockage

Specific Site Details

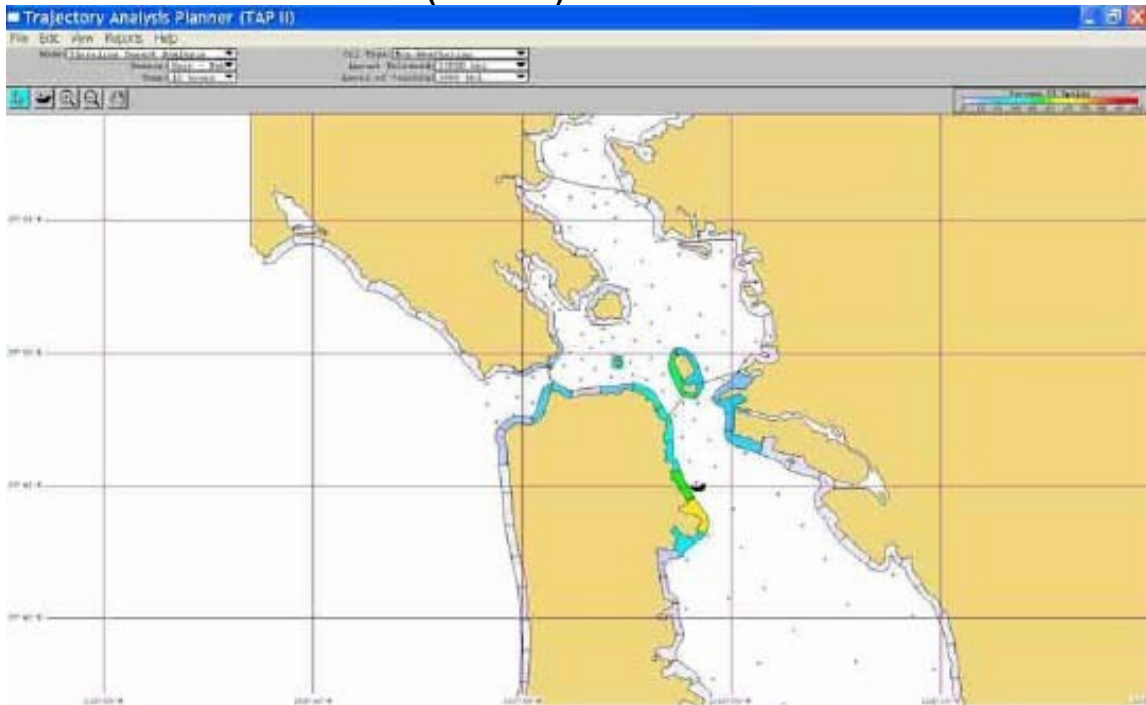
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
62	SF Dry Dock	Deep		36	1200	<p>2 DRYDOCKS: 800 X 150 & 528 X 84; and 2 piers at 528 X 84 each pier; 1200 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE.</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.</p>	<p>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 but possible at the SF Dry Dock. Side tied vessels at Pier 50 enhance the likelihood of secondary confinement.</p>
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 SummaSan Francisco South: Army Street Terminal Pier 80

2-B80

Latitude 37° 45' 122.4 **Longitude** 122° 2 122.377

Type:

County San Francisco

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 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, 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:

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:

PPOR Pre-Incident Information SummaSan Francisco South: Army Street Terminal Pier 80			2-B80
Latitude 37° 45' 122.4	Longitude 122° 2 122.377		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 Safet

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 Commissio	(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 Jursidictional 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 Ti	1 HOUR	

PPOR Pre-Incident Information SummaSan Francisco South: Army Street Terminal Pier 80		2-B80
Latitude 37° 45' 122.4 Longitude 122° 2 122.377		Type: <input type="checkbox"/>
County San Francisco		Dockage <input type="checkbox"/>

List of Nearby Environmentally Sensitive Sit 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	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
80	Army Street Terminal Pier 80	Deep		37	1500	<p>1500 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE.</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.</p>	<p>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.</p>

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

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

2-B92

Latitude 37° 44. 122.4 Longitude 122° 2 122.371

Type:
Dockage

County San Francisco

Location Description:

On Cargo Way off Third Street on San Francisco's Southern Waterfront. Easy access by Highways 101 and 280 using 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 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, 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 SummaSan Francisco South: PIER 92/94/96

2-B92

Latitude 37° 44. 122.4 **Longitude** 122° 2 122.371

Type:
Dockage

County San Francisco

Human Health and Safet

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 Commercial Fishing and Aquaculture:

This site has no impact on commercial fishing.

Economic Impact on Recreational Fishing and Marine Tourism:

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

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
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 Commissio	(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
W	6	MUD	38	0			SEASONAL		

Pilot Requirements

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

2-B92

Latitude 37° 44. 122.4 **Longitude** 122° 2 122.371

Type:

County San Francisco

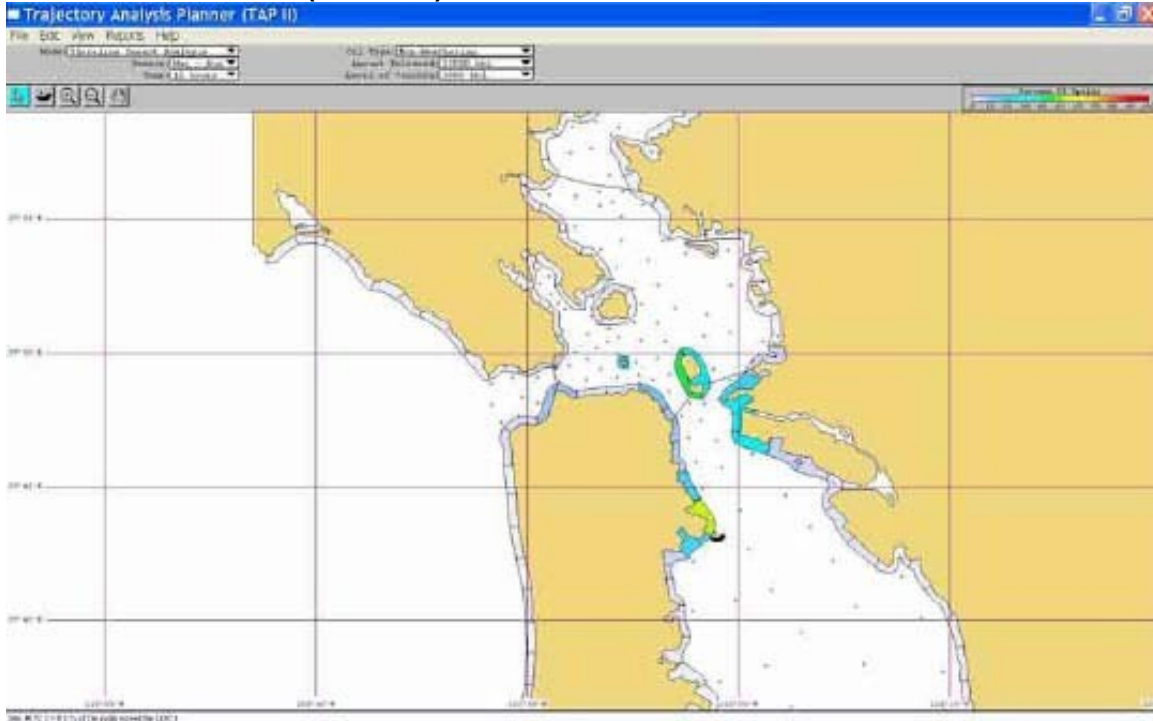
Dockage

Specific Site Details

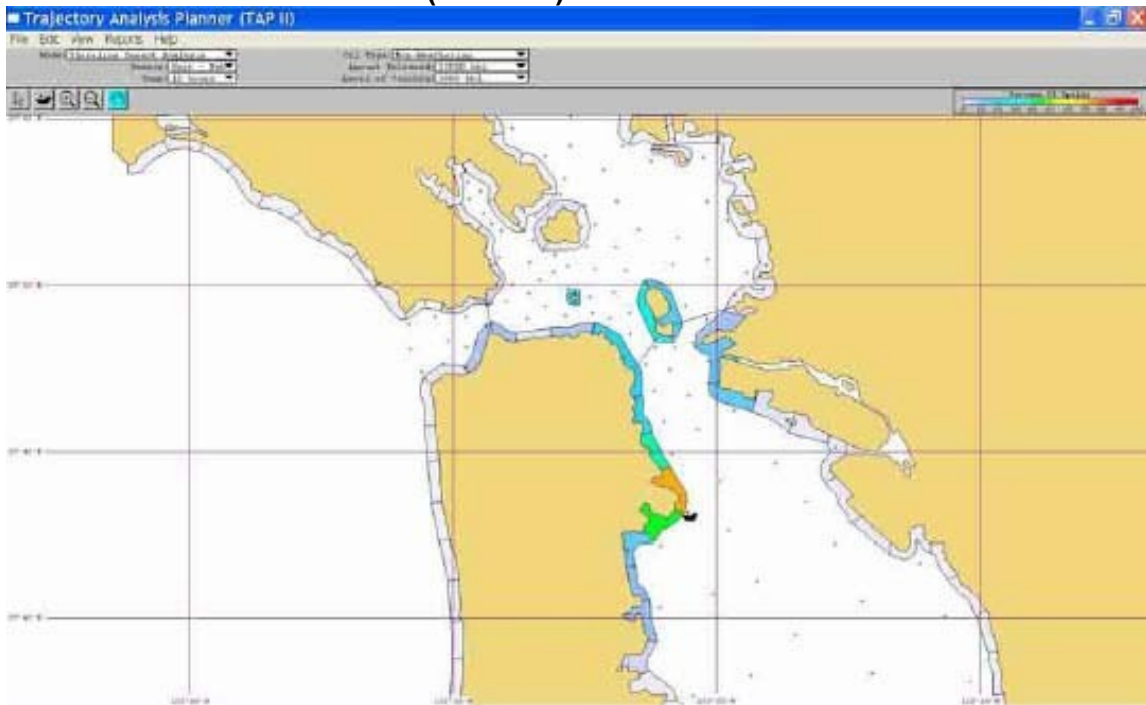
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
92	PIER 92/94/96	Deep		38	2450	<p>1200 IS THE MAX LENGTH OF VESSEL ABLE TO BE AT THIS SITE.</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.</p>	<p>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.</p>
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 SummaSan 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 SummaSan 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 Safet

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 DirHomeland Security	Port of San Francisco	(415) 274-0544	
	Linda Scourtis	SF Bay Conservation and Development Commissio	(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	

PPOR Pre-Incident Information SummaSan Francisco South: Hunters Point (y-HL)		2-B99
Latitude 37° 43' 122.4 Longitude 122° 2 122.358		Type:
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 Sites	SFACP2: 2-350E/X,2-351A/B,2-352B,2-353A,2-400C/X,2-401B ESI/SFB – Maps 1		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
W	6	MUD	30	0			SEASONAL	YES		<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
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:							

PPOR Pre-Incident Information SummaOakland Outer Harbor: any site

2-C00

Latitude 37° 49. 122.3 **Longitude** 122° 1 122.317

Type:

County Alameda

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-C00

Latitude 37° 49. 122.3 **Longitude** 122° 1 122.317

Type:

County Alameda

Dockage

roost/forage, listed species, rare plants.

Subsistence-use Species:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

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

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

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 Safet

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 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 ruin recreational and commercial fishing. Port of Oakland patrons may 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.

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.

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 Manag	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-C00**

Latitude 37° 49. 122.3 Longitude 122° 1 122.317

County Alameda

Type:
Dockage

	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
	Clif Marceetti 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 Time 30 MINUTES

List of Nearby Environmentally Sensitive Sites 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 Draught	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**2-C02**

Latitude 37° 48. 122.3 Longitude 122° 1 122.325

County Alameda

Type:

Dockage

Location Description:

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

Natural Resource Concerns and Issues for this Place / Site

Threatened and Endangered Species (TAES):

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

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

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

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

Emeryville Lagoon/Mudflat (S/F-E) California clapper rail, (S/F-E) salt marsh harvest mouse present year-round, also North Coast bird's beak (rare plant).

Sensitive Non-protected (Non-TAES) Species:

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

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

Critical Habitat for TAES:

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

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

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

2-C02

Latitude 37° 48. 122.3 **Longitude** 122° 1 122.325

Type:

County Alameda

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 Safet

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

Economic Impact on Commercial Fishing and Aquaculture:

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

Economic Impact on Recreational Fishing and Marine Tourism:

Oakland is largely a container port and not normally known for recreational fishing. Jack London Square is the central tourist area with a maritime nexus. San Francisco has a large-scale commercial fishing industry Recent Cosco Busan oil spill in Nov 2007 is evidence enough to show how 50000 gals of oil can significantly affect recreational and commercial fishing. Marine Tourism might be affected as a result of a Places of Refuge incident.

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 Marceetti 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 – Maps17,18,21		Is Containment Possible? <input checked="" 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
NW & winter		MUD	45	0			SEASONAL	vulnerable to		<input checked="" type="checkbox"/>

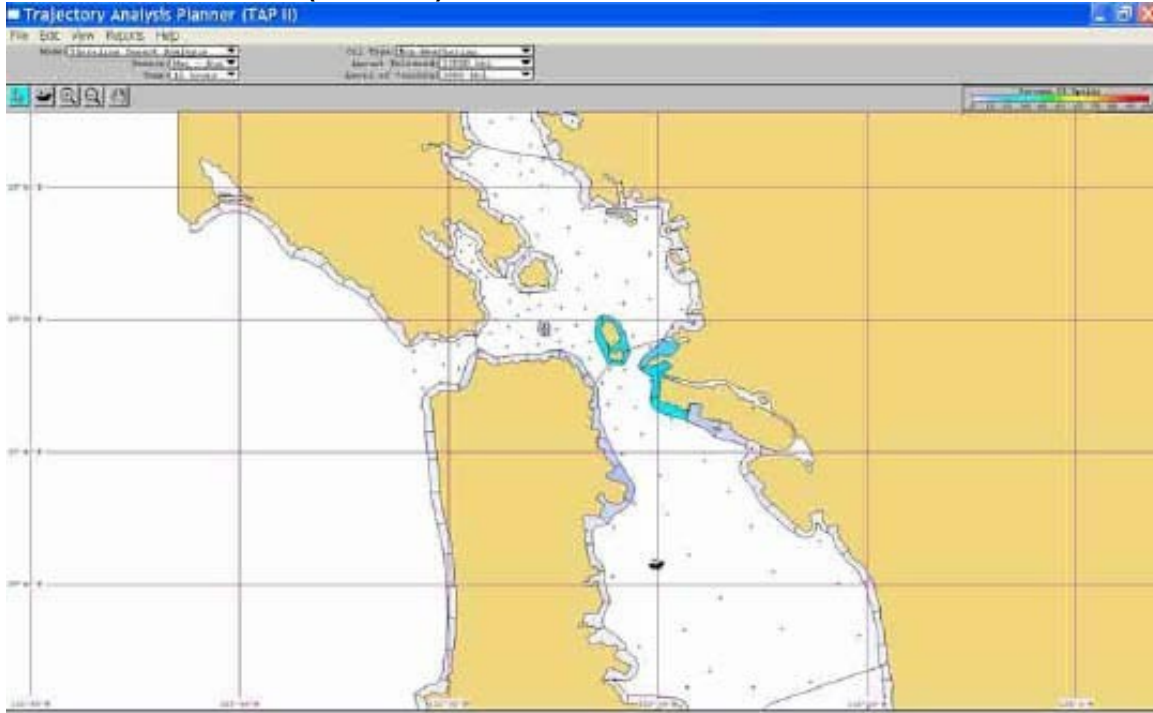
Specific Site Details

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.	

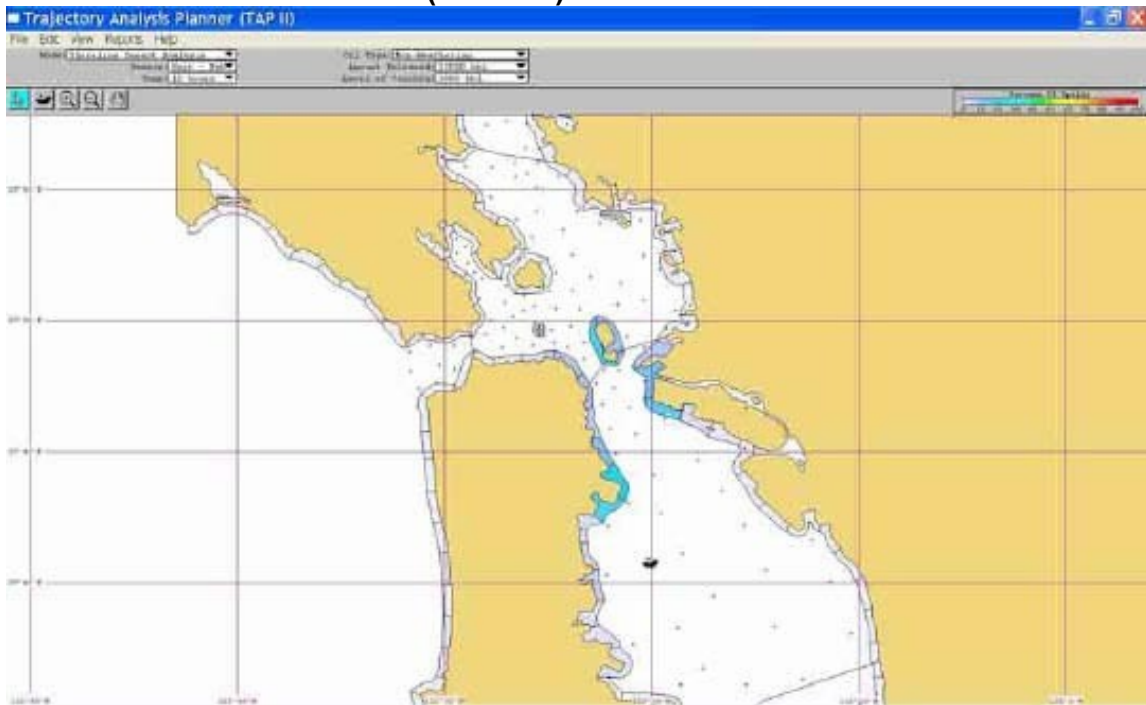
Site Contact/Leasee/Owner:	VTS for contacts
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TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-E00 (Undesignated Anchorages)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



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

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 SummaSouth Bay Anchorages: any other Anchorage**2-E00****Latitude** 37° 41' 122.4 **Longitude** 122° 2 122.354

Type:

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: any other Anchorage

2-E00

Latitude 37° 41' 122.4 **Longitude** 122° 2 122.354

Type:
Anchorage

County San Francisco-Alameda

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

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

2-E00

Latitude 37° 41' 122.4 **Longitude** 122° 2 122.354

Type:
Anchorage

County San Francisco-Alameda

Human Health and Safet

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 Manag	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 Marceetti 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
Approximate Tug Response Time 2 HOURS	
List of Nearby Environmentally Sensitive Sites SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A,	Is Containment Possible? <input type="checkbox"/>

Coast Pilot and Navigation Chart Information

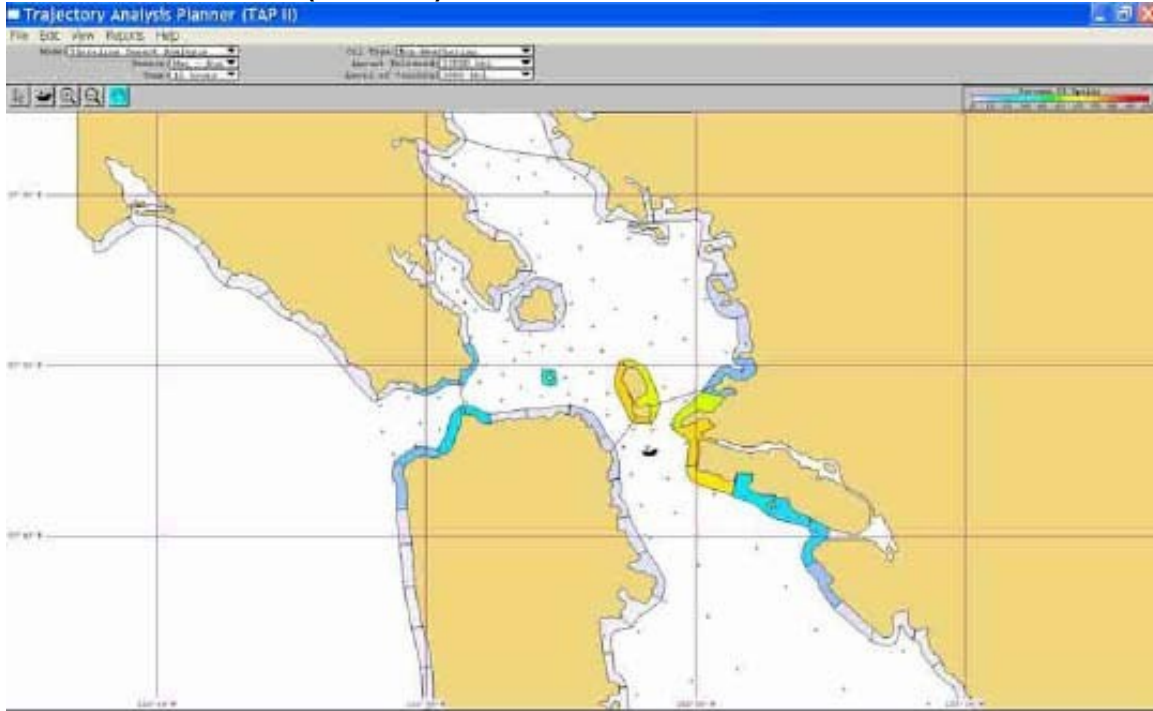
Prevailing Winds	Tidal Range	Bottom Type	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W	6	MUD	26	0			SEASONAL	YES		<input checked="" type="checkbox"/>

Specific Site Details

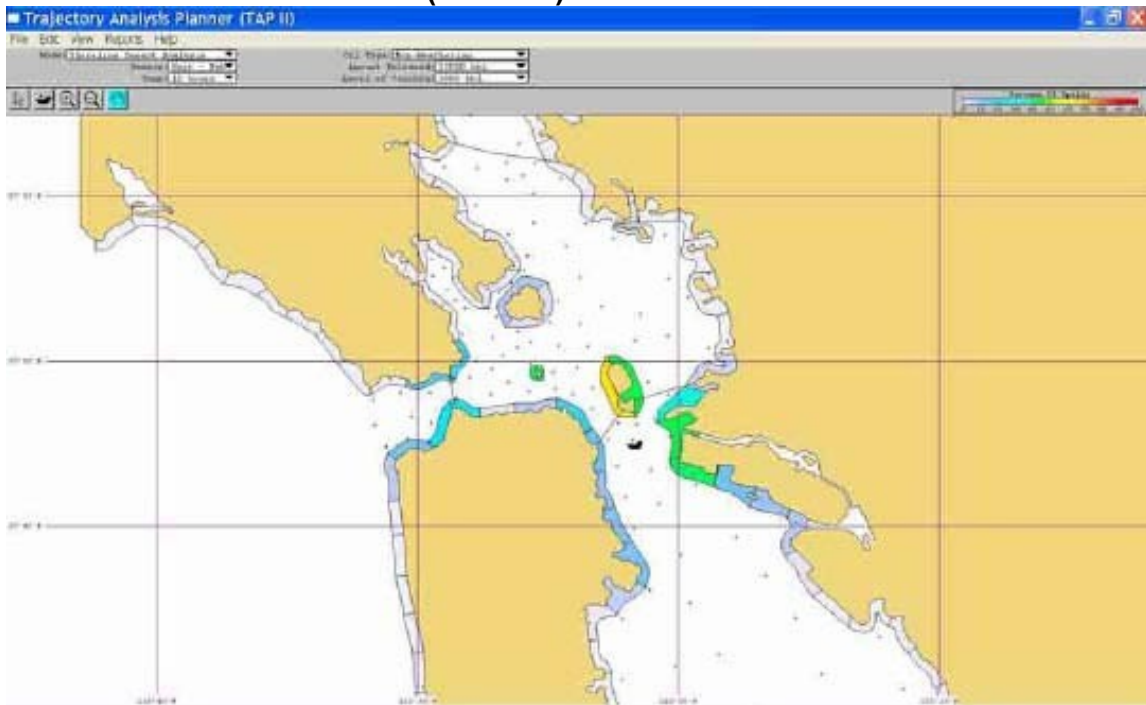
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities			Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern		
03	any other Anchorage	1000	Deep	80		SWING ROOM OR DOCK FACE: 1/2 MILE SF PIER 22 1/2 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 SummaSouth Bay Anchorages: Anchorage 8**2-E08**

Latitude 37° 47. 122.4 Longitude 122° 2 122.355

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 8

2-E08

Latitude 37° 47. 122.4 **Longitude** 122° 2 122.355

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 8

2-E08

Latitude 37° 47. 122.4 **Longitude** 122° 2 122.355

Type:

County San Francisco-Alameda

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

Type:
Anchorage

County San Francisco–Alameda

Human Health and Safet

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 Marcchetti 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	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
Approximate Tug Response Time: 30 MINUTES	
List of Nearby Environmentally Sensitive Sites: SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A,	Is Containment Possible? <input type="checkbox"/>

Coast Pilot and Navigation Chart Information

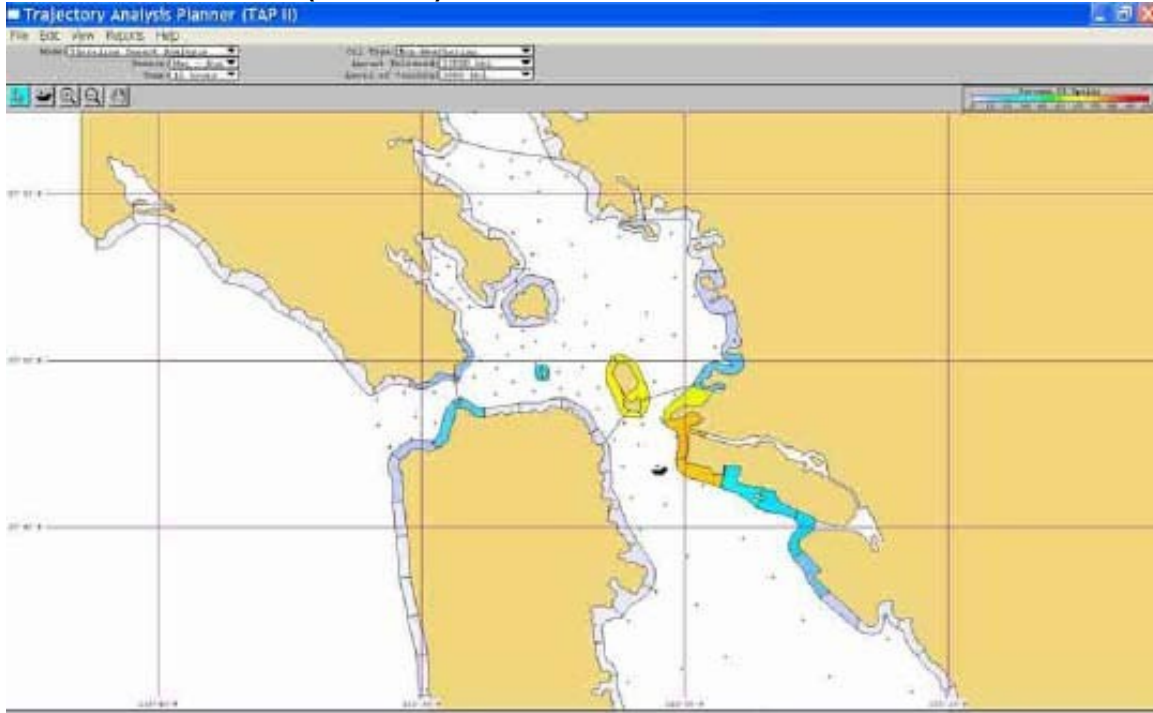
Prevailing Winds	Tidal Range	Bottom Type	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W	6	MUD	55	0			SEASONAL	YES		<input checked="" type="checkbox"/>

Specific Site Details

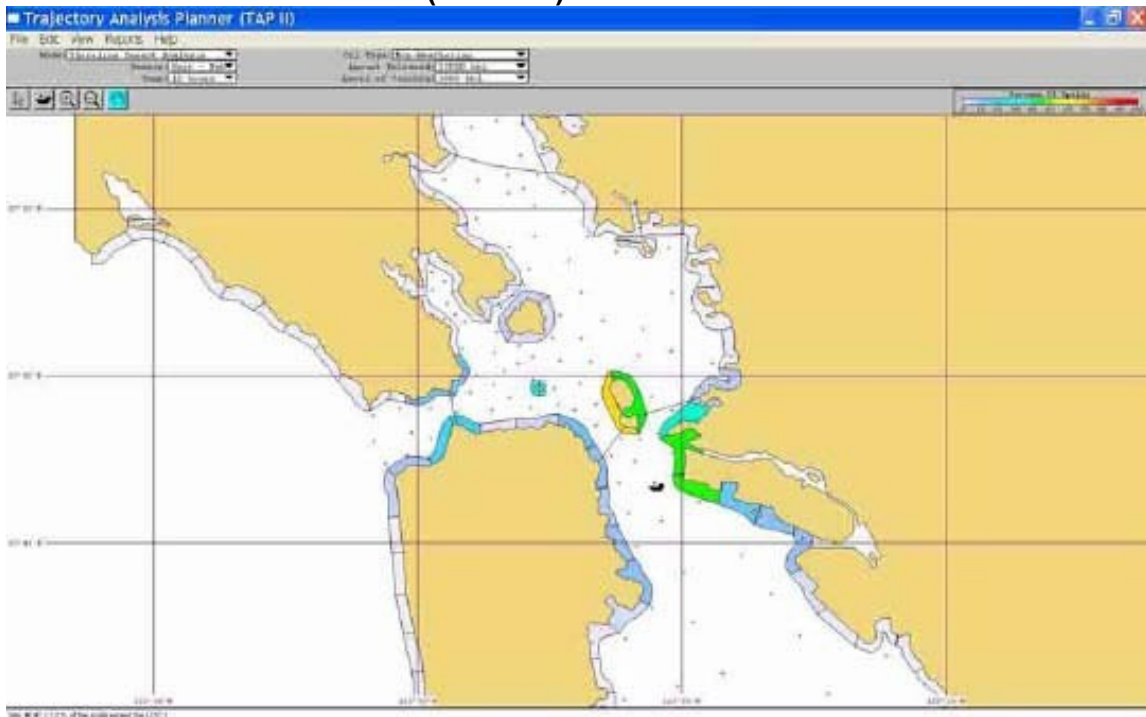
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
08	Anchorage 8	1500	Deep	50		SWING ROOM OR DOCK FACE: 1 / 2 MILE SF PIER 22 1 / 2 IS HOME 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 SummaSouth Bay Anchorages: Anchorage 9**2-E09**

Latitude 37° 46' 122.4 Longitude 122° 2 122.35

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 **Longitude** 122° 2 122.35

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 9

2-E09

Latitude 37° 46' 122.4 **Longitude** 122° 2' 122.35

Type:

County San Francisco-Alameda

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:

Critical Habitat for Subsistence Species:

Essential Fish Habitat:

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

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.

Commercial Fisheries / Species:

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

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

Type:
Anchorage

County San Francisco-Alameda

Human Health and Safet

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 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	

PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 9			2-E09
Latitude 37° 46' 122.4 Longitude 122° 2 122.35			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
Approximate Tug Response Time: 30 MINUTES	
List of Nearby Environmentally Sensitive Sites: SFACP2:307C/A,309A,310C/A,312A,315A,320A,324A,350E/X,351A/B,352B,353A, Is Containment Possible? <input type="checkbox"/>	

Coast Pilot and Navigation Chart Information

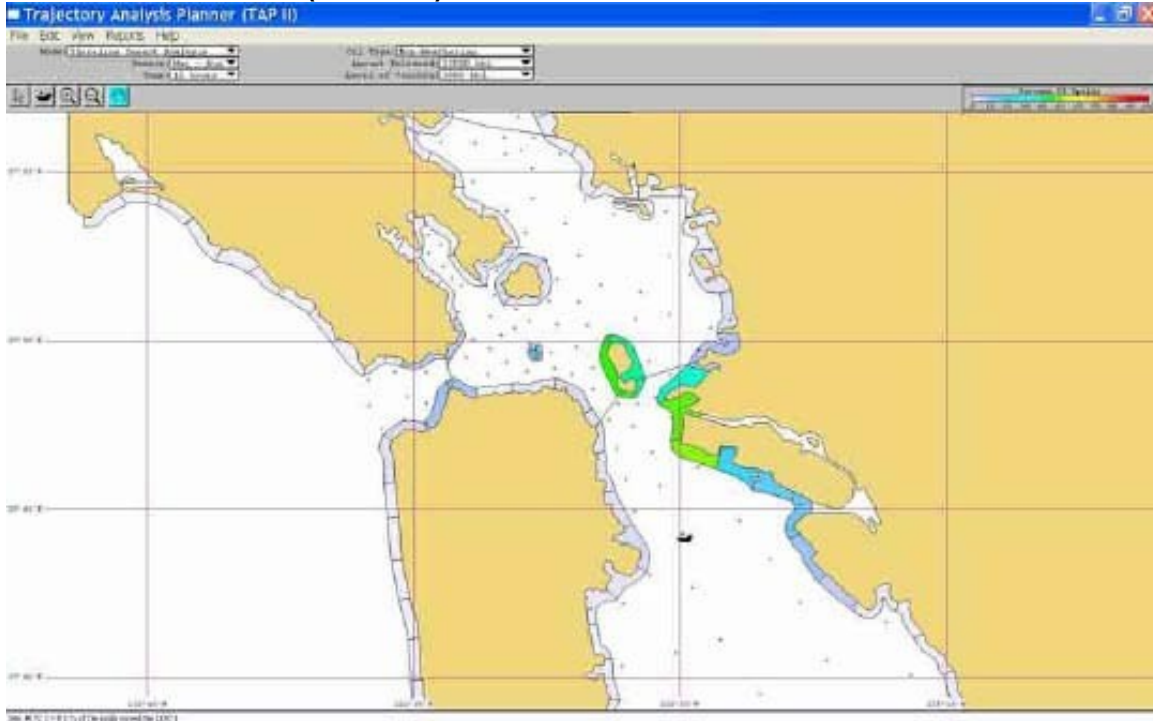
Prevailing Winds	Tidal Range	Bottom Type	Max Water Depth	Min Water Depths	Currents	Sea Conditions	Fog	Shelter From Severe Storms	Navigational Approach	Pilot Requirements
W	6	MUD	60	0			SEASONAL	NO		<input checked="" type="checkbox"/>

Specific Site Details

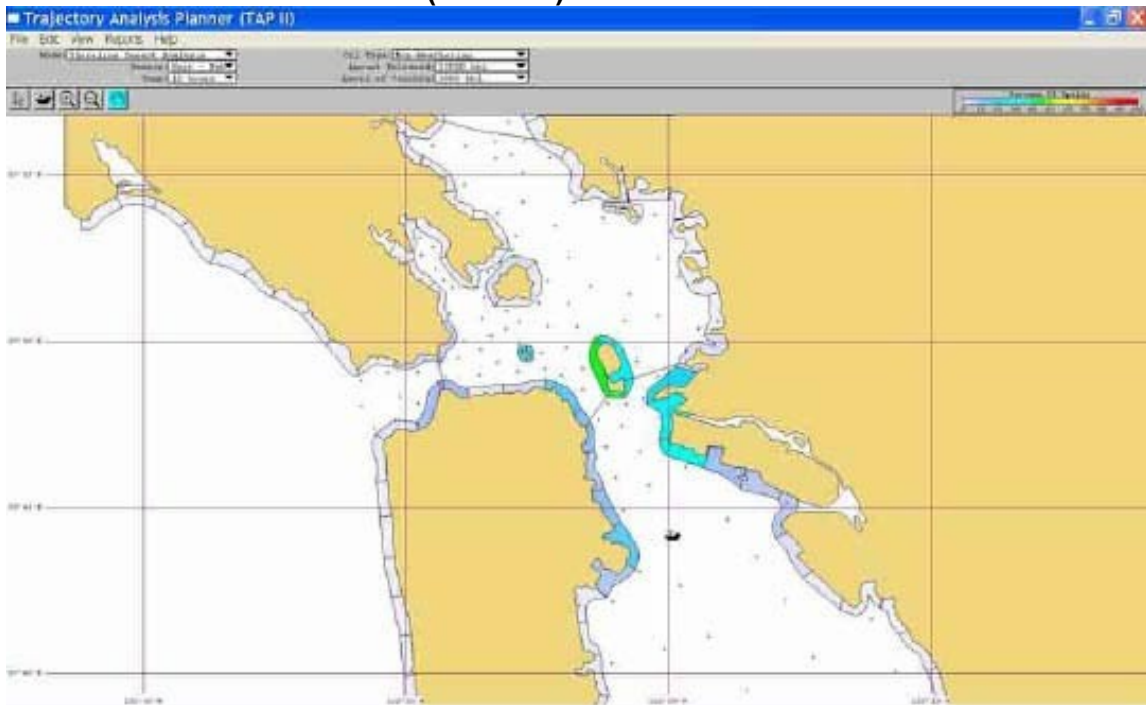
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
09	Anchorage 9	1500	Deep	55		SWING ROOM OR DOCK FACE: 1/2 MILE SF PIER 22 1/2 IS HOME OF 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 SummaSouth Bay Anchorages: Anchorage 12**2-E12**

Latitude 37° 44. 122.3 Longitude 122° 2 122.342

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 **Longitude** 122° 2 122.342

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 12

2-E12

Latitude 37° 44. 122.3 **Longitude** 122° 2 122.342

Type:

County San Francisco–Alameda

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.

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

Human Health and Safet

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

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.

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	
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Dispatch	East Bay Regional Park District	(510) 881-1833	
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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 Jursidictional 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

Type:

County San Francisco-Alameda

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
W	6	MUD	60	0			SEASONAL		

Pilot Requirements

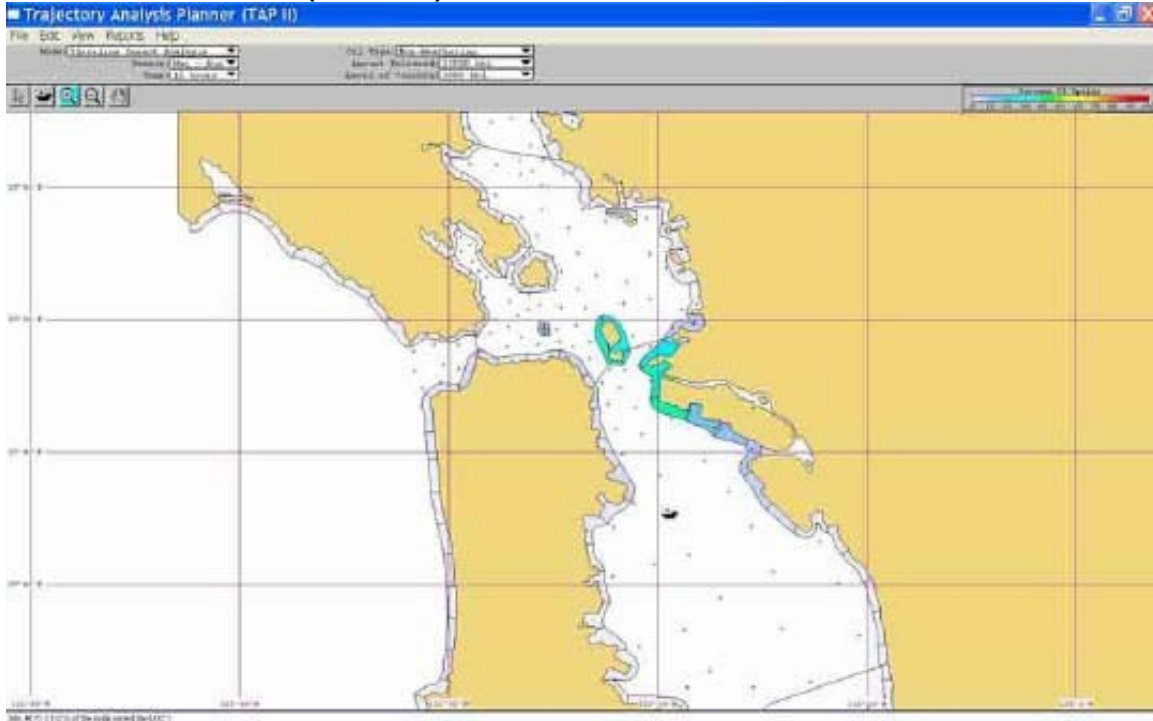
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		ContainmentPossibilities:
		Max Size	Mini Size	Max Draf	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
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.

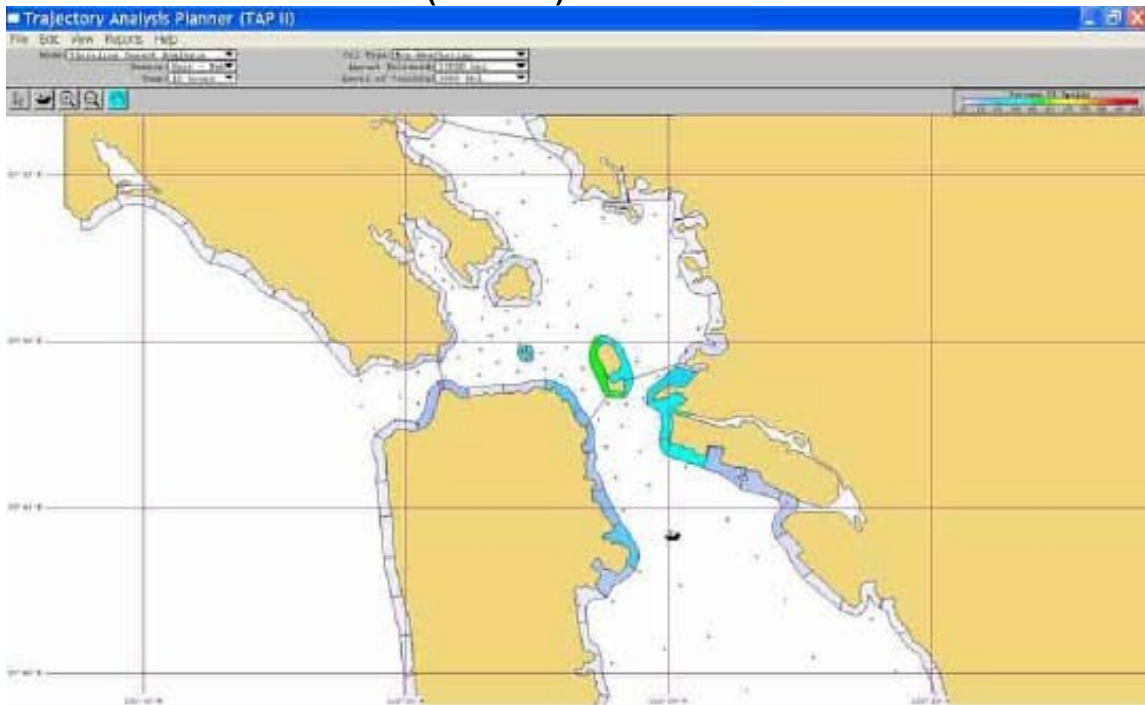
Site Contact/Leasee/Owner:

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaSouth Bay Anchorages: Anchorage 14**2-E14**

Latitude 37° 43. 122.3 Longitude 122° 1 122.33

Type:
Anchorage

County San Francisco-Alameda

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 SummaSouth Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 **Longitude** 122° 1 122.33

Type:
Anchorage

County San Francisco-Alameda

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 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 SummaSouth Bay Anchorages: Anchorage 14

2-E14

Latitude 37° 43. 122.3 **Longitude** 122° 1 122.33

Type:
Anchorage

County San Francisco–Alameda

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 Safet

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

Type:
Anchorage

County San Francisco–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.

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 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 Marceetti 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: 37-42.42, 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

Type:

County San Francisco-Alameda

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
W	6	MUD	45	0			SEASONAL	NO	

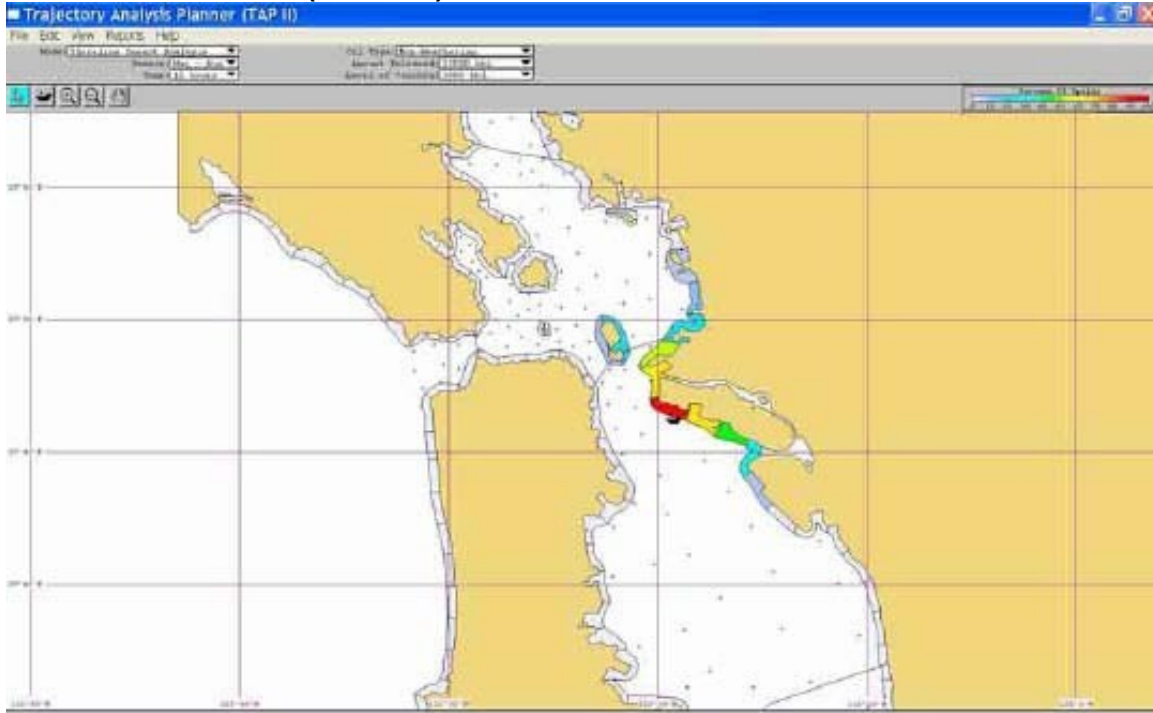
Pilot Requirements
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Specific Site Details

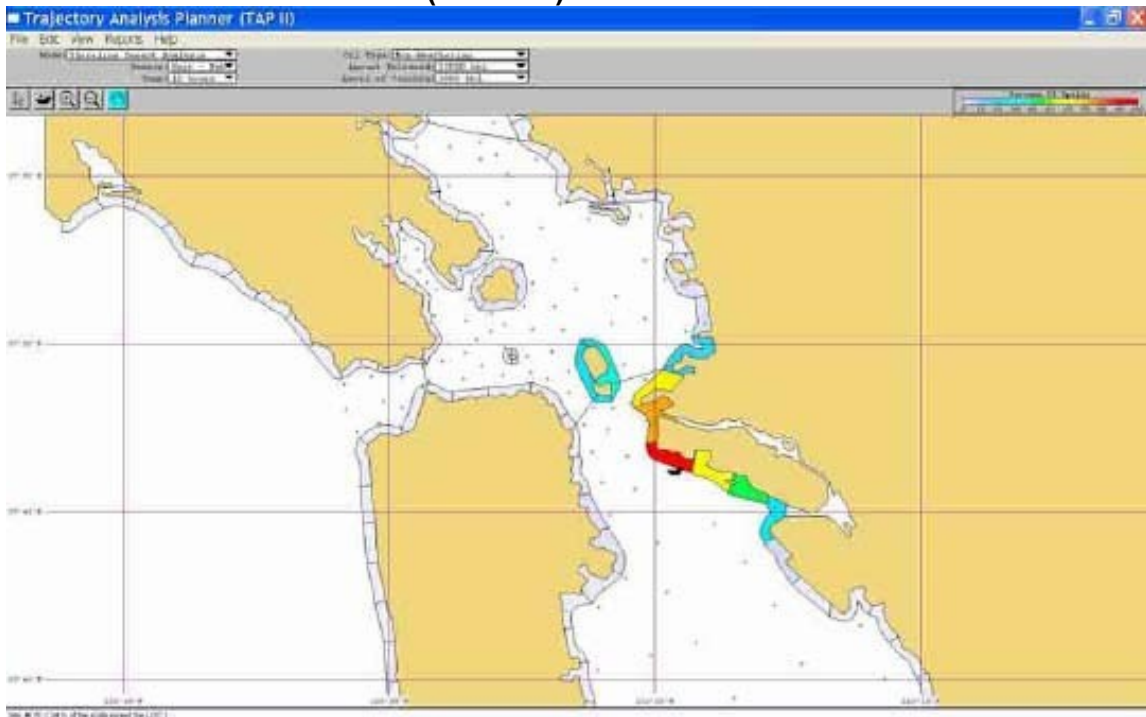
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
14	Anchorage 14	1500	Deep	40		SWING ROOM OR DOCK FACE: 1/2 MILE SF PIER 22 1/2 IS HOME OF 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					

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



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

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 SummaSouth Bay East Shore: Alameda Point

2-F01

Latitude 37° 46. 122.3 **Longitude** 122° 1 122.308

Type:

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:

SFACP2:307C/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 Safet

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

Latitude 37° 46. 122.3 **Longitude** 122° 1 122.308

Type:

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 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:

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.

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 Ullensvang 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 Jurisdictional Contact:

Approximate Tug Response Time

List of Nearby Environmentally Sensitive Sit 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:

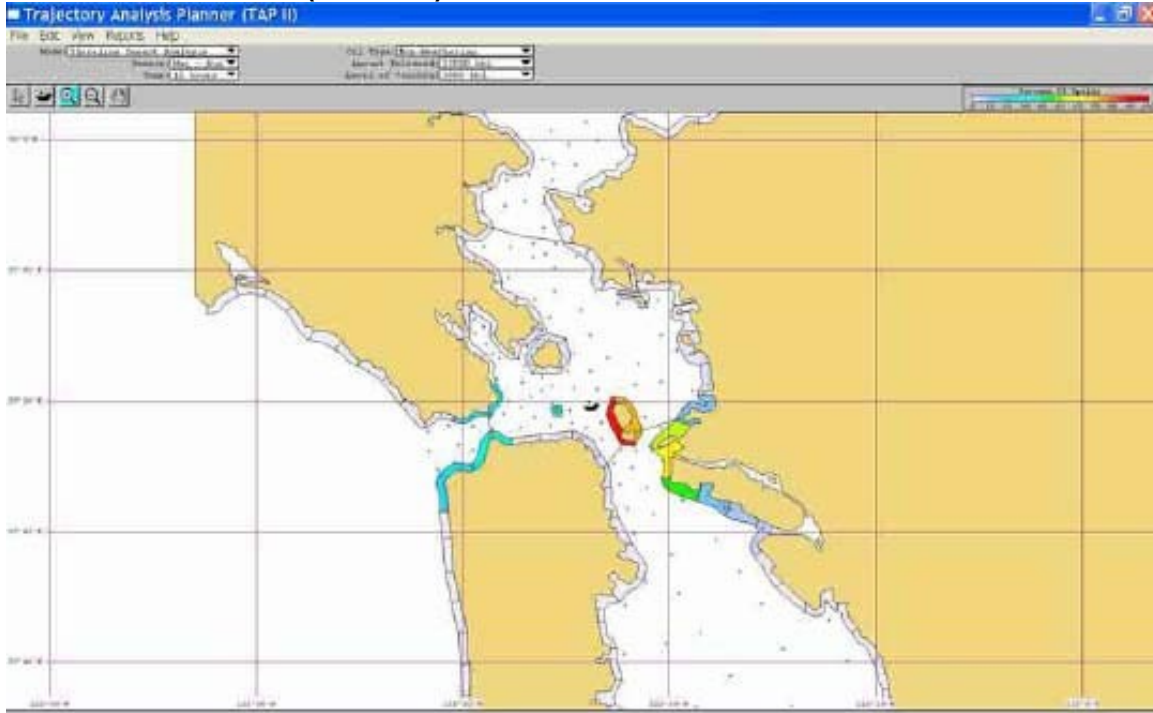
County Alameda

Specific Site Details

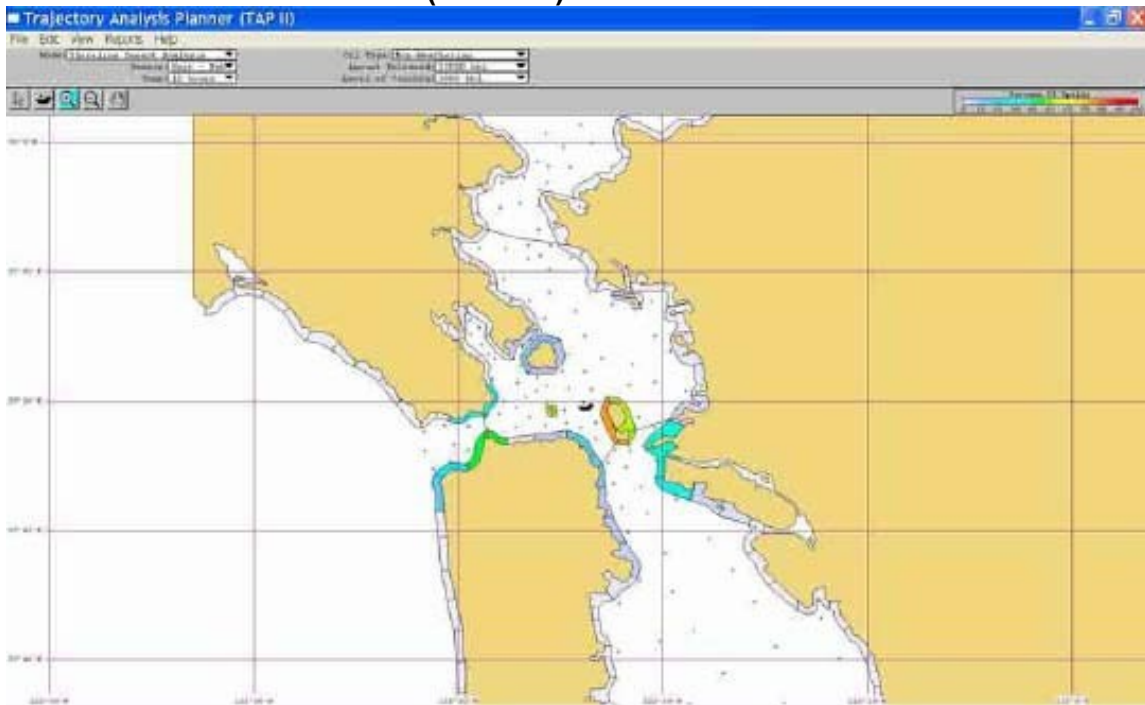
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
01	Alameda Point	800		30	800	<p>Must work with City of Alameda.</p> <p>The MARAD Ready Reserve Fleet is also stationed at Alameda Point (POC: "Tom Schneider Alameda Office 510-749-0903 O-510-786-7323 C-510-749-8351)</p> <p>SF PIER 22 1/2 IS HOME OF FIRE BOAT GUARDIAN AND PHOENIX; OTHER FIREFIGHTING RESOURCES COME FROM FOSS/CHEVRON/OAKLAND AND RICHMOND.</p>	<p>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.</p>
Site Contact/Leasee/Owner:		U.S. Maritime Administration (MARAD)					

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



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

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/ ,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 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

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

Type:

County San Francisco, Marin, Alameda, Contra Costa

Anchorage

Human Health and Safet

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 Manag	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 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
W	6		70	0			SEASONAL	NO	

Pilot Requirements
<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

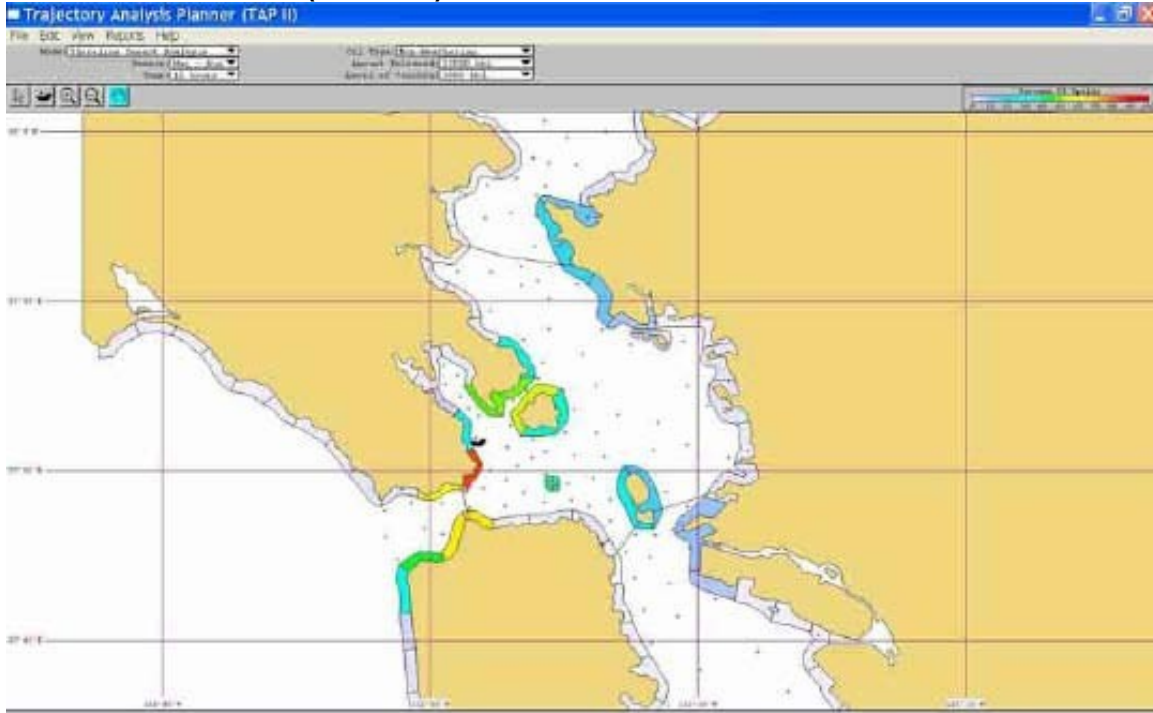
Specific Site Details

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

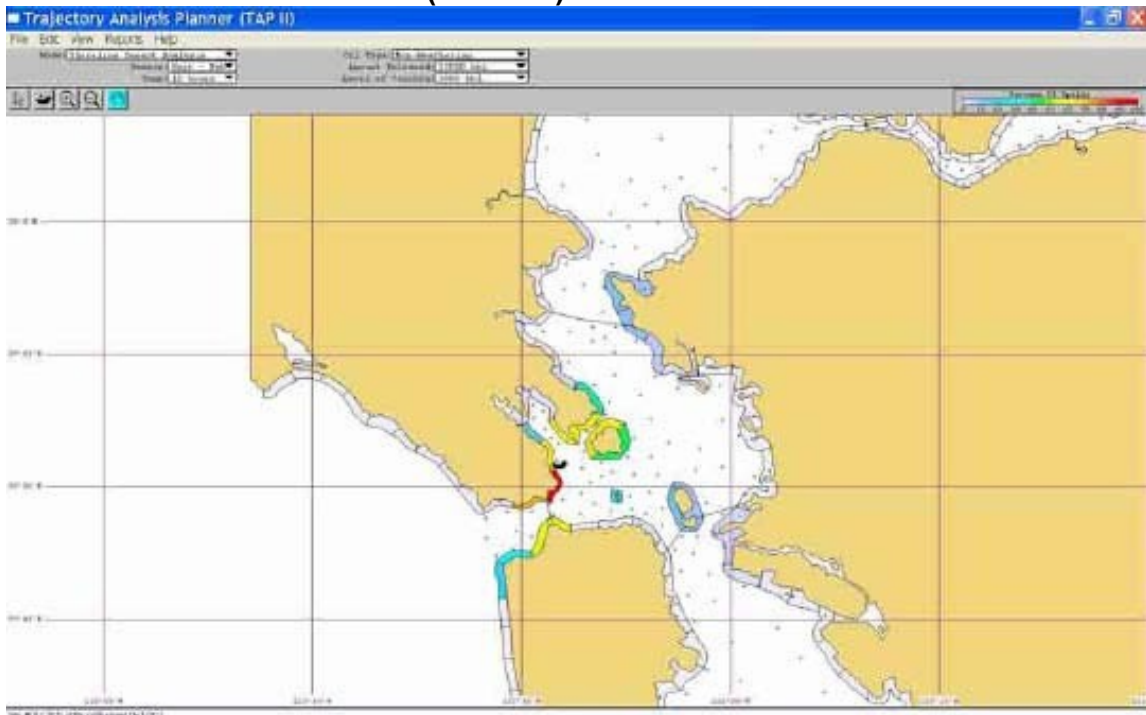
Site Contact/Leasee/Owner:

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

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



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

Latitude 37° 51' 122.5 Longitude 122° 2 122.471

Type:
Anchorage

County San Francisco, Marin, Alameda, Contra Costa

Location Description:

In San Francisco Bay bounded by the east shore of Sausalito and the following lines: Beginning on the shore of Sausalito at latitude 37°51'20" N., longitude 122°28'38" W.; thence southeasterly to latitude 37°50'57.5" N., longitude 122°27'57" W.; thence southwesterly to the shore of Sausalito at latitude 37°50'36" N., longitude 122°28'34" W.

The Central Bay of the San Francisco Estuary provides a wide array of resources both of great natural and cultural significance. It is bounded by the iconic Golden Gate Bridge and contiguous with many properties on the National Register of Historic Places including Alcatraz Island, Fort Point National Historic Site. Because of its proximity to the Pacific Ocean, the assemblage of organisms is more similar to the outer coast (e.g., attached intertidal community) than sites further upstream in the Estuary. The highest diversity of attached, native marine algae can be found at intertidal sites in the Central Bay. Because of its strategic location at the Golden Gate strait, the Central Bay is the most important migratory corridor between the Pacific Ocean and the estuarine and riverine habitats upstream in California. Many of the islands within the Central Bay have exceptional value for seabirds. Alcatraz Island, for instance, has the largest western gull breeding population in the San Francisco Estuary; Brandt's cormorants are only one of two estuarine breeding colonies, and is one of the largest in the region.

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/,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 SummaCentral Bay Anchorages: Anchorage 10

2-H10

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

Type:

County San Francisco, Marin, Alameda, Contra Costa

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 Safet

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 Ullensvang 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	Type:
County San Francisco, Marin, Alameda, Contra Costa	Anchorage

Characteristics and Tactical Considerations

Primary Jurisdictional Contact:	USCG Sector SF	Marine Fire Fighting Resources	SF PIER 24: 37-42.42, 122-23.24
Approximate Tug Response Time	1 HOUR		
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? <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
W	6	MUD	70	0			SEASONAL	NO		<input checked="" type="checkbox"/>

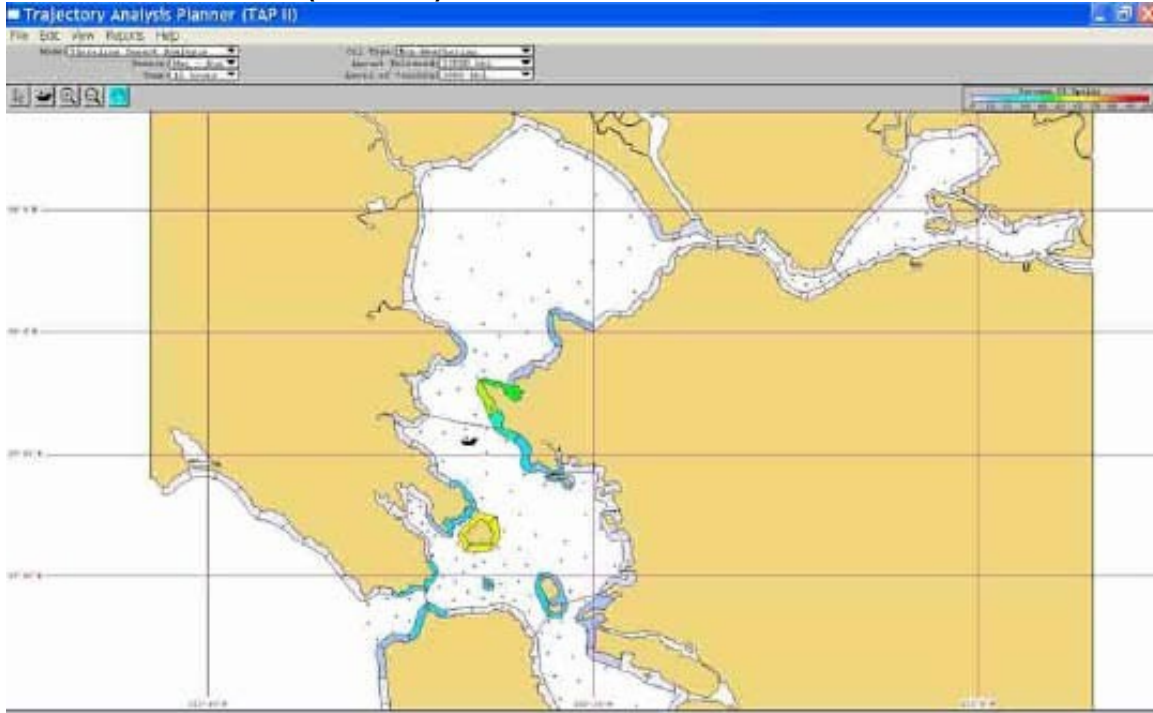
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
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.

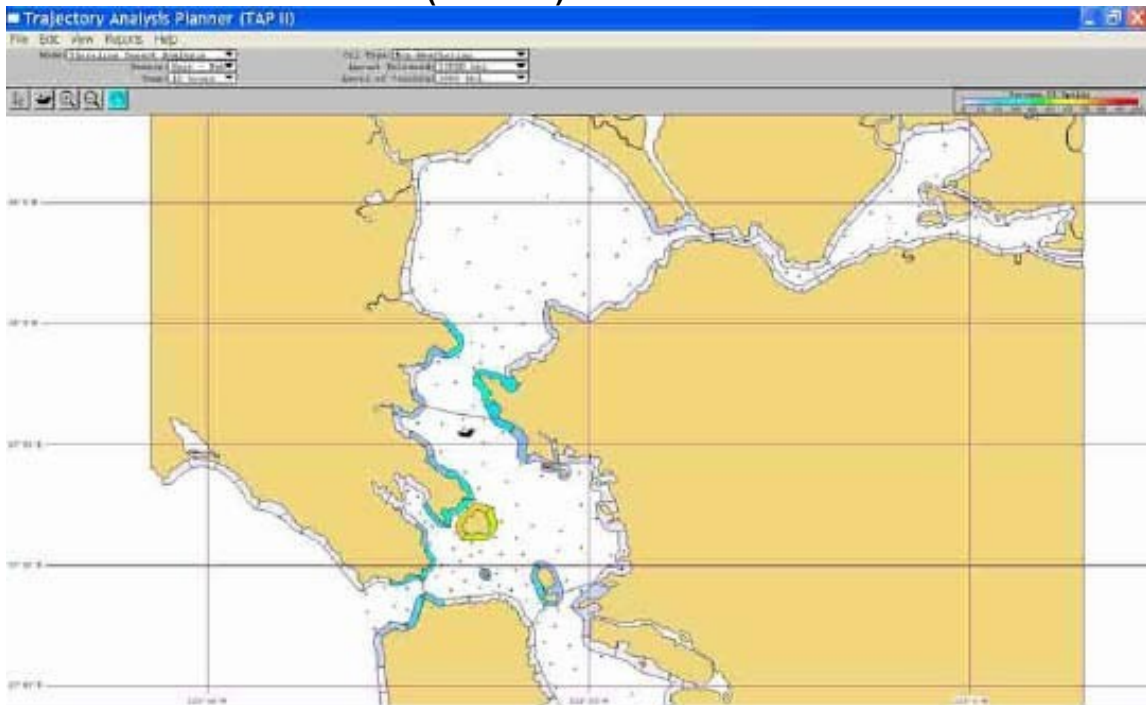
Site Contact/Leasee/Owner:	VTS ON CHANNEL 14
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TRAJECTORY ANALYSIS PLANNER (TAP Model)
Location: 2-H13 (Anchorage 13)

MARCH – AUGUST (12 Hour)



SEPTEMBER – FEBRUARY (12 Hour)



PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13**2-H13**

Latitude 37° 55. 122.5 Longitude 122° 2 122.459

Type:

County San Francisco, Marin, Alameda, Contra Costa

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/,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 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

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 Maritime Commerce and Shipping:

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

Economic Impact on Commercial Fishing and Aquaculture:

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

Economic Impact on Non-maritime Commerce:

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

Economic Impact on Recreational Fishing and Marine Tourism:

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

Other Economic Impacts:

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

Stakeholder List for this Place / Site

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

PPOR Pre-Incident Information SummaCentral Bay Anchorages: Anchorage 13 **2-H13**

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

Type:
Anchorage

County San Francisco, Marin, Alameda, Contra Costa

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 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		28	0			SEASONAL			<input type="checkbox"/>

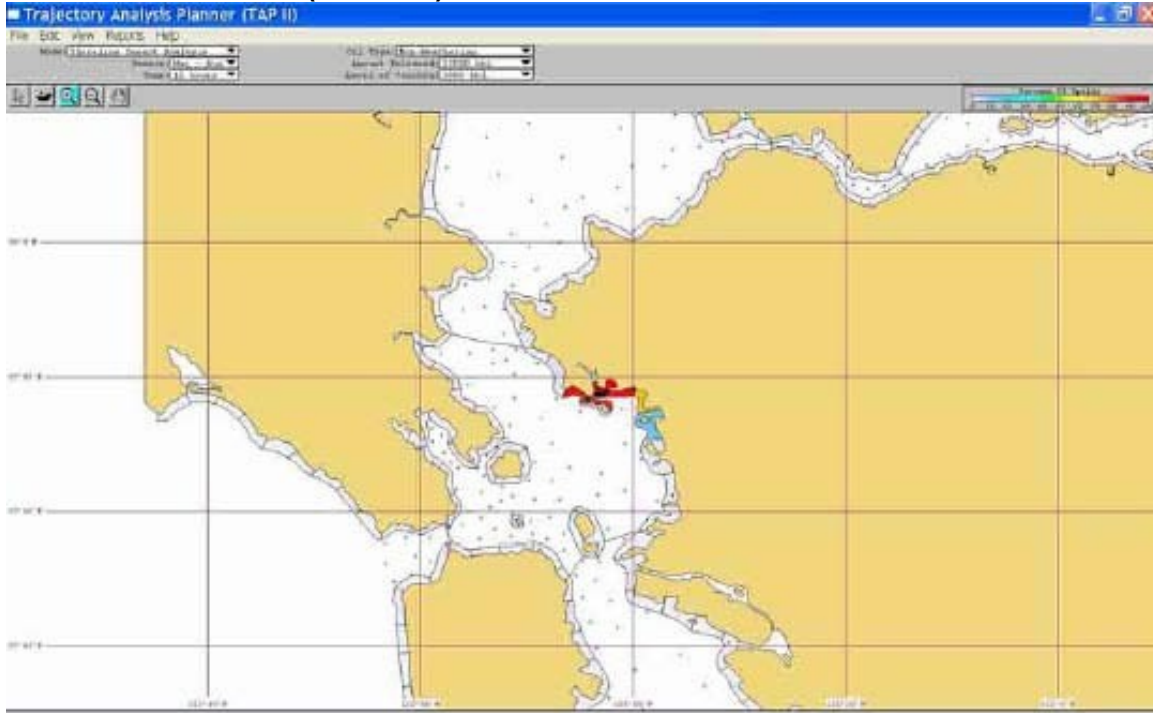
Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
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.

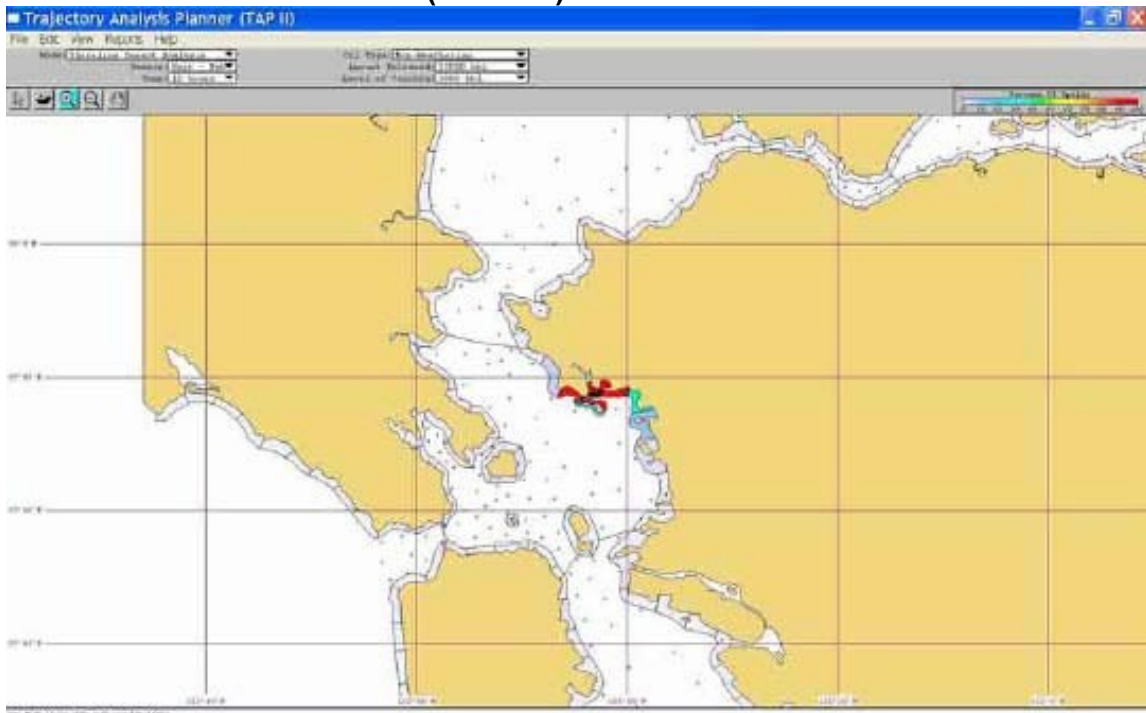
Site Contact/Leasee/Owner:

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-J00**

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-Maps14,15
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-J00
Latitude 37° 54. 122.4 Longitude 122° 2 122.362			Type:
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 Safet

 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 Manag	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 Contami	(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
Latitude 37° 54. 122.4 Longitude 122° 2 122.362			Type:
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 Time	30 MINUTES	
List of Nearby Environmentally Sensitive Sites	SFACP2:451A,452A,453A,454A,455C/X,480A; ESI/SFB – Maps 14,15	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
W	6	MUD	37	0			SEASONAL	YES		<input checked="" type="checkbox"/>

Specific Site Details

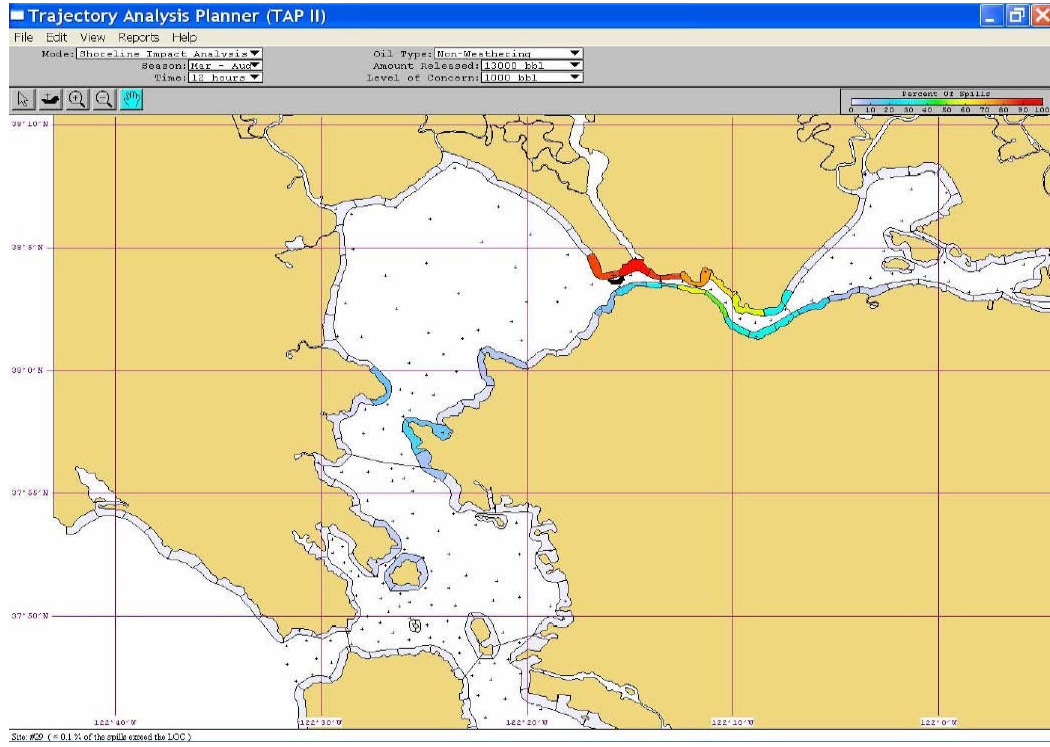
Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		Containment Possibilities:
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
00	any site	900		37	1000	SF PIER 22 1/2 IS FIRE BOAT GUARDIAN AND PHOENIX; OTHER FF RESOURCES 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:

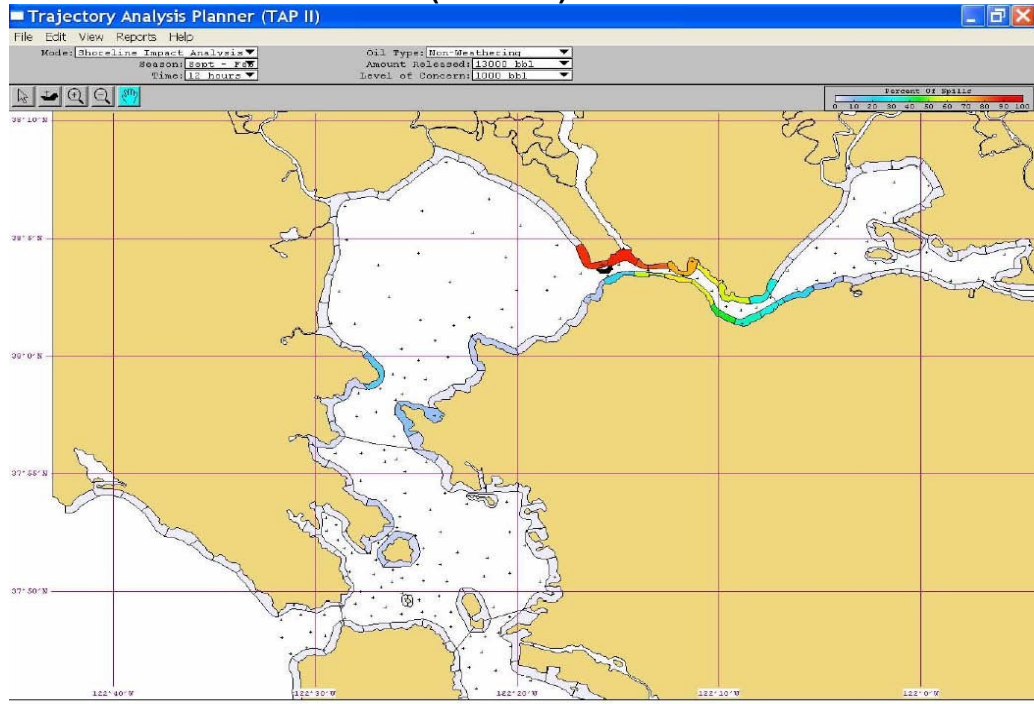
TRAJECTORY ANALYSIS PLANNER (TAP Model)

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

2-M21

Latitude 38° 3.8' 122.3 **Longitude** 122° 1 122.258

Type:

County Solano

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			Type:
County Solano			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 Manag	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 Site 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 – Winte	Minimum	East–West	<input checked="" type="checkbox"/>

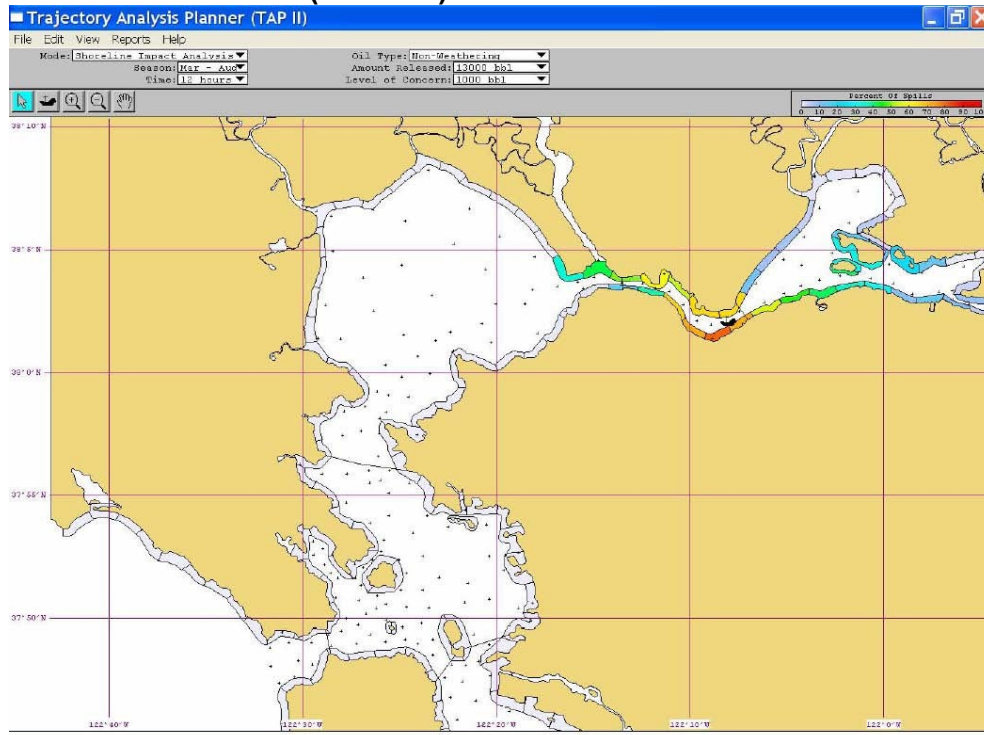
Specific Site Details

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	
21	Anchorage 21 Navy	Deep		38	1100	Limited by Pinole Shoal @ 38' for transit. Check current on NOAA Ports located at Tesoro Pier	

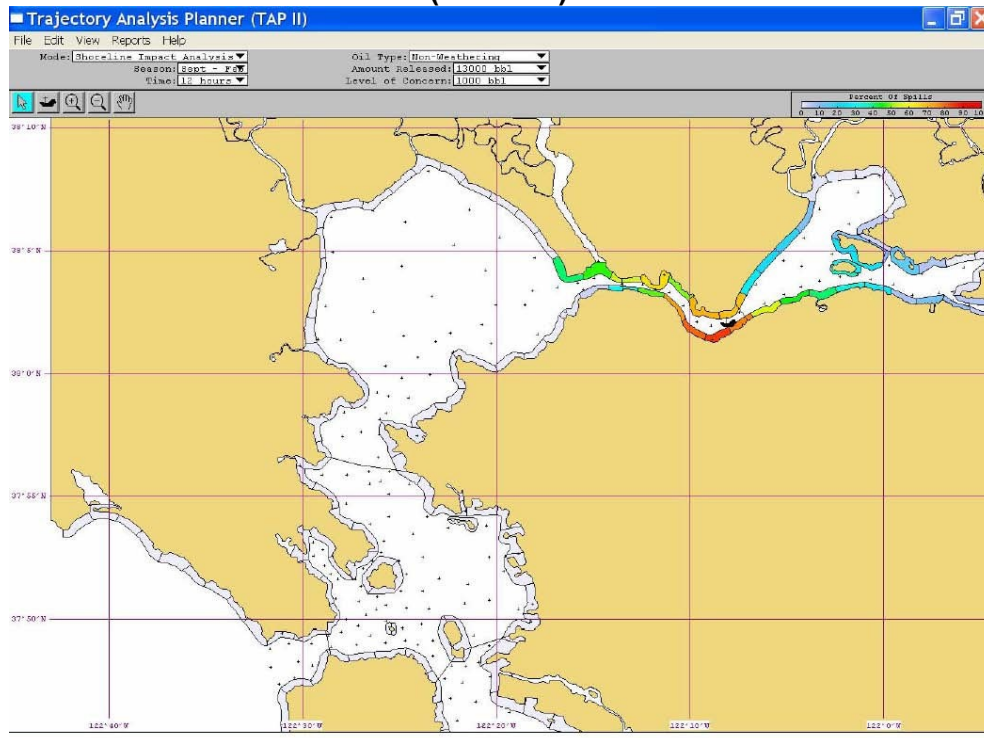
TRAJECTORY ANALYSIS PLANNER (TAP Model)

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

2-M23

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

Type:

County Solano

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

Type:
Anchorage

County Solano

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).

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

Human Health and Safet

Economic Impact on Commercial Fishing and Aquaculture:

Economic Impact on Recreational Fishing and Marine Tourism:

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Recreational Species and Habitat:

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' 122.1 Longitude 122° 8 122.142			Type:
County Solano			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 Time:

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List of Nearby Environmentally Sensitive Sites:

ACP Sites: 2-601A,2-603A,2-605A,2-630B/C,2-651A,2-652A,2-654A ESI/SFB Ma
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 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 - Winter	Minimal	East-West	<input type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
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:

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

2-Q00

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

Latitude 37° 57. 121.3 Longitude 121° 1 121.318

Type:

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 Safet

STOCKTON HAS A POPULATION OF 243771

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 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 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:

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
Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800	
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	

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

Latitude 37° 57. 121.3 **Longitude** 121° 1 121.318

Type:

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 Time: 4 HOURS

List of Nearby Environmentally Sensitive Sites: 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		
		Max Size	Mini Size	Max Draught	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
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:

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

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 Safet

POPULATION OF SACRAMENTO IS 1796857

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:

APRIL 2008 HEADLINE: State of Emergency: Sacramento River Fall Run Chinook Salmon PROCLAMATIONby theGovernor of the State of California

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:

APRIL 2008 HEADLINE: State of Emergency: Sacramento River Fall Run Chinook Salmon PROCLAMATIONby theGovernor 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;

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

Approximate Tug Response Time 4 HOURS

List of Nearby Environmentally Sensitive Sites 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 Draught	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.	Primary containment potential is very good due to minimal local currents. Secondary containment is equally probable, particularly considering the length of the ship channel before other waterways can be exposed.

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

2-DD01

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

Type:

County Marin

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:

SFACP2:198A,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, ashly storm-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

Type:
Anchorage

County Marin

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:

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).

Critical Habitat for Subsistence Species:

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 Safet

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 Office 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 Jurisdictional 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 Time: **4 HOURS FROM SF PIER 24**

List of Nearby Environmentally Sensitive Sites: **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 Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	
01	Deep Anchorage	1500	NA		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**

ACP 3 – Central Coast Area

Pre-Incident Summary Background

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.

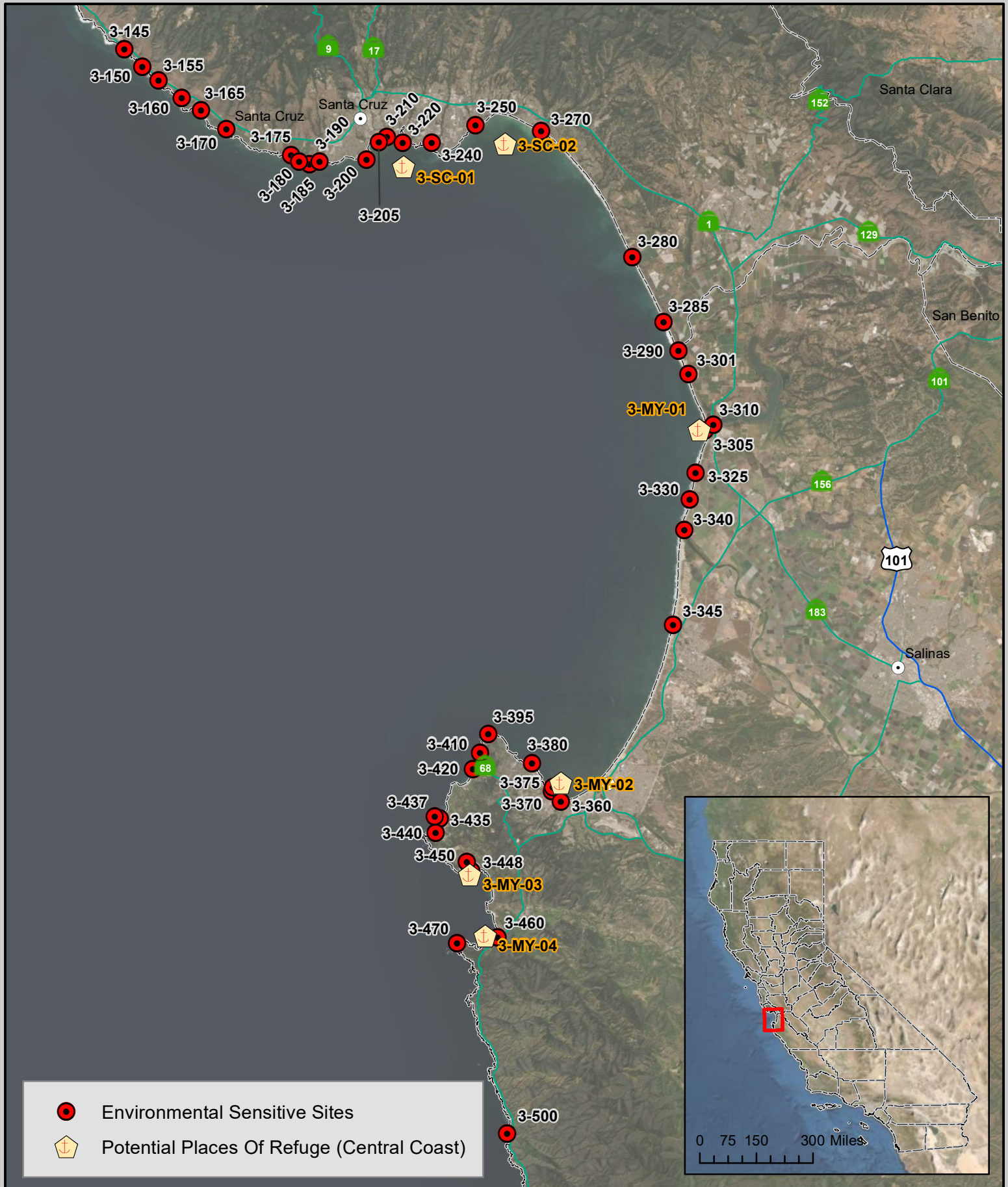
Geographic Information Systems (GIS) maps were generated by the CDFG-OSPR GIS Unit for each of the listed PPOR areas. Identification and assessment of appropriate PPOR sites within the Central Coast area is ongoing and will continue to be refined.

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

Potential Places of Refuge Chart/Pre-Incident Summary Sheets

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



ACP 3

Environmental Sensitive Sites and Potential Places of Refuge

PPOR Pre-Incident Information Summary for Monterey County: Moss Landing

3-MY-01

Latitude: 36° 48.40' 36.8066 Longitude: 121° 47.65 121.7942

Type:
Anchorage

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-E), Steelhead (F-T), Southern sea otters (F-E), and various FE whale species (blue/fin/humback).

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).

Subsistence-use 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.

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.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

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

Latitude: 36° 48.40' 36.8066 Longitude: 121° 47.65 121.7942

Type:
Anchorage

County: Monterey

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.

Economic Impact on Non-maritime Commerce:

The Moss Landing power plant produces the largest electrical output of any conventional power plant in California. Water intake for Duke Energy plant in Moss Landing Harbor.

Other Economic Impacts:

Moss Landing Harbor is home to two major marine research organizations and the largest ocean vessels home ported in Monterey Bay.

Stakeholder List for this Place / Site

Name / Title Organization Phone more details

Characteristics and Tactical Considerations

Primary Jurisdictional Contact: Moss Landing Harbor District Marine Fire Fighting Resources: Monterey Harbor (fire boat and CG 47' boat)

Approximate Tug Response Time

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

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	3.6	Sand	420	30	Strong d		Yes	MINIMUM	West	<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draft	Swing Room 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

3-MY-01

Latitude: 36° 48.40' 36.8066 **Longitude:** 121° 47.65 121.7942

Type:
Anchorage

County: Monterey

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

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

County: Monterey

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.

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 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/humbuck).

Sensitive Non-protected (Non-TAES) Species:

Many seabirds & marine mammals in the area.

Subsistence-use Species:

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, 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

Type:
Anchorage

County: Monterey

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 Non-maritime Commerce:

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.

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 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: 3-345, 3-360, 3-370, 3-375, 3-380, 3-395; Also see 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		
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Monterey Harbor Offshore Anchorage	Deep	1000	36	1000		
Site Contact/Leasee/Owner:							

PPOR Pre-Incident Information Summary for Monterey County: Stillwater

3-MY-03

Latitude: 36° 33.58' 36.5596 Longitude: 121° 56.71 121.9452

County: Monterey

Type:

Anchorage

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.

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).

Sensitive Non-protected (Non-TAES) Species:

Many seabirds & marine mammals in the area. Area also includes important subtidal diversity.

Subsistence-use Species:

Essential Fish Habitat:

Much of the area is designated as EFH. Also, local kelp forest 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.

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. Site is within the Carmel Bay State Marine Conservation Area.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Point Lobos Reserve contains several historical and cultural upland and submerged sites.

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:

Pebble Beach and Carmel communities have a resident population of ~9,000 plus several thousand tourists during peak tourism season.

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

Economic Impact on Maritime Commerce and Shipping:

This area has minor influence on maritime commerce and shipping.

Economic Impact on Non-maritime Commerce:

Other Economic Impacts:

The Carmel/Pebble Beach area is a world-wide resort destination that hosts

PPOR Pre-Incident Information Summary for Monterey County: Carmel Canyon

3-MY-04

Latitude: 36° 31.57' 36.5261 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).

Sensitive Non-protected (Non-TAES) Species:

Many seabirds & marine mammals in the area. Area also includes important subtidal diversity.

Subsistence-use Species:

Essential Fish Habitat:

Much of the area is designated as EFH. Also, local kelp forest 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.

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. Site is within the Carmel Bay State Marine Conservation Area.

Critical Habitat for Subsistence Species:

Historic and Cultural Resources:

Point Lobos Reserve contains several historical and cultural upland and submerged sites.

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:

Pebble Beach and Carmel communities have a resident population of ~9,000 plus several thousand tourists during peak tourism season.

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

Economic Impact on Maritime Commerce and Shipping:

This area has minor influence on maritime commerce and shipping.

Economic Impact on Non-maritime Commerce:

Other Economic Impacts:

The Carmel/Pebble Beach area is a world-wide resort destination that hosts

PPOR Pre-Incident Information Summary for Monterey County: Carmel Canyon

3-MY-04

Latitude: 36° 31.57' 36.5261 Longitude: 121° 56.04 121.934

Type:
Anchorage

County: 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 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: 3-440, 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 Ju	Minimum		<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	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:

PPOR Pre-Incident Information Summary for Santa Cruz County: Santa Cruz Whistle Buoy

3-SC-01

Latitude: 36° 56.89' 36.9481 **Longitude:** 122° 00.04 122.0007

Type:
Anchorage

County: Santa Cruz

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):

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/humbuck).

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:

Many seabirds & marine mammals in the area. Of special concern are common murre (Jul - Dec) & sooty shearwater (Apr - Sep).

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.

Subsistence-use Species:

Critical Habitat for Subsistence Species:

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.

Historic and Cultural Resources:

Historic structures exist within the area as well as various cultural/archeological resources. These include but are not limited to Santa Cruz Boardwalk & Pier, the Cement Ship, and various other water side structures.

Commercial Fisheries / Species:

Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.

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:

55,000 people live within the city of Santa Cruz and 250,000 people live within county lines.

Economic Impact on Maritime Commerce and Shipping:

This area has minor influence on maritime commerce and shipping.

PPOR Pre-Incident Information Summary for Santa Cruz County: Santa Cruz Whistle Buoy

3-SC-01

Latitude: 36° 56.89' 36.9481 Longitude: 122° 00.04 122.0007

Type:
Anchorage

County: Santa Cruz

Economic Impact on Commercial Fishing and Aquaculture:

Santa Cruz Harbor shelters a small number of commercial fishing vessels.

Economic Impact on Non-maritime Commerce:

Intake for desalinization plant at Terrace Point.

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.

Other Economic Impacts:

The Santa Cruz Boardwalk is a major coastal attraction in the area and any environmental emergency could significantly affect that tourism enterprise.

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. 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 to NW	~ 5 ft.	Sandy	60	45	Variable	NW swell, 4 ft.	Common Ju	Very limited	S/SE	<input checked="" type="checkbox"/>

Specific Site Details

Site ID	Site Name	Vessel Capacities			Site Capacities and Facilities		
		Max Size	Mini Size	Max Draft	Swing Room or Dock Face	Facilities, capabilities, and any other issues or concern	Containment Possibilities:
	Santa Cruz Whistle Buoy	Deep	1000	50	1000	This area can be used either as an anchorage or possibly as a mooring location on the nearby navigation buoy.	

Site Contact/Leasee/Owner: Santa Cruz Port District

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

Type:

County: Santa Cruz

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):

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/humbuck).

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:

Many seabirds & marine mammals in the area. Of special concern are common murre (Jul - Dec) & sooty shearwater (Apr - Sep).

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.

Subsistence-use Species:

Critical Habitat for Subsistence Species:

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.

Historic and Cultural Resources:

Historic structures exist within the area as well as various cultural/archeological resources. These include but are not limited to Santa Cruz Boardwalk & Pier, the Palo Alto (Aptos Cement Ship), and various other water side structures.

Commercial Fisheries / Species:

Crab, rockfish, groundfish, prawns, market squid, salmon, anchovy, and sardines all in area. Consider sea food tainting issues.

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:

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 Commercial Fishing and Aquaculture:

Economic Impact on Non-maritime Commerce:

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 Managere	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