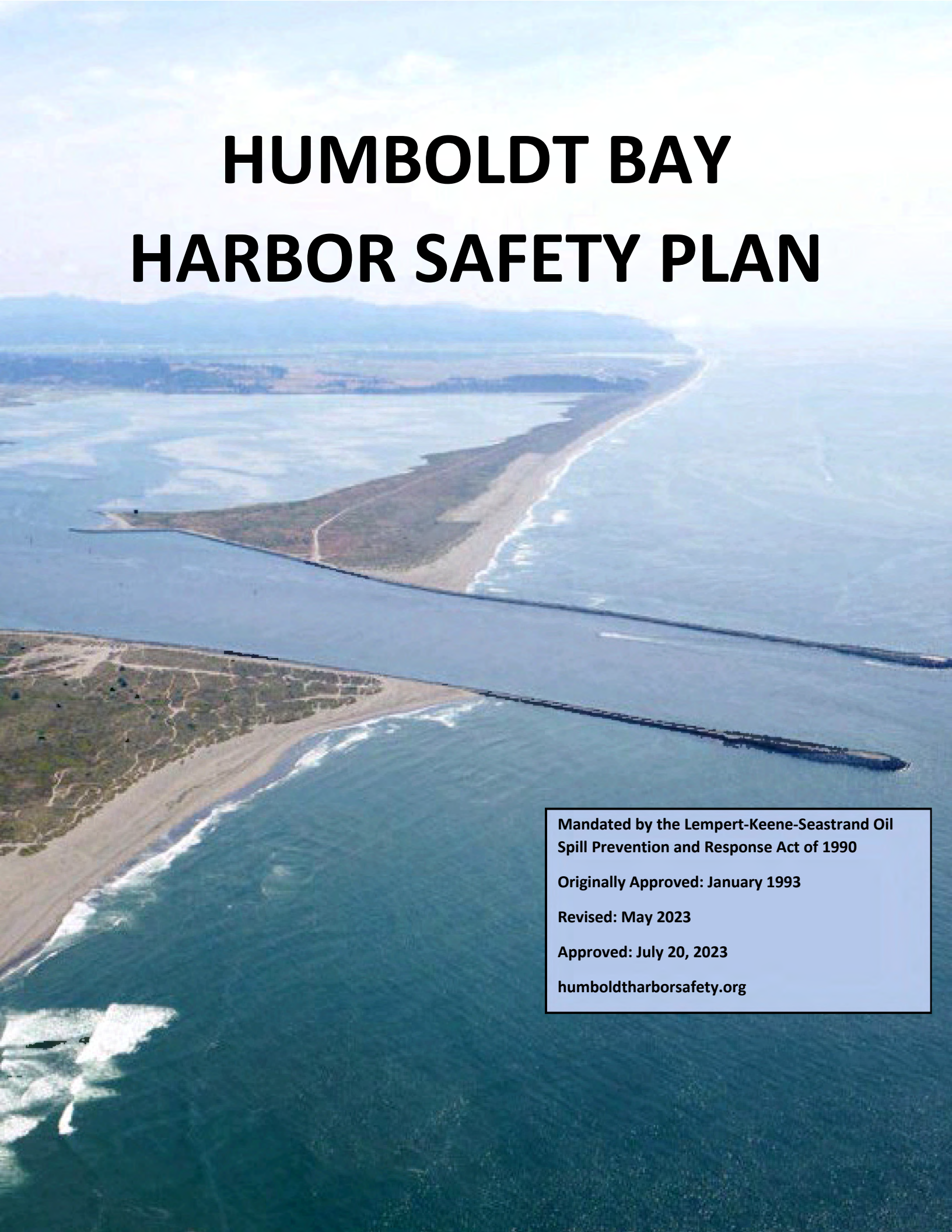
HUMBOLDT BAY HARBOR SAFETY PLAN



Mandated by the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990

Originally Approved: January 1993

Revised: May 2023

Approved: July 20, 2023

humboldtharborsafety.org

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1 INTRODUCTION

1.1 ABOUT HUMBOLDT BAY AND THE PORT AUTHORITY

The Humboldt Bay Area is located approximately 225 nautical miles north of San Francisco, California. Humboldt Bay is a protected harbor. The mouth of the bay is much smaller than the body of water held behind it and open water conditions do not prevail. Humboldt Bay is the only deep-water harbor between San Francisco, California and Coos Bay, Oregon.

The Humboldt Bay Harbor, Recreation and Conservation District was formed in 1973 by act of the state of California per the California Harbors & Navigation Code. The District was established for the acquisition, construction, maintenance, operation, development, and regulation of harbor works and improvements, including rail, water, and air terminal facilities, for the development, operation, maintenance, control, regulation, and management of Humboldt Bay upon the tidelands and lands lying under the inland navigable waters of Humboldt Bay, for the promotion of national and international commerce, navigation, fisheries, and recreation thereon, and for the development and protection of the natural resources of the area. The District has jurisdiction over All tide, submerged, and other lands granted to the District. Humboldt Bay is defined to include all rivers, sloughs, estuaries, and areas tributary to Humboldt Bay, subject to tidal action, provided that only those portions of Tuluwat, Woodley, and Daby Islands bay ward of the mean high tide line shall be under jurisdiction of the District. (CA Harbor & Navigation Code § Div. 6 Dept. of Boating and Waterways- Harbors and Ports, Appendix II, Ch 1, Ch 4, Ch 5, Ch 5.5).
The economy of the Humboldt Bay Area is based upon forest products production and tourism of the nearby Redwood Forests. A small fishing fleet is also supported by local offshore fisheries. The Humboldt Bay and Harbor exports raw and processed timber products. The North Bay supports the largest oyster beds in California, producing more than 50 percent of the State's domestic oyster harvest.

The main traffic corridors through Humboldt County are U.S. Highway 101, also known as the Redwood Highway and Highway 299. Highway 299 is a S. T. A. A. (Surface Transportation Assistance Act of 1982) (https://dot.ca.gov/programs/traffic-operations/legal-truck-access/truck-network-map) approved route connecting Humboldt Bay to the National Maritime Freight Highway System.

The population for Humboldt County is approximately 136,463 (2020 Decennial Census https://www.census.gov). The City of Eureka has a population of approximately 48,119 (2020 Decennial Census https://www.census.gov) and is the largest city in Humboldt County. The county seat is in Eureka, and as such, the city of Eureka is a hub to outlying areas.

1.2 HISTORY AND PURPOSE OF THE HUMBOLDT BAY HARBOR SAFETY COMMITTEE AND PLAN

The Humboldt Bay Area Harbor Safety Committee (HSC) was mandated by the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 (ACT). On November 20, 1991, the California Department of Fish and Wildlife's (CDFW) Office of Oil Spill Prevention and Response (OSPR) officially appointed the Committee.

The California Code of Regulations Title 14, Division 1, Subdivision 4, Chapter 2, Subchapter 1 addresses establishment of Harbor Safety Committees and requirements for Harbor Safety Plans as mandated by the ACT. Specifically, Section 800 includes definitions for terms found within the ACT. Regulations and Section 802 (plan Content Requirements) require the committee to review and evaluate the following:

Tug Escorts
Geographical Boundaries
Harbor Conditions
Vessel Traffic Patterns
Aids to Navigations
Communications
Bridge Management
Enforcement
Vessel Traffic Service (VTS)

Project Funding for VTS
Competitive Aspects
Miscellaneous

On or before July 1 of each year, the ACT also requires that the Harbor Safety Committee report its findings and recommendations to the OSPR Administrator concerning the safety of its harbor and any recommendations for improving tanker and barge safety in the harbor and region of responsibility by amending the provisions of the Harbor Safety Plan, or through other means.
The ACT further requires that the Harbor Safety Plan (HSP) be submitted to the OSPR Administrator subject to an annual review on or before July 1st of each year.

On or before July 1 of each year, the ACT also requires that the Harbor Safety Committee report its findings and recommendations to the Administrator concerning the safety of its harbor and any recommendations for improving tanker and barge safety in the harbor by amending the provisions of the Harbor Safety Plan, or through other means.

In developing the Harbor Safety Plan, the committee reviewed all aspects of vessel operations and safety procedures in Humboldt Bay area and the Port of Humboldt Bay. The primary effort was to improve both harbor safety and the protection of the environment.

1.3 CONTACT INFORMATION

See Appendix 19.4 for current contact information for the Humboldt Bay Harbor Safety Committee.

1.4 PRESENT MEMBERSHIP OF THE HUMBOLDT BAY HARBOR SAFETY COMMITTEE

See Appendix 19.5 for present membership information for the Humboldt Bay Harbor Safety Committee.

2 GEOGRAPHIC BOUNDARIES

The plan boundaries for the Humboldt Bay Area Harbor Safety Plan include all submerged lands between Shelter Cove, California and Trinidad Head, California, from a shoreline elevation of mean higher high water, seaward for three (3) miles including all submerged lands of Humboldt Bay (Inner Harbor). The open water boundary of the "Harbor" shall be defined as the area centered on the Humboldt Bay Sea Buoy and extending radially outward for one mile then landward to the perpendicular intersection with the north and south spits.

See Appendix 20.1 for a boundary map of the areas under the jurisdiction of the Humboldt Bay Area Harbor Safety Committee.

2.1 HARBOR DESCRIPTION

2.1.1 HUMBOLDT BAY

Humboldt Bay is a landlocked harbor on the coast of Northern California, about 225 nautical miles north of San Francisco and about 156 nautical miles south of Coos Bay, Oregon.

The greater Humboldt Bay consists of two large bays connected by a long, narrow channel and separated from the ocean by two long, narrow spits. From the entrance, Humboldt Bay extends north and south a distance of approximately 14 miles, varying in width from 0.5 to 4 miles, and covering an area of over 17,000 acres. Humboldt Bay is surrounded by rolling terraces, steep mountains, and narrow valleys typical of the coastal ranges of the region. Dense forests of redwood and Douglas fir cover much of the area. Humboldt Bay is the only harbor between San Francisco and Coos Bay with channels deep enough to permit passage of large, commercial, ocean-going vessels. Humboldt Bay has a 48-foot Bar and Entrance Channel and 38-foot Samoa Channel. Both the South Bay and Eureka channels are 26 feet deep. The water surface of Humboldt Bay covers over 26 square miles at high tide and about 8 square miles at low tide.

The entrance to Humboldt Bay is bordered by two stone mound jetties approximately one-half mile apart and extending perpendicularly from the ends of two long, narrow sand spits that separate the shallow bay from the ocean. Humboldt Bay has a 48-foot-deep Bar and Entrance channel, and 38-foot-deep Samoa Channel. Both the South Bay and Eureka channels are 26-feet-deep.

The topography of the Humboldt Bay area is relatively flat and characterized by bay waters, tidal flats, and slightly elevated flat to gently rolling terraces. Humboldt Bay is bordered on the south by Table Bluff ridge and on the north and east by rugged mountains. Freshwater and Jacoby Creeks discharge into Arcata Bay on the north and Elk River and Salmon Creek discharge into the central portion of Humboldt Bay and into South Bay, respectively. These streams and their corresponding sloughs are tidal, extending from one to two miles inland from their mouths. The flood plains are uniformly level grasslands, marshlands, and mud flats. There are many smaller tidal sloughs at the north end of Humboldt Bay near Arcata. The Mad River Slough is an abandoned mouth of the Mad River extending inland for about three miles. The present mouth of the Mad River is located approximately five miles north of Humboldt Bay.

Because of its general geomorphology, Humboldt Bay is usually divided into three distinct areas: North or Arcata Bay, Middle or Entrance Bay, and South Bay. The southwest ends of Woodley and Tuluwat Islands may be considered the south end of North Bay. South Bay extends south of the South Spit Jetty and King Salmon.

North Bay covers about 13 square miles and is 5.8 miles at its longest and 11 miles at its widest points. It is bounded by North Spit to the west, Arcata Bottoms to the north, Bayside Bottoms and Fickle Hill to the east and Eureka to the south. Tuluwat Island, Woodley Island, and Daby Islands are all located in the southern portion of North Bay. McDaniel Slough, Jacoby Creek, and Freshwater Creek all discharge fresh water into the North Bay. Mad River Slough, located in the northwest portion of North Bay, does not normally discharge fresh water. During flood conditions on the Mad River, floodwaters may overflow into the slough, and thus into the Bay.

GEOGRAPHIC BOUNDARIES

North Bay is extremely shallow, with over one-half the area (approximately 7 square miles) exposed at low tide. These tidal flats are dissected by several deep channels and numerous shallow channels. Samoa Channel (38-feet-deep Navigation Channel) and Eureka Channel (26-feet-deep Navigation Channel) are the principal commercial waterways of North Bay. The Arcata Channel located in the extreme North Bay (18 feet deep and 150 feet wide) is no longer used for commercial navigation and has not been maintained since 1931.

Entrance Bay (48 feet deep Navigation Channel) is approximately 5 miles long and a maximum of one mile wide. It is bounded by North Spit to the west, and Eureka and the Elk River floodplain to the east. Unlike North and South Bay, it consists of a single deep channel, with generally steep sides. Elk River, the largest freshwater source in Humboldt Bay, empties into Entrance Bay.

South Bay (26 feet deep Navigation Channel) covers approximately 7 square miles, with a maximum length of 4 miles and maximum width of about 2.5 miles. It is bounded by South Spit to the west, Humboldt Hill and Beatrice Flats to the east and Table Bluff to the south. Salmon Creek is the only freshwater source which discharges into South Humboldt Bay.

South Bay is like North Bay with respect to the broad expanses of tidal flats. These flats are also incised by tidal channels. Only one, the Fields Landing Channel, is used commercially and is maintained by the United States Army Corps of Engineers (USACE).

Separating the Bay from the ocean are two long sand spits with a narrow inlet between them. North Spit is about 10 miles long and 0.5 to 0.9 miles wide. Much of this spit consists of large dunes, up to 50 feet high and heavily forested in places. South Spit is about 4 miles long and varies from 0.1 to 0.7 miles in width; it consists of sparsely vegetated dunes much smaller than those on North Spit.

Humboldt Bay contains California's second largest estuary, home to the largest remaining eelgrass beds in the state. Native fish species include Kelp Greenling, Lingcod, California Halibut, Black Rockfish. Humboldt Bay is a breeding habitat for other species such as Longfin Smelt and
The entire Humboldt Bay watershed encompasses approximately 223 square miles. The Mad River (to the north) occasionally overflows into the Bay under flood conditions. The Eel River (to the south) is separated from Humboldt Bay by Table Bluff.

Lowlands to the north and east consist of creek and river flood plains, and former tidal marshes that were diked and drained for agricultural purposes. These lowlands are bordered by low foothills of the Coastal Range. Farther to the east the terrain becomes more mountainous, with elevations of 3,000- 5,000 feet and narrow steep canyons.

Eureka is the principal city adjacent to Humboldt Bay. It serves as the County seat and commercial center of the region. Arcata is the only other incorporated city adjacent to Humboldt Bay and is the location of Humboldt State University. Other communities in the Humboldt Bay area include Bayside, Fairhaven, Fields Landing, King Salmon, Manila, and Samoa.

The commercial/industrial portion of Humboldt Bay is generally located in mid-Humboldt Bay between the southern end of the Fields Landing Channel and the Samoa Bridge to the north. Within this area, coastal dependent industrial uses exist on the east side of the Samoa Spit, along a one-mile stretch of Eureka's shoreline and along a similar length of the Fields Landing Channel in the community of Fields Landing.

There is only one bulk fuel terminal, handling both diesel and gasoline fuel, located in Humboldt Bay. Shipments of petroleum products (gasoline and diesel) range in frequency from every four days to every ten days. Englund Marine, located along the south side of the Eureka Inner Reach, is the primary source of fuel, supplying gasoline and diesel to recreational and commercial vessels. Englund Marine's fueling dock is located at 2 Commercial Street, Eureka, California, North of the City of Eureka Public Marina (Coordinates: 40° 48' 16" N, 124°10'28" W). Vessels dock at the bay side and climb a ladder to access the fuel pumps. There are 2 docks, one for small vessels, and the main dock is for large vessels. Fueling is only available from the above ground, over-water, bayside fuel pumps and cannot be accessed from land.

For additional information on the port area and services, please consult www.humboldtbay.org.

2.1.2 SHELTER COVE

Shelter Cove is about 60 ocean miles south of Humboldt Bay. It lies under the south face of Point Delgada and affords fair shelter in northwest weather but is exposed and dangerous with south or southeast winds. Occasionally a swell may run in the cove. There are no wharves in the cove. Shelter Cove Beach is a long, dark sand beach on the south side of the town of Shelter Cove. The beach is protected from the west by Point Delgada and a rock jetty that was built in 1980. The breakwater / jetty was later improved in 2010.

The rocks, covering 1 to 5 fathoms south of Point Delgada, can be avoided in approaching Shelter Cove by staying over 200 yards south of the lighted whistle buoy and east of the bell buoy.

From Point Delgada the coast extends northwest for 19 miles to Punta Gorda and is backed by steep mountains covered with chaparral and trees. A black sand beach, 0.8 miles north of Point Delgada, extends north for 4 miles. Kaluna Cliff overlooks the south end of the sand beach, and its steep face, scarred by frequent slides, is a noticeable landmark.

Shelter Cove Fishing Preservation, Inc. is a non-profit group formed in 2018 to preserve the fishing heritage of Shelter Cove by providing permanent access to fishing and other recreational and commercial maritime activities through the port of Shelter Cove. They currently operate the public boat launch facility and tractor pull boat launch and retrieval services.

More information and the history of Shelter Cove may be found at:
www.sheltercovefishingpreservationinc.org

2.1.3 TRINIDAD HEAD

Trinidad Head is nearly 39 miles north-northeast of Cape Mendocino and 17.5 miles north of the entrance to Humboldt Bay. It rises to a height of 380 feet. The sides are steep and covered with chaparral. From north or south the head is generally seen as a dark round-topped island. Near the north end it is joined to the mainland by a narrow neck, from the south side of which Little Head, a rocky knoll 125 feet high, projects into Trinidad Harbor. The white cross 200 yards north of the south point of Trinidad Head is prominent. Trinidad Head Light, 196 feet above the water, is shown from a 25-foot white square tower near the southwest side of the head. A lighted whistle buoy is 1 mile west of the head. A fog signal is at the light.

Trinidad Harbor, a small cove east of Trinidad Head, offers shelter in northwest weather, but is dangerous in west or south weather. The cove is small and is further constricted by several rocks, and as a rule, there is always a swell even in the north weather. The harbor is used by fishing boats. The pier has been reconstructed and is actively utilized by commercial fishermen and recreational anglers to a considerable extent during the summer, even though the holding ground is only fair. A pier with a fish house and restaurant is in the bight west of Little Head. Fish are unloaded at the pier and are trucked to Eureka and San Francisco. A small marine railway near the foot of the pier is used for launching and retrieving small crafts up to 26 feet long and 9 feet wide.

More information on Trinidad Harbor is available on their website: http://www.seascape-pier.com/home

2.2 FINDINGS AND RECOMMENDATIONS

Recommendation

The geographic boundary map of the Humboldt Bay Harbor Safety Committee was revised this year to include latitude and longitude coordinates. There are no recommendations or action required by the OSPR at this time.

Review by the Harbor Safety Committee prior to July 1 each year.

3 GENERAL WEATHER AND TIDAL CONDITIONS

3.1 OVERVIEW OF WEATHER AND TIDES

Humboldt Bay has a year-round maritime influenced climate. The rainy season is from October to April, during which 90% of the precipitation falls. The strongest storm systems typically impact the region from December through February with very strong southerly winds, heavy rain, and large seas. Additionally, large westerly swells can cause dangerous surf along the coast and shoaling impacts in the harbor channel.

3.2 WEATHER

Humboldt Bay has a year-round maritime influenced climate. The rainy season is from October to April, during which 90% of the precipitation falls. The annual average rainfall is 40.40 inches. The dry season is from May to September and is marked by considerable fog and low clouds. The fog usually clears by late morning. The prevailing wind is from the north-northwest during the spring and summer and south in the winter. Most storms in the winter approach from the west-southwest. Typical yearly temperatures range from lows in the mid-30s to highs in the low 70s (degrees Fahrenheit). Record highs have reached the 80s and lows have approached 20 degrees.

3.3 WINDS

The winds in Humboldt Bay are driven primarily by storm systems in the winter and the interactions of a thermal trough and high pressure over the eastern Pacific Ocean during the spring, summer, and early fall. The prevailing winds during the stormy winter months are from the south ahead of cold fronts and turn northwest behind the fronts. Winds can become very strong ahead of and with winter storm systems with gusts of 40-50 mph out of the south-southeast. The strongest storms can bring damaging wind gusts in excess of 70 mph. These strong gusts are often brief and only last a few hours. During the summer, the thermal trough over interior California and high pressure over the eastern Atlantic result in persistent north winds along the entire Northwest California coastline. Typical winds speeds are in the 15-25 mph range but can have gusts on occasion to 40 mph.

3.4 FOG

Fog can happen at any time of the year in Humboldt Bay but is most common in the spring, summer, and fall months when the air temperature and dewpoint temperature warm above the temperature of the coastal ocean waters. Typically, low clouds and fog form in the evening hours or overnight and dissipate or retreat to the coast in the late morning or early afternoon during the foggy months. However, during rather persistent patterns, fog can remain in place for days at a time resulting in significantly reduced visibilities. In the winter fog is more diurnally driven with cooling temperatures and clear skies overnight needed for fog to form. This fog disperses early in the morning.

3.5 TIDES AND CURRENTS

There are two tide cycles every twenty-five hours. Each cycle occurs 50 minutes later each day.

The tidal range between mean lower low water (MLLW) and mean higher high water (MHHW). MHHW is 6.4 feet at the Bay Entrance, 6.7 feet at Eureka and Fields Landing, and 7.0 feet at Samoa. Extremes may vary from 11 feet or more between tide cycles.

Tidal currents generally parallel the federally maintained channels. Maximum tidal current velocities during flood and ebb cycles are approximately 2 to 3 knots in the North Bay Channel and 2 to 4 knots in the entrance channel.

Making the turn from the approach to the entrance range is abrupt and difficult to make under certain conditions of wind, sea, and current. Strong and variable tidal and non-tidal currents, rough seas, breaking waves, wind, and fog often adversely affect navigation in the entrance channel.

3.6 SEA CONDITIONS

Sea conditions are influenced by two primary mechanisms; 1) local winter storms in the winter and local northerly winds in the summer and 2) distant storms producing long-period waves that impact the coast primarily from the west-northwest. Local storms and summer northerlies bring very strong winds and steep seas to the coastal waters. Seas can exceed 10 feet regularly in the winter and sometimes exceed 15 feet. The strongest local winds over the coastal waters occur ahead of cold fronts in the winter with storm force 50 kt or greater wind gusts occurring once or twice each winter. Additionally, long period swells from the west bring additional hazards with dangerous shoaling on sandbars and huge breaking waves along the coast. Long period swells between 20 and 30 feet occur several times each winter. These can result in breaking waves in the surf zone during large westerly swell events can easily exceed 20 feet and sometimes exceed 30 feet on the open coastline. In the harbor channel the waves have been recorded at nearly 40 feet. This is a major hazard to navigation and several times each year requires complete closure of the harbor entrance by the Coast Guard.

3.7 TSUNAMI

A Tsunami generated by an earthquake along the Cascadia Subduction Zone could arrive just minutes after the initial shock. The lack of warning time from such a nearby event will result in higher casualties than if it were a distant tsunami source.

For tsunamis originating at distant sources, the National Tsunami Warning Center will provide initial warning notification to local emergency response agencies in time to warn and evacuate threatened coastal areas. The 1964 Alaskan earthquake produced a 6-foot tsunami and a 14-knot current in the Samoa Channel.

On March 11, 2011, the M9.0 Tohoku (Tohoku-Chiho Taiheiyo-Oki) Earthquake occurred near Sendai, Japan and sent a series of tsunami waves to the west coast of the United States within 8 to 10 hours. Widespread damage occurred along the coast including the sinking of 35 vessels and complete destruction of the Crescent City harbor.

For the Port of Humboldt Bay, weather conditions would not allow vessels to cross the bar safely to get to deep water and the only two vessels able to depart Humboldt Bay were the US Coast Guard 47-foot motor lifeboats. Prior to the earthquake and tsunami, local sea conditions were predicted to rise to 18 to 20 feet with Gale winds forecast for the entire week. Crescent City vessels that had gone to sea in advance of the tsunami were able to make it into Humboldt Bay prior to the advancement of the storm.

The California Department of Conservation has prepared interactive tsunami maps for every coastal county in California. Their website also reviews the history of tsunamis in the Pacific Ocean and California, provides technical reports, education, and preparedness information. More information may be found at:
https://www.conservation.ca.gov/cgs/tsunami.

Cal Poly Humboldt (formerly Humboldt State University) actively participates in the Redwood Coast Tsunami Work Group with support from the California Office of Emergency Services. They have published regional brochures for Humboldt County including maps of tsunami hazard areas and preparedness checklists entitled Living on Shaky Ground. See Appendix 20.10 for the County of Humboldt Tsunami Hazard Area Map.
More information may be found at: https://rctwg.humboldt.edu.

Warning sirens will be used as part of the early warning system for numerous communities along the North Coast as part of the implementation of the County plan. The sirens and evacuation drills are performed each year as part of California Tsunami Preparedness Week. More information may be found at:
https://www.tsunamizone.org/california/ and https://www.tsunami.noaa.gov/.

3.8 MARINE WEATHER SERVICES

NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) provides tide, water levels and current information to support maritime users. CO-OPS information can be found here: https://tidesandcurrents.noaa.gov/.

NOAA's National Weather Service has a Weather Forecast Office on Woodley Island that provides marine observations, forecasts, and warnings for the waters adjacent to Humboldt Bay and out 60 nautical miles. The National Weather Service's Ocean Predication Center provides similar information beyond 60 nautical miles. The National Weather Service information for the region can be obtained via NOAA Weather Radio on marine VHF bands and online at www.weather.gov/eureka" www.weather.gov/eureka.

In addition to standard weather forecasts, the National Weather Service office on Woodley Island developed a specialized bar forecast model that predicts when the Humboldt Bay Harbor entrance is dangerous. The forecast model provides wave height and direction, and current speed and direction. It also predicts when waves become steep enough to become dangerous. This bar forecast can be found on the web site above.

3.9 PHYSICAL OCEANOGRAPHIC REAL TIME SYSTEM (PORTS)

NOAA has assisted various ports throughout California with a Physical Oceanographic Real-Time System (PORTS) in providing weather, wave, currents, and other physical oceanographic conditions to local mariners on a real time basis. NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) provides tide, water levels and current information to support maritime users. CO-OPS information can be found here: https://tidesandcurrents.noaa.gov/ .

The CO-OPS Physical Oceanographic Real Time System (PORTS) is a public/private partnership that provides real time meteorological, water level and current information. The data from the Humboldt Bay PORTS can be found here: https://tidesandcurrents.noaa.gov/ports/index.html?port=hb.

PORTS data, when combined with up-to-date nautical charts and precise positioning information, can provide the mariner with a clearer picture of the potential dangers that may threaten navigation safety. Humboldt Bay is known to have some of the strongest currents of any major seaport in the United States. The PORTS program was designed and developed to provide real time data to the mariners and port operators throughout the country to help them avoid maritime accidents. The Humboldt Bay Harbor District, along with Cal Poly Humboldt, Chevron, and NOAA, have partnered since 2012 to install instruments at sites in Humboldt Bay to measure currents. The instruments are called Acoustic Doppler Current Profilers (ADCPs) and they determine current velocities by measuring the travel times of sound as it interacts with objects in the water.

Scripps Institution of Oceanography Coastal Data Information Program (CDIP) operates and maintains Waverider buoys off the coast of Humboldt. Major funding for these buoys comes from the U.S. Army Corps of Engineers and the California Department of Boating and Waterways. There are currently two Waverider buoys located off Humboldt. Buoy 46213 near Cape Mendocino and buoy 46244 off Humboldt Bay's north spit. Observations from buoy 46244 off Humboldt Bay is available via the NOAA PORTS website here: https://tidesandcurrents.noaa.gov/ports/ports.html?id=wv46244.

3.10 FINDINGS AND RECOMMENDATIONS

Recommendation 1

The Harbor Safety Committee supports the efforts of the Humboldt Bay Harbor District, Cal Poly Humboldt, and the PORTS program. The Humboldt Bay Harbor, Recreation and Conservation District and Cal Poly Humboldt currently hold a contract to support ongoing PORTS activities through September 2025. Chevron and Cal Poly Humboldt hold a contract for funding through April 2024. The Harbor Safety Committee recommends continual, ongoing support of the PORTS program and the partnership of Cal Poly Humboldt, Humboldt Bay Harbor, Recreation and Conservation District, and NOAA. Per the 2021 Humboldt Bay PORTS Annual Report, the CO-OPS goal is to attain 95 percent sensor reliability. Current data for 2021 reports 83-97% reliability. System Maintenance is ongoing and the current responsibility of the HBHRCD under the PORTS contract.

No action is required of OSPR at this time. Should funding become necessary to replace or install additional equipment, the Harbor Safety Committee shall request funding from OSPR and identify other possible funding sources.

Review by the Harbor Safety Committee prior to July 1 each year.

Recommendation 2

If a major earthquake or tsunami occurs within the Humboldt Bay region, the Port Authority will make every effort to contact the U.S. Army Corps of Engineers to survey the channels and entrance if adverse conditions are noted.

If a surveyor cannot respond to the request within a reasonable length of time, the Port Authority may contact NOAA for assistance in this matter. The Point of Contact is the California Navigation Manager for the Office of Coast Survey at 301-351-7798 or Chief of the Navigation Response Branch at 202-641-1801.

No action is required by the OSPR at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

4 ANCHORAGE AND AIDS TO NAVIGATION

4.1 AIDS TO NAVIGATION

Types of Aids to Navigation

The aids to navigation within Humboldt Bay Harbor and adjacent to it are as follows:

1. Fixed Aids: Steady, flashing, rotating, and radar reflecting.

2. Buoyed Aids: Flashing, and radar reflecting.

3. Channel Markers: Fixed and buoyed.

4. Audible Markers: Horn, bell, and whistle.

The Aids to Navigation Team Humboldt Bay presently provides quick response to reports (usually by harbor pilots) of any damaged or "off-station" navigational aids. Contact the Aids to Navigation Team Humboldt Bay at (707) 269-2550 for any repairs or replacement of damaged navigational aids, as well as missing or off-station buoys. Additionally, a USCG ship comes from San Francisco 2 to 3 times per year for maintenance and repairs on large scale Buoys.

For positions and descriptions of Aids to Navigation in the area, refer to the Light List available via the internet at: https://www.navcen.uscg.gov/weekly-light-lists.

NOAA has many products and services to promote safe navigation for the maritime community. Several of these programs are described on the National Ocean Services (NOS) website here: https://oceanservice.noaa.gov/navigation/.
NOAA's Office of Coast Survey (OCS) produces a suite of official nautical charts that cover the coastal regions of the United States. OCS also produces and maintains the Coast Pilot, which provides textual information that is difficult to portray on the nautical charts. These and other products are available from the OCS web site here: https://nauticalcharts.noaa.gov/

For positions and specific descriptions see Appendix 19.11 Aids to Navigation for a copy of the USCG light list for the area. Users can also refer to an up-to-date nautical chart of the area. Raster charts in the area, including Humboldt Bay (18622), Point Arena to Trinidad Head Chart (18620), Trinidad Head to Cape Blanco Chart (18600), will cease production by December 2024. Therefore, users should use the appropriate scale Electronic Navigational Chart (ENC) available on NOAA's Office of Coast Survey website: https://www.nauticalcharts.noaa.gov/.

Humboldt Bay Entrance Small Boat Warning Light (LLNR 8136) is located at U.S. Coast Guard Station Humboldt Bay on the boat house jetty.

4.2 HAZARDS

Humboldt Bay is a shallow bay that has been improved for navigation by the regular maintenance of dredged channels. These channels are marked by lighted buoys and fixed lights, which constitute most of the Aids to Navigation.

Vessels currently experience sailing delays due to waiting for favorable tides. The Harbor Entrance has been stabilized by the addition of stone jetties, which are marked by lights and foghorns. Some wharves or piers, which are parallel to or extend into the channels, are lighted by the U.S. Coast Guard or private entity. There are no natural rock hazards within Humboldt Bay.

The Humboldt Bay Harbor, Recreation and Conservation District through a Port Security Grant was able to obtain a camera system to monitor the Bar and Entrance channels. In cooperation with the U.S. Coast Guard and the National Weather Service, this camera system was installed in 2011. The Bar and Entrance camera is currently not in service and unable to be repaired. Funding is needed to replace the camera; the U.S. Coast Guard will apply funds when available.

4.3 SHOALING

Shoaling conditions can exist in the bar and entrance channels. The conditions are unpredictable but occur more often in the winter months or upon the onset of inclement weather. Historically, moderate winter storms have created dangerous shoaling spots as streams of sand flow upward from the entrance of the ship channel. This shoaling not only creates shipping hazards but has forced the Humboldt Bay Bar Pilots to impose restrictions on vessel drafts. Emergency dredging has been necessary in the past to restore the safety of the Bar and Entrance Channel and portions of the Federal Navigation Channel. Some of the more prominent shoaling areas include the Bar Channel in the vicinity of Buoy 2 and the tip of the south jetty; the Entrance Channel; the 110-degree turn in the vicinity of Buoy 7 and Buoy 9; the area around Buoy 10, and the area around Lighted Beacon No. 16. Poor visibility because of surf haze and fog may also hamper vessel operations.

The most recent Hydro Survey Conditions for the Federal Navigation Channel of Humboldt Bay is available at: https://www.spn.usace.army.mil/Missions/Surveys-Studies-Strategy/Hydro-Survey/Humboldt-Bay-Channel/

4.4 ANCHORAGE

Present Conditions

Per Humboldt Bay Harbor, Recreation and Conservation District Ordinance No. 17, Under the authority of section 4 of Appendix II of the California Harbors and Navigation Code:

No vessel may anchor within the Exclusion Zone of Humboldt Bay (Federal Navigation Channel).

No vessel may anchor or moor within Humboldt Bay for a period in excess of seventy-two (72) consecutive hours without the owner, operator, or captain of the vessel first obtaining a Temporary Anchoring Permit from the District, the owner, operator, or captain of the vessel shall present proper personal identification and license, if applicable, and evidence of title or ownership of the vessel. A Temporary Anchoring Permit authorizes the holder to anchor or moor only and grants no further rights, privileges, or uses. A Temporary Anchoring Permit is valid only for fourteen (14) continuous days from date of issuance or extension. A Temporary Anchoring Permit may be extended for only one additional fourteen (14)-day period at the discretion of the Harbor Master.

A Temporary Anchoring Permit may be issued only with respect to a named individual or government entity and a single vessel and shall be valid only in respect to that individual or government entity and vessel. It shall be the responsibility of the vessel owner, operator, or captain to contact the Humboldt Bay Harbor District and apply for a Temporary Anchoring Permit within seventy-two (72) hours of anchoring in Humboldt Bay.

Humboldt Bay Harbor District can be contacted at telephone number: (707) 443-0801, by fax at (707) 443-0800, by E-mail at woodleyisland@humboldtbay.org, or by VHF on channel 14.

In Humboldt Bay the area between Lighted Buoy #17 and the southern end of Fairhaven Terminal’s dock, west of the main North Bay Channel, has been used as a temporary holding area. Large vessels may only hold for a single tide period, because there is not enough room in the channel for them to swing with the change in tide.

Small craft anchorages are seasonally available in Shelter Cove and Trinidad Bay. Humboldt Bay Harbor, Recreation and Conservation District regulates Shelter Cove and oversees management of Shelter Cove by Shelter Cove Fishing Preservation, Inc. Trinidad Bay is managed by the Trinidad Rancheria Tribal Harbor District (Tribal Government).

It is not the intent of the Harbor Safety Committee to officially designate any anchorages within the defined Harbor boundaries currently because of physical limitations (narrow channel width). It is the HSC's position that current procedures

be maintained, i.e., the pilot that guides the vessel be allowed to determine the most suitable holding area for that vessel at that time.

Unloaded vessels calling in Humboldt Bay shall be sufficiently ballasted to navigate the harbor entrance channel and the bar without significant difficulties. Vessels shall arrive with clean ballast or segregated ballast aboard so that it can be discharged into the harbor without pollution. Vessels arriving from foreign ports where they have loaded ballast aboard before departing that port shall change their ballast completely with clean sea water in accordance with California PRC Section 71200-71215.

Vessels' agents shall be advised to instruct masters by email, facsimile, or telex to change ballast prior to arrival in Humboldt Bay.

There are no shoreside ballast reception facilities available for vessels calling in Humboldt Bay.

4.5 FINDINGS AND RECOMMENDATIONS

The Harbor Safety Committee has evaluated the Aids to Navigation and recommends the following:

Recommendation 1

a. All vessels calling at marine terminals in Humboldt Bay shall have sufficient mooring ropes or wires of proper strength to hold the ship fast to the marine terminal during all weather conditions which may be expected in Humboldt Bay.

b. It is the responsibility of the owner/operator of the terminal to ensure that the bollards and hooks on the docks and mooring dolphins to which the ship attaches its mooring ropes and wires shall be of sufficient holding strength to hold the ship alongside during all conditions which may be expected in Humboldt Bay.

c. Each terminal shall provide mooring facilities that can be used by ships for safe mooring. Terminals shall have a bearing surface of sufficient strength to lie against and support the ship properly.

d. The Humboldt Bay Harbor District, in consultation with the HSC, developed an anchoring Ordinance No. 17- An Ordinance Establishing Rules, Regulations and Enforcement Procedures for the Anchoring, Security, and Disposition of Vessels and Property in Humboldt Bay adopted June 2004. See Appendix 19.12 for Ordinance No. 17.

e. The Humboldt Bay Harbor District recommends to the HSC and OSPR that anchorage areas will need to be reviewed and possibly updated to reflect a projected increase in vessel traffic and anchorage needs associated with the proposed Offshore Wind Energy developments and potential new heavy lift, multipurpose terminal.

The HSC has determined that due to physical limitations (narrow channel width), anchorages will not be officially designated within the defined Harbor boundaries and that current procedures will be maintained (i.e., the pilot that guides the vessel will be allowed to determine the most suitable "holding" area for that vessel at that time). It should be clarified in the plan's annual update that there are no anchorages within the bay, and that there is a one-way traffic channel which shall be adhered to make harbor travel safe.

The HSC has made Recommendation 1 a-d regarding safe mooring. However, upon further discussion with the HSC members, no further action will be required by the OSPR, as these recommendations are already being practiced by vessel and terminal owners/operators, and sufficient mooring ropes or wires during transfer operations are already required under federal regulation (33 CFR 156.120 (a))(https://www.ecfr.gov/current/title-33/chapter-I/subchapter-O/part-156/subpart-A/section-156.120).

The HSC will review Recommendation 1e. in a future revision of the Harbor Safety Plan. No action from OSPR is required currently.

5 SURVEYS, CHARTS, AND DREDGING

5.1 SURVEYS AND CHARTS

The US Army Corps of Engineers (ACOE) conducts condition surveys for Humboldt Bay at least twice per year. To view the most recent survey, visit: https://www.spn.usace.army.mil/Missions/Surveys-Studies-Strategy/Hydro-Survey/Humboldt-Bay-Channel/

5.2 CHANNEL DEPTHS

The Federally authorized and maintained navigation channels in Humboldt Bay, from south to north (as noted in Appendix 20.3, Humboldt Bay Area Facilities Map) are as follows:

Fields Landing Channel - 26 feet deep (MLLW) and 300 feet wide.

Fields Landing Turning Basin - 26 feet deep (MLLW) at mile 3.16 (lower end of Fields Landing Channel) - 300 to 800 feet wide, and 600 feet long.

Bar and Entrance - 48 feet deep (MLLW) and 2100 feet wide at seaward mile 1.0 NM tapered to 750 feet wide at seaward mile 0.18, and 500 feet wide from seaward mile 0.18 to mile 0.75.

Turn – (110-degree turn) - 48 feet deep (MLLW).

North Bay Channel - 38 feet deep (MLLW), and 500 feet wide from mile 0.75 to mile 4.29.

Outer Eureka Channel - 38 feet deep (MLLW), and 400 feet wide between mile 4.29 and mile 5.0.

Inner Eureka Channel - 26 feet deep (MLLW), and 400 feet wide between mile 5.0 and mile 6.30.

Samoa Channel - 38 feet deep (MLLW), and 400 feet wide between mile 4.29 and mile 5.84.

Samoa Turning Basin beyond mile 5.84 (upper end of Samoa Channel) - 38 feet deep (MLLW), and 400 to 1000 feet wide, and 1800 feet long.

Arcata Channel - 18 feet deep and 150 feet wide. Abandoned since 1931, it is no longer maintained.

5.3 CHANNEL DESIGN PLANS

The Humboldt harbor channels were designed to conform to the historic tidal drainage patterns of Humboldt Bay. In design of the channels and other navigational features, adequate clearance between the vessel keel and the channel bottom must be considered. Clearance factors must allow for vessel squat, trim, maneuverability, and wave action. The Humboldt Bay Harbor District has established rules requiring a two-foot under keel clearance on all vessels over 300 gross tons while transiting navigation channels.

The U.S. Army Corps of Engineers monitors channel depth, width, and alignment at least annually, and consults with the Harbor District and others concerning any changes. The Corps of Engineers completed a long-term shoal management study of the bar/entrance channel to Humboldt Bay authorized by Section 216 of the 1970 Flood Control Act. The basis of the study was to investigate changed physical conditions that are the causes of unanticipated shoaling in the Humboldt Channels. Funding for the reconnaissance phase of the study was appropriated in the Energy and Water Development Appropriations Act of 2004. The purpose of the analysis was to determine if there was a Federal interest in participating in a cost-shared feasibility study to provide navigation improvements to Humboldt Harbor and Bay, specifically to address the changed conditions (i.e., shoaling) in the Bar and Harbor Entrance and North Bay Channels. The analysis resulted in the finding that there is a Federal interest in continuing the study into the feasibility phase. The analysis reviewed numerous reports

concerning Humboldt Bay and Harbor, including an April 1995 Final Feasibility Report and Environmental Impact Statement/Report for Navigation Improvements, Humboldt County, California by the Army Corps. The analysis identified existing shoaling conditions worsened yearly by weather storm patterns as the main cause of necessary depth restrictions placed on the bar and entrance channel. These restrictions can last up to 6 months of the year depending on federal funding availability for bi-annual dredging.

Dredging of the North Bay, Eureka, Samoa, and Field's Landing Channels are secondary to the Bar and Entrance channels dredging. Not only are shoaling conditions dangerous but carry economic impacts. Public concern has been expressed regarding how safe entrance for all ocean-going vessels is essential to the local economy.

Humboldt Harbor was known as a treacherous entrance before the shoaling issues started. The two main factors that make the entrance dangerous are the semi-permanent sand bar in and near the entrance, and large ocean waves. Shoaling between November and April impedes navigation by reducing channel depth. This prevents large draft vessels (primarily vessels with a draft greater than 30 feet) from entering the harbor. To reduce their draft, some vessels reduce their tonnage resulting in loss of production and greater transportation costs. Shoaling can also result in ship groundings. Ship groundings not only damage vessels but can carry potential risk to human life and safety and risk of catastrophic environmental pollution.

Eleven alternatives to reduce shoaling were developed based on a 2004 multi-agency meeting that included bar pilots, tug captains, coastal engineers, and stevedores. The eleven alternatives are believed to be inclusive of all technically realistic alternatives to reduce shoaling. These alternatives were categorized into three groups based on how they reduce shoaling. The three alternative groups are: (a) sediment removal alternatives (dredging); (b) sediment blocking alternatives (coastal structures); or (c) any combination of (a) and (b). All alternatives still include annual dredging maintenance and would supplement and hopefully stabilize or reduce the amount of maintenance dredging needed at Humboldt.

There is a strong Federal interest in conducting the feasibility study based on the alternatives proposed. There are several alternative plans that appear likely to produce navigation benefits in excess of project costs. The feasibility study requires a 50 percent match of funds from the Humboldt Bay Harbor District as the local sponsor. The study was terminated due to a lack of funds produced. Without alternatives provided for reducing shoaling conditions in Humboldt Bay, it is assumed that the Bar Pilots and Harbor District would continue to address the shoaling problem by imposing draft restrictions ranging from 18 to 33 feet depending on the severity of the shoaling.
(U.S. Army Corp of Engineers. (Aug 2005). HBH 905(b) Analysis Final Aug 05 (002) Section 905 (b) (WRDA 86). Philip T. Feir, LTC, EN Commanding.)

5.4 BERTHS

In 2007, the Harbor Safety Committee of the Humboldt Bay Area adopted a dock address system listing 60 docks and structures within Humboldt Bay. The dock addresses are listed by port area, Universal Location Code, channel, common name, AIS destination code and latitude/longitude.

See Appendix 20.8 for Humboldt Bay Berth Codes.

5.5 FINDINGS AND RECOMMENDATIONS

MONITORING THE IMPROVED CHANNELS

The Harbor Safety Committee has evaluated the current dredging program to determine accurate depth information and found that improvements were necessary.

a. Because of adverse weather conditions some channel areas of Humboldt Bay can shoal very quickly. The U.S. Army Corps of Engineers needs to continue to monitor the channels to assure that sufficient depths are maintained for safe vessel passage. The Entrance Channel and North Bay Channel shall be maintained at the project depth to minimize the risk of grounding. This recommendation is to be conducted and funded by the U.S. Army Corps of Engineers.

b. Soundings associated with existing annual harbor dredging operations by the U.S. Army Corps of Engineers are conducted between April and October, and include the Bar Channel, Entrance Channel, North Bay Channel, and the Samoa Channel. These dredge related soundings are considered adequate for traffic safety during the summer season providing that such dredging project-related soundings do commence with the "conditional" sounding in April, which is deemed necessary to indicate post-storm season conditions. Should the U.S. Army Corps of Engineers change existing dredging schedules; these areas will require sounding in April for traffic safety. This recommendation is to be conducted and funded by the U.S. Army Corps of Engineers.

c. Monthly soundings from December to March from the Bar to Beacon No. 11. This recommendation to be conducted and funded by the U.S. Army Corps of Engineers.

d. The above sounding information is to be provided in a timely manner to the Humboldt Bay Harbor District and to shipping agents who request it from the Corps of Engineers.

e. In 2004 the Humboldt Bay Harbor, Recreation and Conservation District partnered with the U.S. Army Corps of Engineers (USACE) to develop a long-term sediment management program aimed at a permanent solution to minimizing shoaling at Humboldt Bay's entrance between buoy 2 and the south jetty. In 2005 the USACE completed the reconnaissance phase of this project. The next phase of the project is to complete a feasibility study of the nine potential remedies to the shoaling issue. To initiate the feasibility study, the USACE requires a 50/50 match of the approximately three-million-dollar project. The Harbor Safety Committee recommends the State of California, through proposition 1B, funds the State's share of the match. The OSPR sent a letter, in 2008, to California Transportation Commission asking that Proposition 1B funds be used to cover the 50% local cost share necessary to conduct the long-term sediment management feasibility study as described in item "e" above.
The OSPR sent a letter, in 2009, to U.S. Army Corps of Engineers to perform items "a-d" above as part of a program to determine and portray accurate depths for Humboldt Bay. No funding was initiated for the feasibility study to improve the design of the Bar and Entrance channel.

f. In August of 2017, a Coastal Regional Sediment Management Plan was completed for the Eureka Littoral Cell. An environmental impact report has also been completed. The CRSMP identified the Eureka Littoral Cell as having significant issues associated with fine sediments which affects local dredging as well as numerous other environmental issues including sea level rise.

Recommendations

Recommendation 1

Each public facility shall maintain the channel project depth of the berth. Industrial and other private docks shall maintain a depth sufficient for intended use. Soundings shall be performed on a periodic basis, at least annually, to verify the depth of water in and to each berth. This recommendation to be conducted and funded by the Owner of the respective Berth.

Recommendation 1 is currently practiced by facilities within the Harbor. No action is required by OSPR currently.

Recommendation 2

The Harbor Safety Committee recommends that the U.S. Army Corps of Engineers implement the recommendation to finalize the evaluations that were identified in the Humboldt Bay Long-Term Sediment Management Study (CWIS # 081540; P2 Project # 105098) to reduce and prevent shoaling in the Bar and Entrance Channels.

6 VESSEL SPEED AND TRAFFIC PATTERNS

6.1 SHIP TRAFFIC

Vessel Traffic Patterns Present Use

Commodity traffic at Humboldt Harbor is composed of deep draft shipping, barge traffic and commercial fishing. Foreign flagged deep draft ships, log barges and commercial fishing vessels, domestic petroleum barges, and foreign flagged cruise ships frequent Humboldt Bay.

Visiting barges, tankers and freighters are at the upper size end of the vessels that visit and operate in the Humboldt Bay region. Canoes, rowing skiffs, small recreational boats, boats from the local and visiting fishing fleet, and small yachts, also use the harbor.

Recreational sailing and fishing activities occasionally disrupt vessel traffic patterns and create hazards to safety of navigation of large commercial vessels. Sailing vessels participating in organized sailing races occasionally have impeded large vessels which can only maneuver in narrow channels.

Recreational fishing in the Harbor Entrance Channel occurs during the salmon fishing season and may impede the passage of a vessel that can safely navigate only within the narrow channel.

To reduce conflict between small and large vessels, the HSC requested and received approval of Rule 9 to regulate vessel movement and reduce this hazard. The US Coast Guard Captain of the Port issued Public Notice 2-92 (COTP NOTE 2-92, April 15, 1992), which identifies the narrow channels for the purpose of application of Rule 9 in Humboldt Bay. This notice is included in Coast Pilot 7 (https://nauticalcharts.noaa.gov/publications/coast-pilot/files/cp7/CPB7_WEB.pdf). See Appendix 19.9.4 for COTP Notice 2-92).

There are several safe boating education programs available through the appropriate schools, Community Colleges, U.S. Coast Guard Auxiliary and the California Department of Boating and Waterways. However, incidents still occur occasionally.

Vessel Routing Present Conditions

Vessel traffic is restricted to existing channels. Vessels do not frequently pass each other in the channel. When this does occur the vessel with the shallower draft will move to the outer edge of the channel and allow the deeper draft vessel to use the center of the channel.

Vessel routing is conducted by pilots using VHF communication, such that vessels pass at appropriate locations in the channel and in a safe manner.

Navigation in reduced or restricted visibility proceeds based on the judgment of the ship's master or the pilot advising him.

All large vessels carry surface search radar, which allows safer navigation in reduced visibility.

Vessel traffic during dredging operations is rerouted using normal vessel-to-vessel passing procedure.

6.2 SPEED OF VESSELS

Speed within the port should be at a minimum safe speed to maneuver and control the vessel, with regards to weather, conditions of draft, and the maneuvering characteristics of the vessel.

On approaches, speed should be at a level to accommodate safe transit (minimum for existing conditions). It should be noted that the approach to the Port of Humboldt Bay generally involves cross currents which are mostly unpredictable for direction and strength.

Extreme caution (no wake) should be used in the vicinity of the Fuel Barge and a No Wake Zone exists between the Samoa Bridge and the south end of the City of Eureka's Public Marina. (City of Eureka Municipal Code §100.14) Speed within the Eureka Channel Inner Reach, Woodley Island Marina, Eureka Public Marina, and other marinas shall be limited to five (5) miles per hour. (HBHRCD Ord. No. 17 Sec. 7.10) See Appendix 20.5 for reference.

Existing law established within the California Harbors and Navigation code provides that, where not otherwise regulated by local rules and regulations, every owner, operator, or person in command of any vessel propelled by machinery is guilty of an infraction if that vessel travels at a speed in excess of five miles per hour in any portion of the following areas:

- Within 100 feet of any person who is engaged in the act of bathing. A person engaged in the sport of water skiing shall not be considered as engaged in bathing for the purposes of this provision.
- Within 200 feet of: a beach frequented by bathers; a swimming float, diving platform, or lifeline; a way or landing float to which boats are made fast of which is being used for the embarkation or discharge of passengers. (HNC §655.2(a).)

The U.S. Coast Guard has established protection zones for 500 yards around all U.S. naval vessels in navigable waters of the United States. Vessels are to proceed at a no-wake speed when within a protection zone. Non-military vessels are not allowed to enter within 100 yards of a U.S. naval vessel, whether underway or moored, unless authorized by an official patrol.

6.3 FINDINGS AND RECOMMENDATIONS

Existing and proposed federal, state, and local laws, regulations, and ordinances affecting the harbor area were reviewed and considered in the HSC's recommendations.

Recommendation

With the emergence of modern technologies associated with electric vessels and hydrofoil, the speed of vessels in Humboldt Bay and along the coast will need to be reevaluated in the future. Electric vessels with hydrofoil technology have the ability and potential to travel at high rates of speed while creating little to no wake. There are numerous reasons to evaluate speed such as safety of passengers aboard vessel, safety of other persons and vessels on the water, sea life, air quality, energy conservation, and wake.

The Harbor Safety Committee will continue to monitor vessel traffic within Humboldt Bay and will recommend solutions as issues arise.

7 SMALL VESSELS

SMALL VESSELS

7.1 BACKGROUND

Humboldt Bay is a wonderful place to explore in small boats. Fishing, hunting, kayaking, and sightseeing opportunities are many.

7.2 FISHING BOATS

Standards of Care:

- Ensure vessel is safe before getting underway
- Ensure vessel is seaworthy
- Keep flares and distress calling equipment readily accessible
- Be extra careful in fog – DO NOT LOITER near the jetties or in the navigational channels
- Comply with Rule 9 – small vessels remain clear of large vessels that must navigate within a narrow channel
- Avoid passing larger vessels close aboard
- Do not pass large vessels, tugs, etc. without first notifying the vessel of your intention
- Know how and when to monitor VHF Channels
- Know vessel's position – navigation equipment i.e.: nautical charts, GPS, handheld GPS, etc.
- Be an informed mariner:
    - 5 or more short blasts of a vessel's whistle/horn = DANGER SIGNAL
    - Know the Rules of the Road
    - Read Coast Guard Notice to Mariners
    - Monitor the weather
    - Listen to VHF Channel 16 for Coast Guard information broadcasts
    - Be aware of current weather conditions, tidal times, currents, and changing conditions
    - Ensure everyone on board is aware of all emergency procedures

The Coast Guard offers free, non-punitive, commercial fishing vessel safety dockside exams. Upon successful completion of a dockside exam, a decal is issued and any future Coast Guard boarding at sea may be greatly abbreviated. Contact Coast Guard Sector Humboldt Bay at (707) 839-6123 to schedule an exam.

To schedule a FREE COMMERCIAL Fishing Vessel Safety Exam contact:

Melinda 'Mindy' Bacon USCG Humboldt Bay
Office: 707.269.2577 Cell (text): 707.481.0048

Manny Ramirez USCG Sector San Francisco
Tel: 510.437.5788

To register for the next available Commercial Fishermen's Safety Course contact:
Alaska Marine Safety Education Association
2924 Halibut Point Road
Sitka, AK 99835
Tel: 907.747.3287
http://amsea.org

SMALL VESSELS

ALERT!
Report ALL spills of oil and chemicals immediately to the National Response Center (800) 424-8802, California Office of Emergency Services (800) OILS911, and to the marina office.

WHAT TO DO IN CASE OF A SPILL?
By law any spill that creates a sheen on the water must be reported.
Identify and stop the source of the spill.
Notify the marina for assistance.
Call BOTH the National Response Center (1-800-424-8802) and the California Office of Emergency Services (800) OILS911. If you spill you are required by law to notify the authorities.
If the fuel is oil or diesel fuel, contain the spill.
DO NOT CONTAIN GASOLINE SPILLS because of its volatility and flammability.
Properly dispose of used or saturated absorbents. In California, used oil absorbents are presumed to be hazardous waste. Dispose of the used oil absorbent at a marina collecting them or at your County Household Hazardous Waste Collection Center.
Do not use soaps or detergents on a spill. It is illegal and bad for the environment.
Federal law requires that oily waste discharge placards (available at marine supply stores) must be displayed on boats 26+ feet in the engine compartment or near fueling pumping station.

For more information: https://dbw.parks.ca.gov/?page_id=29196

7.3 TOUR BOATS

All tour boats must follow USCG Rule 9 regarding inland navigation.

7.4 SAIL AND MOTORBOATS

Recreational vessels approaching the Port of Humboldt Bay should be aware that large commercial vessels transiting to and from the port will be maneuvering either to embark or disembark a pilot, and that during these times they will be highly limited in their ability to maneuver other than for the pilot boat, or other authorized personnel.

Recreational vessels should follow the below Standards of Care to ensure the safe operation of their craft while in and around the port. Recreational vessel operators should be sensitive to the fact that large commercial vessels are severely limited in their ability to stop or alter course and many times are limited in their ability to sight small vessels due to “blind spots” that extend more than ½ mile ahead, and therefore cannot easily avoid a collision with a smaller, more maneuverable recreational vessel.

Be aware of Security and Safety Zones around fuel barges and cruise ships. Small vessels, according to U. S. Coast Guard International- Inland Navigation Rule No.9, shall remain clear of large commercial and naval vessels for navigational safety and the practice of prudent seamanship. Tugs with tows have limited maneuverability. Do not pass a large vessel, tugs, barges, etc. without first contacting the vessel. Be aware of ships and tugs coming up behind you in the main channel.
USCG-mandated Rule 9 applies to all vessels and is enforced in California by various local agencies such as Sheriff's patrols, as well as USCG. Rule 9 places the obligation on the small [under 20 meters] vessel operator to avoid impeding a large vessel while operating in a deep draft channel or fairway.

The Lookout Rule (Navigation Rule 5) states: "Every vessel shall at all times maintain a proper look-out by sight and bearing as well as by all available means appropriate to the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision."

On April 1, 2021, a new federal law went into effect that requires the operator of a boat with an installed Engine Cut-Off Switch (ECOS) to use the ECOS link. The link is usually a coiled bungee cord lanyard clipped onto the operator's person,

Personal Floatation Device (PFD) or clothing and the other end attached to the cut-off switch, but there are plenty of variations on the market, including electronic wireless devices. The law applies to all "Navigable Waters of the US".

When an operator is wearing a link while underway, the engine will cut-off if the operator is separated from the operating area, an occurrence that can happen if the operator is ejected from the vessel or falls within the vessel. The shutdown of the engine is essential for safety reasons. If the operator is ejected from the vessel, the shutdown may prevent the operator from impacting the vessel's spinning propeller and may aid the operator in safely returning to the drifting vessel.

The law applies to "Covered Recreational vessels" which means any motorized boat with 3 or more horsepower that is less than 26 feet in length and takes effect on April 1, 2021.

Operator Requirement: An individual operating a covered recreational vessel shall use an engine cut-off switch link while operating on plane or above displacement speed.

An earlier law, passed by congress in 2018, required manufactures to install an Emergency Engine Cut-Off Switch (ECOS). The law passed on December 4th, 2018, and went into effect 1 year later. Even though it is now a law, most U.S. boat manufacturers have voluntarily installed an ECOS on their boats for decades.

The terms Engine Cut-Off Switch (ECOS) and Engine/Propulsion Cut-Off Devices are used interchangeably to denote a system that disables the propulsion engine when the operator is unexpectedly displaced from the vessel.

Why should you wear your Engine Cut-off Switch link?

A typical three-blade propeller running at 3,200 rpm can inflict 160 impacts in one second, so it is critical that you are aware of what is going on around you. Be aware:
People in the water may not be visible from the helm.
Account for passengers before starting the engine.
Inform passengers about propeller hazard areas.
alert in congested areas and near swimming zones.
Take extra precautions around towed watersports.
Never permit riding on the bow, gunwale, transom, seatbacks, or other locations where an occupant could fall overboard.
Children should be watched carefully at all times – it only takes a second to fall overboard.
You would childproof your home so think about childproofing your boat.
Establish rules for swim platform use, boarding ladders, and seating.
If someone falls overboard, STOP the boat, once clear begin recovery procedures.
Warning - Never put your boat in reverse to pick someone up out of the water, always circle around going forward while always keeping the person in the water visible to the boat operator.

On April 20,2022, the U.S. Coast Guard amended regulation 88FR 58560. All recreational boats with permanently installed fuel tank(s), or spaces that are capable of trapping fumes, such as a closed compartment under thwarts and seats wherein portable fuel tanks may be stored, a double bottom not sealed to the hull or that is not completely filled with flotation material, a closed living space or a closed stowage compartment in which combustible or flammable materials is stowed are required to carry fire extinguishing equipment.

The following information is provided by the California State Parks, Division of Boating and Waterways:

Take a safe boating course and get your California Boater Card.
Even the most experienced boaters can learn from boating safety courses.

SMALL VESSELS

As of Jan. 1, 2021, all operators of motorized vessels on California waterways who are 40 years of age and younger are required to carry a lifetime boater card. By 2025, all operators of motorized vessels will be required to carry one regardless of age.

Conduct a Vessel Check:
Make sure you have the right safety equipment on board your boat such as life jackets, flares, navigation lights, a horn or whistle, and a first aid kit.
Click here to download the virtual safety check form or to schedule a vessel safety check.
File a Float Plan: Email/text a float plan to a loved one or friend with details of your trip in the event of an emergency.
Check the weather. Know the latest weather forecast prior to going out and check regularly for changing conditions.

Wear a Life Jacket:
Everyone should wear a properly fitted US. Coast Guard-approved life jacket when in or near the water. You never know when an accident may happen, and a life jacket can help save you until search and rescue help can arrive.
In swift water, even the strongest swimmers may be easily overwhelmed. By the time a person is struggling in the water, a rescue is extremely unlikely and places the rescuer at risk.
DBW works with water safety partners throughout the state to offer programs to help ensure boaters have access to life jackets. For example, life jackets can be borrowed for free at one of over 100 local life jacket loaner stations throughout the state.

Avoid Alcohol:
Do not drink and boat. Alcohol continues to be the leading known contributing factor in recreational boating deaths in the United States.
It is against the law in California to operate a boat or water ski with a blood concentration (BAC) of 0.08% or more. Officers may arrest boaters with a BAC of less than 0.08% if conditions are deemed unsafe.
BUI convictions can result in up to six months in jail and/or fines of up to $1,000. Two convictions within seven years could add a jail term of up to one year. Boaters caught operating under the influence may also have their voyage terminated and their vessel impounded.

Actively Supervise Children:
Actively supervise children in and around open bodies of water, giving them your undivided attention. Do not assume that someone is watching them.
Appoint a designated “water watcher,” taking turns with other adults.
Teach children that swimming in open water is not the same as swimming in a pool: they need to be aware of uneven surfaces, river currents, ocean undertow and changing weather.

Stow it, don’t throw it!
Keep your trash on-board. Never throw garbage into waterways. Take advantage of shore-side facilities to recycle plastic, glass, metal, and paper.
Used fishing lines can be deposited at fishing-line recycling stations.

Download helpful boating applications on your phone. The Boat CA App is a free mobile app that shows you boating facilities, life jacket loan stations, laws, boat registration and more.

For more water safety information, including boating laws and a boating facility locator on over 1,450 marinas and waterbody managers, please visit dbw.parks.ca.gov/BoatingSafety.

7.5 KAYAKS, SAILBOARDS, AND PADDLE BOARDS

Paddle boats include kayaks, canoes, standup paddle boards, rowing shells, prams, row boats, and hunting scull boats. Safely paddling or rowing on Humboldt Bay is like taking a bicycle on the road. As bicycles must stay out of the way of cars and trucks

and follow rules of the road, paddle boats must stay out of the way of larger boats and ships. Paddlers should take advantage of the paddle crafts ability to navigate shallow water and stay near the edge close to shore. There is less current, and you can easily gauge your progress by the passing shore.

Know your craft - become familiar with your choice of paddle boat and how to operate it. Be sure your paddles or oars are securely attached to the boat. If you plan to leave your boat to explore the shore, be aware that a rising tide can float a beached boat away, leaving you stranded.

Dress for success - dress like you are going to end up in the water. Dress warm knowing you will be working by paddling or rowing. A US Coast Guard (USCG) approved personal flotation device (PFD) is required. Wear one even if you are in a wetsuit. If you capsize and are hit on the head and knocked unconscious, your PFD can keep your head out of the water, allowing you to breathe.

Plan ahead and follow your plan – Before you launch, check the weather and the tides and currents. Rain can be uncomfortable, but wind can be dangerous. Tides and currents are related. Extreme high tides with corresponding low tides will create faster currents. Low tides can make it difficult to return to shore without getting muddy. Incoming tides are much safer. Tide tables and related current information specific to Humboldt Bay can be found online at the PORTS website (see For more information on next page) Tell someone on shore what your float plan is and then stick to it. Be sure to say when you will be back and inform your shore partner when you return. Do this even if you are in a group.

Stay away from danger - Only cross the shipping lanes at right angles when clear. Stay near shore in shallow water where the current is less. You will see more wildlife there. Paddling in open water takes more energy because you cannot sense your progress, making you work harder. Do not paddle around the moored boats in the marinas. You could get caught in the prop wash of a large fishing boat and be run over as the boat backs out of its slip. Remember, you are very hard to see from large vessels. Do not paddle under docks or piers. Currents could trap you against the pilings and possibly capsize you. If you encounter large boat wakes it is better to take them head on than sideways risking capsize. If you hear a large boat honking at you, he is not telling you to get out of the way but telling you which side he is going to pass. One blast of the horn means he intends to pass on his right, two blasts on his left.

Be Equipped for Safety:

- Be visible by wearing bright colors and flying a flag on a tall fiberglass pole.
- Wear a headlamp or other light /strobe device during low light conditions.
- Carry a canned air horn or loud whistle; a flare gun with three flares.
- Carry bottled water and energy bars.
- A length of rope and anchor
- A working waterproof cell phone (with emergency numbers stored) or a handheld VHF radio to contact the USCG on channel 16.

Emergency Numbers:
Cellular phones: Dial 911
USCG on VHF Marine Channel 16
USCG Sector / Air Station Humboldt Bay - 707-839-6100

Non-emergency numbers:
USCG Sector / Air Station Humboldt Bay General Information - 707-839-6103
Humboldt County Sheriff Marine Dispatch -707-445-7251
Eureka Weather Forecast Recording - 707-443-7062
Eureka National Weather Service Office - 707-443-6484
USCG Bar and Entrance Report - 707-443-2213

SMALL VESSELS

For more information:
USCG Navigation Rules website: https://navcen.uscg.gov
The Humboldt Harbor Safety Committee website: https://humboldtharborsafety.org/
Physical Oceanographic Real-Time System (PORTS®) website: https://tidesandcurrents.noaa.gov/ports/
California Division of Boating and Waterways website: http://www.dbw.ca.gov/
Humboldt Bay Aquatic Center - HSU Center Activities website: https://centeractivities.humboldt.edu

The above information was originally published as “Paddle Boat Safety Guide for Humboldt Bay”. The brochure was created by the Humboldt Bay Harbor Safety Committee and the Humboldt Area Saltwater Anglers.

7.6 FINDINGS AND RECOMMENDATIONS

The Humboldt Bay Harbor Safety Committee is committed to promoting safety for all recreational enthusiasts of Humboldt Bay. Safe boating and protection of the waters of Humboldt Bay remains a priority. The Humboldt Bay Harbor Safety Committee will continue to promote safe boating practices and educational opportunities.

The Harbor Safety Committee will publicize all information received on boating safety courses.
The HSC will work to assist all organizations offering safe boating classes.
The Humboldt Bay Harbor Recreation and Conservation District, with the assistance of the HSC and OSPR, has developed a Harbor Safety Guide for Humboldt Bay. The guide was completed and distributed in the summer of 2003.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each yea

8 ACCIDENTS AND NEAR ACCIDENTS

8.1 MARINE CASUALTIES AND ACCIDENTS

46 CFR Cit. 1, Subpart 4.03 - Definitions

1.1- 1 Marine casualty or accident.

(a) The term marine casualty or accident shall mean any casualty or accident involving any vessel other than public vessels if such casualty or accident occurs upon navigable waters of the United States, its territories or possessions or any casualty or accident wherever such casualty or accident may occur involving any United States' vessel which is not a public vessel.

(b) The term marine casualty or accident includes any accidental grounding, or any occurrence involving a vessel which results in damage by or to the vessel, its apparel, gear, or cargo, or injury or loss of life of any person; and includes among other things, allisions, collisions, strandings, groundings, founderings, heavy weather damage, fires, explosions, failure of gear and equipment and any other damage which might affect or impair the seaworthiness of the vessel.

(c) The term marine casualty or accident also includes occurrences of loss of life or injury to any person while diving from a vessel and using underwater breathing apparatus.

See Appendix 19.10 for current Port Safety Statistics from the USCG.

8.2 FINDINGS AND RECOMMENDATIONS

Annual review of U.S. Coast Guard data and information solicited by the HSC from Humboldt County Sheriff's Marina Patrol, pilots, masters, industry representatives, and other parties shall be performed to assess the effectiveness of tug escorts in the prevention of accidents.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

9 COMMUNICATIONS

9.1 RADIO COMMUNICATIONS

Currently communication from vessel to vessel, and vessel to shore (commercial) is by VHF radio. Many smaller craft (pleasure boats and sailboats) rely on CB radio.

New VHF Channel	Old VHF Channel	Frequency (kHz)	Use/User
10	10	156.500	Port Operations Only
13	13	156.650	Bridge to Bridge Communication Intership Navigation Safety (Bridge-to-bridge). Ships >20m length maintain a listening watch on this channel in US waters
16	16	156.800	Emergency (Open Always) International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
1022	22A	156.100	Coast Guard Public Access
77	77	156.875	Pilot to Tug Communication

9.2 CURRENT USAGE

Currently there are not believed to be any "silent" or low propagation areas within the defined harbor boundaries.

Pilots and boaters have occasionally experienced "bleed over" of signal from the Eureka Police Department's communications system. Occasionally an emergency transmission will override the pilot's hand-held VHF radio set.

The U.S. Coast Guard shall announce daily on Channel 22A that Channel 13 is for bridge-to-bridge communication, Channel 77 is for pilot to tug communication, and neither channel shall be used for personal, non-business communication. It will be left to the Coast Guard's discretion as to when to make the announcement.

The VHF Channels and Users are included in US Coast Pilot 7, chapter 8, for Humboldt Bay.

The following types of vessels are subject to security calls:

a. Tugs with barges

b. Self-propelled vessels over 200 feet in length

Security calls shall be made on channels 13 and 16 when:

a. Inbound vessel reaches the sea buoy

b. Vessel is about to move from dock to dock

c. Vessel is leaving dock for sea.

Security calls will allow other vessels to be aware of ship or barge movements approaching and leaving the harbor.

"Sea" is beyond the end of the jetties.

9.3 RADIOTELEPHONE DISTRESS MESSAGE

Distress calls indicate a vessel or aircraft is threatened by grave and imminent danger and requests immediate assistance. They have absolute priority over all other transmissions. All stations which hear a distress call must immediately cease any transmission capable of interfering with the distress traffic and continue to listen on the frequency used for the emission of the distress call. This call should not be addressed to a particular station, and acknowledgment of receipt should not be given before the distress message which follows it is sent. Distress calls are made on VHF-FM channel 16 (MAYDAY). For less serious situations than warrant the distress procedure, the radiotelephone urgency signal consisting of three repetitions of the word PAN PAN (pronounced PAWN-PAWN), or the safety signal SECURITE (pronounced SECURITAY) spoken three times, are used as appropriate. For complete information on emergency radio procedures, see 47 CFR 80 or Radio Navigational Aids, Pub. 117 (https://www.ecfr.gov/current/title-47/chapter-I/subchapter-D/part-80?toc=1).

9.4 FINDINGS AND RECOMMENDATIONS

It is the opinion of the Harbor Safety Committee that current communications systems are adequate and that current procedures be maintained.

10 BRIDGES

10.1 BRIDGES

Present Condition

Highway 255 crosses over Eureka, Woodley Island, Tuluwat Island, and Arcata Channel by way of a fixed highway bridge. Clearances of the three spans are 40 feet vertical, 150 ft. horizontal from Eureka to Woodley Island; 30 feet vertical, 100 feet horizontal from Woodley Island to Tuluwat Island; and 45 feet vertical, 200 feet horizontal from Indian Island to the Samoa Channel. Vertical clearances are referred to mean high water. No large commercial vessels pass under these spans. Small pleasure and sailing craft pass under these spans while on their way to use the boating, sailing opportunities, and commercial oyster harvesting activities that exist on Arcata Bay during high tide periods.

These bridges have undergone seismic retrofit (project completed spring 2006). The horizontal and vertical clearances were not altered.

There is not a bridge over the Humboldt Bay Bar and Entrance Channel.

10.2 FINDINGS AND RECOMMENDATIONS

Present procedures and regulations are believed to be adequate; there are no recommendations for change at this time.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

11 VESSEL TRAFFIC SERVICES

11.1 VESSEL TRAFFIC SERVICES

The Humboldt Bay HSC has examined the need for a Vessel Traffic Service (VTS) in Humboldt Bay and has determined that VTS is not needed. It would not significantly enhance the safe movements of vessels and barges in and about Humboldt Bay, nor would it reduce the risk of environmental harm resulting from grounding and collisions.

There are 7 terminals in Humboldt Bay which are currently being used by ships and barges.
The terminal located farthest from the sea buoy at the main channel entrance is 6.6 miles from that sea buoy. Humboldt Bay harbor is relatively small compared to other harbors on the U.S. West Coast that have planned for or are using VTS.

There is only one entrance channel into Humboldt Bay, and the North Bay has one main ship channel. This channel is 400 feet in width, and normally does not permit large ships to meet or pass in the channel. Therefore, normally only one-way traffic exists, and only one ship moves at a time in Humboldt Bay.

The Humboldt Bay Bar Pilots direct all ship movements in the bay. According to Federal Law, all U.S. registered ships and all foreign ships (all vessels 300 gross tons or more) must use a bar pilot when transiting the bay. From a practical standpoint, U.S. ships under enrollment (a type of registration issued by the United States Coast Guard), which are not required to take a bar pilot, do so, nevertheless. Therefore, all ship movements in the bay are directed or monitored by the bar pilots.

Tugs with barges under tow carrying "certain hazardous materials" must report to the U.S. Coast Guard Station at the entrance to Humboldt Bay prior to transiting the bay. These movements are in turn reported to the bar pilots who monitor these barge movements. In Section 8, Communications, the Humboldt Bay HSC has recommended that all tugs with barges and self-propelled vessels over 200 feet in length make security broadcasts at various locations in the bay and approaches, so that large vessel movements are known by all users.

There are two tugboat companies serving Humboldt Bay which aid vessels mooring, unmooring, and transiting the bay, and assist barge movements in the bay. The tug companies work in close liaison with the bar pilots, and any vessel or barge movements assisted by the tug companies are coordinated with the bar pilots.

The Humboldt Bay Harbor Safety Committee has determined that a Vessel Traffic Service is not needed in Humboldt Bay based on the above facts and circumstances.

11.2 FINDINGS AND RECOMMENDATIONS

The Committee has examined the need for a Vessel Traffic Service (VTS) in Humboldt Bay and has determined that conditions in the harbor currently do not warrant the need to install a VTS. The need for a Vessel Traffic System will be reevaluated periodically.

The Committee should examine the future needs for a VTS in Humboldt Bay associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

12 TUG ESCORT / ASSIST FOR TANK VESSELS

12.1 CURRENT PRACTICE

The present use of tugs in Humboldt Bay is for escort of vessels and petroleum barges, and to assist with vessel docking and undocking.

Vessels 300 gross tons or greater, but less than 400 gross tons, which carry fuel or oil but not as cargo, and are not operated for commercial purposes, are “non tank” vessels.

Per Humboldt Bay Harbor, Recreation, and Conservation District Ordinance No. 15, Pilotage is required for all U.S. ships under enrollment and all foreign ships (all vessels 300 gross tons or more). It is recommended that any mariners unfamiliar with Humboldt Bay employ a local pilot. Pilots board vessels about 0.5 miles west of Humboldt Bay Entrance Lighted Whistle Buoy (HB). Bar Pilots also provide visibility and bar condition information for ships using the service. See Appendix 20.13 for a complete copy of Ordinance No. 15.

Tugboat assistance is advised by the Humboldt Bay Bar Pilots due to the lack of maneuvering room in Humboldt Bay, and increased vessel size. The assist tugs are presently used for the dual purpose of assist and escort.

At times strong and unpredictable cross currents can occur at the Harbor Entrance. These currents are predicted on past weather conditions.

Southerly weather accompanied by a southwesterly to westerly swell creates a strong current during low water periods at the 110-degree turn from the Lighted Buoy No. 5 to Light No. 11.

For approximately the first three miles of the transit the tug assist/escort boats are not made fast to the vessel employing them. This is due to the open sea conditions that exist.

It would be nearly impossible for a tug to approach a ship moving at full power and trying to negotiate the sometimes-treacherous swell and currents of the Humboldt Bay entrance if the larger vessel lost its power or steering. It would also be dangerous to slow the larger vessel to a speed at which the tug could come alongside because that would result in considerably less control of the larger vessel by the pilot. However, a ship negotiating the 110-degree turn at the Humboldt Bay entrance or moving at slower speeds inside the harbor would benefit from the presence of an escort tug if a loss of engine or steering control occurred. The escort tug would be able to provide some steering and/or stopping ability for the stricken vessel.

The pilot may send the escort tug ahead of the ship to make certain that the ship's path is clear. Tugs are also indispensable in thick fog for marking buoys and lights and checking tidal current conditions ahead of the ship while the pilot is navigating the narrow channels of Humboldt Bay.

Before a vessel arrives at the port, the ship's captain radios the port requesting tug and pilot service. The tug then transits the entrance, meets the vessel, and the bar pilot boards the vessel. It is at the pilot's discretion as to whether a tug escort is needed. If not, the escort tug returns to port and meets the assist tug. These two tugs are then used to berth the vessel. This procedure is reversed when the vessel is ready to leave the harbor.

Tugboats engaged in escorting or assisting vessels in Humboldt Bay shall continue their service until dismissed by either the pilot or the master of the vessel employing them. However, the master of the tugboat engaged in escorting or assisting another vessel may temporarily halt or discontinue service if he deems his crew or vessel is in immediate danger.

See Appendix 19.8 for current tugs in Humboldt Bay Bollard Pull Certificates.

12.2 FINDINGS AND RECOMMENDATIONS

Recommendation 1

The HSC shall annually review the performance and effectiveness of tug capabilities. This review shall rely, in part, on information solicited by the HSC from pilots, masters, industry representatives, and other parties.

Recommendation 2

The Humboldt Bay Area HSC recommends the following number of assist tugboats, which will also function as tug escorts, for vessels and barges in the Humboldt Bay Harbor.

a. All barges carrying hazardous or liquefied compressed gases will be escorted according to escort procedures described by the current Captain of Port Public Advisory (See Appendix 19.9.6 for 33 CFR 160.203).

b. All tank vessels must have a qualified Humboldt Bay Bar Pilot and escort tug. Additional tug(s) will be standing by and prepared to render assistance.

c. Any vessel equipped with a working bow and/or stern thruster may substitute this equipment for the services of one tugboat provided that such substitution does not reduce the total number of tugs below one (1). It shall be understood that the minimums contained herein reflect ideal circumstances and conditions. The master/pilot shall arrange for additional tugboat assistance should adverse weather conditions, unusual port congestion, or other conditions or circumstances so require.

Recommendation 3

Tugs and barges transporting oil or oil derivative products, or "certain dangerous cargoes" as described in 33 CFR 160.203 shall comply with the following rules and regulations:

a. All barges carrying hazardous or liquefied compressed gases will be escorted according to escort procedures described by the current Captain of Port Public Advisory (See Appendix 19.9.5).

b. 46 CFR § 15.812 Pilots.

(a) Except as specified in paragraph (f) of this section, the following vessels, not sailing on register, when underway on the navigable waters of the United States, must be under the direction and control of an individual qualified to serve as pilot under paragraph (b) or (c) of this section, as appropriate:

(1) Coastwise seagoing vessels propelled by machinery and subject to inspection under 46 U.S.C. Chapter 33, and coastwise seagoing tank barges subject to inspection under 46 U.S.C. Chapter 37.

Recommendation 4

The HSC should review and monitor Tug Capability Requirements associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

No action required at this time. Review by the Harbor Safety Committee prior to July 1 each year.

13 UNDER KEEL CLEARANCE

13.1 UNDER KEEL CLEARANCE

Under keel clearance is the distance between the deepest point on the vessel and the bottom of the channel in still water conditions.

The Humboldt Bay Harbor, Recreation and Conservation District has established rules requiring a two-foot under keel clearance on all vessels over 300 gross tons while transiting the navigation channels. See Appendix 19.13 for Ordinance No. 15.

13.2 FINDINGS AND RECOMMENDATIONS

The HSC should monitor Under keel Clearance guidelines regarding an anticipated increase in size of vessels associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

14 PILOTAGE

14.1 REGULATIONS

The ports of Long Beach, Los Angeles, San Diego, Port Hueneme, and Humboldt Bay; the State of California; and the U. S. Coast Guard have executed a Memorandum of Agreement (MOA) to create an improved system of pilotage. The parties to this agreement intend to maintain the safety of vessel navigation and port and environmental safety by establishing local pilotage training and apprenticeship programs which ensure the use of pilots with local knowledge on vessels over 300 gross tons not in enrollment while navigating at the ports subject to this agreement. This agreement also created a Pilotage Advisory Committee in each port subject to this agreement, which will provide recommendations for the implementation and improvement of the pilotage system for the port. The Humboldt Bay Harbor, Recreation and Conservation District currently employs and licenses pilots for Humboldt Bay.

The Humboldt Bay Pilotage Advisory Committee completed its report on April 20, 1999. The Harbor District Board accepted the report and forwarded it to the OSPR Administrator on April 22, 1999, thereby fulfilling the requirements of the MOA. Training standards and pilot proficiency were then codified in the Harbor District's Ordinance No. 15: General Tariff No.1.

Pilotage standards are maintained by apprenticeship, professional growth, and oversight programs defined in Humboldt Bay Harbor, Recreation and Conservation District Ordinance No. 15. The State will review programs for consistency. The Ports will maintain control of pilots.

The Harbor Safety Committee asked for and received from U.S. Coast Guard verification that the Captain of the Port (COTP) will notify the Port Authority and Humboldt Bay Bar Pilots of any order altering the movement of any vessel arriving or departing Humboldt Bay.

14.2 TRAINING AND RECRUITMENT

The Humboldt Bay Harbor District established in December of 2021 a Bar Pilotage Subcommittee tasked with the recruitment of Bar Pilots for Humboldt Bay. The Humboldt Bay Harbor District has the authority to provide for, supervise, and license bar pilots operating out of Humboldt Bay per Ordinance No. 15. See Appendix 19.13 for Ordinance No. 15. Interviews were conducted and on August 4, 2022, the HBHD Board of Commissioners appointed two mariners into the pilot trainee program as "Observing Apprentices". On October 13, 2022, one additional "Observing Apprentice" was appointed, bringing the total number of apprentices to 3.

14.3 FINDINGS AND RECOMMENDATIONS

The HSC shall rely, in part, on information solicited by the HSC from pilots, masters, industry representatives, and other parties for recommendations.

The Humboldt Bay Harbor District currently has three Observing Apprentice pilots as of March 2023.

No action is required currently.
Review by Harbor Safety Committee prior to July 1 each year.

15 ENVIRONMENTAL AND ECONOMIC IMPACTS OF THE PLAN

15.1 ENVIRONMENTAL AND REGULATORY BACKGROUND

The Harbor Safety Plan must identify and discuss the potential economic and environmental impacts of implementing the provisions of the plan and describe the significant differences in the restrictions that could vary from port to port within the geographic boundaries of the plan.

This section will be developed further in a future update of the Humboldt Bay Harbor Safety Plan.

For current information, please see section 17, Funding and Competition.

15.1.1 Economic Impacts
15.1.2 Tides and Currents
15.1.3 Harbor Depths, Channel Design, and Dredging
15.1.4 Tug Escorts
15.1.5 Pilotage
15.1.6 Small Vessels
15.1.7 Vessel Traffic Service

15.2 OIL AND FUEL SPILLS
15.3 OTHER SHIP POLLUTION
15.4 BULKING/LINGERING
15.5 BALLAST WATER
15.6 MARINE MAMMAL STRIKES
15.7 DREDGING
15.8 ECONOMIC IMPACTS
15.9 FINDINGS AND RECOMMENDATIONS

16 PLAN ENFORCEMENT

PLAN ENFORCEMENT

16.1 OVERVIEW

Each member of the HSC as they function within the meaning of the existing federal, state, and local laws, regulations, and ordinances as they affect the Humboldt Bay Area, is charged with the responsibility of bringing back to the Harbor Safety Committee any recommended changes to the foregoing.

16.2 COORDINATION

The U.S. Coast Guard is the principal regulator of vessel movements within the harbor boundaries. The Coast Guard performs these duties on air, sea, and land using helicopters, patrol boats, and shoreside surveillance.

Pursuant to 33 CFR 6, Protection and Security of Vessels, Harbors, and Waterfront Facilities (Espionage Act), the rules and regulations of the relevant legislative authorities shall be enforced by the Captain of the Port (COTP) under the supervision and general direction of the District Commander and the Commandant. The COTP may supervise and control the movement of any vessel. The Espionage Act has powers based on security, not safety, and has only criminal penalties.

The Ports and Waterways Safety Act (PWSA) of 1972, as amended by the Port and Tanker Safety Act of 1978, (33 USC 1221 et seq.) provides the strongest authority for the Coast Guard's port safety program and is intended to increase vessel safety and protect the marine environment in ports, harbors, waterfront areas, and navigable waters. It allows the establishment of a Vessel Traffic Service (VTS), control of vessel movement, establishment of requirements for vessel operation, and other related port safety controls. This Act allows civil and criminal penalties for violations.

In addition, several other laws call for Coast Guard enforcement. These include the Federal Water Pollution Control Act, which delegates enforcement authority and responsibility to the Coast Guard in cases where oil and hazardous substances are discharged into U.S. waters in quantities which may be harmful. In addition, the Act to Prevent Pollution from Ships (33 USC 1901 et seq.) limits the operational discharges of oil from ships and requires reception facilities to receive waste that cannot be discharged at sea. Finally, the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC 1401 et seq.) requires Coast Guard surveillance of ocean dumping activities.

COTP Orders (33 CFR 160.111) are directed at individual vessels and address short- term hazards. Any long-term directive would require that federal rule making procedures be followed. COTP orders may involve establishing a vessel traffic routing scheme or vessel size, speed, and draft limitations; restricting traffic movement to one direction and to certain times and requiring vessels to be assisted by tugboats.

Enforcement of the Harbor and Navigation Code of the State of California is the responsibility of the Humboldt County Sheriff's Department and is funded by the State of California.

16.3 FINDINGS AND RECOMMENDATIONS

It is encouraged that Committee members and alternates, as well as the entire waterfront community, monitor compliance of provisions contained in the Harbor Safety Plan. Noncompliance should be reported to the committee for appropriate action.

No action is required at this time.
Review by Harbor Safety Committee prior to July 1 each year.

17 FUNDING AND COMPETITION

16.1 FUNDING

Present Condition Funding

Funding for most of the recommendations will be from government agencies. Periodic soundings shall be conducted under the direction of the U.S. Army Corps of Engineers. Installation, movement, and repair of navigational aids shall be conducted by the U.S. Coast Guard.
The cost of hiring tugs is borne by the shipping company. The cost of maintaining Bar Pilots is borne by the Humboldt Bay Harbor, Recreation and Conservation District.
Procedural recommendations will not require funds to implement.
It is the responsibility of the shipping company and its vessel masters to be knowledgeable of procedures and rules of operation in Humboldt Bay, as described in this document.
The hazardous wave forecasting model (SWAN) for Humboldt Bay has been funded by the National Weather Service Forecasting Office whereas the CDIP Waverider buoy is funded by the Scripps institute of Oceanography. PORTS (Physical Oceanographic Real-Time System) is funded through a partnership with NOAA and Chevron.

17.1 COMPETITION

The preceding rules, recommendations, and procedures have been compiled to create a harbor that can operate safely and with economic and regulatory feasibility.
The economic effects of this document will be felt most on barge shipping companies, as they are required to obtain escort tugs when transiting Humboldt Bay.
Humboldt Bay is one port; therefore, there are no port-to-port restrictions in Humboldt Harbor.
Dock owners will be impacted financially by the cost of annual berth soundings. Maintenance of the berthing area and the dock itself are normal expenses incurred by the dock owner.
Changes/modifications of communications protocol shall not have a negative fiscal or negative competitive effect on the harbor or shipping companies.

17.2 FINDINGS AND RECOMMENDATIONS

Recommendation 1
The Committee recommends that Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 be amended to provide funding for all the recommendations put forth in this Plan.

Recommendation 2
Should funding not be available through the recommended entities the Committee requests that the recommendations be funded through OSPR revenues.
The OSPR will endorse the HSC's recommendations made in the Harbor Safety Plan; however, the OSPR cannot fund all the recommendations within the Plan, nor can Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 be amended to provide such funding. Should the HSC determine that more funding is required in the future, the HSC may prepare recommendations in the Plan, as part of the annual update for specific projects recommending a specific amount of funding for specific projects as described in the Plan that could not get funded. The OSPR will consider these recommendations as part of its review to determine the source and feasibility of funding.

No action required at this time.
Review by the Harbor Safety Committee prior to July 1 each year.

18 BEST MARITIME PRACTICES

18.1 INTRODUCTION

Best Maritime Practices (BMPs) are accepted and agreed upon methods to conduct vessel transits or operations that are necessary for or enhance the safety of vessels, personnel, dockside facilities and marine resources. These BMPs are not to be considered regulations or laws, but guidelines to assist the mariner with local knowledge while operating in the vicinity of the Port of Humboldt Bay.

This BMP section has been designed as a reference guide for safe and environmentally sound vessel movements and operations in and around the port area.

18.2 IMPORTANT GENERAL INFORMATION

In the past Humboldt Bay was considered treacherous and dangerous, and many disasters have occurred there. Even with present improvements, mariners are still advised to use extreme caution on the bar. The strong currents that may be encountered, and the abrupt turn at the outer end of the South Jetty, are apt to be dangerous for strangers. The bar is the smoothest during the last of the flood current, and it is often passable at this time and impassable 2 hours later, when the ebb current has set in. Mariners are advised to contact Coast Guard Station Humboldt Bay on VHF channel 16 or 22A prior to transiting the bar. Caution should also be exercised inside the jetties due to the rapid change in the channel conditions. Deep-draft vessels are usually taken in and out of the bay at high tide if there is any swell on the bar because of the shoaling in the entrance channel. (Coast Pilot 7 - 40th Edition 2008)

18.3 GENERAL ANCHORAGE

Per Humboldt Bay Harbor, Recreation and Conservation District Ordinance No. 17, Under the authority of section 4 of Appendix II of the California Harbors and Navigation Code:

No vessel may anchor within the Exclusion Zone of Humboldt Bay (Federal Navigation Channel).

No vessel may anchor or moor within Humboldt Bay for a period in excess of seventy-two (72) consecutive hours without the owner, operator, or captain of the vessel first obtaining a Temporary Anchoring Permit from the District, the owner, operator, or captain of the vessel shall present proper personal identification and license, if applicable, and evidence of title or ownership of the vessel. A Temporary Anchoring Permit authorizes the holder to anchor or moor only and grants no further rights, privileges, or uses. A Temporary Anchoring Permit is valid only for fourteen (14) continuous days from date of issuance or extension. A Temporary Anchoring Permit may be extended for only one additional fourteen (14)-day period at the discretion of the Harbor Master.

A Temporary Anchoring Permit may be issued only with respect to a named individual or government entity and a single vessel and shall be valid only in respect to that individual or government entity and vessel. It shall be the responsibility of the vessel owner, operator, or captain to contact the Humboldt Bay Harbor District and apply for a Temporary Anchoring Permit within seventy-two (72) hours of anchoring in Humboldt Bay.

Humboldt Bay Harbor District can be contacted at telephone number: (707) 443-0801, by fax at (707) 443-0800, by E-mail at woodleyisland@humboldtbay.org, or by VHF on channel 14.

18.4 UNDER KEEL CLEARANCE

Per Humboldt Bay Harbor, Recreation and Conservation District Ordinance No. 15, the established rule requires a two-foot under keel clearance on all vessels over 300 gross tons while transiting the navigation channels. See Appendix 19.13 for reference.

18.5 TUG ASSIST: NON-TANK VESSELS

Per Title 14 CCR 851.80-851.86 (See Appendix 19.3.1), Tug assist guidelines for vessels transiting Humboldt Bay requiring pilotage.

North Bay: Two (2) tugboat requirement on all vessels not equipped with bow thruster.

Tugboat 1: Twin screw, minimum 1,500 hp
Tugboat 2: Twin screw, minimum 2,000 hp

Vessels equipped with bow thruster will be reviewed by the Pilots on a case-by-case basis depending on current weather and tidal conditions, horsepower of thruster, design of rudder and draft of the vessel.
Single tug departure will be at the discretion of the Pilot.

South Bay: Two (2) tugboat requirement on all vessels arriving in South Bay.

Tugboat 1: Twin screw, minimum 1,500 hp
Tugboat 2: Twin screw, minimum 2,000 hp

Single tug departure will be at the discretion of the Pilot.

*Tugboat carrying Pilot to the pilot station must have transfer platform and safety equipment meeting or exceeding recommendations agreed upon with the Pilots.
**Pilot reserves the right to make changes to the above minimums based upon ship conditions, weather, or other limiting factors.

18.6 TUG ASSIST: TANK VESSELS – CDFW OSPR REGULATIONS

See Appendix 19.3 for a copy of the regulations.

TITLE 14. NATURAL RESOURCES DIVISION 1. FISH AND GAME COMMISSION - DEPARTMENT OF FISH AND GAME SUBDIVISION 4. OFFICE OF SPILL PREVENTION AND RESPONSE CHAPTER 4. VESSEL REQUIREMENTS SUBCHAPTER 4. TANK VESSEL ESCORT REGULATIONS FOR HUMBOLDT BAY

ARTICLE 1. GENERAL PROVISIONS AND DEFINITIONS

§ 851.80. Purpose and Scope.

The regulations in this subchapter set forth tank vessel escort requirements for tank vessels entering, shifting within, or leaving Humboldt Bay.

“Humboldt Bay” encompasses those harbor boundaries which include all submerged lands of Humboldt Bay (Inner Harbor); and the open water boundary defined as the area centered on the Humboldt Bay Sea Buoy and extending radially outward for a distance of one mile then landward to the perpendicular intersection with the north and south spits.

The escort tug requirements specify that tank vessels carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall be escorted by a suitable escort tug(s).

The escort tug(s) shall be used to influence the speed and direction of travel of a tank vessel in the event of a steering or propulsion failure, thereby reducing the possibility of groundings or collisions and the risk of an oil spill from these tank vessels.

The Administrator shall review the tug/tank vessel matching criteria and other requirements of this subchapter within two years of the effective date of this subchapter. The review will include a survey of the tank vessel-related incidents in U.S. waters to determine the type of failures that have occurred, an assessment of tug technology and any advances made in design and power, and the escort tug-related rules and policies that are implemented by other coastal states and maritime organizations. At the conclusion of the review, the Administrator will determine whether it is necessary to modify the tug/tank vessel match criteria or any other requirements of this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.81. Definitions.

In addition to the definitions found in Government Code Section 8670.3 and Chapter 1, Section 790 of this subdivision, the following definition shall apply to this subchapter. Where similar terms are defined, the following will supersede the definition in Chapter 1:

(a) “Bona fide sister tug” means a tug which has not had its bollard pull capabilities verified by a member of the International Association of Classification Societies, but is constructed and maintained with the same hull form, engines, type of propulsion, stability, maneuverability, speed, power, and endurance of a tested and certified escort tug.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.82. Escort Tug Requirements for Tank Vessels.

(a) Escort tugs, alone or in combination, must have total ahead bollard pull in pounds greater than or equal to the tank vessel's deadweight tonnage. When required under this subsection and subsection 851.85(j)(2), additional escort tugs shall stand by during transit and be prepared to render assistance.

(b) All tankers transiting the waters of Humboldt Bay, carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall use a minimum of one escort tug. For purposes of this subchapter, oil spill response vessels, and offshore supply vessels as defined in 46 USC 2101, are not required to engage escort tugs in accordance with this subchapter.

(c) All tank barges transiting the waters of Humboldt Bay, carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall use at least one escort tug, in addition to the barge's line-haul tug. For purposes of this subchapter, oil spill response vessels, and offshore supply vessels as defined in 46 USC 2101, are not required to engage escort tugs in accordance with this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.83. Requirements for Escort Tug Crew Members.

Any escort tug used to comply with the requirements of this subchapter, must meet crew standards as follows:

(a) Escort tug operators shall, at a minimum, be duly licensed Operators of Uninspected Towing Vessels as set forth in Title 46, Code of Federal Regulations (CFR), Section 10.464.

(b) Escort tug crews shall have a minimum of two certified deck hands. An engineer, if employed, may not be included as a deck hand. This requirement does not preclude additional deck hands who are gaining experience for certification, but such deck hands cannot be used to meet the manning requirements of this section.

(c) Escort tug crews shall possess Coast Guard license(s)/document(s) appropriate for the escort tug and service.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.84. Requirements for Escort Tugs.

All escort tugs approved for use under this subchapter shall be equipped with and shall maintain in good working order:

(a) Primary and secondary VHF radios;

(b) 300 feet of tag line;

(c) Power line-handling equipment fore and aft for rapid, mechanically assisted deployment of lines. The primary winch shall be in the position best suited for the design of the particular vessel in escort service;

(d) Tow line with a “safe working load” that is 2.5 times the certified bollard pull rating of the escort tug;

(e) One working radar;

(f) Fendering as follows:

(1) appropriate to absorb the impact inherent in hull-to-hull operations;

(2) located at both the bow and stern to act as pivot points when pulling away from the tank vessel;

(3) sufficient to assure that there are no exposed corners, large holes or metal parts which could inflict damage on the escorted vessel; and

(4) sufficient surface area to minimize sliding when working at an angle.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.85. Requirements During Tank Vessel Escorts.

(a) Escort tugs shall maintain a station-keeping distance from the tank vessel being escorted of no further than 1,000 feet ahead or aside, or 500 feet astern of the tank vessel while engaged in the escort activity.

(b) An escort tug shall not simultaneously engage in the escort of more than one tank vessel.

(c) The speed or speeds selected for the transit must permit stationing the escort tug to allow the escort tug to effectively influence the tank vessel's movement in the event of a casualty.

(d) A tanker shall have sufficient and qualified line-handling-capable crew members standing by and available to immediately receive lines from each escort tug. In addition, the tanker shall comply with all applicable federal regulations relating to anchor readiness.

(e) The line-haul tug for a tank barge shall have sufficient and qualified line-handling-capable deck hands standing by available to receive lines from each escort tug. When the tank barge is fitted with an emergency tow wire or comparable, adequate mechanical device, or the escort tug is made fast to the tank barge, crew transfers shall not be required.

(f) Tank vessels shall have sufficient and qualified direct supervision of line-handling-crew operations. Supervisors shall have direct radio communication capability with the bridge of the tank vessel or vessel towing a barge.

(g) The master of any tank vessel shall maintain, at all times for which escort tug services are required, direct two way radio communications on VHF-FM with the master of the escort tug on a channel agreed to by both the master of the tank vessel and the master of the escort tug providing escort services.

(h) Notwithstanding any other provision of this subchapter, all escort tugs in Humboldt Bay which meet the requirements of this subchapter for the escort of tank vessels shall have their bollard pull (ahead and astern) measured, except as provided in (i) below.

(1) Bollard pull measurements shall be verified by a member of the International Association of Classification Societies.

(2) Bollard pull measurements verified by a member of the International Association of Classification Societies in other ports of the State shall meet the requirements of this section, provided that evidence of the results of these measurements are on file with the Humboldt Bay Harbor District.

(3) Escort tug companies shall provide the Humboldt Bay Harbor District with the results of the bollard pull measurements verified pursuant to the provisions of this subchapter.

(4) Escort tugs whose bollard pull has not been measured and verified or are not within the scope of the definition of “bona fide sister tug”, shall not be used for the escort of tank vessels in Humboldt Bay.

(i) An escort tug determined by the master/pilot to be a “bona fide sister tug” may be used with the same (ahead and astern) bollard pull as the certified sister tug.

(j) The braking force shall be re-measured after any modification and/or repairs to the main engines, hull, shaft-drive line, or steering, that could affect the bollard pull. The new measurements must be registered with the Humboldt Bay Harbor District.

(k) Escort tugs that submit to the Escort Tug Inspection Program, as described in Sections 851.8(a)(4)(B) and 851.23(a)(7)(B), can perform escort duties in any port in the state, if the tugs meet the requirements of the appropriate subchapter (i.e.,

Subchapter 1, San Francisco Bay Region; Subchapter 2, Los Angeles/Long Beach Harbor; Subchapter 3, Port Hueneme Harbor; Subchapter 4, Humboldt Bay; Subchapter 5, San Diego Harbor), of this Chapter 4 of the California Code of Regulations.

(l) Notwithstanding any other provision of this subchapter:

(1) The tank vessel master remains responsible for the safe navigation and maneuvering of the tank vessel in all circumstances. The requirements outlined in this subchapter are in addition to, and not a limitation of, any other responsibilities created by custom, law, or regulation.

(2) Where an emergency exists, the tank vessel master may adjust the minimum escort tug requirements contained in this subchapter. For purposes of this subchapter, an emergency is defined as any of, but is not limited to, the following:

(A) imminent and immediate danger to the tank vessel, its cargo or its crew;

(B) imminent and immediate danger to a marine terminal, service or escort tug;

(C) imminent and immediate danger to a vessel in the proximity of the escorted vessel; or

(D) any emergency declared by the United States Coast Guard Captain of the Port which would necessitate a modification to the provisions set forth in this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.86. Remedies.

(a) Nothing herein shall limit or prevent any action by any party in a court of competent jurisdiction.

(b) Any person who knowingly, intentionally, or negligently violates any provision of this subchapter shall be subject to criminal, civil, and/or administrative civil actions as prescribed in Article 9, Government Code, beginning with Section 8670.57.

Note: Authority cited: Section 8670.17.2(d) and 8670.23.1(d), Government Code. Reference: Section 8670.17.2, 8670.23.1 and 8670.57, Government Code.

18.7 TUG ASSIST: TANK VESSELS – USCG REQUIREMENTS

Per Marine Safety Bulletin MSIB: 23-01, January 05, 2023, Requirements for Humboldt Bay Bar Crossing for Tank Vessels: The MSIB advises mariners on the procedures for tank vessels to request permission form the Sector Humboldt Bay Commander to cross the Humboldt Bay Bar in accordance with the Regulated Navigation Area (RNA) described in 33 CFR § 165.1195 (See Appendix 19.9.1). The RNA includes all navigable waters of the Humboldt Bay Bar Channel and the Humboldt Bay Entrance Channel, Humboldt Bay, CA. A tank vessel is defined in 33 CFR §165.1195(b) "as any vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue."

In accordance with 33 CFR § 165.1195, a tank vessel is required to request permission for every bar crossing, to include inbound and outbound transits, within four hours of crossing. Permission must be requested by contacting Station Humboldt Bay on VHF-FM Channel 16 or (707) 443-2213. If unable to reach Station Humboldt Bay, contact Sector Humboldt Bay at VHF-FM Channel 16 or (707) 839-6113.

Bar crossings will not be permitted if all the following conditions are not met:

(1) Sector Humboldt Bay Commander has granted permission to cross;
(2) Sea conditions at the bar are less than six feet;
(3) Winds at the bar are less than 30 knots;
(4) The transit will take place during daylight hours;
(5) The vessel has only a single tow or no tow;
(6) The visibility at the bar is greater than 1,000 yards; and
(7) The vessel and tow are in proper operating condition.

The Master of the vessel may request a waiver to cross the bar from the Sector Humboldt Bay Commander at least four hours prior to the planned bar crossing time using the same communication method as above. The waiver request must contain the following:

(1) A description of the proposed operation;
(2) The conditions for which the waiver is requested;
(3) The reasons for requesting the waiver;
(4) The reasons that the requester believes the proposed operation can be accomplished safely; and
(5) A callback phone number.

The Sector Humboldt Bay Commander has the final authority to grant permission to cross the bar, close the bar, or grant a waiver. The Sector Humboldt Bay Commander decision will be communicated to the Master of the tank vessel by Sector Humboldt Bay via Station Humboldt Bay.

Any tank vessel that fails to receive proper permission to transit the RNA from the Sector Humboldt Bay Commander may be subject to enforcement action, to include Civil Penalty of not more than $103,050 for each violation.

18.8 TUGS NAVIGATING SEVERE WEATHER & CRITICAL MANEUVERING AREAS OF HUMBOLDT BAY

18.8.1 Tugs with Tows <1600 Gross Tons: Guidelines for Navigating in Reduced Visibility

Critical Maneuvering Areas (CMAs): There are areas within Humboldt Bay where additional standards of care are required due to the restrictive nature of the channel, proximity of hazards, or the prevalence of adverse currents.

• Tugs with tows should not transit through CMAs when visibility is less than 0.25 nautical mile.

• Tugs with tows in petroleum service should not transit through CMAs when visibility is less than 0.5 nautical mile.

Locations within the Bay identified as Critical Maneuvering Areas:

- Humboldt Bay Entrance Light # 4 (Tip of South Jetty)
- Humboldt Bay Light # 11 (Rock and Roll Alley)

Vessels docked: Tugs with tows at a dock within Humboldt Bay should not commence movement if visibility is less than 0.25 nautical mile at the dock. Tugs with tows in petroleum service at a dock within the Bay should not commence a movement if visibility is less than 0.5 nautical miles at the dock.

Vessels proceeding to dock: Tugs with tows proceeding to a dock should anchor if visibility at the dock is known to be less than 0.25 nautical mile, unless, under all circumstances, proceeding to the dock is the safest option. Tugs with tows in petroleum service proceeding to a dock should anchor if visibility at the dock is known to be less than 0.5 nautical mile, unless, under all circumstances, proceeding to the dock is the safest option.

Note: Vessel captains or operators should broadcast a General Information Security call over Channel's 16 and 13 upon determination that a scheduled movement will be delayed or canceled.

18.8.2 Tugs with Tows <1600 Gross Tons: Guidelines for Navigating in Severe Weather

Several factors must be considered when limiting transits in the Bay or closing the Bar due to severe weather, including sea state, tidal influences, visibility, traffic density, and wind advisories issued by NOAA. The size and condition of the vessels being addressed must also be considered. The Harbor Safety Committee recommends a tiered approach, applying greater caution as conditions worsen.

18.8.3 Sustained winds exceeding 25 knots in the Bay:

- Tugs with tows should closely evaluate whether it is safe to transit in the Bay. Size and sail area of the vessel, tidal influences, visibility, operator skill and traffic density should all be considered.
- Vessel captains or operators should regularly monitor Channel's 16 and 13 and establish regular communications with the Coast Guard.

18.8.4 Sustained winds exceeding 40 knots in the Bay:

- Transits to and from berths are not recommended but may be performed following a careful risk management evaluation by the vessel operator and vessel management.

18.8.5 Sustained winds exceeding 40 knots and/or seas exceed 12 ft at the Sea Buoy

- Bar traffic restrictions and closure should be considered for tugs with tows. Size of the vessel, draft, swell period, tidal influences, visibility, and traffic density should all be considered. Strong ebb tides should be avoided, and a minimum of 10 feet under keel clearance at the Bar and Entrance Channel is recommended.

18.9 SAFE SPEED

Speed within the port should be at a minimum safe speed to maneuver and control the vessel, with regards to weather, conditions of draft, and the maneuvering characteristics of the vessel.

On approaches, speed should be at a level to accommodate safe transit (minimum for existing conditions). It should be noted that the approach to the Port of Humboldt Bay generally involves cross currents which are mostly unpredictable for direction and strength.

Extreme caution (no wake) should be used in the vicinity of the Fuel Barge and a No Wake Zone exists between the Samoa Bridge and the south end of the City of Eureka's Public Marina. (City of Eureka Municipal Code §100.14) Speed within the Eureka Channel Inner Reach, Woodley Island Marina, Eureka Public Marina, and other marinas shall be limited to five (5) miles per hour. (HBHRCD Ord. No. 17 Sec. 7.10)

California Harbors and Navigation Code limits vessel speed to not more than 5 miles per hour within 100 feet of any person who is engaged in the act of bathing, a swimming float, diving platform or lifeline, and within 200 feet of a beach frequented by bathers, a way or landing float to which boats are made fast or which is being used for the embarkation or discharge of passengers.

The U.S. Coast Guard has established protection zones for 500 yards around all U.S. naval vessels in navigable waters of the United States. Vessels are to proceed at a no-wake speed when within a protection zone. Non-military vessels are not allowed to enter within 100 yards of a U.S. naval vessel, whether underway or moored, unless authorized by an official patrol.

18.10 SMALL CRAFT

California State Law requires all persons 13 years of age and younger to wear a personal floatation device (PFD) while underway on a moving recreational vessel of any length. The PFD must be Coast Guard-approved style in serviceable condition and of a type and size appropriate for the conditions and the activity. It is highly recommended that all people wear a PFD while underway.

Take a safe boating course and get your California Boater Card.
Even the most experienced boaters can learn from boating safety courses.
As of Jan. 1, 2021, all operators of motorized vessels on California waterways who are 40 years of age and younger are required to carry a lifetime boater card. By 2025, all operators of motorized vessels will be required to carry one regardless of age.

Be an informed mariner:

- 5 or more short blasts of a vessel's whistle/horn = DANGER SIGNAL
- Know the Rules of the Road
- Read Coast Guard Notice to Mariners
- Monitor the weather
- Listen to VHF Channel 16 for Coast Guard information broadcasts
- Be aware of current weather conditions, tidal times, currents, and changing conditions
- Ensure everyone on board is aware of all emergency procedures

18.11 COMMUNICATIONS

- VHF Channel 13 - Bridge to Bridge Communications
- VHF Channel 14- Port of Humboldt Bay / Woodley Island Marina
- VHF Channel 16 - Hailing and Distress
- VHF Channel 22 - Coast Guard Public Access
- VHF Channel 77 - Humboldt Bay Bar Pilots Coast Guard Group Humboldt Bay - Emergency Search and Rescue only (707) 839-6100 or 9-1-1

Use VHF Channel 13 to make passing arrangements with other vessels.

Treat VHF Channel 16 like you would 9-1-1. Mariners should be aware that Channel 16 is used for "Security" broadcasts for vessel movement and safety.

All users are encouraged to minimize voice traffic on all channels, maintain circuit discipline and broadcast on "low power" whenever possible.

Cellular phone coverage can be unreliable. Do not rely on a cellular phone as your only source of communication. Cellular phones cannot replace the VHF-FM marine radio's ability to communicate marine safety information with multiple marine users at one time.

18.12 TSUNAMI MARITIME ACTIONS: SMALL CRAFT

FOR SMALL CRAFT such as recreational sailing and motor vessels, commercial fishing vessels and all vessels under 300 gross tons.

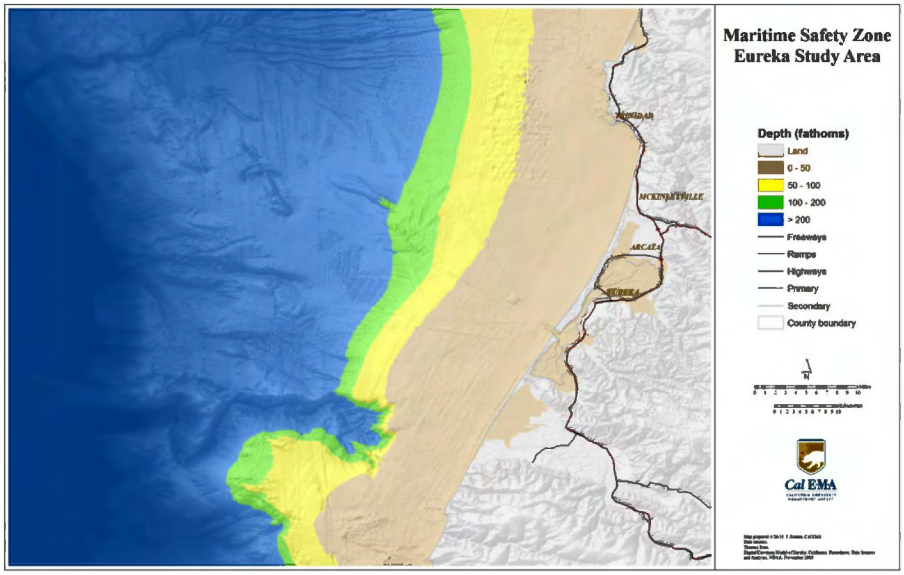
DROP, COVER, HOLD ON - You should first protect yourself from an earthquake. When the shaking stops, move quickly to higher ground away from the coast. Signs a tsunami may be imminent - if you feel a strong earthquake lasting 20 seconds or more near the coast, rapid change in water elevation, a loud roar from the ocean, go to high ground immediately.

18.13 TSUNAMI MARITIME ACTIONS PRECAUTIONARY MEASURES FOR OCEAN GOING SHIPS/BARGES

These Maritime Actions for a Distant Source Tsunami Hazard have been created for the Humboldt County Emergency Operations Plan and is considered a living document subject to change. This is for a DISTANT SOURCE tsunami only.

18.13.1 KEY POINTS TO KNOW

The safest locations for a vessel in a tsunami event are in deep water or out of the water and out of the Tsunami Hazard Zone. Cal OES's "RULE OF THUMB" is 180+ feet (30 fathoms or more) in depth. This is approximately 4 miles offshore of Humboldt Bay. NOAA also recommends Mariners in deep water 180 feet or greater should stay at sea. Those in shallow water or harbors should move to deep water if there is enough time and weather conditions are suitable.



18.13.2 POSSIBLE MARINER ACTIONS PRIOR TO TSUNAMI SURGE ARRIVAL

Vessels at sea when a tsunami event is announced should remain in deep water. Given the time frame available, vessels within Humboldt Bay, with the ability to travel to deep water prior to the initial tsunami surge arrival time should do so as soon as possible. At Humboldt Bay, bar conditions may dictate the ability of vessels to get to sea.
Trailer able vessels in the water or vessels on trailers within the Tsunami Hazard Zone should be moved to locations outside the zone.

18.13.3 DO YOU HAVE ENOUGH TIME TO ACCOMPLISH YOUR GOAL?

Exceptional care should be taken when making the decision to move a vessel from the Tsunami Hazard Zone. Congestion on the roads and in the harbor area may greatly delay all mitigation actions. Mariners should not attempt to remove a vessel from the Tsunami Hazard Zone unless they are certain the movement activity can be completed in the time available. Remember there may be road closures, restricted access, and traffic congestion.
At tsunami estimated TIME of arrival MINUS ONE (1) HOUR, also known as T minus 1 or T-1, access to coastal areas including the marinas will be prohibited.

TRAILER ABLE: If your vessel is trailer able and you wish to remove it from the water, consider the following:

- Make sure your family is safe first.
- Check the tide and weather conditions.
- Find someone to assist you to hook up your trailer, drive to the marina to drop you off, drive to the boat ramp, load the boat, go to high ground.
- PLEASE remember, there may be road congestion and congestion at the boat ramps. If you do not have time to accomplish your goals, you should not make the attempt.

NON-TRAILER ABLE: If you are unable to remove your vessel from the water, consider the following:

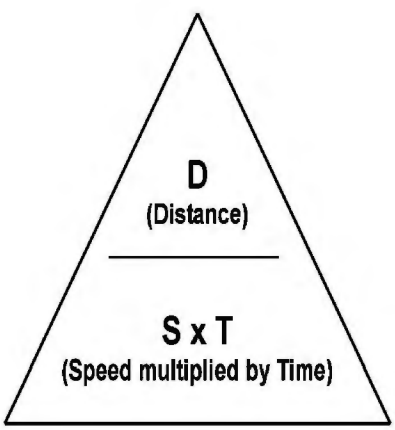
- Make sure your family is safe first.
- Grab extra lines and fenders for your vessel and remove any important items from your vessel.
- PLEASE remember, there may be road congestion. If you do not have time to accomplish your goals, you should not make the attempt.

VESSELS considering leaving the harbor and head to sea, please consider the following:

- Make sure your family is safe first.
- Check tide, bar, and ocean conditions.
- Check the weather forecast for the next couple of days.
- Ensure you have enough fuel, food, and water to last a couple of days.
- Have someone drive you to the marina so your vehicle is not in the inundation zone.
- PLEASE REMEMBER: There may be road congestion. There may also be vessel congestion in the harbor as SHIPS, BARGES and other vessels attempt to depart at the same time. All vessels should monitor VHF Channel 16 and use extreme caution. NEVER impede another vessel. If you do not have time to accomplish your goal, you should not make the attempt.

Distance **S**peed **T**ime formula.

To use this triangle put your finger over the letter you are going to solve. **D**istance = **S**peed multiplied by **T**ime.
• If you want to know **S**, then put your finger over the **S** and it gives you **D / T** (Distance divided by Time).
• If you want to find **D** then cover the **D** and you have **S x T** (Speed multiplied by Time).
• If you want to find **T** then cover the **T** and you have **D / S** (Distance divided by Speed)



For marine purposes Distance is in nautical miles and tenths of a nautical mile. Speed is in knots (nautical miles per hour) and tenths of a knot. Time is in hours and minutes. To convert minutes to hours, divide by 60. To convert hours to minutes, multiply by 60.

Example:
I need to travel 9.0 nautical miles at 6 knots. How long will it take?
Distance divided by Speed =Time1.1 nautical miles / 6 knots = 1.5 hours (1 hours 30 minutes)

It is approximately 09 nautical miles from Woodley Island Marina breakwater to the 30-fathom line.
It is approximately 15 nautical miles from Woodley Island Marina breakwater to the 50-fathom line.
It is approximately 19 nautical miles from Woodley Island Marina breakwater to the 100-fathom line.

18.13.4 THINGS TO CONSIDER WHILE AT SEA

· Monitor VHF-FM Channel 16 and the marine WX channels for periodic updates of tsunami and general weather conditions.
· Keep in contact with other boaters for safety and moral support.
· BEFORE RE-ENTERING HUMBOLDT BAY, make sure the harbor is open for traffic.
· Be aware of the tides, currents, and surges. Keep a look out for debris.

Possible Mariner Actions Following the Tsunami “All-Clear” Message: "ALL CLEAR" – DOES NOT MEAN THE HARBOR IS OPEN.

The "All-Clear" message is for land entry only. Mariners at sea should stay at sea until after the United States Coast Guard Captain of the Port has issued a message stating that Humboldt Bay is open for traffic. Check with your docking facility to ascertain its ability to receive vessels. Adverse tsunami surge impacts may preclude safe use of the harbor. Vessels may be forced to anchor offshore or to travel great distances to seek safe harbor. An extended stay at sea is a possibility if the Harbor is impacted by debris or shoaling. Make sure your vessel is prepared to stay at sea.

Where possible, mariners should congregate for mutual support while at sea, anchor or during transit elsewhere.

18.13.5 LESSONS LEARNED FROM PAST EVENTS

During the March 11, 2011, event, Crescent City boats headed to sea. Once the tsunami hit and they realized they were unable to return to Crescent City harbor, decisions needed to be made as to where to go because of a huge storm approaching the coast. Some vessels had enough fuel to make it to Brookings Harbor and to Humboldt Bay. Some smaller vessels did not have enough fuel and made the choice to re-enter Crescent City harbor to anchor. Some Crescent City Captains had never been to Humboldt Bay, and some were running single handed as they did not have enough time to round up crewmen. As with the Captains who chose to go to Brookings, all Captains heading to Humboldt Bay kept in close contact with

each other for safety and for moral support. Even though the tsunami initially impacted the west coast on the morning of March 11, 2011, the largest surges in Crescent City did not arrive until later in the evening.

18.13.6 BACKGROUND

Very large underwater earthquakes are the most likely cause of tsunami waves which can cause significant damage to very distant shores. Earthquake-caused tsunami waves occur when the sea floor abruptly deforms and vertically displaces the overlying water column. The displaced water travels outward in a series of waves which grow in intensity as they encounter shallower water along coastlines. Tsunami wave impacts are greatest in and around ocean beaches, low-lying coastal areas, and bounded water bodies such as harbors and estuaries. Potential tsunami wave impact areas should always be avoided during tsunami events.

Any tsunami event can threaten harbors, facilities, and vessels. A distant source tsunami event does allow at least some time for local agencies and citizens to take steps to help mitigate the expected impacts of tsunami surges. However, the time available for response is minimal – All needed mitigation actions probably cannot be accomplished. Therefore, the actions to be taken must be prioritized and based on life- safety preservation. Only those actions with a surety of success should be attempted.

The distant tsunami source location does greatly impact the ability of Humboldt County response entities and the public to mitigate expected impacts. A tsunami originating in Chile (14-15 hours away), or Japan (9-10 hours away) will allow much more local mitigation activity than a tsunami originating in the Aleutians (4-5 hours away).

Response entities and the public should allow enough time to complete the mitigation activity and to depart the Tsunami Hazard Zone prior to the projected first tsunami surge arrival time. Emergent mitigation activities will be extensive and involve large numbers of people resulting in congestion and delayed actions – It may not be possible to complete normally simple mitigation actions in the time frame available.

Where do I get more information on Tsunamis and local conditions?
Redwood Coast Tsunami Work Group http://humboldt.edu/rctwg/

Tsunami evacuation maps may be found on the Redwood Coast Tsunami Work Group website. Locate your home, work, schools, etc. and download the maps of your areas. Talk with your family about emergency procedures. Know your surroundings and how to react.

Tsunami Warning Center: www.tsunami.gov

National Weather Service Office in Eureka www.weather.gov/eureka
Phone: 1-707-443-6484

Humboldt Harbor Safety Committee: www.humboldtharborsafety.org

Local television and radio stations.

Humboldt County Office Of Emergency Services”
https://humboldtgov.org/356/Office-of-Emergency-Services

The Humboldt Bay Harbor Safety Committee participated in developing a draft of the Humboldt County Emergency Operations Tsunami Contingency Plan. The draft last published in the 2018 version of the Humboldt Harbor Safety Plan was not finalized and has been removed from this version.

19 SUMMARY OF RECOMMENDATIONS

19.1 SUMMARY OF RECOMMENDATIONS

19.1.1 GEOGRAPHIC BOUNDARY

No recommendations.

19.1.2 GENERAL WEATHER AND TIDAL CONDITIONS

The HSC recommends continued support of the PORTS program.

If a major earthquake or tsunami occurs within the Humboldt Bay region, the Port Authority will make every effort to contact the U.S. Army Corps of Engineers to survey the channels and entrance if adverse conditions are noted.

19.1.3 ANCHORAGE AND AIDS TO NAVIGATION

The Humboldt Bay Harbor District, in consultation with the HSC, developed an anchoring Ordinance No. 17- An Ordinance Establishing Rules, Regulations and Enforcement Procedures for the Anchoring, Security, and Disposition of Vessels and Property in Humboldt Bay adopted June 2004. See Appendix 19.12 for Ordinance No. 17.

The Humboldt Bay Harbor District recommends to the HSC and OSPR that anchorage areas will need to be reviewed and possibly updated to reflect a projected increase in vessel traffic and anchorage needs associated with the proposed Offshore Wind Energy developments and potential new heavy lift, multipurpose terminal.

The HSC has determined that due to physical limitations (narrow channel width), anchorages will not be officially designated within the defined Harbor boundaries and that current procedures will be maintained (i.e., the pilot that guides the vessel will be allowed to determine the most suitable "holding" area for that vessel at that time). It should be clarified in the plan's annual update that there are no anchorages within the bay, and that there is a one-way traffic channel which shall be adhered to make harbor travel safe.

The HSC has made recommendations regarding safe mooring. However, upon further discussion with the HSC members, no further action will be required by the OSPR, as these recommendations are already being practiced by vessel and terminal owners/operators, and sufficient mooring ropes or wires during transfer operations are already required under federal regulation (33 CFR 156.120 (a))(https://www.ecfr.gov/current/title-33/chapter-I/subchapter-O/part-156/subpart-A/section-156.120).

19.1.4 SURVEYS, CHARTS, AND DREDGING

The Harbor Safety Committee has evaluated the current dredging program to determine accurate depth information and found that improvements were necessary.

Because of adverse weather conditions some channel areas of Humboldt Bay can shoal very quickly. The U.S. Army Corps of Engineers needs to continue to monitor the channels to assure that sufficient depths are maintained for safe vessel passage. The Entrance Channel and North Bay Channel shall be maintained at the project depth to minimize the risk of grounding. This recommendation is to be conducted and funded by the U.S. Army Corps of Engineers.

Soundings associated with existing annual harbor dredging operations by the U.S. Army Corps of Engineers are conducted between April and October, and include the Bar Channel, Entrance Channel, North Bay Channel, and the Samoa Channel. These dredge related soundings are considered adequate for traffic safety during the summer season providing that such dredging project-related soundings do commence with the "conditional" sounding in April, which is deemed necessary to indicate post-storm season conditions. Should the U.S. Army Corps of Engineers change existing dredging schedules; these

areas will require sounding in April for traffic safety. This recommendation to be conducted and funded by the U.S. Army Corps of Engineers.

Monthly soundings from December to March from the Bar to Beacon No. 11. This recommendation is to be conducted and funded by the U.S. Army Corps of Engineers.

The Harbor Safety Committee recommends that the U.S. Army Corps of Engineers implement the recommendation to finalize the evaluations that were identified in the Humboldt Bay Long-Term Sediment Management Study (CWIS # 081540; P2 Project # 105098) to reduce and prevent shoaling in the Bar and Entrance Channels.

19.1.5 VESSEL SPEED AND TRAFFIC PATTERNS

With the emergence of modern technologies associated with electric vessels and hydrofoil, the speed of vessels in Humboldt Bay and along the coast will need to be reevaluated in the future. Electric vessels with hydrofoil technology have the ability and potential to travel at high rates of speed while creating little to no wake. There are numerous reasons to evaluate speed such as safety of passengers aboard vessel, safety of other persons and vessels on the water, sea life, air quality, energy conservation, and wake.

The Harbor Safety Committee will continue to monitor vessel traffic within Humboldt Bay and will recommend solutions as issues arise.

19.1.6 SMALL VESSELS

The Humboldt Bay Harbor Safety Committee is committed to promoting safety for all recreational enthusiasts of Humboldt Bay. Safe boating and protection of the waters of Humboldt Bay remains a priority. The Humboldt Bay Harbor Safety Committee will continue to promote safe boating practices and educational opportunities.

The Harbor Safety Committee will publicize all information received on boating safety courses.
The HSC will work to assist all organizations offering safe boating classes.

19.1.7 ACCIDENTS AND NEAR ACCIDENTS

Annual review of U.S. Coast Guard data and information solicited by the HSC from Humboldt County Sheriff's Marina Patrol, pilots, masters, industry representatives, and other parties shall be performed to assess the effectiveness of tug escorts in the prevention of accidents.

19.1.8 COMMUNICATIONS

It is the opinion of the Harbor Safety Committee that current communications systems are adequate and that current procedures be maintained.

19.1.9 TUG ESCORT/ASSIST FOR TANK VESSELS

The HSC shall annually review the performance and effectiveness of tug capabilities. This review shall rely, in part, on information solicited by the HSC from pilots, masters, industry representatives, and other parties.

The Humboldt Bay Area HSC recommends the following number of assist tugboats, which will also function as tug escorts, for vessels and barges in the Humboldt Bay Harbor.

All barges carrying hazardous or liquefied compressed gases will be escorted according to escort procedures described by the current Captain of Port Public Advisory (See Appendix 19.9.6 for 33 CFR 160.203).

All tank vessels must have a qualified Humboldt Bay Bar Pilot and escort tug. Additional tug(s) will be standing by and prepared to render assistance.

Any vessel equipped with a working bow and/or stern thruster may substitute this equipment for the services of one tugboat provided that such substitution does not reduce the total number of tugs below one (1). It shall be understood that the minimums contained herein reflect ideal circumstances and conditions. The master/pilot shall arrange for additional tugboat assistance should adverse weather conditions, unusual port congestion, or other conditions or circumstances so require.

Tugs and barges transporting oil or oil derivative products, or "certain dangerous cargoes" as described in 33 CFR 160.203 shall comply with the following rules and regulations:

All barges carrying hazardous or liquefied compressed gases will be escorted according to escort procedures described by the current Captain of Port Public Advisory (See Appendix 19.9.5).
46 CFR § 15.812 Pilots.

> (a) Except as specified in paragraph (f) of this section, the following vessels, not sailing on register, when underway on the navigable waters of the United States, must be under the direction and control of an individual qualified to serve as pilot under paragraph (b) or (c) of this section, as appropriate:
>
> (1) Coastwise seagoing vessels propelled by machinery and subject to inspection under 46 U.S.C. Chapter 33, and coastwise seagoing tank barges subject to inspection under 46 U.S.C. Chapter 37.

The HSC should review and monitor Tug Capability Requirements associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

19.1.10 BRIDGES

No recommendations.

19.1.11 VESSEL TRAFFIC

The Committee should examine the future needs for a VTS in Humboldt Bay associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

19.1.12 UNDER KEEL CLEARANCE

The HSC should monitor Under keel Clearance guidelines regarding an anticipated increase in size of vessels associated with the proposed offshore wind energy project and potential construction of a new multipurpose heavy lift terminal.

19.1.13 PILOTAGE

The HSC shall rely, in part, on information solicited by the HSC from pilots, masters, industry representatives, and other parties for recommendations.

The Humboldt Bay Harbor District currently has three Observing Apprentice pilots as of March 2023.

19.1.14 ENVIRONMENTAL AND ECONOMIC IMPACTS OF THE PLAN

This section will be revised with new recommendations in the next update of the Harbor Safety Plan.

19.1.15 PLAN ENFORCEMENT

It is encouraged that Committee members and alternates, as well as the entire waterfront community, monitor compliance of provisions contained in the Harbor Safety Plan. Noncompliance should be reported to the committee for appropriate action.

19.1.16 FUNDING AND COMPETITION

The Committee recommends that Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 be amended to provide funding for all the recommendations put forth in this Plan.
Should funding not be available through the recommended entities the Committee requests that the recommendations be funded through OSPR revenues.

The OSPR will endorse the HSC's recommendations made in the Harbor Safety Plan; however, the OSPR cannot fund all the recommendations within the Plan, nor can Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 be amended to provide such funding. Should the HSC determine that more funding is required in the future, the HSC may prepare recommendations in the Plan, as part of the annual update for specific projects recommending a specific amount of funding for specific projects as described in the Plan that could not get funded. The OSPR will consider these recommendations as part of its review to determine the source and feasibility of funding.

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APPENDIX V

HARBOR SAFETY COMMITTEE OF THE HUMBOLDT BAY AREA BY-LAWS

As Amended 17 March 2011

Article I: Name

Section 1. The Harbor Safety Committee of the Humboldt Bay Area (hereinafter referred to as the Committee).

Article II: Purpose

Section 1. The Committee is established pursuant to Section 8670.23 of the Government Code and Title 14, California Code of Regulations, Sections 800-802, and is responsible for planning for the safe navigation and operation of tank ships, tank barges, and other vessels within the harbor, and making recommendations to the Administrator of the Office of Spill Prevention and Response (OSPR), hereinafter referred to as the Administrator.

Article III: Membership

Section 1. Membership Categories

a. Members shall be selected from local representatives of organizations or companies in the Humboldt Bay Area region whenever possible.

b. The Committee shall consist of members and their alternates appointed by the Administrator as follows:

    1. One designee representing the port authority within the harbor;

    2. One representative of tank ship operators;

    3. One representative of the pilot organization within the harbor;

    4. One representative of dry cargo vessel operators;

    5. One representative of commercial fishing;

    6. One representative of pleasure boat operators;

    7. One representative of a recognized Tribal/nonprofit environmental organization that has as a purpose the protection of marine resources;

8. One representative of the California Coastal Commission;

9. One representative from a recognized labor organization involved with operations of vessels;

10. One representative of tug or tank barge operators, neither of whom shall also be engaged in the business of operating either tank ships or dry cargo vessels;

11. One representative from Local Law Enforcement;

12. One representative from Marine Oil Terminal Operators;

13. One representative from Coast Guard Group Humboldt Bay;

14. One representative from each of the following: Captain of the Port from the U.S. Coast Guard; U.S. Army Corps of Engineers; the National Oceanographic and Atmospheric Administration, and the U. S. Navy, to the extent that each consents to participate on the committee.

c. Appointees filling membership categories identified in items b1 through b12, above, are specified as appointed members.

d. Committee may petition the Administrator with a request for new or additional membership positions for special needs to conduct ongoing harbor safety committee business and which reflect the makeup of the local maritime community. The qualifications for such positions shall be set either in committee bylaws or on the petition. The approval of such petitions shall be at the sole discretion of the Administrator.

e. Committee may petition the Administrator for the elimination of new or additional membership positions requested and approved pursuant to Subsection d above. The approval of such petitions shall be at the sole discretion of the Administrator.

Section 2. Membership Qualifications

The members appointed from the categories listed in Section 1b (2), (3), (4), and (10) shall have navigational expertise. An individual is considered to have navigational expertise if the individual meets any of the following conditions:

a. Has held or is presently holding a Coast Guard Merchant Marine Deck Officer's license;

b. Has held or is presently holding a position on a commercial vessel that includes navigational responsibility;

c. Has held or is presently holding a shore side position with direct operational control of vessels;

d. Has held or is currently holding a position having responsibilities for permitting or approving the docking of vessels in and around harbor facilities.

Section 3. Term of Membership for Appointed Members

a. A member shall be appointed for a three-year term.

b. A member's appointment shall be terminated as a result of any of the following circumstances:

    1. The member retires from, or otherwise leaves employment under which he/she was appointed. Members who leave their employer may, if qualified under their new employment, apply for the seat they vacated or, if qualified, apply for another Committee seat that becomes vacant.

    2. The member undergoes a change in work responsibilities which alters the constituency which he/she represents, or alters their qualifications for the position.

    3. The member voluntarily resigns for any reason.

    4. A member is removed by the Administrator for any reason under Section 6 below.

c. A member impacted by any of the conditions identified in items 1-4 above is expected to submit their resignation to the Chair (with a copy to the Administrator) within five working days.

d. Any incumbent completing his/her three-year term may re-apply.

Section 4. Alternates for Appointed Members

a. The alternate representative shall be appointed by the Administrator. Only one alternate shall be appointed for each primary member, and only the appointed alternate is accorded proxy powers. The alternate shall be selected from the same membership category as the primary member, and shall meet the same qualifications. The appointed alternate may vote, participate in, or take any other action on behalf of the primary member consistent with the Committee's bylaws and any applicable statutory or regulatory provisions.

b. An alternate may vote only in the absence of the primary member.

c. Except as noted in Section 5d, below, an alternate's term expires when the primary member's term expires.

d. When a primary members resigns or is removed, an alternate may serve until such time as a new primary member is appointed.
e. When possible, the primary member should be allowed to recommend their alternate;

    1. If there is more than one applicant for a position, the primary member and the Administrator should consider the other applicants when selecting alternates. The Administrator shall consider diversity of organizations within each membership category when selecting alternates.

Section 5. Attendance of Appointed Members

a. Attendance of scheduled Committee meetings is expected. The standard of attendance is determined as follows:

    1. For each appointed membership category team consisting of a primary member and alternate, missing three consecutive meetings is considered to be not meeting the standard of attendance.

    2. For a primary member with no alternate, missing four consecutive meetings is considered to be not meeting the standard of attendance.

b. The Committee Chair shall review the meeting attendance records on a regular basis and shall inquire about members and teams with excessive absences.

c. The Chair may make an exception to the attendance standards for a member experiencing extenuating circumstances.

Section 6. Member Removal

a. Circumstances may arise which require that a Committee member voluntarily resign or be removed from their position. Such events include:

    1. Failing to meet attendance standards, as set in Section 5;

    2. Falsifying application materials;

    3. The member's term ending prematurely due to meeting one of the conditions described in Article III, Section 3, items b1 and b2.

b. A member who demonstrates any of the three criteria listed above is expected to voluntarily tender his written resignation to the Chair (with a copy to the Administrator) within five working days of being informed of this condition. If the expected resignation is not forthcoming, the Chair shall privately contact the member, explain which bylaw(s) has been violated, and seek the member's resignation. If the request is not honored within ten working days, the Chair shall write to the member (with a copy to the Administrator), explaining which bylaw(s) has been violated and, again, request a resignation. If the resignation is not offered within 15 working days, the Harbor Safety Committee may request the Administrator in writing (with a copy to the member) of the situation, identify which bylaw(s) has been violated, and seek the Administrator's assistance in removing the recalcitrant member.

c. The Chair shall announce at the next full meeting the resignation or removal of any member.

Article IV: Officers

Section 1. The Administrator shall appoint a Chairperson and vice chairperson, for a term not to exceed the balance of their current membership appointment, from the membership specified in Article III.

Section 2. An Executive Secretary (Secretariat) shall be contracted by the Administrator. The Secretariat shall serve as the Administrative staff to the Committee.

Article V: Subcommittees and Work Groups

Section 1. The Committee may establish Subcommittees and Work Groups, as it deems necessary. Meetings shall be duly noticed and open to the public in accordance with Article VII to receive maximum participation.

Section 2. The Chair of the Harbor Safety Committee shall appoint the chairperson of Subcommittees and Work Groups. The Chair may appoint Subcommittee members.

Section 3. Subcommittees should be composed of an uneven number of voting Committee members with no fewer than three people on a subcommittee. Vote by the majority of the subcommittee members present shall be necessary to pass a recommendation of the subcommittee. If a majority of Committee members are voting at a subcommittee meeting, that meeting should be noticed as a meeting of the full Harbor Safety Committee.

Section 4. Work Groups may be composed of any number of participants. Work Groups should operate by consensus of those present, including interested members of the

public.

Section 5. Subcommittees and Work Groups may make recommendations to the full Committee, which will vote on the recommendations as detailed in Article VIII. Recommendations should be made in writing and provided to the Committee prior to any vote on the matter.

Article VI: Recommendations from Committee

Section 1. The Committee shall make recommendations or requests of the Administrator on rules, regulations, guidelines and policies on Harbor Safety. The Committee shall make recommendations or requests to other federal, state or local agencies.

Section 2. The Committee shall prepare and submit a Harbor Safety Plan and annual updates to the Administrator by June 30 of each year or as directed otherwise by the Administrator.

Article VII: Meetings

Section 1. Governing rules for meetings shall be the Ralph M. Brown Act (Open Meetings for Local Legislative Bodies), the Humboldt Bay Area HSC bylaws, and Robert's Rules of Order.

Section 2. Each Committee member and alternate shall be provided a copy of the Humboldt Bay Area HSC bylaws and the Harbor Safety Plan. Upon request, Committee members and alternates, as well as interested parties, shall be provided a copy of the Brown Act.

Section 3. The Committee normally meets bi-monthly at the Humboldt Bay Harbor District office.

Section 4. Quorum

A quorum of a simple majority of voting members excluding federal agencies must be present in order that business can be legally transacted. Should a quorum not be present the Committee can proceed as a Committee of the whole, but cannot take action on any item.

Section 5. Agenda for Meetings:

a. An agenda drafted by the Secretariat in consultation with the Committee Chair shall be prepared for each meeting of the Committee. The agenda shall be distributed no fewer than seven (7) days prior to the scheduled meeting and shall comply with all provisions of the Brown Act.

b. In accordance with the Brown Act, agendas for full Committee meetings shall be posted 72 hours in advance at the Secretariat's office. Posting shall be visible from the outside of the building.

c. Agendas shall include a brief general description of each item to be discussed, including whether voting action is anticipated to be taken on an item.

d. Each agenda item that requires Committee action shall include time for public comment.

e. The Committee may take action on an item not appearing on the agenda by determining that an immediate need exists and it came to the attention of the Committee after the agenda was distributed. This determination must be approved by a two-thirds (2/3 rd) vote of all appointed Committee members, if fewer than two-thirds (2/3rd) of all appointed members are in attendance by a unanimous vote of those appointed members present.

f. A Committee member or member of the public can discuss an item not on the agenda under New Business/Public Comments. However, no action by the Committee can be taken until such time as the item is duly noticed at a regular or special meeting, and time has been allotted to receive public input prior to Committee action.

Article VIII: Voting

Section 1. Voting

a. The Humboldt Bay Area Harbor Safety Plan annual review shall be approved by two-thirds (2/3rd) of the appointed Committee members or their alternates.

b. With the exception of items specified in Section 1a of this Article, Article VII, Section 5e and Article IX, passage of any item subject to a vote by committee members shall require a simple majority of appointed members, or their alternates present at a meeting. No action shall be taken on any item which is not on the agenda provided pursuant to Article VII, Section 5, except as allowed by Article VII, Section 5e.

c. Due to the advisory nature of the Committee and its selected representatives, members shall not be excused from voting in case of potential conflict of interest.

Article IX: Bylaws Review, Acceptance and Amendments

Section 1. Enactment of Bylaws

To enact bylaws, the proposed bylaws must be:

a. Included as an agenda item at a regular meeting

b. Noticed to the public in accordance with Article VII, Section 5, of these bylaws.

c. Be approved by a two-thirds (2/3rd) of the appointed Committee members or their alternates.

Section 2. Bylaws Status

The bylaws shall become effective after Committee approval and shall continue in force until amended or repealed.

Article X: Certification

I certify that these bylaws were approved by the Harbor Safety Committee of the Humboldt Bay Area on 17 March 2011, at Eureka, California, by a vote of __7__ yea to __0__ nay. This document is true and correct, and constitutes the official bylaws governing the Committee. These bylaws shall remain in force until amended or repealed in accordance with Article IX.

_____

David Hull, Chair
Date: 17 March 2011

CALIFORNIA CODE OF REGULATIONS
TITLE 14, DIVISION 1
SUBDIVISION 4, OFFICE OF OIL SPILL PREVENTION AND RESPONSE
CHAPTER 3. OIL SPILL PREVENTION AND RESPONSE PLANNING
SUBCHAPTER 1. HARBOR SAFETY COMMITTEES AND HARBOR SAFETY PLANS
SECTIONS 800 - 802

Effective 2/9/05

800. DEFINITIONS

In addition to the definitions in Chapter 1, Section 790 of this Subdivision, the following definitions shall govern the construction of this subchapter. Where similar terms are defined, the following will supersede the definition in Chapter 1:

(a) "Vessels" means any watercraft or ship of any kind, including every structure adapted to be navigated from place to place for the transportation of merchandise or persons.

NOTE: Authority cited: Section 8670.23, Government Code.
Reference: Sections 8670.3, 8670.21 and 8670.23, Government Code.

800.5. HARBOR SAFETY COMMITTEES

(a) The Administrator shall create harbor safety committees for the harbors and adjacent regions of San Diego Bay; Los Angeles/Long Beach Harbor; Port Hueneme; San Francisco, San Pablo, and Suisun Bays; and Humboldt Bay. In consultation with each harbor safety committee, the Administrator shall determine its geographic region of responsibility which shall be clearly reflected in the committee's plan as described in Section 802(b)(2) of this Subchapter.

(b) In the event that a designee of a port authority is not able to participate as a harbor safety committee member due to military affiliations, the civilian counterpart for that harbor may serve in place of the port authority designee.

(c) All meetings of harbor safety committees, their subcommittees, workgroups or organizations, as defined in Government Code Section 54952, are subject to the open meeting requirements contained in Government Code Sections 54950 through 54962.

NOTE: Authority cited: Sections 8670.23 and 8670.23.1, Government Code.
Reference: Section 8670.23, Government Code.

800.6. HARBOR SAFETY COMMITTEE MEMBERSHIP

(a) The Administrator shall appoint to each harbor safety committee, for a term of three years, all of the following members and their alternates:

(1) A designee of each of the port authorities within the region, except that the harbor safety committee for the San Francisco, San Pablo and Suisun Bay region shall have four designees.

(2) A representative of dry cargo vessel operators, except that the harbor safety committee for the San Francisco, San Pablo and Suisun Bay region may have two representatives.

(3) A representative of tank ship operators, except that the harbor safety committee for the San Francisco, San Pablo and Suisun Bay region shall have one additional representative of either tank ship operators or marine oil terminal operators.

(4) For the harbor safety committees for the Los Angeles/Long Beach Harbor region, Port Hueneme region, and Humboldt Bay region a representative of marine oil terminal operators.

(5) A representative of tug or tank barge operators, who is not also engaged in the business of operating either tank ships or dry cargo vessels, except that the harbor safety committees for the San Francisco, San Pablo and Suisun Bay region and Humboldt Bay region shall have one representative of tug operators and one representative of tank barge operators, neither of whom is also engaged in the business of operating either tank ships or dry cargo vessels.

(6) For the harbor safety committees for the San Francisco, San Pablo and Suisun Bay region, Los Angeles/Long Beach Harbor region and San Diego Bay region, a representative of scheduled passenger ferry or excursion vessel operators.

(7) A representative of the pilot organizations within the region, except that the harbor safety committee for the Los Angeles/Long Beach Harbor region shall have two pilot representatives: one a designee of the Port of Los Angeles pilot organization and one a designee of the Port of Long Beach pilot organization. Additionally, the harbor safety committee for the Los Angeles/Long Beach Harbor region shall have one representative of mooring masters who represents all mooring masters operating within the committee's geographic area of responsibility.

(8) A representative of a recognized labor organization involved with operations of vessels.

(9) A representative engaged in the business of commercial fishing.

(10) A representative of pleasure boat operators or a recreational boat organization.

(11) A representative of a recognized nonprofit environmental organization that has as a purpose the protection of marine resources, except that the harbor safety committee for the Los Angeles/Long Beach Harbor region may have two representatives .

12) The United States Coast Guard Captain of the Port and a designee of each of the following federal agencies to the degree that each consents to participate on the committee: the United States Army Corps of Engineers, the National Oceanographic and Atmospheric Administration, and the United States Navy.

(13) A designee of the California Coastal Commission, except for the harbor safety committee for

the San Francisco, San Pablo and Suisun Bay region, where the Administrator shall appoint a designee of the San Francisco Bay Conservation and Development Commission.

(b) A harbor safety committee may petition the Administrator with a request for new or additional membership positions for special needs to conduct ongoing harbor safety committee business and which reflect the makeup of the local maritime community. The qualifications for such positions shall be set either in committee bylaws or on the petition. The approval of such petitions shall be at the sole discretion of the Administrator.

(c) A harbor safety committee may petition the Administrator for the elimination of new or additional membership positions requested and approved pursuant to Subsection (b). The approval of such petitions shall be at the sole discretion of the Administrator.

(d) The members appointed from the categories listed in Subsections (a)(2), (3), (4), (5),(6), and (7) above shall have navigational expertise. An individual is considered to have navigational expertise if the individual meets any of the following conditions:

(1) Has held or is presently holding a United States Coast Guard Merchant Marine Deck Officer's license.

(2) Has held or is presently holding a position on a commercial vessel that includes navigational responsibilities.

(3) Has held or is presently holding a shoreside position with direct operational control of vessels.

(4) Has held or is currently holding a position having responsibilities for permitting or approving the docking of vessels in and around harbor facilities.

(e) The Administrator shall appoint a chairperson and vice chairperson, for a term not to exceed the balance of their current membership appointment, for each harbor safety committee from the membership specified in Subsection (a) above. The Administrator may withdraw such appointments at his or her sole discretion.

(f) Upon request of the committee chairperson, pursuant to the committee's bylaws, the Administrator may remove a member or alternate appointed under authority of Subsection (a) above.

NOTE: Authority cited: Sections 8670.23 and 8670.23.1, Government Code.
Reference: Section 8670.23, Government Code.

801. GENERAL PROVISIONS

(a) Each harbor safety committee shall be responsible for planning for the safe navigation and operation of vessels within its geographic region of responsibility. As part of meeting this

responsibility, each committee shall prepare and submit to the Administrator its harbor safety plan which encompasses all vessel traffic within its region and addresses the region's unique safety needs.

(b) All harbor safety plans shall be consistent with both the California Oil Spill Contingency Plan and the National Contingency Plan.

(c) All harbor safety plans shall be in writing and shall include a reference to any federal, state or local laws or regulations if those laws or regulations were relied upon to develop the plan.

(d) Harbor safety plans which meet the requirements of this subchapter shall be implemented by the Administrator in consultation with the respective committee.

(e) On or before July 1 of each year, each harbor safety committee shall assess maritime safety or security within its region, including tank vessel safety, and shall report its findings and recommendations for improvements to the Administrator by amending its current harbor safety plan or instituting other alternatives to address its findings. All plans shall be reviewed by the Administrator to ensure their compliance with this subchapter.

(f) The Administrator may direct a harbor safety committee to address any issue affecting maritime safety or security, as appropriate, and to report findings and recommendations on those issues.

NOTE: Authority cited: Sections 8670.23 and 8670.23.1, Government Code.
Reference: Section 8670.23, Government Code.

802. HARBOR SAFETY PLAN CONTENT

(a) All harbor safety plans shall be written in consideration of the best achievable protection standard as that term is defined in Chapter 1 of this subdivision.

(b) Each harbor safety plan shall include, at a minimum, a discussion of the following:

(1) Tug Escorts

(A) One section of the plan shall be dedicated to the usage of tug escorts in the committee's geographic region of responsibility.

(B) This section shall allow for a case-by-case determination of tug escort usage or need based on specified criteria which include, but are not limited to, all of the following factors:

1. the physical limitations of the tugs;

2. an analysis of commonly encountered weather and sea conditions including, but not limited to, wind, tidal and ocean currents;

3. the type of cargo carried by the tank vessel;

4. a determination of whether or not tug escorts are needed for unladen tank vessels; and

5. the effectiveness of tug escorts in steering and/or stopping assistance for heavily laden tank vessels given the geographic and navigational limitations of that region.

(C) This section shall also include, but not be limited to, all of the following:

1. an outline discussing tug boat capabilities when assisting a tank vessel;

2. a recommendation determining when tank vessels must be escorted by tug(s) while entering, leaving, or navigating in the region;

3. a determination of sufficient size, horsepower, and pull capacity of the tug(s) to assure maximum assistance capability;

4. a comprehensive inventory of the number and types of tugs available for tank vessel escort in each geographic region; and

5. an analysis, including factual data and studies relating to the analysis, which specifies the incidence and location of accidents and the effects of the absence or presence of tug escorts at the time of those accidents.

(D) Each plan shall address its method for performing a continued study of tug escorts, which will rely in part on relevant information solicited by the harbor safety committee from pilots, masters, representatives from towing industries and builders, and other interested parties.

(2) Geographic Region of Responsibility

This section shall provide a written description of each committee's geographic region of responsibility and shall include a large scale chart, or chartlet, illustrating the entire region. The geographic region of responsibility described and illustrated shall be the one approved by the Administrator as outlined in Section 800.5(a) of this Subchapter.

(3) Regional Harbor Conditions

This section shall provide:

(A) a description of existing and expected conditions of weather, tidal ranges, tidal currents (directions and velocities) and other factors which might impair or restrict visibility or impact vessel navigation;

(B) a description of the procedures for routing vessel traffic, and any contingency or

secondary routing plans which may be used during construction and dredging operations;

(C) a description of limitations of current anchorages (designations, proximity to heavily used fairways or channels) and any plans, if developed, to address those limitations; and

(D) a description of the current channel design (navigable channel width and advertised dredged depth) and any proposed changes to these plans.

(4) Vessel Traffic Patterns

This section shall provide, to the greatest extent possible:

(A) A description of the types of vessels which call on the ports or facilities within the region; and

1. identification of the types of cargo transported on the vessels; and

2. a determination of the amount of oil annually (using a three year average) shipped into or from the ports or facilities within the region.

(B) a history and types of all accidents and near-accidents which have occurred within the region during the past three years and any corrective actions or programs taken to alleviate recurrences. For purposes of this subsection, "near-accident" shall mean all situations where a risk of collision as defined by 33 USC 2007 existed;

(C) an assessment of current safety problems or conflicts with small vessels, sailing vessels, or vessels engaged in fishing as it relates to violation of Rule 9 (Narrow Channels Rule) of the Inland Navigational Rules Act (33 USC 2009);

(D) current procedures for routing vessels during emergencies or other contingencies which impact navigation;

(E) a review of existing and proposed federal, state and local laws, regulations or ordinances affecting the region to determine a need for any change;

(F) an assessment of the need for establishing or upgrading existing educational or public awareness programs for all waterway users.

(5) Aids to Navigation

This section shall:

(A) describe any fixed navigational hazards specific to the region and aids to navigation systems in place to minimize risk of contact with these hazards;

(B) evaluate the existing aids to navigation systems available to each region as established and maintained by the United States Coast Guard or other navigational aids as permitted by the United States Army Corps of Engineers, and determine the need for any changes; and

(C) evaluate current programs to determine accurate depth information in navigable channels, anchorages and berths used by tank vessels, and make recommendations necessary to increase the accuracy of such information.

(6) Communication

This section shall:

(A) review and evaluate the adequacy of current ship-to-ship and ship-to-shore communication systems used in the region;

(B) identify any low propagation, or silent areas within the region;

(C) if communication deficiencies exist, develop a strategy to address such deficiencies.

(7) Bridge Management Requirements

(A) This section shall assess the current schedule for bridge openings, the adequacy of ship-to-bridge communications, and the physical limitations affecting vertical and horizontal clearance.

(8) Enforcement

(A) This section shall include suggested mechanisms that will ensure that the provisions of the plan are fully, uniformly and regularly enforced.

(9) Project Funding

This section shall:

(A) provide recommendations for funding projects that the committee intends to recommend or initiate; and

(B) consider the imposition of user fees, and assess existing billing mechanisms as potential funding sources.

(10) Competitive Aspects

This section shall:

(A) identify and discuss the potential economic impacts of implementing the provisions

of the harbor safety plan; and

(B) describe the significant differences in the restrictions that could vary from port to port within the region.

(11) Miscellaneous

(A) This section shall address any additional issues deemed necessary by the harbor safety committee that could impact safe navigation in the region including, but not limited to:

1. vessel pilotage;

2. vessel ballast procedures or requirements;

3. vessel mooring requirements;

4. navigation in reduced or restricted visibility; and

5. maintenance dredging necessary for safe vessel operation.

NOTE: Authority cited: Sections 8670.23 and 8670.23.1, Government Code.
Reference: Section 8670.23, Government Code.

TITLE 14. NATURAL RESOURCES
DIVISION 1. FISH AND GAME COMMISSION - DEPARTMENT OF FISH AND GAME
SUBDIVISION 4. OFFICE OF SPILL PREVENTION AND RESPONSE
CHAPTER 4. VESSEL REQUIREMENTS
SUBCHAPTER 4. TANK VESSEL ESCORT REGULATIONS FOR HUMBOLDT BAY

ARTICLE 1. GENERAL PROVISIONS AND DEFINITIONS

§ 851.80. Purpose and Scope.

The regulations in this subchapter set forth tank vessel escort requirements for tank vessels entering, shifting within, or leaving Humboldt Bay.

“Humboldt Bay” encompasses those harbor boundaries which include all submerged lands of Humboldt Bay (Inner Harbor); and the open water boundary defined as the area centered on the Humboldt Bay Sea Buoy and extending radially outward for a distance of one mile then landward to the perpendicular intersection with the north and south spits.

The escort tug requirements specify that tank vessels carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall be escorted by a suitable escort tug(s).

The escort tug(s) shall be used to influence the speed and direction of travel of a tank vessel in the event of a steering or propulsion failure, thereby reducing the possibility of groundings or collisions and the risk of an oil spill from these tank vessels.

The Administrator shall review the tug/tank vessel matching criteria and other requirements of this subchapter within two years of the effective date of this subchapter. The review will include a survey of the tank vessel-related incidents in U.S. waters to determine the type of failures that have occurred, an assessment of tug technology and any advances made in design and power, and the escort tug-related rules and policies that are implemented by other coastal states and maritime organizations. At the conclusion of the review, the Administrator will determine whether it is necessary to modify the tug/tank vessel match criteria or any other requirements of this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.81. Definitions.

In addition to the definitions found in Government Code Section 8670.3 and Chapter 1, Section 790 of this subdivision, the following definition shall apply to this subchapter. Where similar terms are defined, the following will supersede the definition in Chapter 1:

(a) “Bona fide sister tug” means a tug which has not had its bollard pull capabilities verified by a member of the International Association of Classification Societies, but is constructed and maintained with the same hull form, engines, type of propulsion, stability, maneuverability, speed, power, and endurance of a tested and certified escort tug.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.82. Escort Tug Requirements for Tank Vessels.

(a) Escort tugs, alone or in combination, must have total ahead bollard pull in pounds greater than or equal to the tank vessel's deadweight tonnage. When required under this subsection and subsection 851.85(j)(2), additional escort tugs shall stand by during transit and be prepared to render assistance.

(b) All tankers transiting the waters of Humboldt Bay, carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall use a minimum of one escort tug. For purposes of this subchapter, oil spill response vessels, and offshore supply vessels as defined in 46 USC 2101, are not required to engage escort tugs in accordance with this subchapter.

(c) All tank barges transiting the waters of Humboldt Bay, carrying as cargo a total volume of oil greater than or equal to 5,000 long tons or 5% of the vessel's deadweight tonnage, whichever is less, shall use at least one escort tug, in addition to the barge's line-haul tug. For purposes of this subchapter, oil spill response vessels, and offshore supply vessels as defined in 46 USC 2101, are not required to engage escort tugs in accordance with this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.83. Requirements for Escort Tug Crew Members.

Any escort tug used to comply with the requirements of this subchapter, must meet crew standards as follows:

(a) Escort tug operators shall, at a minimum, be duly licensed Operators of Uninspected Towing Vessels as set forth in Title 46, Code of Federal Regulations (CFR), Section 10.464.

(b) Escort tug crews shall have a minimum of two certified deck hands. An engineer, if employed, may not be included as a deck hand. This requirement does not preclude additional deck hands who are gaining experience for certification, but such deck hands cannot be used to meet the manning requirements of this section.

(c) Escort tug crews shall possess Coast Guard license(s)/document(s) appropriate for the escort tug and service.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.84. Requirements for Escort Tugs.

All escort tugs approved for use under this subchapter shall be equipped with and shall maintain in good working order:

(a) Primary and secondary VHF radios;

(b) 300 feet of tag line;

(c) Power line-handling equipment fore and aft for rapid, mechanically assisted deployment of lines. The primary winch shall be in the position best suited for the design of the particular vessel in escort service;

(d) Tow line with a “safe working load” that is 2.5 times the certified bollard pull rating of the escort tug;

(e) One working radar;

(f) Fendering as follows:

(1) appropriate to absorb the impact inherent in hull-to-hull operations;

(2) located at both the bow and stern to act as pivot points when pulling away from the tank vessel;

(3) sufficient to assure that there are no exposed corners, large holes or metal parts which could inflict damage on the escorted vessel; and

(4) sufficient surface area to minimize sliding when working at an angle.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.85. Requirements During Tank Vessel Escorts.

(a) Escort tugs shall maintain a station-keeping distance from the tank vessel being escorted of no further than 1,000 feet ahead or aside, or 500 feet astern of the tank vessel while engaged in the escort activity.

(b) An escort tug shall not simultaneously engage in the escort of more than one tank vessel.

(c) The speed or speeds selected for the transit must permit stationing the escort tug to allow the escort tug to effectively influence the tank vessel's movement in the event of a casualty.

(d) A tanker shall have sufficient and qualified line-handling-capable crew members standing by and available to immediately receive lines from each escort tug. In addition, the tanker shall comply with all applicable federal regulations relating to anchor readiness.

(e) The line-haul tug for a tank barge shall have sufficient and qualified line-handling-capable deck hands standing by available to receive lines from each escort tug. When the tank barge is fitted with an emergency tow wire or comparable, adequate mechanical device, or the escort tug is made fast to the tank barge, crew transfers shall not be required.

(f) Tank vessels shall have sufficient and qualified direct supervision of line-handling-crew operations. Supervisors shall have direct radio communication capability with the bridge of the tank vessel or vessel towing a barge.

(g) The master of any tank vessel shall maintain, at all times for which escort tug services are required, direct two way radio communications on VHF-FM with the master of the escort tug on a channel agreed to by both the master of the tank vessel and the master of the escort tug providing escort services.

(h) Notwithstanding any other provision of this subchapter, all escort tugs in Humboldt Bay which meet the requirements of this subchapter for the escort of tank vessels shall have their bollard pull (ahead and astern) measured, except as provided in (i) below.

(1) Bollard pull measurements shall be verified by a member of the International Association of Classification Societies.

(2) Bollard pull measurements verified by a member of the International Association of Classification Societies in other ports of the State shall meet the requirements of this section, provided that evidence of the results of these measurements are on file with the Humboldt Bay Harbor District.

(3) Escort tug companies shall provide the Humboldt Bay Harbor District with the results of the bollard pull measurements verified pursuant to the provisions of this subchapter.

(4) Escort tugs whose bollard pull has not been measured and verified or are not within the scope of the definition of “bona fide sister tug”, shall not be used for the escort of tank vessels in Humboldt Bay.

(i) An escort tug determined by the master/pilot to be a “bona fide sister tug” may be used with the same (ahead and astern) bollard pull as the certified sister tug.

(j) The braking force shall be re-measured after any modification and/or repairs to the main engines, hull, shaft-drive line, or steering, that could affect the bollard pull. The new measurements must be registered with the Humboldt Bay Harbor District.

(k) Escort tugs that submit to the Escort Tug Inspection Program, as described in Sections 851.8(a)(4)(B) and 851.23(a)(7)(B), can perform escort duties in any port in the state, if the tugs meet the requirements of the appropriate subchapter (i.e., Subchapter 1, San Francisco Bay Region; Subchapter 2, Los Angeles/Long Beach Harbor; Subchapter 3, Port Hueneme Harbor; Subchapter 4, Humboldt Bay; Subchapter 5, San Diego Harbor), of this Chapter 4 of the California Code of Regulations.

(*l*) Notwithstanding any other provision of this subchapter:

(1) The tank vessel master remains responsible for the safe navigation and maneuvering of the tank vessel in all circumstances. The requirements outlined in this subchapter are in addition to, and not a limitation of, any other responsibilities created by custom, law, or regulation.

(2) Where an emergency exists, the tank vessel master may adjust the minimum escort tug requirements contained in this subchapter. For purposes of this subchapter, an emergency is defined as any of, but is not limited to, the following:

(A) imminent and immediate danger to the tank vessel, its cargo or its crew;

(B) imminent and immediate danger to a marine terminal, service or escort tug;

(C) imminent and immediate danger to a vessel in the proximity of the escorted vessel; or

(D) any emergency declared by the United States Coast Guard Captain of the Port which would necessitate a modification to the provisions set forth in this subchapter.

Note: Authority cited: Section 8670.17.2 and 8670.23.1, Government Code. Reference: Section 8670.17.2 and 8670.23.1, Government Code.

§ 851.86. Remedies.

(a) Nothing herein shall limit or prevent any action by any party in a court of competent jurisdiction.

(b) Any person who knowingly, intentionally or negligently violates any provision of this subchapter shall be subject to criminal, civil, and/or administrative civil actions as prescribed in Article 9, Government Code, beginning with Section 8670.57.

Note: Authority cited: Section 8670.17.2(d) and 8670.23.1(d), Government Code. Reference: Section 8670.17.2, 8670.23.1 and 8670.57, Government Code.

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Member
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Humboldt Bay Harbor, Recreation and Conservation District
Alternate
Mr. Chris Mikkelsen
Humboldt Bay Harbor, Recreation and Conservation District

Coastal Commission

Member
Mr. Jonathan Bishop
Oil Spill Program Coordinator, California Coastal Commission
Alternate
Vacant

Local Law Enforcement

Member
Deputy Travis Rogers
Humboldt County Sheriff's Department
Alternate
Deputy Phil Dastool
Humboldt County Sheriff's Department

Tug Operator

Member
Capt. Leroy Zerlang (Chair)
Coos Bay Tug / Zerlang and Zerlang Marine
Alternate
Vacant

Bar Pilot

Member
Capt. John Powell
Humboldt Bar Pilots
Alternate
Capt. Tim Petrusha
Humboldt Bar Pilots

Tank Barge Operators
Member
Mr. Ross McDonald
Sause Bros. Tug and Barge
Alternate
Vacant

Dry Cargo Vessel Operators
Member
Ms. Julie Moug (Vice Chair)
Figas Construction
Alternate
Mr. Pete Jackson
Green Diamond

Non-Profit Environmental Organizations
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Mr. Adam Canter
Wiyot Tribe
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Humboldt Baykeeper

Pleasure Boating
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Humboldt Bay Area Harbor Safety Committee

California Senate Bill 414

Assessment of Emergency Towing Capabilities in the Humboldt Bay Area of Responsibility

11/3/2022

Final Report

Table of Contents

Part I. Introduction/Background

California Senate Bill 414 (SB 414) was signed into law by Governor Edmund G. Brown, Jr. and became effective January 1, 2016[1]. The bill requires the Administrator of the Office of Spill Prevention and Response (OSPR) to task the Humboldt Harbor Safety Committee (HUM HSC):

> *". . . to assess the presence and capability of tugs within their respective geographic area of responsibility to provide emergency towing of tank and non-tank vessels to arrest their drift or otherwise guide emergency transit."*

The assessment must take into consideration data from United States Coast Guard (USCG), relevant incident and accident data, simulation models/studies, and identification of transit areas where risks might be elevated. In addition, the assessment must consider the condition of tank and non-tank vessels calling on Humboldt Bay, including the USCG's Marine Inspection Program and Port State Control Program. See Appendix A for the complete text of SB 414.

On February 8th, 2018, OSPR Administrator Thomas M. Cullen, Jr. sent a letter to the HUM HSC Chair Suzie Howzer providing further guidance and support for the assessment. Specifically, the letter clarified the scope of the assessment to vessels over 300 Gross Registered Tonnage (GRT), required the assessment for Humboldt to be initiated by January 2020, and offered financial assistance if needed to complete the tasking. Upon completion, the assessment is to be reported in the Humboldt Harbor Safety Plan. See Appendix B for the letter from the OSPR Administrator.

At its July 18, 2019 meeting, the HUM HSC again reviewed the mandate of SB 414 and formalized a SB 414 Workgroup ("Workgroup"). See Appendix C for a roster of Workgroup participants. The Workgroup identified the core issues raised by SB 414 as follows:

- Identify the geographic area of responsibility (AOR) for the assessment,
- Determine what it means to "arrest the drift or otherwise guide emergency transit,"
- Identify the current inventory of available tug assets in the AOR,
- Assess the capabilities and limitations of available tug assets in the AOR,

[1] An act to amend Sections 8670.12, 8670.13, 8670.28, and 8670.67.5 of, and to add Sections 8670.11, 8670.13.3, and 8670.55.1 to, the Government Code, relating to oil spill response.

- Identify any transit areas of concern in the AOR,
- Gather relevant incident and accident data,
- Analyze information from the USCG's Port State Control Program and Marine Inspection Program.

The primary focus of this study is to assess response tug availability and capability in the Humboldt HSC AOR. At the outset, the Workgroup acknowledged that many varied factors affect this analysis. For example, severe weather in the offshore waters can increase overall risk by increasing a disabled vessel's drift rate, decreasing a response tug's speed (thus increasing its run-time), and hampering a response crew's ability to connect towing equipment to a disabled vessel. In addition, there are oftentimes opportunities to reduce risk by controlling or influencing the drift of a disabled vessel in a manner that affords additional time for response assets to arrive on scene. Ships' crews can use bow thrusters or partially functioning engines to reduce their vessel's drift rate or alter its drift direction. Should the vessel drift nearer to shore (and into more shallow waters), it may be possible to deploy the disabled ship's anchor(s) and arrest its drift before it goes aground.

The process of performing a successful rescue of a disabled vessel, whether the goal is to hook up and tow the disabled vessel, or to stabilize the vessel and arrest its drift, is dependent upon a multitude of factors including: the size, horsepower (bollard pull), range, propulsion and presence of standard towing equipment on the rescue tug; the rescue tugs' availability; the type, size, and condition of the disabled vessel to be rescued; the existing weather and sea conditions; and the urgency of the situation in terms of location and distance from shore.

When assessing hypothetical failure scenarios absolute conclusions are not likely. Nonetheless, a qualitative analysis of the likelihood and potential consequence related to a hypothetical occurrence can be achieved. Toward that end, clearly defining the scope for this study will focus our analysis and facilitate more reliable conclusions.

Part II. Scope of Study

The HUM HSC was tasked with assessing "the presence and capability of tugs within its geographic area of responsibility." In assessing the capability of tugs to respond to a disabled vessel in the offshore waters of the Humboldt Bay area, the Workgroup followed guidance from the OSPR Administrator and limited its study to vessels 300 gross tons and larger. This category generally includes vessels of the

following types: General Cargo/Multi-Purpose Ships, Bulk Carriers, Fuel Barges, Tug/Barge Units, Heavy Lift Ships, and Cruise Ships.

Geographic Area of Responsibility

Defining the geographic limits of the study area is a critical threshold issue. SB 414 requires the HUM HSC *". . . to assess the presence and capability of tugs within their respective geographic area of responsibility…".* For guidance, the Workgroup looked to the Humboldt Bay Area Harbor Safety Plan. In the Harbor Safety Plan, the HUM HSC geographic area of responsibility (AOR) is defined as follows:

> *The plan boundaries for the Humboldt Bay Area Harbor Safety Plan include all submerged lands between Shelter Cove, California and Trinidad Head, California, from a shoreline elevation of mean higher high water, seaward for three (3) miles including all submerged lands of Humboldt Bay (Inner Harbor).*

For these reasons, the SB 414 Workgroup concluded that the geographic AOR for this study should match the Humboldt Bay Area Harbor Safety Plan AOR. See graphic depiction below.

Arrest Drift or otherwise Guide Emergency Transit

For the purposes of this study, the Workgroup interprets the term *"arrest their drift or otherwise guide emergency transit"* as the ability to use tugs and/or ship's anchors to hold a disabled vessel in position, slow its drift rate to afford more time for additional resources to arrive on scene, alter its direction of drift to avoid grounding, or any combination of the above. This definition includes using response tugs to push/pull/nudge/guide a vessel to influence its direction of drift sufficiently so that it avoids drifting ashore, even though the disabled vessel may still be moving. This definition also includes using the disabled vessel's anchors, where possible, to arrest its drift and prevent grounding. The overarching objective of *"arresting their drift or otherwise guiding emergency transit"* is to prevent a vessel from grounding. This analysis does not apply beyond the point where sufficient towing assets have arrived on scene to stabilize the emergency. Additional resources may be needed to safely direct the vessel to a harbor of safe refuge or safe anchorage, which is beyond the scope of this study.

Part III. Assessment Considerations/Data Collected/Analysis

The Workgroup membership is composed of a cross-section of maritime professionals with expertise in a variety of disciplines including vessel operations, piloting, and offshore towing. The Workgroup collected and analyzed a large amount of data to prepare this report, including: a current inventory of available response tugs within the Humboldt AOR; past studies and simulation models; incident data over the past 9 years (January 2013 through December 2021); identification of transit areas of concern; and information relating to the USCG's Port State Control and Marine Inspection Programs.

Tug Inventory/Capability/Availability

The Workgroup provided a current inventory of active ship assist tugs in the Humboldt AOR. The inventory contains information on the name, size, horsepower/bollard pull, fuel capacity, onboard tow equipment, and the availability of each tug. Currently, three active ship assist tugs are in the Humboldt Bay AOR with varying horsepower/bollard pull capabilities (up to 59 tons). All three tugs are available on call 24-hours a day. It should be noted that such an inventory is a "snapshot in time," since home-port assignments for tugs can change. Nonetheless, this inventory does indicate a current summary of tug assets in the Humboldt Bay area. The Workgroup believes that it is representative of the minimum number of tugs that will continue to be available in the future.

Humboldt Bay AOR Current Tug Inventory

Tug	Size	Horsepower/Bollard Pull	Fuel Capacity	Tow Equipment	Availability
Koos King	65x23x8	2,200HP (59 tons)	10,800 gal	- Capstan Forward - Tow Winch with Penant Drum Aft - 1,200 ft. of 1 3/4" wire	24-hour on call
Captain Leroy	65x20x7	2,200HP (54 tons)	5,000 gal	- Tow winch Aft - 250 ft. 3" 8 strand blue steel	24-hour on call
Renegade	71x23x12	1,800HP (42 tons)	9,800 gal	- Soft line winch Fore and Aft	24-hour on call

Sause Bros. also has tugs that regularly transit the west coast. These are all oceangoing tugs that have significant power and range and can operate in almost any weather conditions. However, they are usually towing a petroleum barge and would need to hand off the barge to another vessel before they could assist a vessel in distress. A recent inventory of Sause Bros. tugs with bollard pulls and ranges for each is listed below.

Sause Bros. Current Tug Inventory

Tug	Bollard Pull	Range
Apache	65 tons	35 days
Black Hawk	44 tons	35 days
Geronimo	65 tons	35 days
Klihyam	60 tons	35 days
Mikiona	65 tons	35 days
Cochise	65 tons	35 days

The present use of tugs in Humboldt Bay is primarily for escort of vessels and petroleum barges, and to assist with vessel docking and undocking. The tug companies work in close liaison with the bar pilots,

and any vessel or barge movements assisted by the tug companies are closely coordinated with the bar pilots. Pilotage is generally required for vessels greater than 300 GRT. It is also recommended that any mariners unfamiliar with Humboldt Bay employ a local pilot. Pilots board vessels about 0.5 miles west of the Humboldt Bay Entrance Buoy. Tug assistance is advised by the Humboldt Bay Bar Pilots due to the lack of maneuvering room in Humboldt Bay, increased vessel sizes, and at times poor visibility and strong cross currents that can occur at the harbor entrance.

The Workgroup compared the current inventory to an older inventory contained in a 2002 Project Report[2] that compiled similar data. The comparison shows that the current tug inventory in the Humboldt Bay area is more robust today, as larger, and more capable tugs are currently available.

The Workgroup found the 2002 Project Report instructive in generally evaluating the effectiveness and capability of the current tug inventory. According to that in-depth report, tugs with 40 tons of bollard pull or more meet the criteria as a "rescue tug" for the Humboldt area. In 2002, there was a total of 2 ocean going tugs which operated in the Humboldt Bay area, with only one having a bollard pull of 40 tons or greater (Knutzen Koos King – 57 tons). Today, that number has increased with a total of 3 tugs, all of which have a bollard pull of 40 tons or greater.

Thus, there is currently a robust and effective inventory of adequately equipped tugs available for the "arrest or influence" mission associated with the tasking of SB 414. Further, the present-day tug inventory is larger, more modern, more powerful, and better equipped to assist any size of vessel in distress than at any time in the past.

Based on current and expected future tug inventories in the Humboldt Bay area, the HUM HSC believes that there is a high likelihood that tugs will be readily available and equipped to respond to a disabled vessel within the HUM AOR.

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[2] *West coast offshore vessel traffic risk management project* (Final Report, 2002), Pacific States/British Columbia Oil Spill Task Force and the U.S. Coast Guard, Pacific Area. Retrieved from, http://oilspilltaskforce.org/wp-content/uploads/2013/12/2002-Offshore-Vessels-Risk-Management-Project-Report.pdf.

Incident Data Collected

The Workgroup assessed relevant vessel incidents that occurred January 2013 through December 2021. Based on information reported to the U.S. Coast Guard over this 9-year period, there were no (0) incidents relevant to this study. For the purposes of this study, a "relevant incident" is defined as an incident related to propulsion, steering, electrical, or other similar casualty that did or could result in a drifting ship needing tug assistance. This definition strips out cases of small fishing and pleasure boats, search and rescue cases, medical evacuations, rules of the road, and the like.

Going back over 20 years, USCG review of casualty data found one instance of a major casualty occurring on a vessel of 300 GRT or greater that required tug assistance in Humboldt Bay. That was the bulk carrier KURE in November of 1997. After the vessel punctured a fuel oil tank while shifting positions at the pier, spilling heavy fuel oil into the bay, it grounded in the entrance channel on departure and required tugs to free it.

As described previously in this report, the deep draft ships that call on Humboldt Bay use assist tugs as part of their normal mooring, maneuvering, and shifting procedures when they are in port. In addition, Humboldt does not get a lot of deep draft traffic that would be relevant to this study. As of this writing, deep draft vessels over 300 GRT that enter Humboldt Bay annually are as follows: Bulk Carriers (chip ships) approximately 7 per year; Fuel Barges approximately 24 per year; Cruise Ships approximately 2 per year; ACOE vessels approximately 2 per year; and USCG buoy tenders approximately 2 per year. Moreover, the deep draft vessels relevant to this study do not generally use Humboldt Bay as an anchorage area while awaiting berth space like they do in some of the other ports. For these reasons, vessel casualties that necessitate a rescue tow are infrequent in the HUM AOR.

The Humboldt HSC concludes that the incidence of vessel casualties that necessitate a rescue within the HUM AOR is extremely low, and that should a failure occur within the HUM AOR response tugs would readily available and equipped to respond.

Transit Areas of Concern

The Workgroup identified the Humboldt Bay entrance as a transit area of concern. At times strong and unpredictable cross currents can occur at the Harbor Entrance. The currents are predicated on past weather conditions. According to information gathered during simulations that were conducted by the

Humboldt Bay Bar Pilots in 2008, southerly weather accompanied by a southwesterly to westerly swell creates a strong current during low water periods at the 110-degree turn from the lighted buoy #5 to light #11.

For approximately the first three miles of transit the tug assist/escort boats are not made fast to the vessel employing them. This is due to the open sea conditions that exist in this area. According to the Workgroup, it would be nearly impossible for a tug to approach a ship moving at full power and trying to negotiate the sometimes-dangerous swell and currents of the Humboldt Bay entrance if the larger vessel lost its power or steering. It would also be dangerous to slow the larger vessel to a speed at which the tug could come alongside because that would result in considerably less control of the larger vessel by the pilot. However, a ship negotiating the 110-degree turn at the entrance or moving at slower speeds inside the harbor benefit from the presence of an escort tug if a loss of engine or steering control occurred. The escort tug would be able to provide some steering and/or stopping ability for the stricken vessel.

The pilot may also send the escort tug ahead of the ship to make certain that the ship's path is clear. Tugs are also indispensable in thick fog for marking buoys and lights and checking tidal current conditions ahead of the ship while the pilot is navigating the narrow channels of Humboldt Bay. Tugboats engaged in escorting or assisting vessels in Humboldt Bay continue their service until dismissed by either the pilot or the master of the vessel employing them. However, the master of the tug engaged in escorting or assisting another vessel may temporarily halt or discontinue service if the crew or vessel is in immediate danger.

The HUM HSC finds that the Humboldt Bay entrance is a transit area of concern. While the likelihood of an occurrence in this area is extremely low, the HUM HSC has nevertheless identified this as a transit area of concern and recommendations listed in the current Harbor Safety Plan should continue to be followed.

Assessment of United States Coast Guard's Port State Control and Marine Inspection Programs

SB 414 requires the review of the USCG's Marine Inspection Program and Port State Control Program (PSC) regarding risks due to a vessel's hull or engineering material deficiencies, or inadequate crew training and professionalism. The Humboldt Bay Harbor Safety Committee is following the Los Angeles-Long Beach Harbor Safety Committee and the Harbor Safety Committee of the San Francisco Bay

Region's innovative and streamlined approach to assess the condition of the USCG's PSC program. The committees recognized a worldwide network of PSC regimes exist with the goal to eliminate substandard shipping. The USCG holds observer status within both the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MoU) and Paris Memorandum of Understanding on Port State Control (Paris MoU). Similarly, the Tokyo MoU has granted observer status to the Paris MoU, and the Paris MOU has granted observer status to the Tokyo MoU. The Paris MoU, Tokyo MOU and the USCG each produced an annual PSC report, and these reports list the vessel Detention Rate due to unsatisfactory Safety Examination results. The USCG's annual reports also list the Detention Rate for California, known as District 11's Detention Rate.

The HSCs reviewed six years (2010 - 2015) of data published in annual reports from the Paris MoU's, Tokyo MoU and USCG. This assessment encompassed PSC data from forty-five countries on five continents, 651,134 PSC vessel boardings, 350,943 Safety Examinations and 12,991 Detentions.

Utilizing the Detention Rate derived from PSC data, the HSCs were able to quantify the quality of vessels calling on California ports by comparing the California Vessel Detention Rate weighted average against the combined PSC authorities' detention rate weighted average. Using the California Vessel Detention Rate in this way enables for the relative assessment as to the condition/quality of vessels calling on California ports.

The assessments results were definitive and conclusive. The California Vessel Detention Rate weighted average at 0.0064% is the lowest of all surveyed PSC organizations. It indicates vessels calling on California are 99.84% less likely to possess the characteristics that would warrant a PSC detention than other parts of the world.

PSC Authority	No. of Safety Examinations	No. of Detentions	Detention Rate %	Weighting % Based on Detentions*	Detention Rate Weighted Average** (Detention Rate % x Weight)
(A)	(B)	(C)	(D)	(E)	(F)
			(C) / (B)		(D) X (E)
Tokyo MoU	178,148	8,145	4.5720%	62.70%	2.8665%
Paris MoU	115,399	4,022	3.4853%	30.96%	1.0790%
USCG less D 11	50,619	749	1.4794%	5.77%	0.0854%
D11 (CVDR)	6,777	75	1.1067%	0.58%	0.0064%
Totals	350,943	12,991	-	100%	4.0374%
PSC Detention Rate Weighted Average (W.A)					4.0374%

CVDR W.A.	0.0064%
CVDR W.A. Below PSC Detention Rate W.A.	4.0309%
Percent CVDR W.A. is below PSC Detention Rate W.A.	-99.84%***

Notes:
* Calculation is Number of Detentions by a PSC divided by the sum of all PSC Detentions (12,991)
** Calculation is Detention Rate % multiplied by the Weighting %
*** Calculation is 4.0374% less 0.0064% divided by 4.0374%

U.S. Coast Guard's Marine Inspection Program (U.S. Flag Vessels) – Published each year in the Paris MoU and Tokyo MoU Annual Reports, is an updated document entitled, "White, Grey and Black (WGB) List." The WGB List represents the full spectrum, from quality flag states to flag states with a poor performance that are considered high risk. It is based on the total number of inspections and detentions and is the results from PSC inspections. The WGB List reflects the quality of a flag state's (marine) inspection program as well as the quality of vessels and vessel operators.

The White List contains a list of flag states found to be of higher quality and lower risk. Conversely, the Black List contains a list of flag states found to be substandard and of higher risk.[3] The Gray List is a list of flag states that may be simply described as average, average being considered less than ideal.

Independent third party audits, more commonly referred to as PSC inspections, over the last six consecutive years have reflected favorably upon the flag state of United States as well as the condition of the USCG's Marine Inspection Program. During the sample period (2010-2015), the flag state of United States attained White List, low risk status 83% of the time. Moreover, over the past four consecutive years (2012-2015), the flag state United States attained White List, low risk status 100% of the time.

Accordingly, the Humboldt HSC finds the condition of United States vessels 300 GRT and greater and the condition of the USCG's Marine Inspection Program to be adequate.

Part IV. Conclusions

There are many factors that could cause a vessel to lose propulsion and/or maneuverability. However, based on the data assembled in response to Senate Bill 414, Humboldt is prepared for most foreseeable

[3] "White, Grey and Black List." *Paris MoU*. Paris MoU, 2016. Web. 27 December 2016.

emergency scenarios that might require a tug to assist a 300 GRT vessel to arrest its drift or otherwise guide its emergency transit in the AOR. Given the presence and capability of ocean towing tugs in the Humboldt Bay area, it is likely that an assist tug will arrive on scene before a disabled vessel traveling in the HUM AOR could drift into danger and become grounded. As noted in this report, there have been very few vessel failures that have necessitated an emergency tow or assist in the AOR. The Humboldt Harbor Entrance was the only transit areas of concern identified in the HUM AOR. Lastly, the quality of the vessels and crews calling Humboldt Bay and other California ports is generally very high as indicated by reliable data from the annual reports of the USCG's Port State Control Program, the Tokyo MoU, and the Paris MoU.

Conclusion: The Humboldt Bay Area Harbor Safety Committee finds that there is a very high degree of likelihood that the resources presently in place in the Humboldt Area of Responsibility are, and will continue to be, sufficient to arrest the drift of a disabled vessel or otherwise influence its drift to prevent it from grounding.

CHAPTER 609

An act to amend Sections 8670.12, 8670.13, 8670.28, and 8670.67.5 of, and to add Sections 8670.11, 8670.13.3, and 8670.55.1 to, the Government Code, relating to oil spill response.

[Approved by Governor October 08, 2015.
Filed with Secretary of State October 08, 2015.]

LEGISLATIVE COUNSEL'S DIGEST

SB 414, Jackson. Oil spill response.

(1) The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act generally requires the administrator for oil spill response, acting at the direction of the Governor, to implement activities relating to oil spill response, including emergency drills and preparedness, and oil spill containment and cleanup. The act authorizes the administrator to use volunteer workers in response, containment, restoration, wildlife rehabilitation, and cleanup efforts for oil spills in waters of the state. Existing law requires the administrator to evaluate the feasibility of using commercial fishermen and other mariners for oil spill containment and cleanup.

This bill would require the administrator, in cooperation with the United States Coast Guard, to establish a schedule of drills and exercises that are required under the federal Salvage and Marine Firefighting regulations. The bill would require the administrator, on or before January 1, 2017, to submit to the Legislature a report assessing the best achievable technology of equipment for oil spill prevention, preparedness, and response and to update regulations governing the adequacy of oil spill contingency plans before July 1, 2018. The bill would require the administrator to direct the Harbor Safety Committees for various regions to assess, among other things, the presence and capability of tugs within their respective regions of responsibility to provide emergency towing of tank and nontank vessels to arrest their drift or guide emergency transit.

(2) The act requires the administrator to study the use and effects of methods used to respond to oil spills and to periodically update the study to ensure the best achievable protection from the use of those methods.

This bill would require the administrator, in conducting the study and updates, to consult current peer-reviewed published scientific literature. The bill would require the administrator, by May 1, 2016, to request that the federal California Dispersant Plan be updated, as provided, and to provide support and assistance in that regard.

(3) The act requires the administrator to license oil spill cleanup agents for use in response to oil spills.

This bill would require the administrator, if dispersants are used in response to an oil spill, to submit to the Legislature a written notification of, and a written justification for, the use of dispersants and a report on the effectiveness of the dispersants used, as provided.

(4) Existing law establishes the Oil Spill Technical Advisory Committee and requires the committee to provide recommendations to, among other entities, the administrator on the implementation of the act.

This bill would require the committee to convene a taskforce to evaluate the feasibility of using vessels of opportunity for oil spill response. The bill would require the taskforce to provide recommendations to the administrator and the Legislature on whether vessels of opportunity should be included in oil spill response planning.

(5) The act makes a person who causes or permits a spill or inland spill strictly liable for specified penalties for the spill on a per-gallon-released basis. The act provides that the amount of penalty is reduced by the amount of released oil that is recovered and properly disposed of.

This bill would eliminate that reduction in the penalty by the amount of oil recovered and properly disposed of.

DIGEST KEY

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: no

BILL TEXT

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 8670.11 is added to the Government Code, to read:

8670.11. In addition to Section 8670.10, the administrator, in cooperation with the United States Coast Guard, shall establish a schedule of drills and exercises required pursuant to Section 155.4052 of Title 33 of the Code of Federal Regulations. The administrator shall make publicly available the established schedule.

SEC. 2. Section 8670.12 of the Government Code is amended to read:

8670.12. (a) The administrator shall conduct studies and evaluations necessary for improving oil spill response, containment, and cleanup and oil spill wildlife rehabilitation in waters of the state and oil transportation systems. The administrator may expend moneys from the Oil Spill Prevention and Administration Fund created pursuant to Section 8670.38, enter into consultation agreements, and acquire necessary equipment and services for the purpose of carrying out these studies and evaluations.

(b) The administrator shall, consulting current peer-reviewed published scientific literature, study the use and effects of dispersants, incineration, bioremediation, and any other methods used to respond to a spill and, by May 1, 2016, request that the federal California Dispersant Plan be updated pursuant to subdivision (d). The study shall periodically be updated by the administrator, consulting current peer-reviewed published scientific literature, to ensure the best achievable protection from the use of those methods. Based upon substantial evidence in the record, the administrator may determine in individual cases that best achievable protection is provided by establishing requirements that provide the greatest degree of protection achievable without imposing costs that significantly outweigh the incremental protection that would otherwise be provided. The studies shall do all of the following:

(1) Evaluate the effectiveness of dispersants and other chemical, bioremediation, and biological agents in oil spill response under varying environmental conditions.

(2) Evaluate potential adverse impacts on the environment and public health including, but not limited to, adverse toxic impacts on water quality, fisheries, and wildlife with consideration to bioaccumulation and synergistic impacts, and the potential for human exposure, including skin contact and consumption of contaminated seafood.

(3) Recommend appropriate uses and limitations on the use of dispersants and other chemical, bioremediation, and biological agents to ensure they are used only in situations where the administrator determines they are effective and safe.

(c) The studies shall be performed with consideration of current peer-reviewed published scientific literature and any studies performed by federal, state, and international entities. The administrator may enter into contracts for the studies.

(d) The administrator shall support the federal Regional Response Team, as described in Section 300.115 of Title 40 of the Code of Federal Regulations, in the development, and shall request regular updates, of plans and procedures for use of dispersants and other chemical agents in California. The administrator's assistance may include, but is not limited to, providing the federal Regional Response Team with current peer-reviewed published scientific literature, and risk and consequence analysis.

SEC. 3. Section 8670.13 of the Government Code is amended to read:

8670.13. (a) The administrator shall periodically evaluate the feasibility of requiring new technologies to aid prevention, response, containment, cleanup, and wildlife rehabilitation.

(b) (1) On or before January 1, 2017, the administrator shall submit a report to the Legislature, pursuant to Section 9795, assessing the best achievable technology of equipment for oil spill prevention, preparedness, and response.

(2) The report shall evaluate studies of estimated recovery system potential as a methodology for rating equipment in comparison to effective daily recovery capacity.

(3) Pursuant to Section 10231.5, this subdivision is inoperative on July 1, 2020.

(c) (1) Including, but not limited to, the report prepared pursuant to subdivision (b), the administrator shall update regulations governing the adequacy of oil spill contingency plans for best achievable technologies for oil spill prevention and response no later than July 1, 2018.

(2) The updated regulations shall enhance the capabilities for prevention, response, containment, cleanup, and wildlife rehabilitation.

(d) (1) The administrator shall direct the Harbor Safety Committees, established pursuant to Section 8670.23, to assess the presence and capability of tugs within their respective geographic areas of responsibility to provide emergency towing of tank vessels and nontank vessels to arrest their drift or otherwise guide emergency transit.

(2) The assessments for harbors in the San Francisco Bay area and in Los Angeles-Long Beach area shall be initiated by May 1, 2016. The assessments for the other harbors shall be initiated by January 1, 2020.

(3) The assessment shall consider, but not be limited to, data from available United States Coast Guard Vessel Traffic Systems, relevant incident and accident data, any relevant simulation models, and identification of any transit areas where risks are higher.

(4) The assessment shall consider the condition of tank and nontank vessels calling on harbors, including

the United States Coast Guard's marine inspection program and port state control program regarding risks due to a vessel's hull or engineering material deficiencies, or inadequate crew training and professionalism.

SEC. 4. Section 8670.13.3 is added to the Government Code, to read:

8670.13.3. If dispersants are used in response to an oil spill in state waters, the administrator shall provide written notification of their use to the Legislature within three days of the use. The administrator shall provide the Legislature with written justification of their use, including copies of key supporting documentation used by the federal on-scene coordinator and the federal Regional Response Team as soon as those material are released. Within two months of the use of dispersants in state waters, the administrator shall also provide a report to the Legislature on the effectiveness of the dispersants used, including, but not limited to, results of any available monitoring data to determine whether the dispersant use resulted in overall environmental benefit or harm. The written notification, justification, and report shall be submitted pursuant to Section 9795.

SEC. 5. Section 8670.28 of the Government Code is amended to read:

8670.28. (a) The administrator, taking into consideration the facility or vessel contingency plan requirements of the State Lands Commission, the Office of the State Fire Marshal, the California Coastal Commission, and other state and federal agencies, shall adopt and implement regulations governing the adequacy of oil spill contingency plans to be prepared and implemented under this article. All regulations shall be developed in consultation with the Oil Spill Technical Advisory Committee, and shall be consistent with the California oil spill contingency plan and not in conflict with the National Contingency Plan. The regulations shall provide for the best achievable protection of waters and natural resources of the state. The regulations shall permit the development, application, and use of an oil spill contingency plan for similar vessels, pipelines, terminals, and facilities within a single company or organization, and across companies and organizations. The regulations shall, at a minimum, ensure all of the following:

(1) All areas of state waters are at all times protected by prevention, response, containment, and cleanup equipment and operations.

(2) Standards set for response, containment, and cleanup equipment and operations are maintained and regularly improved to protect the resources of the state.

(3) All appropriate personnel employed by operators required to have a contingency plan receive training in oil spill response and cleanup equipment usage and operations.

(4) Each oil spill contingency plan provides for appropriate financial or contractual arrangements for all necessary equipment and services for the response, containment, and cleanup of a reasonable worst case oil spill scenario for each area the plan addresses.

(5) Each oil spill contingency plan demonstrates that all protection measures are being taken to reduce the possibility of an oil spill occurring as a result of the operation of the facility or vessel. The protection measures shall include, but not be limited to, response to disabled vessels and an identification of those measures taken to comply with requirements of Division 7.8 (commencing with Section 8750) of the Public Resources Code.

(6) Each oil spill contingency plan identifies the types of equipment that can be used, the location of the equipment, and the time taken to deliver the equipment.

(7) Each facility, as determined by the administrator, conducts a hazard and operability study to identify the hazards associated with the operation of the facility, including the use of the facility by vessels, due to operating error, equipment failure, and external events. For the hazards identified in the hazard and operability studies, the facility shall conduct an offsite consequence analysis that, for the most likely hazards, assumes pessimistic water and air dispersion and other adverse environmental conditions.

(8) Each oil spill contingency plan contains a list of contacts to call in the event of a drill, threatened discharge of oil, or discharge of oil.

(9) Each oil spill contingency plan identifies the measures to be taken to protect the recreational and environmentally sensitive areas that would be threatened by a reasonable worst case oil spill scenario.

(10) Standards for determining a reasonable worst case oil spill. However, for a nontank vessel, the reasonable worst case is a spill of the total volume of the largest fuel tank on the nontank vessel.

(11) Each oil spill contingency plan specifies an agent for service of process. The agent shall be located in this state.

(b) The regulations and guidelines adopted pursuant to this section shall also include provisions to provide public review and comment on submitted oil spill contingency plans.

(c) The regulations adopted pursuant to this section shall specifically address the types of equipment that will be necessary, the maximum time that will be allowed for deployment, the maximum distance to cooperating response entities, the amounts of dispersant, and the maximum time required for application, should the use of dispersants be approved. Upon a determination by the administrator that booming is appropriate at the site and necessary to provide best achievable protection, the regulations shall require that vessels engaged in lightering operations be boomed prior to the commencement of operations.

(d) The administrator shall adopt regulations and guidelines for oil spill contingency plans with regard to mobile transfer units, small marine fueling facilities, and vessels carrying oil as secondary cargo that acknowledge the reduced risk of damage from oil spills from those units, facilities, and vessels while maintaining the best achievable protection for the public health and safety and the environment.

SEC. 6. Section 8670.55.1 is added to the Government Code, to read:

8670.55.1. (a) The committee shall convene a taskforce, including appropriate state and federal governmental representatives, nongovernmental organizations, oil spill response organizations, and commercial fishing and other potential vessels of opportunity, to evaluate and make recommendations regarding the feasibility of using vessels of opportunity for oil spill response in marine waters. The evaluation shall examine the following:

(1) Appropriate functions of vessels of opportunity during an oil spill.

(2) Appropriate management of a vessel's of opportunity spill response program.

(3) Vessels of opportunity equipment, training, and technology needs.

(4) Liability and insurance.

(5) Compensation.

(b) As part of the evaluation, the taskforce shall hold two public meetings, one in southern California and one in northern California, prior to making final recommendations.

(c) (1) On or before January 1, 2017, the committee shall provide to the administrator and to the Legislature final recommendations on whether vessels of opportunity should be included in oil spill response planning.

(2) The recommendations provided to the Legislature shall be provided pursuant to Section 9795.

(d) If appropriate, the administrator, by January 1, 2018, shall update regulations to provide for inclusion of vessels of opportunity in the oil spill prevention, response, and preparedness program.

SEC. 7. Section 8670.67.5 of the Government Code is amended to read:

8670.67.5. (a) Regardless of intent or negligence, any person who causes or permits a spill shall be strictly liable civilly in accordance with subdivision (b) or (c).

(b) A penalty may be administratively imposed by the administrator in accordance with Section 8670.68 in an amount not to exceed twenty dollars ($20) per gallon for a spill.

(c) Whenever the release of oil resulted from gross negligence or reckless conduct, the administrator shall, in accordance with Section 8670.68, impose a penalty in an amount not to exceed sixty dollars ($60) per gallon for a spill.

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Office of Spill Prevention and Response
1700 K Street, Suite 250
Sacramento, California 95811
Telephone: (916) 445-9338
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EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

February 8, 2018

Ms. Suzie Howser
Chair
Humboldt Harbor Safety Committee
601 Startare Drive
Eureka, California 95501

Dear Ms Howser:

Senate Bill 414 signed into law by Governor Edmund G. Brown, Jr., became effective January 1, 2016. This bill requires me to exercise my authority pursuant to Government Code 8670.23.1(g), and task your Harbor Safety Committee with the following:

- Assess the presence and capability of tugs within your respective geographic areas of responsibility to provide emergency towing of vessels over 300 GRT to arrest their drift or otherwise guide emergency transit in the event of a loss of propulsion or steerage.
- The assessment for the Humboldt Bay area shall be initiated by January 2020.
- The assessment shall consider, but not be limited to, data from available United States Coast Guard, relevant incident and accident data, any relevant simulation models, and identification of any transit areas where risks are higher.
- The assessment shall consider the condition of tank and non-tank vessels calling on the harbor, including the United States Coast Guard's marine inspection program and port state control program regarding risks due to a vessel's hull or engineering material deficiencies, or inadequate crew training and professionalism.

My project officer for this assessment is Oil Spill Prevention Specialist Mr. David Mighetto who may be contacted by e-mailed at David.mighetto@wildlife.ca.gov or by phone at 1-916-445-3157. Questions regarding the appropriateness of any assessment model or report format may be directed to Mr. David Mighetto or to my Prevention Branch Chief, Mr. Ted Mar, reachable by email at Ted.Mar@wildlife.ca.gov or by phone at 1-916-323-6281.

The assessment should be completed on the committee's established schedule and reported in your Harbor Safety Plan in June of the finished year. If additional funding is required to complete this tasking, the amount and justification should be submitted to the project officer.

As always, I appreciate the committee's efforts. I look forward to results of your findings.

Sincerely,

Thomas M. Cullen, Jr.
Administrator
Office of Spill Prevention and Response

Conserving California's Wildlife Since 1870

Appendix C – SB 414 Workgroup Participants

Leroy Zerlang – Zerlang & Zerlang
Cody Zerlang – Zerlang & Zerlang
Ross McDonald – Sause Bros.
John Powell - Pilots
Tim Petrusha – Pilots
Adam Shiltz – United States Coast Guard
Reuben Macaspac – Office of Spill Prevention and Response
Jonathan Bishop – CA Coastal Commission
Larry Oetker – Humboldt Bay Harbor District

Overview

California Senate Bill 414 (SB 414) requires Harbor Safety Committees to assess the condition of vessels over 300 GRT calling on California (CA) ports. Additionally, assess the condition of the United States Coast Guard's (USCG) marine inspection program and port state control (PSC) program regarding risks due to hull or engineering material deficiencies, or inadequate crew training and professionalism.

Background

A Harbor Safety Committee is comprised of a diverse group of port stakeholders including both commercial and recreational waterway users, regulatory authorities, organized labor, and non-governmental environmental organizations. Though the Harbor Safety Committee is arguably the most comprehensive organization on a wide range of maritime related topics, many committee members believe assessing the condition of vessel's calling on California ports, and to assess the condition of the USCG's marine inspection and port state control programs, is beyond the level of the committee's expertise.

Few organizations possess the resources, and maritime expertise to properly conduct an assessment of federal programs as required by SB 414. In matters relating to the effectiveness of federal programs, the United States Governmental Accountability Office is often the organization called upon to objectively assess a federal agency. However, the Los Angeles-Long Beach and the Harbor Safety Committee of the San Francisco Bay Region (HSCs) employed an innovative and streamlined approach to systematically meet the SB 414 mandates by comparing PSC regimes' data.

Assessment – U.S.C.G.'s Port State Control Program and Foreign Flag Vessels

Currently, a worldwide network of regional co-operation PSC ministries exists with the objective to eliminate substandard shipping. There are a total of nine regional PSC agreements / Memorandum of Understandings (MoUs) to include: Abuja MoU, Black Sea MoU, Caribbean MoU, Indian Ocean MoU, Mediterranean MoU, Paris MoU, Riyadh MoU, Tokyo MoU, and Vina del Mar Agreement.[4]

The Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MoU) and Paris Memorandum of Understanding on Port State Control (Paris MoU) established and maintain effective and close co-operation both at the administrative and technical levels. Representatives of the two Secretariats attend the Port State Control Committee meetings of each MoU on a regular basis and the USCG holds observer status within both of these two organizations.[5]

For this assessment, the Tokyo MoU, Paris MoU and United States Coast Guard, will be referred to as PSC regimes and only data provided from these three organizations will be referenced. The close

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4 Tokyo MoU, "Annual Report on Port State Control in the Asia–Pacific Region 2015", 2016, p 9.

5 Ibid.

cooperative relationship between the USCG, the Tokyo MoU and the Paris MoU facilitates uniform and trackable data values.

PSC regimes including the USCG have established a vessel targeting matrix to rationally and systematically determine the probable risk posed by foreign flag ships. In developing their risk assessment methodology, the PSC regimes recognize there are key, trackable and quantifiable data points that are often a reflection of a vessel's operational condition and compliance with international safety and environmental protection standards.[6]

Three primary factors or data points a PSC's targeting matrix utilize include: Ship Management Company, Recognized Organizations (Classification Societies), and the Flag State of a ship. Secondary trackable and quantifiable data points include ship type, ship age as well as a PSC's previous experience/issues with a particular ship.[7] [8]

If a PSC's targeting matrix identifies a ship of potential higher risk, and a subsequent Safety Examination determined the ship is substandard, a detention of the ship may be ordered by the PSC. "Ships are detained when the condition of the ship or its crew does not correspond substantially with the applicable conventions. Such strong action is to ensure that the ship cannot sail until it can proceed to sea without presenting a danger to the ship or persons on board, or without presenting an unreasonable threat of harm to the marine environment."[9]

Amongst the list of PSC detainable deficiencies are hull and engineering material deficiencies, inadequate crew training, and professionalism. Vessel detentions thus provide for a key and universal trackable data point to meet the requirements of SB 414.

Methodology

The HSCs sought to determine the quality of vessels calling on California ports by identifying the rate that vessels were being detained by the USCG. Additionally, determine if the detention rate in California was higher or lower than the rate of all vessels being detained in other parts of the United States/word.

The HSCs reviewed six years of data published in the PSC regimes' annual reports from 2010 to 2015. This assessment will show the California Vessel Detention Rate (CVDR) as compared with the combined six year average Detention Rate as detailed the annual reports produced by each PSC authority to include:

- PSC data from forty-five countries on five continents

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6 "PSC Safety Targeting Matrix – Safety Policy." *United States Coast Guard* (*USCG).* USCG, 12 January 2016. Wed. 6 July 2016.

7 Ibid.

8 "Ship Risk Calculator – Ship Risk Profile." *Paris MoU*. Paris MoU, 2016. Web. 6 July 2016.

9 Tokyo MoU, "Annual Report on Port State Control in the Asia–Pacific Region 2015", 2016, p 11.

- 651,134 PSC vessel boardings
- 350,943 Safety Examinations
- 12,991 Detentions

The PSC Average Detention Rate is an average for all three surveyed PSC regimes. It is based upon total number of Safety Examinations and Detentions from each PSC authority, over a six year period.

If the CVDR is above the PSC Average Detention Rate, the CVDR is considered undesirable. A CVDR percent above (or leads) PSCs Detention Rate suggests the qualities of vessels inspected in California on average are substandard compared to vessels inspected in other parts of the United States/world and thus require more vessels to be detained.

Conversely, if the CVDR is below the PSC Average Detention Rate, the CVDR is considered desirable. A CVDR percent below PSCs Detention Rate suggests the quality of vessels inspected in California on average are of a higher standard than vessels inspected in other parts of the United States/world and thus require fewer vessels to be detained.

Findings

A review of the USCG's electronic notice of arrival data for the calendar year 2015 revealed that 1,888 individual foreign vessels intended to call on California ports in 2015.[10] Referencing the USCG's 2015 PSC Annual Report, the U.S. Coast Guard's District 11 conducted 1,083 Safety Examination in California. Accordingly, the District 11's vessel targeting matrix led to a PSC Safety Examination rate of 57.36% of all foreign flag vessels arriving in California.

The below table references Attachment 1 and shows six years of cumulative safety examination and detention data per PSC authority. The Detention Rate can be derived by dividing Detentions by Safety Examinations. "Detention rates are expressed as a percentage of the number of Safety Examinations, rather than the number of individual ships inspected to take account for the fact that some ships may be inspected more than once in a calendar year."[11]

[10] All ships arriving from a foreign port are required to give ninety-six (96) hours advanced notice of their arrival to the USCG.

[11] Paris MoU, "Paris MoU on Port State Control, Annual Report 2015", 2016, p 16.

Appendix D – United States Coast Guard's Port State Control and Marine Inspection Programs' Data and Detailed Report

Table 1: Six Year Cumulative Inspection and Detention Data per PSC Authority

PSC Authority	Vessel Boardings	Safety Examinations	Detentions	PSC Average Detention Rate
Tokyo MoU	97,637	178,148	8,145	4.5720%
Paris MoU	89,407	115,399	4,022	3.4853%
USCG less District 11	417,038	50,619	749	1.4794%
USCG District 11	47,052	6,777	75	1.1067%*

Note: * 1.1067% represents the California Vessel Detention Rate (CVDR)

Table 1 reveals that the California Vessel Detention Rate or CVDR is 1.1067%. The CVDR is equal to the USCG District 11 Detention Rate due to fact that all vessel Safety Examinations were conducted in or adjacent to California waters.

Additionally, Table 1 reveals that the CVDR is below the Detention Rate of the other PSCs. *A CVDR below the PSC Average Detention Rate is a desirable situation. It indicates the quality of vessels inspected in California on average are of a higher standard than vessels inspected in other parts of the United States/world.*

Table 2 compares the California Vessel Detention Rate weighted average against both the domestic and international PSC regimes' weighted average detention rates. Using the California Vessel Detention Rate in this way allows for comparing PSC regimes detention rate both domestically and internationally and enables for the relative assessment as to the condition/quality of vessels calling on California ports.

Table 2: Six Years Weighted Average Detention Rate Computation

PSC Authority	No. of Safety Examinations	No. of Detentions	Detention Rate %	Weighting % Based on Detentions*	Detention Rate Weighted Average** (Detention Rate % x Weight)
(A)	(B)	(C)	(D)	(E)	(F)
			(C) / (B)		(D) X (E)
Tokyo MoU	178,148	8,145	4.5720%	62.70%	2.8665%
Paris MoU	115,399	4,022	3.4853%	30.96%	1.0790%
USCG less D 11	50,619	749	1.4794%	5.77%	0.0854%
D11 (CVDR)	6,777	75	1.1067%	0.58%	0.0064%
Totals	350,943	12,991	-	100%	4.0374%
PSC Detention Rate Weighted Average (W.A)					4.0374%
CVDR W.A.					0.0064%
CVDR W.A. Below PSC Detention Rate W.A.					4.0309%
Percent CVDR W.A. is below PSC Detention Rate W.A.					-99.84%***

Notes:

* Calculation is Number of Detentions by a PSC divided by the sum of all PSC Detentions (12,991)

** Calculation is Detention Rate % multiplied by the Weighting %

*** Calculation is 4.0374% less 0.0064% divided by 4.0374%

Assessment - Marine Inspection Program and U.S. Flag Vessels

Much like the USCG's PSC program has been established to inspect and enforce safety and environmental standards on foreign ships calling on ports in the United States; the USCG's Marine Inspection Program (MIP) inspects and enforces safety and environmental standards on United States vessels. Though the standards of the PSC program and the MIP may vary in scope, each program functions to meet the same overarching need. That is, to determine that both foreign and domestic vessels comply with the all applicable laws, rules, and regulations relating to safe construction,

equipment, manning, and operation and that they are in a seaworthy condition for the services in which they are operate (33 CFR § 1.01-20).

Methodology

Essentially, Port State Control authorities that makeup the Paris and Tokyo MoUs act as third party auditors. A PSC inspection (or audit) is an attempt to verify that a vessel, its operator and flag state (the country in which a vessel is registered) meet applicable conventions, safety and environmental standards; thus provides for an independent, unbiased and creditable means to access United States vessels and speaks to the quality and effectiveness of the USCG's MIP.

Published each year in the Paris MoU and Tokyo MoU Annual Reports, is an updated document entitled, "White, Grey and Black (WGB) List". The WGB List represents the full spectrum, from quality flag states to flag states with a poor performance that are considered high risk. It is based on the total number of inspections and detentions and is the results from PSC inspections.[12] The WGB List reflects the quality of a flag state's (marine) inspection programs as well as the quality of vessels, and vessel operators.

The White List contains a list of flag states found to be of higher quality and lower risk. Conversely, the Black List contains a list of flag states found to be substandard. Black List flag states are deemed to be of high risk.[13] The Gray List is a list of flag states that may be simply described as average, average being considered less than ideal.

From 2010 to 2015 the flag state United States has appeared on the Tokyo MoU's White List for the past six consecutive years and on Paris MoU for the past four consecutive years. Note, in 2010 and 2011 the flag state United States appeared on Paris MoU's Gray List.

Expressed differently, from to 2010 to 2015, out of a possible twelve trials[14] (six trials in the Tokyo MoU and six trials in the Paris MoU), the flag state United States attained White List, low risk status ten out of twelve trials or 83% of the sample period. From 2012 to 2015 out of a possible eight trials (four trials in the Tokyo MoU and for trials in the Paris MoU) the flag state United States attained White List, low risk status eight out of eight trials or 100% of the sample period.

Conclusion

Many committee members expressed reservations as to the ability of a Harbor Safety Committee to properly conduct an assessment of a federal program such as required by California Senate Bill 414. Yet,

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12 "White, Grey and Black List." *Paris MoU*. Paris MoU, 2016. Web. 27 December 2016.

13 Ibid.

14 According to StatTrek.com, a binomial experiment is a statistical experiment. The experiment consists of set number of repeated trials. Each trial can result in just two possible outcomes, "success" and "failure". The trials are independent; meaning the outcome on one trial does not affect the outcome on other trials. In the case, "success" defined as a flag state listed on the White List and "failure" defined as flag state not listed on the White List.

Appendix D – United States Coast Guard's Port State Control and Marine Inspection Programs' Data and Detailed Report

The Los Angeles-Long Beach Harbor Safety Committee and the Harbor Safety Committee of the San Francisco Bay Region employed an innovative and streamlined approach to assess the condition of the United States Coast Guard's port state control program and marine inspection program.

The HSCs utilizing the Detention Rate derived from PSC regimes data was able to quantify the quality of vessels calling on California ports by comparing the California Vessel Detention Rate weighted average against the combined PSC regimes' detention rate weighted average. Using the California Vessel Detention Rate in this way enables for the relative assessment as to the condition/quality of vessels calling on California ports.

The assessments results were definitive and conclusive. Table 2 shows the California Vessel Detention Rate weighted average at 0.0064% is the lowest of all surveyed PSC organizations. Table 2 also indicates that vessels calling on California are 99.84% less likely to possess the characteristics that would warrant a PSC detention than other parts of the world.

Independent third party audits more commonly referred to as PSC inspections over the last six consecutive years have reflected favorably upon the flag state of United States as well as the condition of the U.S.C.G.'s Marine Inspection Program. During the sample period (2010-2015), the flag state of United States attained White List, low risk status 83% of the time. Moreover, over the past four consecutive years (2012-2015), the flag state United States attained White List, low risk status 100% of the time.

After conscientious and thorough review of the of data presented in this study, including PSC data from forty-five countries on five continents; 651,134 PSC vessel boardings; 350,943 Safety Examinations, 12,991 Detentions the HSCs find the following: The condition of United States vessels 300 GRT and greater, the condition of foreign vessels calling on California ports, the condition of the United States Coast Guard's Marine Inspection Program and Port State Control program to be adequate.

Appendix D – United States Coast Guard's Port State Control and Marine Inspection Programs' Data and Detailed Report

Tokyo MoU PSC Data				
Year	**Ship Boardings**	**Safety Examination**	**Detentions**	**Detention %**
2015	17,269	31,407	1,153	3.6712%
2014	16,761	30,405	1,203	3.9566%
2013	16,861	31,018	1,395	4.4974%
2012	16,439	30,929	1,421	4.5944%
2011	15,771	28,627	1,562	5.4564%
2010	14,536	25,762	1,411	5.4771%
Total	97,637	178,148	8,145	4.5720%

Paris MoU PSC Data				
Year	**Ship Boardings**	**Safety Examination**	**Detentions**	**Detention %**
2015	15,246	17,858	595	3.3318%
2014	15,377	18,430	612	3.3207%
2013	14,108	17,687	668	3.7768%
2012	14,646	18,308	669	3.6541%
2011	15,268	19,058	688	3.6100%
2010	14,762	24,058	790	3.2837%
Total	89,407	115,399	4,022	3.4853%

USCG (All Districts) PSC Data				
Year	**Ship Boardings**	**Safety Examination**	**Detentions**	**Detention %**
2015	73,752	9,265	202	2.1802%
2014	79,091	9,232	143	1.5490%
2013	83,535	9,394	121	1.2881%
2012	72,309	9,469	105	1.1089%
2011	79,031	10,129	97	0.9576%
2010	76,372	9,907	156	1.5746%
Total	464,090	57,396	824	1.4356%

USCG District 11 PSC Data				
Year	**Ship Boardings**	**Safety Examination**	**Detentions**	**Detention %**
2015	7,570	1,083	24	2.2161%
2014	8,113	1,020	12	1.1765%
2013	8,529	1,185	7	0.5907%
2012	7,491	1,163	14	1.2038%
2011	8,212	1,211	9	0.7432%
2010	7,137	1,115	9	.8072%
Total	47,052	6,777	75	1.1067%

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Humboldt Bay
Harbor of Safe Refuge
Vessel Simulation

Final Report Agreement #P0775034

Submitted to:
Mr. Al Storm
Department of Fish and Game
Office of Spill and Prevention
And Response

Submitted By:
Capt. Tim Petrusha
Capt. John Powell
Humboldt Bay Harbor, Recreation
and Conservation District Bar Pilots

November 2007

Humboldt Bay
Harbor of Safe Refuge
Vessel Simulation

Final Report Agreement #P0775034

Table of Contents

Background and Objectives

Government Code section 8670.7 gives the OSPR Administrator broad authority and responsibility for preventing, containing and cleaning-up oil spills in California's marine waters. The Administrator is required to carry out his/her duties in accordance with California's Oil Spill Contingency Plan. This Plan, on page 2 states that it's policy to "take action to control the source of any oil spill and to contain any discharge to the maximum extent possible."

An oil spill-related issue which has surfaced in recent years centers on what is to be done with vessels which become distressed while at sea but in the vicinity of a coastline. Such vessels may or may not be leaking oil, but all pose a substantial risk of being carried ashore by on-shore winds, grounding and spilling oil. Such was the case of the vessel PRISTIGE off the coast of Spain. In the case of the PRISTIGE, as would certainly be the case anywhere in California, there was substantial local resistance to bring the distressed vessel into any harbor. This NIMBY attitude resulted in the distressed vessel being left at sea where it eventually broke up, sank and significantly oiled the Spanish coastline.

This example makes clear that it would be in California's best environmental interest to designate Specific *Harbors of Safe Refuge* within the state where a distressed vessel could go, or be towed, and obtain suitable repairs rather than be allowed to pose a substantial oil spill threat be lingering off the coast. By directing a distressed vessel to a *Harbor of Safe Refuge*, the Administrator will proactively prevent or, in the case of a leaking vessel control the source of, an oil discharge.

While it was not within the scope of this contract to deal with the political issues of creating a *Harbor of Safe Refuge,* the contract does deal with a fundamental technical issue of making such a designation. Humboldt Bay is the only deepwater port on a 400-mile stretch of coastline from San Francisco to Coos Bay, Oregon, making it a very important potential *Harbor of Safe Refuge*.

The Humboldt Bay Harbor, Recreation and Conservation District (District) was contracted to oversee this research for several reasons. First, the District was created by the State of California to oversee commerce, fisheries, navigation and recreation in Humboldt Bay while protecting the environment. In this capacity, the District functions as the local Port Authority working with private terminal operators, owning and operating a public marine terminal, participating in the Harbor Safety Committee of the Humboldt Bay Area and coordinating channel maintenance with the US Army Corps of Engineers. Secondly, since 2006 the District has employed the Bar Pilots an as such has the opportunity to direct special studies with these professional mariners that would be called upon during any *Harbor of Safe Refuge* need.

The deliverable of this contract is a report that will specify the largest distressed vessel that can safely be navigated through the navigation channels in Humboldt Bay. This is the most fundamental and critically important information needed by the Administrator in making a technical determination if Humboldt Bay can be safely used as a *Harbor of Safe Refuge* for any particular distressed vessel. Additionally, while operating a ship handling simulator to obtain information needed for the preparation of the report, the Humboldt Bay Bar Pilots will gain information and skills to improve their ability to safely transit the new channel while conducting their routine day-to day piloting duties, thus enhancing the overall navigational safety of Humboldt Bay. Both of these benefit and support OSPR in its mission of preventing or containing oil spills and protecting the natural marine sources of California.

In addition, the results of these simulations could potentially be used in "Incident Investigation" by oversight committees such as the Pilot Advisory Committee, United States Coast Guard, and National Transportation Safety Board.

Lastly, these simulations are learning tools for navigators and decision makers. This effort will help with the analysis of potential future changes of Humboldt Bay such as channel realignment, buoy repositioning and jetty reconfiguration.

Methodology

The simulation of Humboldt Bay was created at Pacific Maritime Institute (PMI) in Seattle, Washington on a "TRANSAS" simulation system. PMI is equipped with a Trans Marine USA bridge simulator. They contract with Transas USA to keep the simulator current with state of the art bridge simulation upgrades. The simulator is a 240 degree DNV class full mission bridge simulator equipped with full bridge controls of steering and engine, radar simulation, radio communications, GPS plotting and Doppler predictors. A full debriefing room is available for critique and review after each simulation.

For this project, PMI developed a Humboldt Bay simulation model that provides a realistic display of the navigation channels, aids to navigation, all weather conditions, various atmospheric phenomena, time of day, visibility and illumination effects, reflection and glare on the water. Tides and current can be adjusted as required and are based on actual data collected in Humboldt Bay. PMI can set up environmental zones to create realistic environmental conditions such as fog banks, rain, local wind, current effects and local wave effects.

The simulator incorporates an extensive library of simulations of ship types comprising vessels of different tonnages, dimensions, and hull forms including but not limited to tankers, bulk carriers, passenger vessels, tug boats and

container vessels. Visual controls allow the operator to choose between Port and Starboard wing locations and rotate the visual image vertically so the ships' side, docks and assist tugs are visible.

Mathematical models of the ships and ships equipment, physical forces and effects have been based on the results of research carried out by ship/tug captains and hydrodynamicists, and comply with the highest standards.

This system is of the highest quality and technology at this point in time. When simulating ships and towing vessels transiting Humboldt Bay, PMI Instructors can change multiple conditions at any time during the exercise, such as visibility, wind, current, swell and even the occasional break down. A variety of assist tugs with a large range of horsepower are also available for use during each exercise, anchors can be utilized making the simulation experience feel very life like. This is particularly good for Emergency Ship Handling courses, a course that is required every five years for Humboldt Bay Harbor District Pilots.

Results

More than twenty ship navigation simulation exercises were completed between August 7-9, 2007. Exercises consisted of vessels with a length over all (LOA) from 600 ft to 1,132 ft. All but one exercise was performed without the use of external tugboat forces. Vessel types used in these exercises were break bulk, container ships, tankers, passenger carriers and car carriers. These simulations were performed mostly with mild weather conditions. Figure 1 summarizes the results of this first set of simulation exercises. A complete summary of these simulations and their results are included in this report in Appendix 1.

Twenty-four additional exercises were completed between September 10-11, 2007. Exercises consisted of vessels with a LOA ranging from 644 ft to 984 ft. All exercises were performed without the use of external tugboat forces. Vessel types used in these exercises included break bulk, container ships, tankers, passenger carriers and car carriers. These simulations were performed with extreme or near extreme weather conditions consisting of high winds, large swell conditions and current effects. Figure 2 summarizes the results of this second set of simulation exercises. A complete summary of these simulations including weather conditions and results are included in this report in Appendix 1.

Figure 3: Simulation of a Bulk Carrier starting a 180 degree turn in the Samoa Channel turning basin, with the assistance of a 1600 horse power tug boat.

Discussion

Based on the simulations performed for this report, a ship of 950 feet LOA can safely transit Humboldt Bay at slack water in favorable weather conditions. In the simulations performed as weather conditions deteriorated so did the possibility of safely maneuvering the ship into Humboldt Bay. Although some of the extreme weather simulations showed successful transit, it appears an average swell condition on this magnitude of vessel should be no larger than 13 to 15 feet to transit safely. The effect of wind conditions on these vessels varied with the depth to which the ship was loaded. Successful transits were completed with wind conditions of 20 knots or less. A wind speed of 20 knots should be considered maximum on light vessels or vessels with a large freeboard, such as a car carrier, in order to transit Humboldt Bay safely. Wind speed of up to 25 knots would be considered acceptable on loaded or deep draft vessels.

Ships with a LOA of 700 feet or more must transit Humboldt Bay at slack water due to the angle of the turn leading into the North Bay channel.

Although these simulations showed positive results on vessels up to 950 feet LOA entering into and transiting Humboldt Bay, berthing accommodations and tugboat assist power must be considered when planning on vessels of this size.

Figure 4: Simulation of a 1,132' LOA Tanker entering Humboldt Bay Entrance Channel.

Based on these vessel simulations and experience gained through years of local pilotage, the following specific discussion regarding several environmental factors can be made:

Wind

Wind was the largest factor affecting ships that were in ballast condition. Loaded ships handled the wind much easier. Twenty-five knots of wind should be considered maximum, for most all ships transiting Humboldt Bay. Certain ships may be exceptions depending on the load condition and the size of the ship. Larger ships (800' to 950') will require tugs with more horsepower for maneuvering and docking purposes. Vessels that are equipped with bow (and stern) thrusters will handle better during the docking process.

Swell

Swell was by far the biggest factor affecting the success of crossing the Humboldt Bay Bar. Swells up to 13 feet had little effect on the ships being simulated. When swells were increased above 13 feet, most vessels became difficult to control and as swell conditions increased further some ships became uncontrollable. Tug assist while crossing the entrance to Humboldt Bay is far too dangerous, especially in a large swell situation.

Tides

The tides on Humboldt Bay range from approximately -2.2 feet lower low water to a +8.8 feet higher high water with a maximum range of approximately 11 feet. Most large or deep draft vessels enter Humboldt Bay at or near High tide. Large Vessels in ballast condition can enter at low water with conditions permitting.

Tidal Currents

Tidal currents on Humboldt Bay average approximately two knots and rarely exceed three knots. When docking a vessel it is preferred to have less than two knots of current for tug assist effectiveness. Currents between buoy #10 and the Entrance buoy #2 average approximately two knots, with a maximum of about four knots. During storm conditions, velocities can reach up to 5.5 knots. For a *Harbors of Safe Refuge* use, it is recommended to avoid navigating the Bar Channel and Turn when tidal currents are greater than three knots.

Cross Current

At the entrance to Humboldt Bay there is quite often a cross current at the tips of the jetties that typically runs north or south. Ships up to 700 feet in length and with good handling characteristics have successfully passed through the entrance with a cross current of three knots. This current has been recorded at speeds to five knots. Vessels greater than 700 feet have more difficulty with this cross current, as the vessels stern is still in the cross current while the bow is being sheltered from the current by the jetties. Cross currents of up to two knots were used during 27 simulations.

Based on the results of this exercise, vessels up to 950 feet can come into Humboldt Bay during with up to two knots of cross current. Before transiting the entrance to Humboldt Bay during *Harbors of Safe Refuge* condition, the Pilot and Vessels Captain will have to agree on swell height, wind strength, tidal current, bar channel cross currents and tug options.

Safety

When any vessel contracts with a Humboldt Bar Harbor District Pilot the Captain of that vessel agrees to let the pilot guide his/ her vessel into or out of Humboldt Bay. This vessel movement shall take place only after both the Master of the vessel and the Humboldt Bay Harbor District Bar Pilot exchange all pertinent information concerning a safe vessel transit of Humboldt Bay. If either party feels it is unsafe for any reason to make the transit, the vessel movement shall be postponed or cancelled until conditions improve as much that both parties agree that the vessel transit can be performed safely.

Assist Tugs

Presently there are two assist tugs in operation with the following characteristics:

Tug/Pilot Boat: KOOS KING

- Length: 65 Feet
- Horse Power: 2000
- Configuration: Twin Screw

Tug: MARY ANN BRUSCO

- Length: 62 Feet
- Horse Power: 1000
- Configuration: Twin Screw

These assist tugs are adequate for assisting vessels up to approximately 700 feet in length.

In addition there are offshore towing vessels with up to 5000 horsepower that frequent Humboldt Bay:

- Sause Bro. Towing Co. tows fuel barges in and out of Humboldt Bay.
- Sea Coast Towing will tow fuel barges in place of Sause Bro. Towing Co.
- Dunlop Towing is currently towing barges of wood chips both in and out of Humboldt Bay.
- Brusco Tug and Barge Inc. Offshore Division is currently towing log barges and chip barges in and out of Humboldt Bay.

When available, these offshore towing vessels have assisted in the past and could possibly be used in emergencies in the future.

Conclusion

Over 50 simulations of Humboldt Bay Bar channel with a wide variety of vessels were conducted on Pacific Maritime Institute (PMI) Transas Simulator in Seattle, Washington between August 7-9 and September10-11, 2007. Weather conditions tested on the simulator ranged from 0 to 30 knots of wind, 0 to 30 feet of swell and 0 to 2 knots of cross current at the entrance to Humboldt Bay.

The results of these navigational simulation exercises show that Humboldt Bay can be used as a *Harbor of Safe Refuge* for many of these vessels. Simulation shows that with good conditions, a vessel of up to 1150' LOA can safely transit the Humboldt Bay entrance and the 114-degree turn between buoy #5 and buoy #10 with tug assistance. When outside factors are added to the same simulation such as wind, swell, current and tide this vessel is unable to make the same transit without tug assist. In less than good conditions the simulation demonstrated that a 950' LOA vessel can safely transit from the Humboldt Bay sea buoy to the Samoa Channel turning basin, then with tug assist made a 180 degree turn and then proceeded back to sea. Currently due to the present dimensions of the Samoa Channel turning basin, a vessel no longer than 950' can safely make this 180-degree turn.

At this time, ships calling on Humboldt Bay are usually between 600' and 700'. In the future, Humboldt Bay can accept larger vessels up to 950' as long as the vessel receives adequate tug assist, if needed, and sufficient moorage.

When using information in this report, it is crucial that the reader be aware that each of the environmental elements can combine to create extremely dangerous conditions when transiting Humboldt Bay. It is imperative that the Humboldt Bay Bar Pilots be consulted during any consideration to use Humboldt Bay as a *Harbor of Safe Refuge*. The Pilots knowledge of the condition of the vessel and the sea and weather conditions is critical to the decision to use Humboldt Bay.

Associated Marine Surveying Co., Inc.

Marine Surveyors and Consultants

July 19, 2011

Mr. Gene Cole
Knutson Towboat Company
400 North Front Street
Coos Bay, OR 97420

RE: T/B "KOOS KING"
BOLLARD PULL TEST
COOS BAY, OREGON
OUR FILE: **SO 1108**

Requestor,

At the request of Mr. Gene Cole, Knutson Towboat Company, Coos Bay, Oregon, and for the account of TO WHOM IT MAY CONCERN, the undersigned did attend and conduct a Bollard Pull Test by the T/B "Koos King" at the former Weyerhaeuser Chip Facility, Coos Bay, Oregon on Tuesday, July 19, 2011. The scope and purpose of the survey was to determine the pulling ability of the mentioned vessel from the bow and from the stern. The pull was measured in pounds.

At 1630 hours, the undersigned did proceed to Tyree Oil Company fuel dock, Coos Bay, Oregon and boarded the T/B "Koos King". The vessel proceeded down river to the above mentioned facility where the testing commenced. The following was noted:

PARTICULARS OF VESSEL:

NAME	:	T/B "Koos King"
OFFICIAL NUMBER	:	662923
BUILT	:	1983 - Mid Coast Marine, Coos Bay, Oregon
HULL NUMBER	:	9911
DOCUMENTED LENGTH	:	65.0'
GROSS REGISTERED TONS	:	85
ENGINES	:	2 x Cummins KTA 38M Diesel Engines 1200 HP @ 2000 RPMs
PROPULSION	:	2 x "Coolidge" - 4 Blade Propellers - 70" x 69" Kort Nozzles
OWNER	:	Knutson Towboat Co. 400 N. Front St. Coos Bay, Oregon

55805 Fishtrap Rd PO Box 516 Coquille, OR 97423
Telephone - (541) 297-3150 Email - asssocmarineco@gmail.com
Tom Curry Surveyor Cell 541-270-2136

PARTICULARS OF DYNAMOMETER (HOOK SCALE):

Manufacturer	:	Rice Lake Weighing Systems
Hook Scale - Model:	:	R431-D3-100K-CD - S/N: 8373
Digital Reader - Model:	:	500 HE - S/N: 88-1126
Servicing/Calibration	:	Pacific Scale Company, Clackamas, Oregon
Date	:	July 17, 2011

PARTICULARS OF SURVEY:

At 1645 an eye spliced, nine (9") inch x two hundred (200') foot poly-nylon towing line was attached to a mooring cleat at the former Weyerhaeuser Chip facility in Coos Bay, Oregon. The mooring cleat was embedded in a large concrete foundation.

The line was attached to the hook scale by means of a thirty-five (35) ton shackle and the hook scale was thence attached to the stern towing bitt by means of a thirty-five (35) ton shackle and a one (1") wire rope eye to eye pendant.

At 1700 the T/B "Koos King" began a monitored pull on the line. The engines were run up at 1975 to 2000 RPMs for approximately three (3) minutes. During the test the digital scale indicated a pull weight of a maximum of 67,205 pounds and a minimum of 65,,120 pounds.

The T/B "Koos King" then slacked off and the line, shackles, and hook scale were moved to the bow where the line was fed through the bow fairlead, over the bow bitt, and attached to the bow capstan in a similar fashion as above.

At 1716, the vessel began a monitored pull on the line. The engines were run up to near 2000 RPMs for approximately three (3) minutes. During the test the digital scale indicated a pull weight of a maximum of 37,510 pounds and a minimum of 36,083 pounds.

At 1730 with the testing complete, the vessel then proceeded to Knutson Towboat Company dock in Coos Bay.

River conditions at the time of testing:
High Tide - 1730 hours - 6.4 feet
River depth under keel - 40 to 41 feet

Weather conditions were clear and warm with an estimated wind speed of less than 15 knots.

CERTIFICATION:

The undersigned marine surveyor does certify that a Bollard Pull Test was conducted by the T/B "Koos King" on the above date, location, and conditions as stated with the following noted:

Vessel Ahead Pull Weight (Pounds):	**Maximum - 67,205 pounds**
Vessel Astern Pull Weight (Pounds):	**Maximum - 37, 510 pounds**

The above survey report is hereby submitted and is rendered without prejudice TO WHOM IT MAY CONCERN.

Respectfully submitted,

ASSOCIATED MARINE SURVEYING CO. INC. C. ALFRED GNANN MARINE SURVEYOR

C. Alfred Gnann, Marine Surveyor
Associated Marine Surveying Co., Inc.

The above Report of Survey has been conducted with non-destructive techniques and sets forth the apparent condition of the vessel, testing equipment, and gear to the best of the undersigned's ability without the removal of portions of vessel structures and without the opening of vessel machinery (motors, engines, generators, gears, or pumps) or the testing equipment for internal examination. Unless noted, all equipment to include navigational and communications was not examined for serviceability. The survey represents the undersigned's honest and unbiased opinion and the undersigned is not to be held responsible for any errors or omissions. Nor inaccuracies for items indicated as "reported to be", "said to be", "said to contain", or "not observed". Nor does the above Report of Survey create any liability of, guarantees to, or warrantees by the company or their employees arising out of the reliance on information contained herein. The above Report of Survey is based on visual or reported data created on the date of the survey and does not construe knowledge of the condition of the vessel prior to, or subsequent to the date of the survey.

JOHN C. MURDOCH
Marine Surveyors

6211 North Ensign Street
Portland, Oregon 97217

Phone: 503/289-761
Fax: 503/288-168

Case No. 12-73
Inspection:
Bollard Pull Test

January 2, 2013

TUG "CAPTAIN HAROLD"

Report of Inspection made by the undersigned Surveyor on December 29, 2012 at the request of Knutson Towboat Company, Coos Bay, Oregon on the Tug "Captain Harold", 68 Gross Tons, 510330 Official Number, Knutson Towboat Company, Owners, while lying afloat at Coos Bay, Oregon in order to ascertain the bollard pull of the vessel.

VESSEL PARTICULARS:

A welded steel twin oil screw Kort nozzle-equipped inland water tug with a bluff rounded bow, straight sides, and a square stern.

Propulsion is via two Cummins KTA 38 M turbocharged after cooled 12-cylinder diesel engines of 1,250 bhp each at 2,100 rpm.

Vessel built in 1967 by Sherman Boat Works at Long Beach, California, extensively reconstructed in 2002, and re-engined in 2012.

Dimensions: (Registered)

Length	65.7'
Breadth	20'
Depth	6.5'

DYNOMOMETER PARTICULARS:

A Rice Lake Weighing Systems electronic dynomometer, serial number 8373, manufactured on February 2, 1988 was used for the test. A "Hostile Environment Survivor Model HE 500" remote monitor Serial Number 88-126 was connected electrically to the dynomometer for monitoring at a safe distance. The arrangement was last calibrated by Pacific Scale Company, Clackamas, Oregon on July 17, 2011.

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Case No. 12-73

PARTICULARS OF BOLLARD PULL TEST:

At approximately 1200 hours on December 28, 2012 the Tug "Captain Harold" proceeded to the former Weyerhauser Lumber Dock. One end the 200' x 9" braided polypropelene tow line with an eye spliced on each end was made fast to a bollard atop a 10' x 10' concrete deadman. The leading end of the tow line was connected to the dynomometer via a 2-1/4" safety shackle. The dynomometer was then made fast to the after tow bitts via a doubled 1" wire rope strap and a 2-1/4" screw pin shackle.

The weather was cloudy with a light SE' wind and a 9.2' high tide was predicted for 1257 hours. The water depth was 43'.

At 1228 hours all was in readiness and the tug began to pull straight out normal to the shore line. The engine revolutions were gradually increased and at 1255 hours a maximum pull of 61,400 pounds at 2,100 rpm over a period of approximately two minutes was recorded.

The towing gear was then re-rigged to connect up to the anchor windlass forward. At 1309 hours the tug was maneuvering to back straight out with the wind and tidal current on the port beam. At 1320 hours a maximum pull of 40,000 pounds at 2,100 rpm over a period of approximately two minutes was recorded.

CERTIFICATION:

The undersigned hereby certifies that a Bollard Pull Test was carried out by the Tug "Captain Harold" at the date and location noted above with results a follows:

Ahead Test Maximum Pull	61,400 pounds
Astern Test Maximum Pull	40,000 pounds

ATTENDING:

Gene Cole	Representing	Knutson Towboat Company

Inspection made without prejudice.

JOHN C. MURDOCH
Marine Surveyor

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Associated Marine Surveying Co., Inc.
Marine Surveyors and Consultants

February 11, 2020

Mr. Pete Billeter
Pacific Tug Co., LLC
520 3rd Court
Coos Bay, OR 97420

RE: T/B "RENEGADE"
BOLLARD PULL TEST
NORTH BEND, OREGON
OUR FILE: **SO 2001**

Requestor,

At the request of Mr. Pete Billeter, Pacific Tug Co., LLC, Coos Bay, Oregon, and for the account of TO WHOM IT MAY CONCERN, the undersigned did attend a Bollard Pull Test by the T/B "Renegade" at the Southport Lumber Company, 90800 Transpacific Pkwy, North Bend, Oregon on Tuesday, February 11, 2020. The scope and purpose of the survey was to determine the pulling ability of the mentioned vessel from the bow and from the stern. The pull was measured in pounds.

At 0700 hours, the undersigned did proceed to Pacific Tug, 520 3rd Court, Coos Bay, Oregon and boarded the T/B "Renegade". The vessel proceeded down river to the above mentioned facility where the testing commenced. The following was noted:

PARTICULARS OF VESSEL:

NAME	:	T/B "Renegade" Ex: "Mahi", "Maoi"
OFFICIAL NUMBER	:	618705
BUILT	:	1980 - Orange Shipbuilding, Orange, Texas, USA
HULL NUMBER	:	220
DOCUMENTED LENGTH	:	71.2'
GROSS REGISTERED TONS	:	123
ENGINES	:	2 x Caterpillar 398 TA Diesel Engines @900 HP ea. 1800 HP @ 1200 RPMs
PROPULSION	:	2 x 66" Diameter 3 - Blade Propellers - Reported Standard Rudders
OWNER	:	Pacific Tug Co., LLC 520 3rd Court Coos Bay, Oregon

PO Box 5807 Charleston, OR 97420
Telephone - (541) 290-0523 Email - asssocmarineco@gmail.com

PARTICULARS OF DYNAMOMETER (HOOK SCALE):

Manufacturer :	:	Dynamark Engineering Inc.
Hook Scale - Model:	:	Dynamometer 50 Ton Load Cell Rental Washington Chain & Supply
Certification Number :	:	1906-1019C
Servicing/Calibration :	:	Washington Chain & Supply, Seattle, Washington
Date :	:	June 26, 2019
Recertification Date:	:	June 26, 2020

PARTICULARS OF SURVEY:

At 0800, a nine (9") inch x one hundred (100') foot poly-nylon towing line was attached through a closed chock and attached to a mooring double bitt at the Southport Lumber Company facility in Coos Bay, Oregon. The double mooring bitt was embedded in a large concrete foundation.

The line was fed through the bow fairlead and attached to the hook scale by means of a fifty (50) ton shackle and the hook scale was fed through the bow fairlead and thence attached to the bow double bitt by means of a fifty (50) ton shackle and a four (4") inch plasma 12 strand braided line.

At 0820 the T/B "Renegade" began a monitored pull on the line. The engines were run up at 950 to 1200 RPMs for approximately three (3) minutes. During the test the digital scale indicated a pull weight of a maximum of 58,220 pounds and a minimum of 54,700 pounds.

The T/B "Renegade" then slacked off and the line, shackles, and hook scale were moved to the aft deck where the line was fed over the stern, and attached to the stern towing bitt in a similar fashion as above.

At 0838, the vessel began a monitored pull on the line. The engines were run up to near 1200 RPMs for approximately three (3) minutes. During the test the digital scale indicated a pull weight of a maximum of 84,600 pounds and a minimum of 79,400 pounds.

With the testing complete, the lines and equipment secured, at 0915 the vessel then proceeded to Pacific Tug Company dock in Coos Bay.

River conditions at the time of testing:
Low Tide - 0812 hours - 1.5 feet
River depth under keel - 30 feet
Mean lower low water Maintained in the Coos River @ 37 feet.
Weather conditions were clear and cool with an estimated wind speed of less than 5 knots.

CERTIFICATION:

The undersigned marine surveyor does certify that a Bollard Pull Test was conducted by the T/B "Renegade" on the above date, location, and conditions as stated with the following noted:

Vessel Astern Pull Weight (Pounds): **Maximum – 58,220 pounds**

Vessel Ahead Pull Weight (Pounds): **Maximum - 84,600 pounds**

The above survey report is hereby submitted and is rendered without prejudice TO WHOM IT MAY CONCERN.

Respectfully submitted,

ASSOCIATED MARINE SURVEYING CO., INC.
BRIAN E. SKALLERUD
MARINE SUVEYOR

Brian E Skallerud, Marine Surveyor
Associated Marine Surveying Co., Inc.

The above Report of Survey has been conducted with non-destructive techniques and sets forth the apparent condition of the vessel, testing equipment, and gear to the best of the undersigned's ability without the removal of portions of vessel structures and without the opening of vessel machinery (motors, engines, generators, gears, or pumps) or the testing equipment for internal examination. Unless noted, all equipment to include navigational and communications was not examined for serviceability. The survey represents the undersigned's honest and unbiased opinion and the undersigned is not to be held responsible for any errors or omissions. Nor inaccuracies for items indicated as "reported to be", "said to be", "said to contain", or "not observed". Nor does the above Report of Survey create any liability of, guarantees to, or warrantees by the company or their employees arising out of the reliance on information contained herein. The above Report of Survey is based on visual or reported data created on the date of the survey and does not construe knowledge of the condition of the vessel prior to, or subsequent to the date of the survey.

Title 33 - Navigation and Navigable Waters
Chapter I - Coast Guard, Department of Homeland Security
Subchapter P - Ports and Waterways Safety
Part 165 - Regulated Navigation Areas and Limited Access Areas
Subpart F - Specific Regulated Navigation Areas and Limited Access Areas
Eleventh Coast Guard District Eleventh Coast...

Authority: 46 U.S.C. 70034, 70051; 33 CFR 1.05-1, 6.04-1, 6.04-6, and 160.5; Department of Homeland Security Delegation No. 00170.1, Revision No. 01.2.

Source: CGD 79-034, 47 FR 29660, July 8, 1982, unless otherwise noted.

Editorial Note: Nomenclature changes to part 165 appear by USCG-2006-25556, 72 FR 36328, 36329, July 2, 2007 and by USCG-2018-1049, 84 FR 7813, Mar. 5, 2019.

§ 165.1195 Regulated Navigation Area; Humboldt Bay Bar Channel and Humboldt Bay Entrance Channel, Humboldt Bay, California.

(a) ***Location.*** The Regulated Navigation Area (RNA) includes all navigable waters of the Humboldt Bay Bar Channel and the Humboldt Bay Entrance Channel, Humboldt Bay, California.

(b) ***Definitions.*** As used in this section -

COTP means the Captain of the Port as defined in Title 33, Code of Federal Regulations, Section 1.01-30 and 3.55-20.

Sector means Coast Guard Sector/Air Station Humboldt Bay.

Sector Commander means the Commanding Officer of Coast Guard Sector/Air Station Humboldt Bay.

Hazardous material means any of the materials or substances listed in 46 CFR 153.40.

Humboldt Bay Area means the area described in the location section of this regulation.

Oil means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

Station means Coast Guard Station Humboldt Bay.

Tank Vessel means any vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(c) ***Applicability.*** These regulations apply to the owners and operators of tank vessels transporting oil or hazardous material as cargo within the Humboldt Bay Area.

(d) ***Regulations.***

(1) In addition to the arrival and departure notification requirements listed in title 33 CFR, part 160, Ports and Waterways Safety - General, subpart C - Notifications of “Arrivals, Departures, Hazardous Conditions, and Certain Dangerous Cargoes”, the owner, master, agent or person in charge of a vessel to which this notice applies shall obtain permission to cross within four hours of crossing the Humboldt Bay Bar. Between 6:30 a.m. and 10 p.m., notification/requests for permission can be

made to Station Humboldt Bay on VHF-FM Channel 16, or at (707) 443-2213. If between 10 p.m. and 6:30 a.m., or if unable to reach the Station, notification/requests for permission can be made directly to Sector/Air Station Humboldt Bay on VHF-FM Channel 16 or at (707) 839-6113.

(2) Permission for a bar crossing by vessels or towing vessels and their tows to which this regulation applies is dependent on environmental and safety factors, including but not limited to: Sea state, winds, visibility, size and type of vessel or tow, wave period, time of day/night, and tidal currents. The final decision to close the bar rests with Humboldt Bay Sector Commander or his designated representative. At a minimum, Humboldt Bay Bar Channel crossings by vessels subject to this advisory will generally not be permitted unless all of the following conditions exist: Proper permission to cross has been received, sea conditions at the bar are less than 6 feet, winds at the bar are less than 30 knots, the transit will take place during daylight hours, the vessel has only a single tow or no tow, the visibility at the bar is greater than 1,000 yards, and the vessel and tow are in proper operating condition.

(3) If the bar is closed to vessels to which this regulation applies, waiver requests will be accepted within four hours of crossing the entrance channel. If the waiver request is made between 6:30 a.m. and 10 p.m., the request should be made to Station Humboldt Bay on VHF-FM Channel 16, or at (707) 443-2213. If between 10 p.m. and 6:30 a.m., or if unable to reach the Station, the request can be made directly to Sector/Air Station Humboldt Bay on VHF-FM Channel 16 or at (707) 839-6113. Waiver requests must be made by the vessel master and must provide the following: A description of the proposed operation, the conditions for which the waiver is requested, the reasons for requesting the waiver, the reasons that the requester believes the proposed operation can be accomplished safely, and a callback phone number. The Station or Sector Watchstander receiving the request will brief the Officer in Charge of the Station who will then brief the Sector Commander. The authority to grant waivers rests with the Sector Commander or his designated representative.

(4) In addition to the requirements in paragraphs (d)(1)-(3) of this section, vessels transporting liquefied hazardous gases or compressed hazardous gases in bulk as cargo into or out of Humboldt Bay are required to be aided by two assist tugs. If the vessel carrying the gases is towed, the assist tug requirement is in addition to the towing tug. The assist tugs shall escort the vessel through its transit and must be stationed so as to provide immediate assistance in response to the loss of power or steering of the cargo vessel, its towing tug, or loss of control over the tow.

(5) Vessels to which this regulation applies may be required by the Sector Commander or his designated representative to be escorted by a Coast Guard vessel during their transit. In addition, if a vessel master, agent, or pilot has concerns about the safety of a vessel's transit through the Humboldt Bay Entrance Channel, a Coast Guard escort may be requested. Requests for an escort should be directed to Station on VHF-FM channel 16 or at (707) 443-2213 between 6:30 a.m. and 10 p.m., or to Sector on VHF-FM channel 16 or at (707) 839-6113 if between 10 p.m. and 6:30 a.m.

(e) ***Enforcement.*** Acting as a representative of the Captain of the Port, the Humboldt Bay Sector Commander will enforce this regulation and has the authority to take steps necessary to ensure the safe transit of vessels in Humboldt Bay. The Sector Commander can enlist the aid and cooperation of any Federal, State, county, and municipal agency to assist in the enforcement of the regulation. All persons and vessels shall comply with the instructions of the Sector Commander or the designated on-scene patrol personnel. Patrol personnel comprise commissioned, warrant, and petty officers of the Coast Guard onboard Coast Guard, Coast Guard Auxiliary, local, State, and Federal law enforcement vessels.

Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

[CGD11-05-006, 70 FR 49492, Aug. 24, 2005]

—INTERNATIONAL—
Steering and Sailing Rules

RULE 9
Narrow Channels

(a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e)

(i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(i). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(ii) and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d).

(ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

—INLAND—
Steering and Sailing Rules

RULE 9
Narrow Channels

(a)

(i) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(ii) Notwithstanding paragraph (a)(i) and Rule 14(a), a power-driven vessel operating in narrow channels or fairways on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel shall use the danger signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e)

(i) In a narrow channel or fairway when overtaking, the power-driven vessel intending to overtake another power-driven vessel shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c) and take steps to permit safe passing. The power-driven vessel being overtaken, if in agreement, shall sound the same signal and may, if specifically agreed to take steps to permit safe passing. If in doubt she shall sound the danger signal prescribed in Rule 34(d).

(ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Every vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

MARINE SAFETY
INFORMATION BULLETIN (MSIB): 23-01

January 05, 2023

U.S. Coast Guard Sector San Francisco
Department of Homeland Security

Requirements for Humboldt Bay Bar Crossing for Tank Vessels

This bulletin advises mariners on the procedures for tank vessels to request permission from the Sector Humboldt Bay Commander to cross the Humboldt Bay Bar in accordance with the Regulated Navigation Area (RNA) described in **33 CFR § 165.1195**. The RNA includes all navigable waters of the Humboldt Bay Bar Channel and the Humboldt Bay Entrance Channel, Humboldt Bay, CA. A tank vessel is defined in **33 CFR § 165.1195(b)** "as any vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue."

In accordance with **33 CFR § 165.1195**, a tank vessel is required to request permission for every bar crossing, to include inbound and outbound transits, within four hours of crossing. Permission must be requested by contacting Station Humboldt Bay on VHF-FM Channel 16 or (707) 443-2213. If unable to reach Station Humboldt Bay, contact Sector Humboldt Bay at VHF-FM Channel 16 or (707) 839-6113.

Bar crossings will not be permitted if all the following conditions are not met:

(1) Sector Humboldt Bay Commander has granted permission to cross;
(2) Sea conditions at the bar are less than six feet;
(3) Winds at the bar are less than 30 knots;
(4) The transit will take place during daylight hours;
(5) The vessel has only a single tow or no tow;
(6) The visibility at the bar is greater than 1,000 yards; an
(7) The vessel and tow are in proper operating condition.

The Master of the vessel may request a waiver to cross the bar from the Sector Humboldt Bay Commander at least four hours prior to the planned bar crossing time using the same communication method as above. The waiver request must contain the following:

(1) A description of the proposed operation;
(2) The conditions for which the waiver is requested;
(3) The reasons for requesting the waiver;
(4) The reasons that the requester believes the proposed operation can be accomplished safely; and
(5) A callback phone number.

The Sector Humboldt Bay Commander has the final authority to grant permission to cross the bar, close the bar, or grant a waiver. The Sector Humboldt Bay Commander decision will be communicated to the Master of the tank vessel by Sector Humboldt Bay via Station Humboldt Bay.

More information on this RNA can be found in 33 CFR § 165.1195. Any tank vessel that fails to receive proper permission to transit the RNA from the Sector Humboldt Bay Commander may be subject to enforcement action, to include Civil Penalty of not more than $103,050 for each violation.

For additional information regarding this bulletin, please contact the U.S. Coast Guard Sector Humboldt Bay at (707) 839-6113 or Sector San Francisco Waterways Management Division at SFWaterways@uscg.mil or 415-399-7401.

Sincerely,

TAYLOR Q. LAM
Captain, U.S. Coast Guard
Captain of the Port of San Francisco & Northern California
U.S. Coast Guard Sector San Francisco

U.S. Department of Transportation
United States Coast Guard

Commanding Officer
U. S. Coast Guard
Marine Safety Office
San Francisco Bay

Building 14
Coast Guard Island
Alameda, CA 94501
(510) 437-3073

COTPNOTE 02-92
APR 15 1992

CAPTAIN OF THE PORT, SAN FRANCISCO PUBLIC NOTICE 02-92

Subj: ENFORCEMENT OF NAVIGATION RULES IN HUMBOLDT BAY

PURPOSE: This notice provides a listing of the major deep draft channels in Humboldt Bay and adjacent waters which the Captain of the Port considers to be "narrow channels or fairways" within the meaning of the International and Inland Rules of the Road.

DISCUSSION: Rule 9, in both the International and Inland Rules of the Road, provides requirements for vessels navigating in the vicinity of narrow channels or fairways. Vessels and powerboats less than 20 meters (approximately 65 feet), all sailboats and vessels engaged in fishing **shall not impede** the passage of a vessel **that can safely navigate only within a narrow channel or fairway.** The term "shall not impede" means a small craft must keep well clear and not hinder or interfere with the transit of larger vessels. Small craft and fishing vessels shall not anchor or fish in narrow channels if large vessels or barges being towed are transiting. The "shall not impede" requirement does not change the traditional give-way or stand-on assignment between vessels.

Coast Guard enforcement efforts, combined with a public education and information program, are further intended to draw public attention to the serious hazards created when large vessels are impeded by smaller vessels. This effort should result in an improved level of navigational safety and reduce the risk of collisions, groundings and their potential consequences.

The listing of channels is not all inclusive, but it identifies areas where deep draft commercial and public vessels routinely operate. The Captain of the Port considers the following areas to be "narrow channels or fairways" for the purpose of enforcing the International and Inland Rules of the Road:

a. **Humboldt Bay Bar Channel** in its entirety.

b. **Humboldt Bay Entrance Channel** in its entirety

c. **Fields Landing Channel** in its entirety.

d. **North Bay Channel** in its entirety.

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e. Eureka Channel; Outer Reach and Inner Reach in its entirety.

f. Samoa Channel in its entirety.

g. All other government maintained channels and turning basins.

Rules of the Road Enforcement: Timely reporting and enforcement of Rules of the Road infractions promotes safer navigation. Vessel masters, pilots and operators are encouraged to report incidents which merit investigation. Reports will be fully investigated and may result in license suspension or revocation proceedings or the assessment of civil penalties.

J. M. MacDONALD
Captain, U. S. Coast Guard
Captain of the Port

Title 46 - Shipping
Chapter I - Coast Guard, Department of Homeland Security
Subchapter B - Merchant Marine Officers and Seamen
Part 15 - Manning Requirements
Subpart H - Computations

Source: CGD 81-059, 52 FR 38652, Oct. 16, 1987, unless otherwise noted. Redesignated by USCG-2004-17914, 78 FR 78001, Dec. 24, 2013.
Authority: 46 U.S.C. 2101, 2103, 3306, 3703, 8101, 8102, 8103, 8104, 8105, 8301, 8304, 8502, 8503, 8701, 8702, 8901, 8902, 8903, 8904, 8905(b), 8906 and 9102; and DHS Delegation No. 00170.1, Revision No. 01.2.
Source: CGD 81-059, 52 FR 38652, Oct. 16, 1987, unless otherwise noted.

§ 15.812 Pilots.

(a) Except as specified in paragraph (f) of this section, the following vessels, not sailing on register, when underway on the navigable waters of the United States, must be under the direction and control of an individual qualified to serve as pilot under paragraph (b) or (c) of this section, as appropriate:

(1) Coastwise seagoing vessels propelled by machinery and subject to inspection under 46 U.S.C. Chapter 33, and coastwise seagoing tank barges subject to inspection under 46 U.S.C. Chapter 37.

(2) Vessels that are not authorized by their COI to proceed beyond the Boundary Line established in part 7 of this chapter, are in excess of 1,600 GRT propelled by machinery, and are subject to inspection under 46 U.S.C. Chapter 33.

(3) Vessels operating on the Great Lakes, that are propelled by machinery and subject to inspection under 46 U.S.C. Chapter 33, or are tank barges subject to inspection under 46 U.S.C. Chapter 37.

(b) The following individuals may serve as a pilot on a vessel subject to paragraph (a) of this section, when underway on the navigable waters of the United States that are designated areas:

(1) An individual holding a valid first-class pilot's license or MMC officer endorsement as first-class pilot, operating within the restrictions of his or her credential, may serve as pilot on any vessel to which this section applies.

(2) An individual holding a valid license or MMC officer endorsement as master or mate, employed aboard a vessel within the restrictions of his or her credential, may serve as pilot on a vessel of not more than 1,600 GRT propelled by machinery, described in paragraphs (a)(1) and (a)(3) of this section, provided he or she -

(i) Is at least 21 years old;

(ii) Is able to show current knowledge of the waters to be navigated, as required in § 11.713 of this subchapter; and

(iii) Provides evidence of completing a minimum of four roundtrips over the route to be traversed while in the wheelhouse as watchstander or observer. At least one of the roundtrips must be made during the hours of darkness if the route is to be traversed during darkness.

(3) An individual holding a valid license or MMC officer endorsement as master, mate, or operator employed aboard a vessel within the restrictions of his or her credential, may serve as pilot on a tank barge or tank barges totaling not more than 10,000 GRT/GT, described in paragraphs (a)(1) and (a)(3) of this section, provided he or she -

(i) Is at least 21 years old

(ii) Is able to show current knowledge of the waters to be navigated, as required in § 11.713 of this subchapter

(iii) Has a current physical examination in accordance with the provisions of § 11.709 of this subchapter

(iv) Has at least 6 months of service in the deck department on towing vessels engaged in towing operations; an

(v) Provides evidence of completing a minimum of 12 roundtrips over the route to be traversed, as an observer or under instruction in the wheelhouse. At least three of the roundtrips must be made during the hours of darkness if the route is to be traversed during darkness

(c) An individual holding a valid license or MMC officer endorsement as master, mate, or operator, employed aboard a vessel within the restrictions of his or her credential, may serve as a pilot for a vessel subject to paragraphs (a)(1) and (a)(2) of this section, when underway on the navigable waters of the United States that are not designated areas of pilotage waters, provided he or she -

(1) Is at least 21 years old

(2) Is able to show current knowledge of the waters to be navigated, as required in § 11.713 of this subchapter; an

(3) Has a current physical examination in accordance with the provisions of § 11.709 of this subchapter

(d) In any instance in which the qualifications of a person satisfying the requirements for pilotage through the provisions of this subpart are questioned by the Coast Guard, the individual must, within a reasonable time, provide the Coast Guard with documentation proving compliance with the applicable portions of paragraphs (b) and (c) of this section

(e) Federal pilotage requirements contained in paragraphs (a) through (d) of this section are summarized in the following two quick reference tables

(1) Table 1 to § 15.812(e)(1) provides a guide to the pilotage requirements for inspected, self-propelled vessels.

Title 33 - Navigation and Navigable Waters
Chapter I - Coast Guard, Department of Homeland Security
Subchapter P - Ports and Waterways Safety
Part 160 - Ports and Waterways Safety - General
Subpart C - Notification of Arrival, Hazardous Conditions, and Certain Dangerous Cargoes

Source: USCG-2002-11865, 68 FR 9543, Feb. 28, 2003, unless otherwise noted.
Authority: 46 U.S.C. 70001-70003, 70034, and Chapter 701; DHS Delegation 00170.1, Revision No. 01.2. Subpart C is also issued under the authority of 46 U.S.C. 3715 and 46 U.S.C. 70011.
Source: CGD 79-026, 48 FR 35404, Aug. 4, 1983, unless otherwise noted.

§ 160.203 Applicability.

(a) This subpart applies to the following vessels that are bound for or departing from ports or places within the navigable waters of the United States, as defined in 33 CFR 2.36(a), which includes internal waters and the territorial seas of the United States, and any deepwater port as defined in 33 CFR 148.5:

(1) U.S. vessels in commercial service, and

(2) All foreign vessels.

(b) Unless otherwise specified in this subpart, the owner, agent, master, operator, or person in charge of a vessel regulated by this subpart is responsible for compliance with the requirements in this subpart.

(c) Towing vessels controlling a barge or barges required to submit an NOA under this subpart must submit only one NOA containing the information required for the towing vessel and each barge under its control.

[USCG-2002-11865, 68 FR 9543, Feb. 28, 2003, as amended by USCG-2004-19963, 70 FR 74669, Dec. 16, 2005. Redesignated and amended at 80 FR 5330, 5331, Jan. 30, 2015]

Port Safety Category Statistics

Calendar Year 2022

Safety Category	Reported Incidences
Total Number of Captain of the Port Orders for the Period	00
Marine Casualties (reportable CG-2692) within MSD jurisdiction: Allision, Collision, Fire, Flooding, Capsize, Grounding, Sinking, Personnel Injuries, and Loss of Steering, Propulsion, or Power	24
Total Number of (routine) Navigational Safety Issues or Letters of Deviation	00
Waterway events requiring CG permit	03
Marine Pollution Response	**Reported Incidences**
Commercial Vessels	00
Commercial Fishing Vessels	07
Recreational Fishing Vessels	05
Facilities	00
USCG Regulated Oil Transfer Facilities	00
Waterfront Facilities	00
Mystery Spills (No Verified Source)	
Crescent City	04
Humboldt Bay	06
Noyo River	03
Offshore	00
Total Oil / HAZMAT Pollution Incidents including vehicles within MSD Area of Responsibility	01
Spill Volumes	
Spills Less than 10 Gallons	00
Spills 10-100 Gallons	12
Spills > 100 Gallons	00
Potential Pollution Incidents Mitigated by Response Efforts (Since Previous Meeting)	01
USCG Civil Penalty Actions Resulting From Pollution	00
Civil Penalties for CG Hearing Officer Consideration	00
Notices of Violation (Tickets)	00
Letters of Warning	12
Total Penalty Actions	12

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
			CALIFORNIA - Eleventh District				
	SAN FRANCISCO TO POINT ARENA (Chart 18640)						
382	*NOAA Environmental Lighted Buoy 46059*	38-04-09.000N 129-58-34.000W	Fl (4)Y 20s			Yellow boat-shaped buoy.	Aid maintained by National Oceanic and Atmospheric Administration.
385	**Point Reyes Light**	37-59-44.205N 123-01-23.413W	Fl W 5s	265	14	Cylindrical structure on top of square building. 37	HORN: 1 blast ev 30s (3s bl), operates continuously.
390	*NOAA Environmental Buoy 46013*	38-14-05.000N 123-19-01.000W	Fl (4)Y 20s		4	Yellow disc-shaped buoy.	Aid maintained by National Oceanic and Atmospheric Administration.
395	*Bodega Head Lighted Whistle Buoy 30*	38-17-08.012N 123-04-13.055W	Fl R 6s		4	Red.	
415	*Arena Cove Lighted Bell Buoy A*	38-54-39.221N 123-43-35.029W	Mo (A) W		4	Red and white stripes with red spherical topmark.	
420	**Point Arena Light**	38-57-17.139N 123-44-26.214W	Fl W 15s	155	14	Light House 115	
	POINT ARENA TO TRINIDAD HEAD (Chart 18620)						
430	*Albion River Lighted Whistle Buoy AR*	39-13-36.653N 123-47-18.238W	Mo (A) W		4	Red and white stripes with red spherical topmark.	
435	Little River Bell Buoy LR	39-15-57.085N 123-48-02.568W				Red and white stripes with red spherical topmark.	
440	Mendocino Bay Whistle Buoy MB	39-17-51.942N 123-48-44.130W				Red and white stripes with red spherical topmark.	
445	*NOAA Environmental Lighted Buoy 46014*	39-13-50.921N 123-58-27.430W	Fl (4)Y 20s			Yellow disc-shaped buoy.	Aid maintained by National Oceanic and Atmospheric Administration.
	SAN DIEGO TO CAPE MENDOCINO (Chart 18020)						
448	*Dart Tsunami Warning Lighted Buoy Station 46411*	39-20-06.000N 127-04-12.000W	Fl (4)Y 20s				Aid maintained by National Oceanic and Atmospheric Administration.
	POINT ARENA TO TRINIDAD HEAD (Chart 18620)						
450	**Point Cabrillo Light**	39-20-54.905N 123-49-33.828W	Fl W 10s	81	22	Light House 47	Emergency light of reduced intensity when main light is extinguished.
455	*Noyo Approach Lighted Whistle Buoy NA*	39-25-55.083N 123-49-59.550W	Mo (A) W		4	Red and white stripes with red spherical topmark.	
465	*Point Delgada Lighted Whistle Buoy 36*	40-00-15.330N 124-04-51.966W	Fl R 6s		4	Red.	
470	Shelter Cove Entrance Bell Buoy 1	40-00-34.430N 124-03-35.464W				Green.	
478	*Scripps Waverider Lighted Research Buoy 094*	40-17-41.400N 124-43-54.600W	Fl (5)Y 20s			Yellow sphere with whip antenna.	Private aid.
485	*Blunts Reef Lighted Bell Buoy 40*	40-26-49.048N 124-29-56.772W	Fl R 2.5s		5	Red.	
490 8130	*Humboldt Bay Entrance Lighted Whistle Buoy HB*	40-46-24.085N 124-16-13.616W	Mo (A) W		4	Red and white stripes with red spherical topmark.	AIS: MMSI 993692035
500	*NOAA Environmental Lighted Buoy 46022*	40-44-53.000N 124-31-37.000W	Fl (4)Y 20s			Yellow disc-shaped buoy.	Aid maintained by National Oceanic and Atmospheric Administration.
505	*Scripps Waverider Lighted Research Buoy 168*	40-53-45.660N 124-21-25.200W	Fl (5)Y 20s			Yellow sphere with whip antenna.	Private aid.
510	*NOAA Environmental Lighted Buoy 46006*	40-45-52.000N 137-22-37.000W	Fl (4)Y 20s		4	Yellow disc-shaped buoy.	Aid maintained by National Oceanic and Atmospheric Administration.
515	Pilot Rock Gong Buoy 2	41-02-37.860N 124-09-20.707W				Red.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
	CALIFORNIA - Eleventh District						
	BODEGA AND TOMALES BAY						
	Tomales Bay						
8065	Hog Island Daybeacon	38-12-01.963N 122-56-36.591W				JG on pile.	
8070	- Daybeacon 7	38-11-44.470N 122-56-35.241W				SG on pile.	
8075	- Daybeacon 10	38-11-17.646N 122-55-51.094W				TR on pile.	
	ELK TO FORT BRAGG						
	Albion River						
8080	- LIGHT 1	39-13-41.412N 123-46-26.660W	Q G	35	3	SG on pile.	HORN: 1 blast ev 30s (3s bl) Operates by keying microphone five times on VHF-FM Chan. 22A
	ANACAPA PASSAGE (Chart 18729)						
	ELK TO FORT BRAGG						
	Noyo River						
8085	- *Entrance Lighted Bell Buoy 2*	39-25-47.038N 123-49-21.105W	Fl R 2.5s		3	Red.	
8090	- *Entrance Lighted Buoy 3*	39-25-46.217N 123-49-01.694W	Fl G 2.5s		3	Green.	
8095	- ENTRANCE LIGHT 4	39-25-38.918N 123-48-36.113W	Fl R 4s	17	4	TR on pile.	
8100	- ENTRANCE LIGHT 5	39-25-41.202N 123-48-37.323W	Oc G 4s	28	4	SG on pile.	
8101	**- Sound Signal**	39-25-41.202N 123-48-37.323W				On pile.	HORN: 1 blast ev 30s (3s bl). operates continuously.
8105	- DIRECTIONAL LIGHT	39-25-38.280N 123-48-27.192W	F W R G	17		On pile.	White light in center of channel (103.5°-106.5°). Red light when right of inbound channel (100°-103.5°). Green light when left of inbound channel (106.5°-110°).
8110	- LIGHT 8	39-25-38.305N 123-48-21.971W	Fl R 4s	15	4	TR on pile.	
8115	- LIGHT 9	39-25-39.664N 123-48-20.431W	Fl G 2.5s	15	3	SG on post.	
8116	- ENTRANCE SMALL BOAT WARNING LIGHT	39-25-39.656N 123-48-20.285W	Q Y	15	8	NR labeled ROUGH BAR on tower.	Lights flash when seas exceed eight feet in height. Lights extinguished for lesser sea conditions, but with no guarantee that bar is safe.
8120	- LIGHT 10	39-25-37.014N 123-48-20.488W	Fl R 2.5s	15	4	TR on pile.	
8125	- LIGHT 12	39-25-26.322N 123-48-08.637W	Fl R 4s	5	3	TR on pile.	
	CALIFORNIA - Eleventh District						
	HUMBOLDT BAY (Chart 18622)						
	Humboldt Bay						
8130 490	- *Entrance Lighted Whistle Buoy HB*	40-46-24.085N 124-16-13.616W	Mo (A) W		4	Red and white stripes with red spherical topmark.	AIS: MMSI 993692035
8135	- *Lighted Bell Buoy 2*	40-45-56.815N 124-14-57.512W	Fl R 4s		3	Red.	Seasonal Aid 01 May to 31 Oct. AIS active year round: MMSI: 993692213
8136	- ENTRANCE SMALL BOAT WARNING SIGN LIGHT Located at CG station.	40-46-01.662N 124-13-00.574W	Q Y	12	3		Lights flash when seas exceed six feet in height. Hazardous Bar Conditions Advisory will also be broadcast when seas exceed ten feet in height. Lights extinguished for lesser sea conditions, but with no guarantee that bar is safe.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
			CALIFORNIA - Eleventh District				
	HUMBOLDT BAY (Chart 18622)						
	Humboldt Bay						
8140	- APPROACH RANGE FRONT LIGHT	40-45-52.612N 124-13-53.396W	Q W	39		KRW on Dolphin.	Visible 4° each side of the rangeline. Horn: 2 Blasts ev 20s (2s bl-2s si-2s bl-14s si). Light and Horn operate throughout 24 hours.
8145	- APPROACH RANGE REAR LIGHT 150 yards, 105.3° from front light.	40-45-51.442N 124-13-47.762W	Oc W 4s	57		KRW on pile.	Visible 4° each side of the rangeline. Lighted throughout 24 hours.
8150	- ENTRANCE LIGHT 3	40-46-07.902N 124-14-19.610W	Fl G 2.5s	37	5	SG on white cylindrical structure labeled NORTH.	
8155	- ENTRANCE LIGHT 4	40-45-52.572N 124-14-37.798W	Fl R 2.5s	57	5	TR on white cylindrical structure labeled SOUTH.	HORN: 1 blast ev 10s (1s bl), operates continuously.
8165	- ENTRANCE RANGE FRONT LIGHT	40-45-05.529N 124-13-35.572W	Q G	22		KRW on Dolphin.	Visible 1.5° each side of the rangeline. Lighted throughout 24 hours.
8170	- ENTRANCE RANGE REAR LIGHT 269 yards, 140.3° from front light.	40-44-59.407N 124-13-28.879W	Oc G 4s	41		KRW on Dolphin.	Visible 1.5° each side of the rangeline. Lighted throughout 24 hours.
8175	- *Lighted Bell Buoy 5*	40-45-25.997N 124-13-50.679W	Fl G 4s		4	Green.	
8180	- LIGHT 6	40-45-23.754N 124-14-04.154W	Fl R 4s	30	3	TR on pile.	
8185	- *Lighted Bell Buoy 7*	40-45-21.036N 124-13-38.303W	Fl G 4s		4	Green.	
8190	- *Lighted Bell Buoy 8*	40-45-08.016N 124-13-31.110W	Q R		3	Red.	
8195.1	- LIGHT 9	40-45-26.441N 124-13-25.363W	Fl G 2.5s		4		Fl G 2.5S
8200	- *Lighted Buoy 10*	40-45-30.596N 124-13-10.283W	Fl R 4s		3	Red.	
8205	- LIGHT 11	40-45-35.504N 124-13-16.473W	Fl G 4s	35	4	SG on pile.	
8210	- LIGHT 12	40-45-54.198N 124-12-51.976W	Fl R 6s	15	4	TR on Dolphin.	
8216	- LIGHT 13	40-46-03.815N 124-12-55.397W	Fl G 6s	20	4	SG on pile.	
8220	- LIGHT 14	40-46-05.598N 124-12-38.754W	Fl R 2.5s	15	3	TR on pile.	
8225	- *Lighted Buoy 15*	40-46-28.424N 124-12-13.498W	Fl G 4s		4	Green.	
8230	- LIGHT 16	40-46-24.521N 124-12-07.631W	Fl R 4s	15	4	TR on pile.	
8235	- *Lighted Buoy 17*	40-46-45.442N 124-11-55.933W	Fl G 2.5s		3	Green.	
8237	DEL NORTE STREET PIER LIGHT A	40-47-26.000N 124-11-20.000W	Fl R 4s	10		On post.	Private aid.
8245	SAMOA CHANNEL LIGHT 2	40-48-07.643N 124-11-10.789W	Fl R 2.5s	15	3	TR on pile.	Ra ref.
8248.1	- *Seaweed Farm Danger Buoy 1*	40-48-31.590N 124-11-10.390W	Fl Y 4s				Private aid.
8248.2	- *Seaweed Farm Danger Buoy 2*	40-48-29.410N 124-11-11.320W	Fl W 4s				Private aid.
8248.3	- *Seaweed Farm Danger Buoy 3*	40-48-26.470N 124-11-12.370W	Fl Y 4s				Private aid.
8248.4	- *Seaweed Farm Danger Buoy 4*	40-48-31.590N 124-11-10.010W	Fl Y 4s				Private aid.
8248.5	- *Seaweed Farm Danger Buoy 5*	40-48-29.260N 124-11-10.540W	Fl Y 4s				Private aid.
8248.6	- *Seaweed Farm Danger Buoy 6*	40-48-26.460N 124-11-11.570W	Fl Y 4s				Private aid.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
			CALIFORNIA - Eleventh District				
	HUMBOLDT BAY (Chart 18622)						
	Humboldt Bay						
8248.7	- *Seaweed Farm Danger Buoy 7*	40-48-23.590N 124-11-13.380W	Fl Y 4s				Private aid.
8248.8	- *Seaweed Farm Danger Buoy 8*	40-48-23.590N 124-11-13.010W	Fl Y 4s				Private aid.
8249.1	- *Aqua Farm Danger Buoy 1*	40-48-26.000N 124-11-15.240W	Fl Y 4s				Private aid.
8249.2	- *Aqua Farm Danger Buoy 2*	40-48-24.000N 124-11-16.180W	Fl Y 4s				Private aid.
8249.3	- *Aqua Farm Danger Buoy 3*	40-48-24.000N 124-11-14.010W	Fl Y 4s				Private aid.
8249.4	- *Aqua Farm Danger Buoy 4*	40-48-26.860N 124-11-16.180W	Fl Y 4s				Private aid.
8250	SAMOA CHANNEL LIGHT 3	40-48-33.041N 124-11-06.563W	Fl G 4s	15	4	SG on pile.	
8251.1	- *Kelp Farm Danger Buoy 1*	40-48-37.440N 124-11-12.470W	Fl Y 4s			Regulatory Buoy, White w/ Orange Diamond.	Private aid.
8251.2	- *Kelp Farm Danger Buoy 2*	40-48-38.700N 124-11-11.650W	Fl Y 4s			Regulatory Buoy, White w/ Orange Diamond.	Private aid.
8251.3	- *Kelp Farm Danger Buoy 3*	40-48-36.400N 124-11-10.460W	Fl Y 4s			Regulatory Buoy, White w/ Orange Diamond.	Private aid.
8251.4	- *Kelp Farm Danger Buoy 4*	40-48-37.790N 124-11-09.620W	Fl Y 4s			Regulatory Buoy, White w/ Orange Diamond.	Private aid.
8255	SAMOA CHANNEL LIGHT 4	40-48-50.172N 124-10-46.144W	Fl R 4s	15	3	TR on pile.	
8260	SAMOA TURNING BASIN LIGHT 6	40-49-00.901N 124-10-29.637W	Fl R 2.5s	15	3	TR on pile.	
8265	- LIGHT 19	40-48-13.436N 124-10-58.098W	Fl G 4s	20	4	SG on pile.	
8270	- LIGHT 21	40-48-26.142N 124-10-09.970W	Fl G 2.5s	15	3	SG on pile.	Ra ref.
8275	WOODLEY ISLAND MARINA LIGHT	40-48-25.230N 124-10-00.220W	Fl G 4s			SG on pile.	On floating breakwater. Private aid.
	Humboldt Bay						
	Hookton Channel						
8280	- *Lighted Buoy 1*	40-44-53.790N 124-13-20.878W	Fl G 4s		4	Green.	
8285	- LIGHT 2	40-44-56.688N 124-13-28.258W	Fl R 4s	15	3	TR on pile.	
8290	- LIGHT 3	40-44-38.465N 124-13-28.231W	Fl G 2.5s	20	4	SG on pile.	
8295	- RANGE FRONT LIGHT 4	40-44-32.957N 124-13-37.496W	Q R	20		KRW and TR on pile.	Visible all around; higher intensity on the rangeline.
8300	- RANGE REAR LIGHT 103 yards, 327.9° from front light.	40-44-35.513N 124-13-39.725W	Iso R 6s	30		KRW on pile.	Visible all around; higher intensity on the rangeline.
8305	- LIGHT 5	40-44-32.484N 124-13-30.256W	Fl G 4s	15	4	SG on pile	
8310	- LIGHT 6	40-44-24.672N 124-13-33.892W	Fl R 2.5s	15	3	TR on pile.	
8315	- LIGHT 7	40-44-26.267N 124-13-28.593W	Fl G 4s	20	4	SG on pile.	
8320	- LIGHT 8	40-44-15.564N 124-13-25.312W	Fl R 6s	15	4	TR on pile.	
8325	PACIFIC GAS AND ELECTRIC DIKE LIGHT	40-44-10.454N 124-13-12.219W	Fl W 4s	18		Dolphin.	Private aid.
8330	- LIGHT 10	40-44-01.524N 124-13-14.086W	Fl R 4s	15	3	TR on pile.	Ra ref.
8335	- Daybeacon 9	40-44-04.301N 124-13-08.882W				SG on pile.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
	CALIFORNIA - Eleventh District						
	Humboldt Bay						
	Hookton Channel						
8340	- LIGHT 12	40-43-52.086N 124-13-14.014W	Fl R 2.5s	15	3	TR on pile.	
8345	- LIGHT 13	40-43-34.800N 124-13-19.456W	Fl G 2.5s	15	3	SG on pile	
8350	- LIGHT 14	40-43-19.974N 124-13-34.262W	Fl R 4s	15	3	TR on pile.	Ra ref.
	ST. GEORGE REEF AND CRESCENT CITY HARBOR (Chart 18603)						
	Crescent City Harbor						
8355	- Buoy 1	41-44-13.414N 124-12-49.680W				Green can.	
8360 545	- *Lighted Whistle Buoy 2*	41-42-59.729N 124-11-47.956W	Fl R 6s		4	Red.	
8365	- *Lighted Whistle Buoy 4*	41-43-34.400N 124-11-19.347W	Fl R 4s		4	Red.	
8370 550	CRESCENT CITY ENTRANCE LIGHT	41-44-11.025N 124-11-27.741W	Fl W 5s	55	9	On post	HORN: 1 blast ev 10s (1s bl), operates continuously.
8375	- *Lighted Bell Buoy 6*	41-44-14.427N 124-11-19.346W	Fl R 2.5s		4	Red.	
8380	- *Lighted Buoy 7*	41-44-16.427N 124-11-23.346W	Fl G 2.5s		4	Green.	
8385	CRESCENT CITY INNER BREAKWATER LIGHT 8	41-44-36.504N 124-11-17.884W	Fl R 4s	30	5	TR on pile.	
8386	- LIGHT 9	41-44-41.313N 124-11-12.858W	Fl G 2.5s	15	3	SG on pile.	
8387	- LIGHT 10	41-44-39.213N 124-11-08.758W	Fl R 2.5s	15	3	TR on pile.	
8388	- LIGHT 11	41-44-43.913N 124-11-06.858W	Fl G 4s	15	4	SG on pile.	
8390	- RANGE FRONT LIGHT	41-44-59.802N 124-11-21.171W	Fl G 2.5s	23		KRG on pile.	Visible 4° each side of the rangeline.
8395	- RANGE REAR LIGHT 79 yards, 359.9° from front light.	41-45-02.146N 124-11-21.175W	Oc G 4s	39		KRG on pile.	Visible 4° each side of the rangeline.
	LAKE TAHOE - Eleventh District						
	LAKE TAHOE						
8403	- LONG PIER LIGHT	39-09-04.000N 120-08-25.000W	Fl R 6s	30		On post.	Private aid.
8405	SUGAR PINE POINT LIGHT	39-03-40.532N 120-06-50.197W	Fl W 4s	15	8	NR on post.	
	Lake Tahoe						
8410	- Buoy A	39-13-10.291N 120-00-16.206W				White can with orange bands.	
8415	- *Lighted Danger Buoy B*	39-13-03.349N 120-00-36.285W	Fl W 2.5s		3	White can with orange bands.	
8420	- Buoy C	39-13-13.292N 120-00-43.164W				White can with orange bands.	
8425	- Buoy D	39-14-01.890N 120-02-20.579W				White can with orange bands.	
8430	- Buoy E	39-12-24.092N 120-05-18.295W				White can with orange bands.	
8435	- *Lighted Danger Buoy G*	39-11-04.630N 120-05-31.249W	Fl W 4s		3	White can with orange bands.	
8436	- Buoy H	39-10-39.868N 120-06-10.467W				White can with orange bands.	
8440	- Buoy I	39-10-32.010N 120-06-52.894W				White can with orange bands.	
8442	- Buoy J	39-10-06.189N 120-08-07.050W				White can with orange bands.	
8462	- Buoy 0	38-56-42.894N 120-00-46.938W				White can with orange bands.	
8464	*Emerald Bay Entrance Lighted Buoy 1*	38-57-53.314N 120-04-54.027W	Fl G 4s		3	Green.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
			ALASKA - Seventeenth District				
	KODIAK ISLAND (Chart 16580)						
	Shuyak Strait						
27050	ALLIGATOR ISLAND LIGHT	58-28-28.118N 152-47-16.755W	Fl W 6s	72	7	NR on skeleton tower.	
27055	LIGHTHOUSE POINT LIGHT	58-28-56.702N 152-39-09.451W	Fl W 4s	60	5	NR on small house.	Obscured from 285° to 073.5°.
	ALASKA PENINSULA AND ALEUTIAN ISLANDS (Chart 16011, 16013)						
	Alaska Peninsula						
27060	CHIGNIK SPIT LIGHT	56-18-34.559N 158-23-01.415W	Fl W 4s	35	6	NR on skeleton tower.	Obscured west of 238°.
27061	CHIGNIK BOAT HARBOR ENTRANCE LIGHT 1	56-18-18.017N 158-22-52.449W	Fl G 4s	31	5	SG on spindle.	Position approximate.
27062	Chignik Boat Harbor Entrance Day Beacon 2	56-18-16.373N 158-22-47.851W				TR on skeleton tower on breakwater.	
	Shumagin Islands						
27070	ANDRONICA ISLAND LIGHT	55-20-44.604N 160-03-40.437W	Fl W 4s	115	7	On skeleton tower.	Obscured from 275° to 291.5° and from 317° to 078°.
27075	MXAK Sand Point ASTA	55-18-58.356N 160-23-12.084W					AIS transceiver. MMSI: 993032045 Private aid.
27080	POPOF STRAIT ENTRANCE LIGHT 1	55-21-18.296N 160-30-18.026W	Fl G 4s	50	5	SG on skeleton tower.	
27085	*Popof Strait Lighted Buoy 3*	55-20-43.731N 160-31-05.323W	Fl G 6s		4	Green.	
27090	*Unga Reef Lighted Buoy 4*	55-20-15.430N 160-31-20.325W	Fl R 4s		3	Red.	
27095	*Popof Reef Lighted Gong Buoy 5*	55-20-08.192N 160-31-02.174W	Fl G 2.5s		3	Green.	
27105	HUMBOLDT HARBOR BREAKWATER LIGHT 2	55-19-56.000N 160-30-12.000W	Fl R 2.5s	24	3	TR on spindle.	Position Approximate.
27110	HUMBOLDT HARBOR BREAKWATER LIGHT 3	55-19-56.382N 160-30-03.928W	Fl G 2.5s	24	5	SG on spindle.	
27112	Caton Shoal Buoy 6	55-19-48.140N 160-31-35.794W				Red nun.	
27120	BARALOF BAY LIGHT	55-14-20.422N 160-32-08.582W	Fl W 4s	60	5	NR on skeleton tower.	Obscured from 089° to 222°.
27125	UNGA SPIT LIGHT	55-24-22.954N 160-43-50.894W	Fl W 6s	40	6	NR on skeleton tower.	Obscured from 280.5° to 060°.
27130	SEAL CAPE LIGHT	55-20-56.175N 161-15-15.997W	Fl W 4s	75	6	NR on skeleton tower.	Obscured from 172° to 235°.
27135	UKOLNOI ISLAND LIGHT	55-14-35.346N 161-39-52.105W	Fl W 6s	35	6	NR on skeleton tower.	Obscured from 238° to 052°.
27140	*Bluff Point Shoal Lighted Gong Buoy 1*	55-11-26.906N 161-52-27.993W	Fl G 2.5s		4	Green.	
27145	ARCH POINT LIGHT 2	55-12-19.080N 161-54-19.728W	Fl R 4s	78	5	TR on skeleton tower.	Obscured from 105° to 213°.
27150	*Moss Cape Lighted Buoy 4*	55-07-07.048N 161-56-15.232W	Fl R 6s		4	Red.	
27155	GOLOI SANDSPIT LIGHT 3	55-06-36.282N 161-55-29.339W	Fl G 4s	17	5	SG on skeleton tower.	Obscured from 229° to 328°.
27160	*Iliasik Passage Lighted Buoy 5*	55-01-44.895N 161-55-19.250W	Fl G 2.5s		4	Green.	
27165	Iliasik Passage Buoy 6	55-01-59.285N 161-56-02.674W				Red nun.	
27170	ILIASIK ISLANDS LIGHT	55-02-14.623N 161-56-21.604W	Fl W 6s	95	7	NR on skeleton tower.	Obscured from 120.5° to 254°.
27180	STAG POINT LIGHT	54-59-07.553N 162-18-02.609W	Fl W 4s	23	6	NR on skeleton tower.	
27181	SOUTH KING COVE HARBOR LIGHT 1	55-03-16.977N 162-19-24.859W	Fl G 4s	25	4	SG on spindle.	
27182	KING COVE DEEP WATER DOCKS LIGHTS (2)	55-03-19.000N 162-19-23.000W	Fl R 6s	21		On dolphin.	Private aid.
27185	KING COVE HARBOR ENTRANCE LIGHT 1	55-03-29.957N 162-19-24.522W	Fl G 2.5s	25	3	SG on spindle.	

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

ORDINANCE NO. 17

AN ORDINANCE ESTABLISHING RULES, REGULATIONS AND ENFORCEMENT PROCEDURES FOR THE ANCHORING, SECURITY AND DISPOSITION OF VESSELS AND PROPERTY IN HUMBOLDT BAY

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY ORDAIN AS FOLLOWS:

ARTICLE I

SHORT TITLE; DEFINITIONS

SECTION 1.1 SHORT TITLE. This Ordinance shall be known as the "Anchoring, Ordinance".

SECTION 1.2 DEFINITIONS. For the purposes of this ordinance, certain words and phrases used herein are defined as follows:

(a) "Abandoned Property" in accordance with section 522 (a) of the Harbors and Navigation Code, is any hulk, derelict, wreck, or parts of any ship, vessel or other watercraft sunk, beached, or allowed to remain in an unseaworthy or dilapidated condition upon publicly owned submerged lands, salt marsh, or tidelands within the jurisdictional limits of Humboldt Bay Harbor, Recreation and Conservation District, without its consent expressed by resolution of its legislative body, for a period longer than thirty (30) days without a watchman or other person being maintained upon or near and in charge of the property.

(b) "Anchoring" means attaching a vessel to the bottom or shore of Humboldt Bay, inclusive of the shores of Woodley Island, Indian (Gunther) Island and Daby Island using equipment, lines, ropes, chain or cable which is carried on board such vessel as regular equipment when underway.

(c) "Board" or "Board of Commissioners" means the Board of Commissioners of the Humboldt Bay Harbor, Recreation and Conservation District.

(d) "Channel" means any waterway navigable by vessels or artificially improved or created so as to be navigable by vessels.

(e) "District" means the Humboldt Bay Harbor, Recreation and Conservation District.

(f) "Exclusion Zone" means Humboldt Bay Bar Channel, Humboldt Bay Entrance Channel; Fields Landing Channel; North Bay Channel; Eureka Channel (Outer and Inner Reaches); Samoa Channel; and all government maintained channels, turning basins and fairways leading to a wharf area and within 200 yards of a wharf area, and any exclusion zone promulgated by the United States Coast Guard.

(g) "Harbor Master" means the Chief Executive Officer or a designated representative of the District.

(h) "Humboldt Bay" means the land and overlying waters, to the limit of tidal action, of what is commonly known as Humboldt Bay (inclusive of what is commonly known as South Bay and Arcata Bay) Humboldt County, California, including the land and overlying waters of all streams and estuaries tributaries as further defined in Harbor District Ordinance No. 7.

(i) "Marina" means any structure attached to shore of Humboldt Bay that is capable of securing more than six vessels simultaneously and providing any one of the following services: water, electricity, fire protection, bilge water collection and/or sewage pump out stations. Marinas may include, but are not limited to, Woodley Island Marina, Eureka Public Marina and private marinas in the community of King Salmon.

(j) "Mooring" means the use of any weight, chain, rope, floating objects, structures or appliance used alone or together for the purposes of attaching and holding a vessel in a particular place and which is not carried on board such vessel as regular equipment when underway.

(k) "Peace Officer" means every sworn peace officer of this state or of any City, County, City and County, Harbor District or other political subdivisions of the state, and shall have authority to enforce the provisions of Chapter 5 of the Harbors and Navigation Code.

(l) "Permittee" means the legal owner, operator, or any individual in possession of a vessel using an anchorage by the authority of the District under a Temporary Anchoring Permit.

(m) "Pier" means a structure built out into the water with piles for use as a landing place.

(n) "Storage" means the mooring, berthage, wharfage, or anchorage of a vessel.

(o) "Temporary Anchoring Permit" means a temporary license for the privilege to anchor or moor a vessel in Humboldt Bay under this ordinance.

(p) "Vessel" means every description of watercraft used or capable of being used as a means of transportation on water, except either of the following: (1) A seaplane on the water, or (2) A watercraft specifically designed to operate on a permanently fixed course, the movement of which is restricted to a fixed track or arm to which the watercraft is attached or by which the watercraft is controlled.

(q) "Waters" means navigable waters of the United States and waters which come under the jurisdiction of the United States Army Corps of Engineers, and any other waters within the state with the exception of those privately owned.

(r) "Wharf area" means and includes pier, wharf, bulkhead, bulkhead wharf, seawall, seawall structure, embankment, thoroughfare, and other port terminal facility areas along side of which vessels may lie or which are suitable for and are to be used in the loading and unloading, assembling, distribution and handling of merchandise.

ARTICLE II
JURISDICTION; AUTHORITY

SECTION 2.1 Under the provision of Appendix II of the California Harbors and Navigation Code the jurisdiction of the District to exercise its powers extends over the following:

(a) All tide, submerged and other lands granted to the district.

(b) Humboldt Bay as defined above, means all waters including all rivers, sloughs, estuaries, and areas tributary to Humboldt Bay as defined in Harbor District Ordinance No. 7.

(c) The protection of wildlife habitats, the improvement, protection, and

conservation of the wildlife and fish resources and the ecology of the area, the providing of open space areas and areas for recreational use with open access to the public, the enhancement of the aesthetic appearance of the bay and the area, control of dredging or filling of the bay, or both and prevention of public pollution of the bay.

SECTION 2.2 Under the authority of section 4 of Appendix II of the California Harbors and Navigation Code, the Board may:

(a) Make and enforce all necessary rules and regulations governing the use and control of all navigable waters and all tidelands and submerged lands, filled or unfilled, and other lands within the jurisdiction limits of the District.

(b) Regulate and control the anchoring, mooring, towing, docking, movement, and pilotage of all vessels.

(c) Establish and maintain a system of harbor police and may establish harbor fire protection within the jurisdictional limits of the District for the enforcement of the ordinances, rules and regulations of the District, and employ the necessary officers, who shall as to such matters have all the power of peace officers and firemen within the District; or in the alternative, the District may contract with the governmental entities whose territorial limits are adjacent to or contiguous to those of the District to provide such services.

SECTION 2.3 Duties of the Harbor Master

The Harbor Master, the Eureka Police Department, Humboldt County Sheriff Department, United States Coast Guard, or their designated representatives shall have authority to enforce the provisions of this ordinance and all lawful regulations affecting Humboldt Bay. It shall be the duty of the Harbor Master to:

(a) Carry out and enforce the orders of the Board, the provisions of this ordinance and all regulations and laws of the District, the waters and uplands within the District's jurisdiction.

(b) Assign moorings, anchorages, and berths to vessels within its jurisdiction.

(c) Execute on behalf of the District, Temporary Anchoring Permits for moorings, anchorages, and berths within the District's jurisdiction.

(d) Order any vessel improperly moored, anchored, or berthed, or in violation of any provision of this ordinance, to change its position to one as the Harbor Master shall designate or to remove the same from the District's jurisdiction, and in the event the Harbor Master's orders are not complied with, to cause such vessel to be moved and to collect the cost thereof from such vessel Permittee or owner thereof.

(e) Report promptly to the proper authorities any violation of the laws of the United States for the protection of navigation and the preservation of navigable waters or any violation of the state or local laws or regulations.

(f) Remove abandoned vessel and/or property from Humboldt Bay in accordance with Harbors and Navigation Code Section 522.

ARTICLE III
LIABILITY OF PERMITTEE

SECTION 3.1 The District is not liable in any manner or for any cause whatsoever for any vessel or its contents, gear, and equipment thereof, or any loss or damage thereto howsoever occasioned. Anchoring or mooring of any vessel is at the sole risk of the Permittee.

SECTION 3.2 The District assumes no risk on account of fire, theft, sinking, act of God, or any damage of any kind to a vessel, its equipment, or any property in or on the vessel anchoring or mooring under a Temporary Anchoring Permit within the jurisdiction of the District.

SECTION 3.3 In the event District considers it necessary to resecure or relocate a vessel for any reason, the Permittee shall pay a reasonable cost or charge therefore, plus all costs and materials used therefore. The District assume no responsibility for the safety of a vessel and is not liable for fire, theft, sinking, act of God, or any damage of any kind to a vessel, its equipment, or any property in or on the vessel by reason of District's decision either to resecure the vessel or not to resecure the vessel.

SECTION 3.4 The District, its Board of Commissioners, its Harbor Master, employees, and representatives, are not liable for removal, relocation or storage of vessels under this ordinance.

SECTION 3.5 At all times the Permittee shall comply and shall require all of Permittee's family, agents, employees, business visitors, guests and invitees to comply with all laws, ordinances, rules and regulations, including those of the local, state and

federal government.

ARTICLE IV
TEMPORARY ANCHORING PERMITS

SECTION 4.1 No vessel may anchor or moor within Humboldt Bay for a period in excess of seventy-two (72) consecutive hours without the owner, operator, or captain of the vessel first obtaining a Temporary Anchoring Permit from the District; the owner, operator, or captain of the vessel shall present proper personal identification and license, if applicable, and evidence of title or ownership of the vessel. A Temporary Anchoring Permit authorizes the holder to anchor or moor only and grants no further rights, privileges or uses. A Temporary Anchoring Permit is valid only for fourteen (14) continuous days from date of issuance or extension. A Temporary Anchoring Permit may be extended for only one additional fourteen (14)-day period at the discretion of the Harbor Master.

SECTION 4.2 A Temporary Anchoring Permit may be issued only with respect to a named individual or government entity and a single vessel and shall be valid only in respect to that individual or government entity and vessel. It shall be the responsibility of the vessel owner, operator, or captain to contact the Humboldt Bay Harbor District and apply for a Temporary Anchoring Permit within seventy-two (72) hours of anchoring in Humboldt Bay. Humboldt Bay Harbor District can be contacted at telephone number (707) 443-0801, by fax at (707) 443-0800, by E-mail at woodleyisland@portofhumboldtbay.org, or by VHF on channel 14.

SECTION 4.3 A Temporary Anchoring Permit is non-assignable and is not transferable. No attempted transfer of assignment, whether voluntary or involuntary, by operation of law, under legal process of proceedings, by receivership, in bankruptcy, or otherwise, and no attempted subletting thereof of any Temporary Anchoring Permit is valid or effective and shall automatically terminate any Temporary Anchoring Permit. Sale or transfer of a vessel covered by a Temporary Anchoring Permit immediately revokes the permit and transfers no rights or privileges inherent in the Temporary Anchoring Permit, nor guarantees the issuance of a new Temporary Anchoring Permit.

SECTION 4.4 Temporary Anchoring Permits may be reassigned at the discretion of the Harbor Master if an orderly administration of the anchoring so requires. Holders of a Temporary Anchoring Permit may apply for reassignment; however, reassignment is not a right or privilege inherent in the Temporary Anchoring Permit.

SECTION 4.5 Vessels to which Temporary Anchoring Permit apply may be temporarily assigned or reassigned to other areas under the control of the District to accommodate repairs, improvements, maintenance, construction, emergencies, or when

necessary in order to permit maximum efficient public utilization of the facilities.

SECTION 4.6 Any Temporary Anchoring Permit may be revoked immediately by the Harbor Master if the holder thereof violates any provision of this Ordinance, or any provision of the Temporary Anchoring Permit.

SECTION 4.7 As a condition to the issuance of a Temporary Anchoring Permit, the holder thereof shall at all times keep the Harbor Master informed of his/her current mailing address, telephone numbers and legal owner's name, address and telephone number, and that of any agent of the vessel or owner. The holder thereof shall also notify the Harbor Master immediately upon any change of ownership of the vessel to which the Temporary Anchoring Permit applies, and shall further notify the Harbor Master immediately upon vacating the anchorage assigned to the vessel. Failure to keep the Harbor Master informed as to the provisions set forth in the paragraph shall be grounds for revocation of the Temporary Anchoring Permit by District forthwith.

SECTION 4.8 Upon posting a notice on the vessel, notice by certified mail, return receipt requested, or by personal service delivered to the holder of a Temporary Anchoring Permit that the Temporary Anchoring Permit has been revoked by the District pursuant to this ordinance, and after the expiration of three (3) days from the date when said notice was posted on the vessel, personally delivered or Permittee was personally located but refused personal service, or three (3) days from the date that the certified mail was accepted or refused or unclaimed, the Harbor Master may remove any vessel or other personal property left by the holder thereof upon the District's jurisdiction and dispose of the same in such manner as the District may deem proper including sale or destruction of vessel or other personal property at the vessel owners and/or Temporary Anchoring Permit holder's expense.

ARTICLE V
REFUSAL OF PERMIT

SECTION 5.1 The District may refuse a Temporary Anchoring Permit to any vessel, that in the opinion of the Harbor Master poses a threat to the health, safety, or security of Humboldt Bay or in the professional judgement of the Harbor Master is in any of the following conditions: is being operated with any of the eight unsafe conditions specified in Title 14 of the California Code of Regulations, section 6550.5 (d) (1) through (8), or may present adverse effects to air, water, land, environment, and ecology, or pursuant to Section 523 of the Harbors and Navigation Code. A Permit may be denied if the vessel places an unreasonable burden on the natural resources of the area, on the public health and safety and air and water quality in the vicinity, or on parks, recreational and scenic areas, historic sites and buildings, or archeological sites in the jurisdiction of the District.

SECTION 5.2 The District is not liable in any manner or for any cause whatsoever for any vessel or its contents, gear, and equipment thereof, or any loss or damage or theft thereto howsoever occasioned due to refusal of a Temporary Anchoring Permit.

ARTICLE VI
RATES; PAYMENT OF RATES

SECTION 6.1 Anchoring rates and charges for Temporary Anchoring Permit shall be set by Resolution by the Board of Commissioners.

SECTION 6.2 All anchoring fees and other charges are payable in full at the time of issuance by the District of the Temporary Anchoring Permit. Failure to pay anchoring fees and other charges within three (3) days of due date shall be a violation of this ordinance. All fees must be paid in full at the District office located on Woodley Island, 601 Startare Drive, Eureka, California.

SECTION 6.3 Receipts shall be prepared for all moneys paid.

SECTION 6.4 (a) By anchoring or mooring a vessel in Humboldt Bay without obtaining a Temporary Anchoring Permit or acceptance of a Temporary Anchoring Permit, a vessel owner, operator, master, agent, or Permittee consents to the exercise of personal jurisdiction in either Federal U.S. District Court, Northern District or State of California Superior Court, and the removal of the vessel by the Harbor Master and the existence of a possessory lien under the Boaters Lien Law of the State of California (commencing with Section 500 of the Harbors and Navigation Code) and a maritime lien for any amounts due and payable for a Temporary Anchoring Permit or other charges incurred under this Ordinance without the requirement for further notice of a possessory lien against the vessel under the Boaters Lien Law or a maritime lien under Section 31343 of Title 46, United States Code in the amount of the fees and charges, including actual fees and costs of enforcement and attorneys fees, and to the arrest of the vessel by the United States Marshal or an individual appointed for, or serving that purpose, the recording of the lien against the vessel and lien foreclosure, and the sale of the vessel under a Marshal's sale, and to the exercise of personal jurisdiction over the owner, operator, master or agent responsible for anchoring or mooring the vessel in Humboldt Bay, or the Permittee, and to the exercise of any other available remedy under Federal or State law.

(b) The owner, operator, or master of any foreign flag or United States documented vessel shall appoint a local agent who is responsible for paying any fees or charges incurred, posting a bond or undertaking, or the removal or disposition of an

abandoned vessel under this Ordinance.

(c) The provisions of Subsection (a) of this section shall be posted in a sign and prominently displayed at the Woodley Island Marina, at the Harbor Master's office, on the District web site and included in any Temporary Anchoring Permit in not less than 14 point bold print.

ARTICLE VII
RULES AND REGULATIONS

SECTION 7.1 It is unlawful for any person to present false identification, license or evidence of vessel ownership or possession to the Harbor Master or any peace officer, or to willfully injure, break, remove or tamper with any part of any vessel under Temporary Anchoring Permit, or to climb into or upon any vessel without the consent of the owner unless in the performance of official duties or to protect life, property and environment.

SECTION 7.2 No person may throw, discharge, or deposit from any vessel or from the shore, float, or in any other manner any refuse matter, human waste, contaminated bilge water, or garbage of any kind whatsoever, on or upon the banks, walls, sidewalks, or parking area waters within the boundaries of the Harbor.

SECTION 7.3 No person may leave dead animals, fish, shellfish, bait, or other putrefying matter on or along seawalls, harbor structures, floats, piers, sidewalks, or parking areas of the Harbor.

SECTION 7.4 No person on board any vessel anchored in Humboldt Bay may use the sanitary facilities, toilet, and sinks on board such vessel unless it is equipped with a holding tank that is in proper working order. All vessels having a Temporary Anchoring Permit shall have dye tablets deposited into the holding tanks on board the vessel and may be required to show proper working order of sanitary facilities so as to not discharge any waste into the waters of Humboldt Bay.

SECTION 7.5 No person holding a Temporary Anchoring Permit may engage in exterior power spray painting. The sanding of surfaces shall be by hand or small power sanders (preferably vacuum sanders). All persons engaged in the sanding and painting of surfaces shall control all sand, paint, and dust and keep the same out of the waters of Humboldt Bay.

SECTION 7.6 At such time as it may become necessary to perform work on board a vessel involving use of welding or burning equipment, every person intending to engage in welding or burning on board a vessel shall notify the District of the nature and extent of the proposed work, the workman or company doing the work and the date and time the

work shall be performed. This notification shall be given to the District prior to the start of work and whenever practicable at least one (1) day before the work is to be performed. All vessels engaged in such welding or burning shall ensure that properly charged fire extinguishers are readily available in case of fire.

SECTION 7.7 All anchoring lines, chains, and equipment shall be provided by the Permittee and shall be sufficient number, strength and size to insure that vessel remain securely anchored under all conditions.

SECTION 7.8 Owner(s) of vessel and Permittee of a Temporary Anchoring Permit and person(s) in possession of vessels are responsible for crews and guests aboard a vessel for compliance with all rules, regulations and provisions of the Temporary Anchoring Permit while at anchor.

SECTION 7.9 All vessels are required to be either currently documented with the United States Government or currently registered with a state and must remain currently documented or registered to retain a Temporary Anchoring Permit. All foreign vessels must have proper United States Customs Service clearance.

SECTION 7.10 Speed within the Eureka Channel Inner Reach, Woodley Island Marina, Eureka Public Marina, and other marinas shall be limited to five (5) miles per hour.

SECTION 7.11 No vessel may anchor within the Exclusion Zone.

SECTION 7.12 Nothing in this ordinance relieves the Permittee of complying with all other applicable local, state, federal, or international law.

ARTICLE VIII
NON-PERMITTED VESSEL PROCEDURE

SECTION 8.1 Any vessel moored, anchored or aground in excess of seventy-two (72) hours in Humboldt Bay without a valid Anchoring Permit, would be considered to be a non-permitted vessel.

SECTION 8.2 The Harbor Master shall immediately initiate proceedings under this Section to remove or secure the removal of a non-permitted vessel from Humboldt Bay.

SECTIONS 8.3 In addition to a maritime or statutory lien against the vessel, the vessel owner, operator, master or agent of record are jointly and severally liable for the

actual costs of removal, emergency repairs, storage, disposition and forfeiture of the vessel.

SECTION 8.4 The Harbor Master shall serve notice by affixing a copy of a Notice of Removal and Forfeiture to the vessel in a conspicuous place, posting a copy of the notice at the Harbor Master's office at Woodley Island Marina, posting the notice on the District web site, and by mailing a copy of the notice by first class mail with sufficient postage to the owner or operator of the non-permitted vessel, with copy to the owner, operator, master, or agent of record as previously provided.

SECTION 8.5 The form of Notice is as follows:

NOTICE OF REMOVAL AND FORFEITURE OF NON-PERMITTED VESSEL

NOTICE IS GIVEN that the numbered/documented vessel_____ (Vessel Name), State and State number /Federal documentation number _____, is a non-permitted vessel and subject to removal and forfeiture by Order of the Harbor Master, Humboldt Bay Harbor District under Ordinance Number 17 of the Humboldt Bay Harbor, Recreation and Conservation District on _____ (Date).

The vessel is ordered removed at the sole expense of the owner, operator, master or agent within seventy-two (72) hours of the date of this notice or the vessel will be removed by order of the Harbor Master and stored at the expense of the owner, operator, master, or agent for which actual costs and expenses the vessel, and the owner, operator, master and agent are jointly and severally liable. Failure to pay those accrued costs and expenses of removal, storage and emergency repairs within thirty (30) days of the removal will result in summary forfeiture of the vessel under Federal or State law without further notice required. If the vessel does not pose an immediate navigation hazard, or threat to security or the environment, at the discretion of the Harbor Master, in lieu of removal and forfeiture the vessel owner, operator, master or agent may post a bond or undertaking in the amount of the estimated cost and expense or removal and storage costs until such time as the vessel is removed by the owner, operator, master or agent.

SECTION 8.6 The Harbor Master shall, after serving notice order the owner, operator, master, or agent to remove the vessel at their expense within twenty-four (24) hours. Failure of the owner, operator, master or agent to remove the vessel within twenty-four (24) hours may result in the Harbor Master taking physical possession of the vessel and either securing or storing the vessel at a safe anchorage or facility.

SECTION 8.7 The Harbor Master shall calculate the actual costs and expenses of removal, including any repair necessary to facilitate such removal and storage, and

provide written notice to the owner, operator, master or agent at the last known address. Such actual costs may be recovered pursuant to a possessory lien or maritime lien against the vessel, or through the civil action against the owner, operator, master or agent of the vessel.

SECTION 8.8 The Harbor Master shall on the next business day:

(a) file a possessory lien with the State Department of Motor Vehicles lien under the Boater's Lien Law (commencing with Section 500 of the Harbors and Navigation Code) in the case of a California registered vessel, or the corresponding unit of State government of the State of the vessel's registry, and request an abstract of title for the registered vessel; or

(b) record a Notice of Claim of Lien with the National Vessel Documentation Center under Section 31343 of Title 46, United States Code for a documented vessel and request an abstract of title for the registered vessel; and

(c) mail a copy of the official notice of possessory lien or Notice of Claim of Lien to the vessel owner, operator, master, or agent of record;

(d) post a copy of the official notice of lien or Notice of Claim of Lien on the vessel, at the Harbor Master's office and on the District web site; and

(e) in the case of a documented vessel, seek a U.S. Coast Guard administrative determination that the vessel is abandoned and should be stricken from the documentation list.

SECTION 8.9 The Harbor Master shall enforce:

(a) the possessory lien against the vessel under the procedure set forth in the Boater's Lien Law for a California registered vessel or a vessel registered in another State by reciprocity or an undocumented vessel; or

(b) the maritime lien against a documented vessel of the United States or a foreign flag vessel by filing an action in United States District Court for the Northern District of California, requesting the United States Marshal or another person to arrest the vessel, filing a default judgement, and requesting a Marshal's sale of the vessel free of liens and encumbrances under the Federal Rules of Civil Procedure for admiralty cases;

(c) the exercise of extrajudicial remedies under Section 31325 of Title 46, United States Code; and

(d) the civil remedy for recovery of the actual costs and expenses of vessel removal and forfeiture against the vessel's owner, operator, master, or agent in either Superior Court or United State District Court as the case may be.

Passed and adopted this 9th day of June, 2004, by the Board of Commissioners of the Humboldt Bay Harbor, Recreation and Conservation District by the following polled vote:

AYES: Commissioner Curless, Commissioner Hunter, Commissioner Ollivier

NAYES:

ABSENT: Commissioner Pellegrini, Commissioner Fritzsche

RONNIE PELLEGRINI, President
Board of Commissioners

ATTEST:

RON FRITZSCHE, Secretary
Board of Commissioners

Ordinance No. 15	Enacting General Tariff No. 1, Establishing Rules, Regulations, Charges, and Fees, Including Harbor Fees on Vessels and Cargo in Connection with the Humboldt Harbor and Bay 38' Deep Draft Navigation Improvement Project	8/28/1997
	Amendment No. 1 to Ordinance No. 15	Not used
	Amendment No. 2 to Ordinance No. 15: "Harbor Usage Fee" replaced with "Harbor Improvement Surcharge"	11/11/1999
~~Ordinance No. 16~~	An Ordinance Establishing Standards, Policies and Practices for Pilot Competency, Qualification, Professional Growth and Enforcement	1/27/2000
	Amendment No. 3 to Ordinance No. 15: Add Pilotage Rules and Regulations as previously approved as Ordinance No. 16	4/13/2000
	Amendment No. 4 to Ordinance No. 15: Amend Ordinance 15, Section 3 - Pilotage	12/21/2000
	Amendment No. 5 to Ordinance No. 15: Amend Ordinance 15, Section 3 - Pilotage	7/11/2001
	Amendment No. 6 to Ordinance No. 15: Amend Ordinance 15, Section 3 - Pilotage	10/24/2002
	Amendment No. 7 to Ordinance No. 15: Amend Ordinance 15, Tariff Section No. 6 Item 14	10/24/2019

HUMBOLDT BAY HARBOR USAGE FEE ORDINANCE

HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT DO HEREBY ORDAIN AS FOLLOWS:

ORDINANCE NO. 15

ENACTING GENERAL TARIFF NO. 1, ESTABLISHING RULES, REGULATIONS, CHARGES, AND FEES, INCLUDING HARBOR FEES ON VESSELS AND CARGO IN CONNECTION WITH THE HUMBOLDT HARBOR AND BAY 38 FOOT, DEEP DRAFT NAVIGATION IMPROVEMENT PROJECT WITHIN THE JURISDICTION OF THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

Section I. Findings and Declarations

The Board of Commissioners (the "Board") of the Humboldt Bay Harbor, Recreation, and Conservation District (the "District") finds and declares:

(a) Acting as Trustee of the public trust, and under the police power enabling authority delegated to the District by the State of California in Appendix II of the Harbors and Navigation Code, the purpose of this Ordinance No. 15 enacting General Tariff No. 1, establishing rules, regulations, charges, and fees, including harbor usage fees on vessels and cargo in connection with the Humboldt Harbor and Bay 38 Foot Deep Draft Navigation Improvement Project (the "Project") within the jurisdiction of the Humboldt Bay Harbor, Recreation, and Conservation District (the "Ordinance"), is:

(1) to ensure the safety of individuals, vessels, and public and private property, in and around the waters of Humboldt Bay and Bar; and

(2) to protect those waters, the natural resources therein, and surrounding ecosystems from economic and environmental damage resulting from inter alia vessel collisions and groundings by promoting safe navigation and maritime commerce and providing competent, efficient, and regulated conditions for the anchoring, mooring, docking and safe movement of vessels.

(b) Under section 4 of Chapter 1 of Appendix II of the Harbors and Navigation Code the District, as a specialized agency and a political subdivision of the State of California, the District is granted police power authority to regulate the tidelands and lands lying under the inland navigable waters of Humboldt Bay for the promotion of commerce, navigation, fisheries and recreation thereon, and for the development and protection of the natural resources of the area, and under section 34 of Article 2 of Chapter 3 of Appendix II of that title, the Board may do all

other acts necessary and convenient for the exercise of its powers, including in combination the regulation of navigation on behalf of the State of California subject only to Federal preemption to the line of demarcation between the inland and international rules of the road at the outermost navigational aids, and extraterritorially to include the Humboldt Bar and those areas within the territorial sea where vessels take on pilots to perform pilotage services.

(c) Public access to safe, efficient marine transportation, and an economically healthy maritime industry is essential to the continued economic well-being and future development of the Humboldt Bay Region.

(d) It is essential that the navigable waters of Humboldt Bay remain open to public navigation as a vital foreign and coastwise transportation route for domestic and foreign vessels.

(e) Section 101 of the Water Resources Development Act of 1996, Public Law 104-695 enacted on October 13, 1996, Congress authorized construction of the Humboldt Harbor and Bay 38 foot navigation improvement project (the "Project")with a total Project cost of $15,180,000, First Federal Cost of $10,000,000 and required local contribution to the general navigation features of the Project of $5,180,000.

(f) The Board of Commissioners expressly find that the public interest and convenience, and health, safety, and welfare require the provision of improvements to the existing projects for navigation at Humboldt Bay substantially in accordance with the Congressional authorization and the Basis for Design (February 1996) prepared by the San Francisco District Engineer for the U. S. Army Corps of Engineers (the "District Engineer").

(g) Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended, and Section 101 of the Water Resources Development Act of 1986 ("WRDA 1986"), Public Law 99-662 (codified as amended at 42 U.S.C. ° 1962d-5b), provide, inter alia, that the Secretary of the Army shall not commence construction of any water resources project, or separable element thereof, until each non-Federal sponsor (the "Local Sponsor") has entered into a written agreement to furnish its required cooperation for the project or separable element (the "Project Cooperation Agreement" or "PCA").

(h) Section 208 of WRDA 1986 (33 U.S.C. 2236) grants the consent of Congress to the levy of port or harbor dues upon vessels and cargo, and for emergency response services in the port, in conjunction with a harbor navigation project whose construction or a usable increment thereof is complete subject to the transmittal of a Notice of Intent and draft fee schedule concurrently to the District Engineer and the Assistant Secretary

of the Army for Civil Works, publication in the Federal Register, the conduct of a public hearing, solicitation of public comment, and transmittal of the final fee schedule concurrently to the District Engineer, the Assistant Secretary of the Army for Civil Works, and the Federal Maritime Commission.

(i) The District intends to serve as Non-Federal Sponsor and provide those items of local cooperation necessary for the Project, and to enter into formal written agreements with the United States Government (the "Government") under Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended.

(j) The District intends to discharge those responsibilities insofar as providing at least 30 percent of the required local contribution to the cost of construction of the general navigation features of the Project through the enactment of Ordinance No. 15 within the jurisdiction of the Humboldt Bay Harbor, Recreation, and Conservation District.

Section II. Humboldt Bay Harbor, Recreation and Conservation District

General Tariff No. 1
Naming rates, charges, rules and regulations for port services performed at the
Humboldt Bay Harbor, Recreation, and Conservation District
Eureka, California

This document is a memorandum. It portrays the rules, regulations, charges and rates of the official tariff filed electronically effective , 1997 in the Federal Maritime Commission's Automated Tariff Filing and Information System. (Organization # , Tariff No. 1)

The only effective tariff is Humboldt Bay Harbor, Recreation, and Conservation District Tariff No. 1 that is electronically filed with the FMC ATFI system. In case of any difference in language or rate, Tariff No. 1, the tariff on file with the FMS ATFI system governs and takes precedence.

ISSUED: August 28, 1997 EFFECTIVE: September 28, 1997

CHECK SHEET

Page	Revision
Title	Original

GENERAL TARIFF NO. 1

TABLE OF CONTENTS

GENERAL TARIFF NO. 1

TARIFF SECTION NO. 1

STANDARD TERMS AND CONDITIONS

Item	Subject	Application
1	**District Boundaries and Jurisdiction**	The Harbor District regulates all waterways, and ungranted tidelands and submerged lands within Humboldt Bay, pilotage and towage, and acts as Local Sponsor for Federal navigation projects within the District. The District regulates and controls the construction of wharves, docks, and improvements of all types contemplated on the waterways of the District, and the construction, maintenance and operation, or use of all wharves, warehouses, structures, improvements, or appliances, used in connection with, or for the accommodation or promotion of transportation or navigation on any improvement project of the Federal Government entering the District and on other navigable waterways, improved or unimproved, which lie within the District, and enforces police and sanitary regulations in connection therewith. (Harbors and Navigation Code, State of California) This tariff is issued under the exclusive jurisdiction of Section 208 of the Water Resources Development Act of 1986 (33 U.S.C. 2236) and the District hereby consents to the exclusive exercise of that jurisdiction as to those portions of the tariff implementation of a harbor usage fee under that section.
2	**Usage, user defined**	All persons, firms, corporations, or others desiring to use any of the premises and/or facilities of the Humboldt Bay Harbor, Recreation, and Conservation District, including the Humboldt Harbor and Bay 38 Foot Deep Draft Navigation Improvement Project (the "Project"), shall obtain permission from the Chief Executive Officer.

No person, firm, corporation, or entity may use the facilities or services of the District without written permission of the District, and payment of fees, or a usage agreement with the District.

On application, and subject to availability of, and prior arrangement made, the Humboldt Bay Harbor, Recreation, and Conservation District at its option and convenience may grant the use of its premises, and such other facilities of the District, as it may designate to individual firms, corporations, and others, hereinafter referred to individually and collectively as "user" or "users", for those operations or use of the premises or facilities as it may designate.

The term "user" includes the master, owner, or operator of a vessel, or the shipper, consignor, consignee, terminal operator, rail, truck, or barge carrier having title to, or custody of cargo loaded or unloaded from a vessel entering or departing the District, or the assignee, or successor in interest of any user.

For the issuance of that permission the District will assess the users a harbor usage charge.

Any charges herein or hereafter otherwise provided in the tariff for wharfage, dockage, service and facilities, or for any other services or purposes assessed by the District, are in addition to the harbor usage charge.

The District and users may enter into a usage agreement with carriers, shippers, or other parties. Permission to use District premises and facilities may be revoked for violation of this tariff.

All users of the premises or facilities granted the use of the District are subject to all the terms and conditions of this tariff, and shall pay usage of the District at rates determined under Item 14.

The District reserves the right to amend or replace this tariff at any time. Users should inquire that the tariff on which they rely is the one currently in effect.

3 Liability for fees

Any person, firm, corporation, or any entity requesting the use of facilities or services from the District, or reflected in the vessel documentation, as the owner, operator, or agent, are jointly or severally liable in personam, and any such vessel is liable in rem, for harbor usage fees on vessels entering the District. The shipper, consignor, consignee, or terminal operator, having title to, or custody of, cargo loaded on board or discharged from a vessel within the District, are jointly and severally liable in personam, and any such cargo is liable in rem, for fees on cargo loaded on board or discharged from a vessel at a wharf, dock or terminal facility within the District.

4 Consent to terms of tariff

Use of the navigable waterways of the District, or improved or of tariff unimproved navigable waters, or premises or facilities of the District, by vessels or cargo, or for construction or operation of wharves, docks, or improvements of all types used in connection with, or for the accommodation or promotion of transportation or navigation, or the premises or facilities of the District constitutes implied consent to all of the terms and conditions of this tariff, and evidences an agreement on the part of any users of the premises or facilities of the District to pay all charges specified in this tariff and be governed by all rules, regulations, terms, conditions, and legal actions shown in this tariff.

Conditions for conducting any operation within the District, or use of the premises, facilities, or services of the District, are subject to specific authorization of the Chief Executive Officer, and may include provisions to protect public safety, security, environment, and health. Any person, corporation, firm or entity conducting any

operation within the District, or use of the premises, facilities, or services of the District shall fully comply with applicable provisions of Federal, State, or municipal law, and ordinances adopted by the District.

The District reserves the right, without responsibility for demurrage other charges, loss, or damage of any kind whatsoever, to deny the use of its facilities or services to any vessel or shipper.

5 Application and interpretation of tariff

Rates, rules, terms, conditions, and regulations, contained in this tariff apply equally to all users, vessels and cargo subject to this tariff on the effective date shown in this tariff and as amended.

This tariff is published and filed as required by law and is, therefore, notice that the rates, charges, rules, and regulations, and definitions apply to all users, vessels, and cargo, without specific notice, quotation, or arrangement.

The tariff is effective on or after the date as shown on each page.

Revised pages will be issued to cover changes in this tariff, however all rates and regulations in this tariff are subject to change without notice except as my be required by law. The Chief Executive Officer is the sole judge as to the interpretation of this tariff. Any decision of the Chief Executive Officer is binding upon all users and is final.

Any usage agreement, and the use of any facilities or premises, if any, described in any usage agreement between a user and the District are at all times subject to all provisions and conditions of this tariff.

The rates, rules, terms, conditions, and regulations named in this tariff apply independently of the provisions of any bill of lading, charter party, agreement, or contract of affreightment.

Requests or complaints should be directed to the Chief Executive Officer, Humboldt Bay Harbor, Recreation, and Conservation District, P.O. Box 1030 Eureka, CA 95502-1030.

6 Harbor usage fees

Except as otherwise exempted herein, all users of waters, premises or facilities of the District as described in items 1-3 shall pay harbor usage fees as provided in this tariff to assist in defraying the cost of the required local contribution to Project construction cost under Section 208 of the Water Resources Development Act of 1986 (33 U.S.C. 2236), and the expense of providing emergency response services provided by the District or under mutual aid or mutual assistance agreements, administration, maintenance, promotion, and regulation, of the District, including the supervision of shipping and the District, policing the harbor, and the District's facilities.

For purposes of the levy of harbor usage fees, the Project is considered divisible into two usable increments or reaches corresponding to 1) the Bar and Entrance Channel, and 2) the North Bay and Samoa Channels. Upon completion of construction of the Bar and Entrance Channel, any person, vessel or cargo liable under Item 3 of this tariff, upon that vessel using any portion of the channel, is liable for the fee imposed under Item 14 of this tariff for use of that channel. Upon completion of construction of the North Bay and Samoa Channels, any person, vessel or cargo liable under Item 3, upon that vessel using any portion of the channels, is liable for the fee imposed under Item 14 of this tariff for use of those channels.

Harbor usage fees shall be paid by the operator of the vessel in addition to dockage, and collected by the wharf, dock or facility operator, or the vessel's agent, prior to departure and by the owner of cargo loaded or unloaded at a wharf, dock or facility collected by the operator of that wharf, dock, or facility in

addition to wharfage or other charges prior to release of the cargo to the consignee.

Vessels, wharves, docks, and facilities owned and operated by the Federal Government, a foreign country, a State, or a political subdivision of a country or State, unless engaged in commercial services, towing vessels, vessels engaged in dredging activities and vessels engaged in intraport movements are exempt from the vessel portion of the harbor usage fee described in Section 6. In addition vessels with design drafts of 20 feet or less are exempt from harbor usage fees.

7 Payment of usage fees

Harbor usage fees are due when accrued by the user and payable in cash in U.S. currency to the Chief Executive Officer of the District, or his authorized representative, unless the user has established creditworthiness to the District before using District facilities or services, or has posted adequate security for estimated fees acceptable to the District in advance. Fees that have not been paid within thirty (30) days of the date of assessment are subject to a finance charge of one and one half per cent (1-1/2%) per month. The District reserves the right to estimate and collect in advance all charges which may accrue against vessels, their owners or agents, or against cargo loaded or discharged by a vessel, whose credit has not been properly established or who has become delinquent.

Any pending or alleged claims against the District are not allowed as an offset against outstanding invoices or accrued fees until those claims have been legally established by a court of competent jurisdiction.

8 Access to documentation

The master of an arriving vessel, or the vessel's agent shall deliver to the Chief Executive Officer, or authorized representative, prior to loading or unloading cargo at a wharf, dock or facility within the District, and in no

event later than forty-eight hours after the vessel's arrival, a tonnage certificate and a cargo manifest for the vessel, showing names of shippers, or consignees, and the weights and measurements of any and all cargo loaded or discharged at a wharf, dock, or terminal within the District, or if in ballast a declaration to that effect in order that the proper usage fee may be assessed against the vessel. The master shall also provide the vessel's booking list, showing how much space or weight has been allocated to each shipper for each commodity prior to delivery of any inbound cargo to a wharf, dock, or terminal facility.

The master of a departing vessel, or the vessel's agent, shall also deliver to the Chief Executive Officer, prior to departure, the vessels' load lines certificate, and evidence certifying the vessel's sailing draft after loading and prior to departure.

The shipper, consignor, or terminal operator having title, or custody of , any cargo subject to usage fees shall deliver to the Chief Executive Officer appropriate documentation in the form of bills of lading, freight bills, export declarations, cargo lineups or lists specifying the supplier, marks, estimated volume or weight of each commodity for each vessel and discharge port before the delivery of any outbound cargo to be loaded or discharged in the District.

Failure to supply the necessary documentation makes the vessel owner, operator, or agent, or the shipper, consignor, or terminal operator liable for any damages, including actual attorneys fees, costs, and expenses, that the District sustains as a result of not receiving the required documentation. The Chief Executive Officer may assess a civil penalty not to exceed $500 per day per instance against any vessel owner, operator, or agent, or shipper, consignor, or terminal operator for willful failure

to provide the necessary documentation required under the tariff.

9 Security for payment of fees

Under 33 U.S.C. 2236 (f) user charges levied under this tariff are secured by maritime lien against the vessel or cargo which may be enforced in personam against a responsible party, or in rem against the vessel or cargo subject to levy in United States District Court.

Under 33 U.S.C.2236(e) non-payment of user charges may result in the Secretary of the Treasury denying clearance to a vessel under 46 App.U.S.C. 91, assessing a civil penalty against a responsible person, vessel, or cargo, or seizure or forfeiture of the vessel or cargo under 19 App. U.S.C. 1202 et seq.

10 Late charges

If any user fees due from users are not received by the District when due, users shall pay to the District, in addition to any interest otherwise payable under this tariff or the applicable usage agreement, an additional sum of five per cent (5%) of the overdue fees as a late charge.

11 Records and accounts

Users shall maintain locally a system of accounts and records satisfactory to the Chief Executive Officer, including copies of vessel tonnage certificates, cargo manifests, export declarations, and other documentation covering all vessel calls, and import and export cargo movement and transactions and operations conducted under the tariff or agreement, which shall be preserved during the life of the agreement and for three years thereafter, or for five years in the absence of an agreement . The accounts and records shall be open and available at all reasonable times for examination, audit, and transcription therefrom by District representatives.

12 Collection and enforcement

In the event of any legal proceeding to collect any charges or enforce any provision of this tariff from any person or against any vessel or cargo, the District may recover its expenses incurred in any such proceeding including actual

attorneys fees,litigation expenses and costs (including any bond), including any appeal.

The District may sell, at public or private sale, vessels or cargo on which the owner fails or refuses to pay usage charges. The proceeds of sale are intended to satisfy those charges plus the costs and expenses of sale, including actual attorneys fees. Cargo of a perishable nature, or of a nature likely to damage other cargo or property may be sold at public or private sale without advertising.

13 Liability, indemnity

Every person, corporation, firm, or entity using the facilities, premises, or services of the District shall indemnify, and save and hold harmless the District, its Commissioners, officers, employees, agents, and consultants, from and against any all claims, damages, losses, and expenses, including the duty to defend and respond in damages, and including actual attorney's fees, costs, and expenses, for injury to, or death of any person, employee, passenger, agent, licensee, invitee, or for damage to any property, including loss of use thereof, arising out of, or in any manner connected with the person's, corporation's, firm's, or entity's actions, omissions, or failures,including the acts, omissions, or failures of their employees, agents, or any other person acting for them or on their behalf.

The District is not liable for any damage to, or loss, of freight, or vessel delay, or demurrage, in the use of the premises, facilities, or services of the District.

Nothing in this tariff is intended, nor may be construed to relieve any liability as to any person, corporation, firm, or entity using the facilities, premises, or services of the District, or concerning any third person not a user under this tariff, that may arise under CERCLA, or under any other provision of Federal or State law. In bearing any cost, conducting any investigation, or performing any

cleanup and response as directed by the Government under the Project Cooperation Agreement ("PCA") to enable the construction, operation and maintenance of the Project under that Agreement, or the conduct of berth dredging under that Agreement and as required under the PCA, the District disclaims any liability under CERCLA, or under any other provision of Federal or State law, for the presence, release, threatened release, or response to release or threatened release, or for the generation, transportation, storage, or disposal of contaminated material, and reserves the right to recover the cost of any investigations, and any amounts expended for cleanup and response from potentially responsible parties.

TARIFF SECTION NO. 2

HARBOR RULES AND REGULATIONS

Reserved

TARIFF SECTION NO. 3

PILOTAGE AND TOWAGE REGULATION

Reserved

TARIFF SECTION NO.4

HARBOR POLICE, FIRE PROTECTION, OIL SPILL RESPONSE, SANITARY AND OTHER SERVICES

Reserved

TARIFF SECTION NO. 5

PERMITS AND FACILITIES
RULES, REGULATIONS AND RATES

Reserved

TARIFF SECTION NO. 6

MISCELLANEOUS SERVICES
RATES AND CONDITIONS

Item	Subject	Rates and Conditions
14	Harbor Usage	a. Vessels - five dollars ($5.00) per foot of draft based fees upon reported sailing draft at time of departure for any vessel using any portion of the Bar and Entrance Channel, and an additional five dollars ($5.00) per foot of draft based upon reported sailing draft for any vessel using any portion of the North Bay and Samoa Channels.
		b. Cargo - seven and one-half cents ($0.075) per short ton or eight and two hundred sixty five thousandths cents ($0.08265) per metric ton for any cargo on board a vessel using any portion of the Bar and Entrance Channel, and an additional seven and one-half cents ($0.075) per short ton or eight and two hundred sixty five thousandths cents ($0.08265) per metric ton for any cargo on board a vessel using any portion of the North Bay and Samoa Channels.

Section III. Severability

If any part of this Ordinance is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of this Ordinance is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid application.

Section IV. Special procedures prior to adoption of ordinance

The Chief Executive Officer shall publish the full text of the proposed Ordinance, and transmit a Notice of Intent and

draft harbor usage fee schedule concurrently to the District Engineer along with the approved Draft Project Cooperation Agreement and Financial Plan, and to the Assistant Secretary of the Army for Civil Works for publication in the Federal Register, sets August 14, 1997 as the date for the public hearing on this Ordinance and proposed harbor usage fee, and upon completion of the public hearing directs the transmittal of the final fee schedule concurrently to the District Engineer, the Assistant Secretary of the Army for Civil Works, and to the Federal Maritime Commission in the form of the adopted General Tariff No. 1 through electronic tariff filing.

Section V. Scheduling of public hearing on proposed harbor usage fee

Under 33 U.S.C. 2236(a)(5) a public hearing on the proposed harbor usage fee is scheduled for Thursday, August 14, 1997 commencing at 7:00 p.m. in the conference room of the Humboldt Bay Harbor, Recreation, and Conservation District, Samoa-Woodley Island Marina, Eureka, CA 95502-1030

Section VI. Designation of official and setting deadline for receipt of comments concerning proposed harbor usage fee

Under 33 U.S.C. 2236(a)(6) public comments concerning the proposed harbor usage fee should be directed in writing to the Chief Executive Officer, Humboldt Bay Harbor, Recreation, and Conservation District, P.O. Box 1030 Eureka, CA 95502-1030. Tel. (707) 443-0801. The public comment period will close upon the close of business at 4:00 p.m., August 28, 1997. Written comments must be received by the District on or before that date in order to be considered by the Commission prior to taking final action on the proposed harbor usage fee.

Section VII. Effective date

This Ordinance is effective thirty days following final adoption by the Board of Commissioners.

Section VIII. Humboldt Bay Harbor, Recreation and Conservation District Tariff Advisory Committee

(a) There is established a Humboldt Bay Harbor, Recreation and Conservation District Tariff Advisory Committee.

(b) The Members of the Committee shall consist of seven members appointed by the President of the Board of Commissioners of the Humboldt Bay Harbor, Recreation and Conservation District from among residents of the District with demonstrated expertise in international trade, shipping, commerce and maritime affairs. The

President shall likewise appoint two commissioners to serve as ex officio members of the Advisory Committee. The members of the Committee may elect the Committee Chairperson. Each member shall serve on the committee for a term of two years subject to reappointment by the Board President. Initial appointments would be as follows: Three (3) appointments for 1-year terms and four (4) appointments for 2-year terms, thereby staggering the length of the appointments. No member may serve on the committee for more than two consecutive terms.

(c) The Committee shall advise, and make recommendations to, the President and Board of Commissioners concerning any matter referred to the Committee by the Board within the jurisdiction of the Harbor District tariff adopted by the Commission by Ordinance, including harbor usage fee and tariff rate setting but excluding review of lease agreements or other agreements subject to approval by the Board, modification to accommodate future navigation projects, amendment or termination after payment in full of all outstanding indebtedness, and release of all encumbrances, associated with harbor improvements for which receipts from fee assessment and collection are used to pay debt service or otherwise used to satisfy those financial obligations.

(d) The Committee shall adopt rules of procedure, and maintain books and records, consistent with Commission rules and shall file no later than March 31st of each year an annual report of the Committee's activities for submission to the Board.

(e) Members of the Committee serve without compensation.

THIS ORDINANCE PASSED AND ADOPTED THIS **28th** DAY OF **August** 1997, BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER SMITH, COMMISSIONER CURLESS, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER

NOES:

ABSENT: COMMISSIONER OLLIVIER

Dennis G. Hunter, President
Board of Commissioners

ATTEST:

Ronald Fritzsche, Secretary
Board of Commissioners

CERTIFICATE OF SECRETARY

The, undersigned, duly qualified and acting Secretary of the Humboldt Bay Harbor, Recreation, and Conservation District, does hereby certify: That the attached Ordinance is a true and correct copy of Ordinance No. 15, entitled: Ordinance No. 15 enacting General Tariff No. 1, establishing rules, regulations, charges, and fees, including harbor usage fees on vessels and cargo in connection with the Humboldt Harbor and Bay 38 Foot Deep Draft Navigation Improvement Project (the "Project") within the jurisdiction of the Humboldt Bay Harbor, Recreation, and Conservation District (the "Ordinance") adopted at a legally convened meeting of the Board of Commissioners of the Humboldt Bay Harbor, Recreation, and Conservation District, duly held on the 28th day of August, 1997; and further that such Resolution has, been fully recorded in the Journal of Proceedings in my office and is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this **28th** day of **August**, 1997.

Ronald Fritzsche, Secretary
Board of Commissioners

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

AMENDMENT NO. 2 TO ORDINANCE NO. 15

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY AMEND ORDINANCE NO. 15 AS FOLLOWS:

The term "Harbor Usage Fee" is to be replaced wherever it occurs throughout Ordinance 15 with the term "Harbor Improvement Surcharge".

PASSED AND ADOPTED THIS 11th DAY OF NOVEMBER 1999, BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER SMITH COMMISSIONER HUNTER COMMISSIONER OLLIVIER

NOES:

ABSENT: COMMISSIONER CURLESS COMMISSIONER FRITZSCHE

ATTEST:

JIMMY SMITH, PRESIDENT
Board of Commissioners

Roy Curless

ROY CURLESS, SECRETARY
Board of Commissioners

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

ORDINANCE 16

PILOTAGE

AN ORDINANCE ESTABLISHING STANDARDS, POLICIES AND PRACTICES FOR PILOT COMPETENCY, QUALIFICATION, PROFESSIONAL GROWTH AND ENFORCEMENT

WHEREAS, in the United States, federal law defines two separate but interactive areas of pilotage regulation. The Coast Guard administers the pilotage aboard vessels in the coastwise, domestic trades and the states administer pilotage aboard vessels in foreign trade. In 1789, the First Federal Congress enacted section 4 of the Lighthouse Act, which provided:

"That all pilots in the bays, inlets, rivers, harbors and ports of the United States, shall continue to be regulated in conformity with the existing law of the states respectively wherein such pilots may be or with such laws as the states may respectively hereafter enact for such purpose, until further legislative provision shall be made by Congress" ; and

WHEREAS, the State of California, through the Harbors and Navigation Code, has delegated to the Humboldt Bay Harbor, Recreation and Conservation District (HBHRCD) authority to provide for and supervise pilots aboard vessels in foreign trade. The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 created a comprehensive State oil spill prevention program for coastal and marine waters. The law expanded the authority, responsibilities and duties of the CA Department of Fish & Game under the direction of the Administrator for Oil Spill Response. Government Code Section 8670.6 provided authority to establish the Oil Spill Prevention and Response Office (OSPR) which is responsible for assisting the Administrator in performing the duties specified in the Act. Additionally, AB567 (Hauser) enacted in 1994, provided a mechanism for the HBHRCD to license bar pilots operating in Humboldt Bay; and

WHEREAS, a Memorandum of Agreement (MOA) subsequently emerged as a way to preserve the port's legally delegated control over pilotage, while at the same time, ensuring that the concerns of the State and the Coast Guard were addressed. On February 26, 1997 the Governor of California, the Coast Guard Assistant Commandant for Marine Safety and Environmental Protection and the executive directors of the harbors of Humboldt Bay, Port Hueneme, Los Angeles, Long Beach and San Diego signed the Memorandum of Agreement concerning pilotage. The MOA requires a federal pilot license as a condition of employment. Because of the wording in federal statute (46 USC 8503), this strengthens Coast Guard authority to take action against an individual's right to hold a license when piloting vessels in foreign trade. Accordingly, pilots in Humboldt Bay are subject to the

jurisdiction of the Coast Guard suspension and revocation process when piloting vessels in coastwise or foreign trade. In addition, state pilot licenses for pilotage in Humboldt Bay are issued by HBHRCD; and

WHEREAS, in order to have a safe and efficient pilot organization, it is imperative to attract and hire the best people. Certain skills and experience are necessary to become a pilot and the proper attitude is required for the pilot to accept responsibility for maneuvering large vessels calmly and deliberately. A pilot must sometimes work under stressful conditions but must always exercise good judgment. Because of the pilot's reliance on others in the Bridge Management Team, the Pilot must also be an excellent communicator and manager.

WHEREAS, the goal of the HBHRCD is to maintain an adequate number of trained Pilots in Humboldt Bay to ensure navigation safety and protect commerce and the environment.

NOW, THEREFORE, THE BOARD OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY ORDAIN AS FOLLOWS:

ARTICLE 1 SHORT TITLE, DEFINITIONS

SECTION 1.1 Short Title

This Ordinance shall be known as the "Humboldt Bay Pilotage Ordinance".

SECTION 1.2 Definitions

a. Humboldt Bay, California: All waters within the geographic boundary of Humboldt Bay up to an elevation of Mean Higher High Water, up Humboldt Bay tributaries to the extent of tidal influence and seaward to the westward extent of the Entrance Channel jetties.

b. Humboldt Bar Pilots Association: A partnership of individuals licensed to perform pilotage in Humboldt Bay. This partnership was formed in 1965 to unify Pilots and bring competition between Pilots to an end.

c. Pilot: A trained individual licensed by the federal government and the Humboldt Bay Harbor, Recreation and Conservation District to safely conduct a ship in and out of the waters of Humboldt Bay.

ARTICLE 2 DUTIES OF PILOTS ON HUMBOLDT BAY

SECTION 2.1 Pilotage on Humboldt Bay

a. Pilots on Humboldt Bay must possess a federal Pilot's license and a HBHRCD Pilot's license. All foreign vessels and U.S. flagged vessels not sailing under a coastwise endorsement issued by the U.S. Coast Guard, except vessels under 300 gross tons, navigating Humboldt Bay, are required to use a Pilot holding current licenses for Humboldt Bay.
b. Pilots in Humboldt Bay are required to be members of the Humboldt Bar Pilots Association (a partnership). Association members are self employed but are individually licensed by the Humboldt Bay Harbor, Recreation and Conservation District.
c. The Humboldt Bay Bar Pilots are required to be available with 24 hour notice prior to ship arrival.
d. Pilots are not required to be maintained on station.
e. Radio watch is to be maintained on VHF Channel 16 one hour prior to arrival at the sea buoy.
f. Vessels are to be boarded and disembarked approximately 1.2 miles off of Humboldt Bay.
g. Pilotage is coordinated by the local stevedoring company who act as local agents for the steamship companies.
h. There shall be a minimum of two Pilots plus one back-up Pilot.
i. Pilots shall work ships on a rotational basis.

SECTION 2.2 Pilot – Master Interface

a. Master-Pilot Conference

1. Each Pilotage assignment should begin with a conference between the Pilot and the Master.

2. The initial conference is an opportunity not only to exchange information that the Pilot and Master each needs, but also for the Pilot and the Master to establish an appropriate working relationship.

3. The conference should convey, and be consistent with, the principle that the Pilot and the Master/bridge crew each has an important role in the navigation of the vessel.

4. The amount and subject matter of the information to be exchanged in the initial conference should be determined by the specific navigation demands of the pilotage operation.

b. Pilot's Information Card ("MPX Card")

1. The Humboldt Bar Pilots Association will develop information cards (MPX Cards) for use by their members.

2. The Pilot should give the card to the Master at the time of the initial conference and use it as the basis for discussion during the conference.

3. The card should supplement, not substitute for, the Master/Pilot information exchange.

4. There should be a separate card for outbound and inbound movements and shifting operations when appropriate.

5. The card should include information or instructions specific to navigation in Humboldt Bay. Subjects to be addressed include:
   - radio channels to be monitored;
   - posting of anchor watch/lookout (beyond the requirements of the Rules of the Road; and
   - local navigation requirements or restrictions (tug escorts, speed limits, one-way traffic areas, etc.).

6. The card should also include instructions or requests concerning what the Pilot needs from the Master and crew; subject that might be addressed include:
   - information about the vessel, its characteristics and condition;
   - crew to fix position of the vessel; and
   - only English to be spoken on the bridge.

7. The card should have a blank space for the Pilot to add own items.

8. The Board of Commissioners of the HBHRCD shall approve the card.

c. Pilot's Individual Exchange Practice

1. Each Pilot should develop a personal, standardized conference practice, taking into account regulatory requirements and best practices in pilotage.

2. Pilots should consider using memory aids to ensure that essential exchange items are covered.

d. Absent/Unwilling/Incapable Master

1. An effective exchange requires the participation of a Master who is present, is willing, and has sufficient skills, knowledge, and English language proficiency to provide the information needed by the Pilot and to understand the Pilot's instructions and requests.

2. Pilots should be aware of regulatory requirements for Masters to provide specific information to the Pilot and to cooperate closely with the Pilot.

3. The Pilot should make all reasonable efforts to obtain the presence of the Master for purposes of conducting a conference.

4. If the Master or Bridge crew fails to provide the information needed by the Pilot or if an unsatisfactory exchange leads the Pilot to doubt the ability of the Master or bridge crew to perform the navigation duties normally expected during the vessel movement, the Pilot should use his or her best professional judgement to determine whether it is safe to proceed with the movement.

5. If a Pilot determines that a movement can safely proceed despite an unsatisfactory exchange, the Pilot should adjust his or her pilotage practices during the movement accordingly and should report or record the Master's refusal to engage in an exchange or to provide required information.

6. If a Pilot determines that it is not safe to proceed with a vessel movement due to an unsatisfactory exchange, the Pilot should refuse to proceed, advise the Master/bridge crew on anchoring the vessel or taking other steps to secure the vessel's safety, and notify appropriate authorities by the best means available.

e. Ship's Pilot Card/Wheelhouse Poster

1. Pilots should be aware of regulations requiring vessels to have a pilot card and wheelhouse poster containing maneuvering data and other information concerning the ship.

2. If the Pilot, in the exercise of his or her best judgement, considers the information provided orally by the Master about the vessel and its characteristics unclear or insufficient, the Pilot should consult the Pilot card/wheelhouse poster to confirm or supplement information from the Master.

3. Pilots should be aware that information on a pilotcard/wheelhouse poster about a vessel's handling and maneuvering characteristics may not be accurate when maneuvering in Humboldt Bay or local conditions that may be present during the pilotage operation. Such information may be based on "new vessel" conditions, which may be affected by factors such as bottom fouling, propeller/rudder damage or trim.

f. Ships Calling on a Frequent, Regular Basis

1. The information exchange should not be abandoned for vessels that call on a frequent, regular basis. Such vessels have the potential to induce complacency.

2. The exchange for such vessels can, and should, be adjusted with the focus on items, concerning both vessel and pilotage, that may have changed since the previous call or are otherwise pertinent to the particular pilotage operation.

g. Continuing Communication

1. The initial conference should not be the end of communication and information sharing.

2. The Pilot should convey during the initial conference: the need to communicate throughout the pilotage operation, the Pilot's willingness to answer questions, and the Pilot's continuing need for information.

h. Pilot Boarding Locations and Procedures

1. In places where the Pilot boarding location or procedures impose significant constraints on the time or attention that can be devoted to the initial Master-Pilot conference, the Humboldt Bar Pilots Association and the HBHRCD should review whether changing the boarding location and/or procedures would be feasible and would produce significant benefits that could not be obtained through improvements in the conference process.

2. Any proposed change in the Pilot boarding location or procedures should be measured against the traditional principle that Pilot boarding locations and procedures are determined by both the navigational needs of the ship and the personal safety of the Pilot.

i. Training in the Master-Pilot Information Exchange

1. The Master-Pilot information exchange should be an important focus of the initial and continuing training for Pilots, particularly Bridge Resource Management courses for Pilots.

2. Initial training in the Master-Pilot information exchange should cover:
   - regulatory requirements
   - recognition of language, cultural, psychological and physiological impediments to effective communication and interaction and techniques for overcoming those impediments; and
   - best practices for Humboldt Bay.

3. Continuing training should review initial training items and examine recent accidents, new practices of other Pilots and studies dealing with the subject.

ARTICLE 3 PILOT TRAINEE SELECTION PROCESS

SECTION 3.1 Selection Process

a. The process used to select Pilot Trainee candidates follows general Harbor District hiring procedures, namely, advertisement, acceptance of applications, review of applications and reference checks, interview of the top five to seven candidates, follow-up interviews with the top three candidates and pilot trainee selection. The HBHRCD will conduct the interview and trainee selection process. Individuals enrolled and participating in the Humboldt Bar Pilots Association training program prior to April 22, 1999 are considered accepted into the HBHRCD pilot training program at an equivalent level of training. The experience points portion of the selection process places a greater emphasis on experience and a lesser emphasis on formal education and pilotage endorsements, although the value of those qualities is recognized. An applicant's relationship to a current or former pilot will have no weight during the selection process. In addition, the HBHRCD reserves the right to reject any and all applicants.

SECTION 3.2 Initial Competency

To qualify as a pilot trainee applicant, an individual must:

a. Pass a pre-employment physical examination per USCG regulations including a drug screen.

b. Possess a high school diploma or equivalent.

c. Meet the following criteria:

1. Possess a copy of the current federal license with endorsement. The federal license shall be on file at HBHRCD office for all pilots working on Humboldt Bay. No Humboldt Bay Pilot License renewal shall be issued without the current federal license on file and;

2. Three years of full time paid experience as a USCG licensed Master or Chief Mate of an inspected vessel, of not less than 5,000 gross tons, on the waters of any ocean (a valid license must be submitted at the time of filing) or;

3. Three years of full time paid experience as a pilot whose duties include docking and undocking of oceangoing or coastwise vessels transiting the Pilot grounds in a major

port of the United States or;

4. Three years of full time paid experience as a Master of a tugboat within the confines of Humboldt Bay with an unlimited radar endorsement, or;

5. Possession of a current, valid federal license as master of vessels of at least 1600 gross tons with a unlimited radar endorsement or;

6. Three years paid experience as a Docking Master on flat tow vessels, or;

7. Possession of a current, valid federal license as Master of vessels of any tonnage, any ocean with an unlimited radar endorsement or;

8. Be enrolled and participating in the Humboldt Bar Pilots Association training program prior to April 22, 1999.

SECTION 3.3 Experience Ranking

The following point system may be used to assist in the selection of pilot trainee candidates:

1. Tug Experience

• Any tug experience (minimum one year in command) "Command" = Master or operator in charge of vessel	10 Pts.
• Offshore command experience (not less than 1600 tons combined tug and tow)	5 Pts.
• 2 to 5 years command	5 Pts.
• Over 5 years command	5 Pts.
• Served as pilot on own vessels (not less than 1600 tons combined tug and tow, minimum 100 moves) in pilotage waters. ("Own vessels" means vessels for which applicant was also the master or second in command.)	5 Pts.
Tug Experience - Maximum	30 Pts.

2. Deep Draft Experience

- Any self-propelled vessels in navigation of not less than

1600 gross tons (minimum one year in command or five years equivalent as licensed officer of the watch) 10 Pts.

- In command of self-propelled vessels over 10,000 gross tons 5 Pts.
- 2 to 5 years command 5 Pts.
- Over 5 years command 5 Pts.
- Served as pilot on "own-vessels" (minimum 100 moves) on pilotage waters. ("Own vessels" means vessels for which applicant was also the master or second in command.) 5 Pts.

Deep Draft Experience - Maximum 30 Pts.

3. Piloting Experience

- Serving as commercial pilot, not a member of the crew, directing and controlling the movement of vessels of not less than 1600 gross tons (minimum 100 moves) on waters

in which a pilot is required by state, federal or foreign law 10 Pts.

- 2 to 5 years 10 Pts.
- Over 5 years 10 Pts.

Piloting Experience - Maximum 30 Pts.

4. Other

(a) Professional Training

- Maritime Academy Graduate
  (If completed 2 years * - 1 Pt;
  If completed 3 years * - 2 Pts.) Maximum 3 Pts.

  * and provides documentation to establish that applicant left in good standing

- Manned Model Simulator 2 Pts.
- Bridge Resource Management 1 Pt.

Maximum 6 Pts.

(b) Pilotage Endorsements
(On Coast Guard License)

- For 1 or more non-local routes (2 Pts.)
- For local route (Humboldt Bay) (3 Pts.*)

Maximum 4 Pts.

* If combined with points for non-local routes,
not more than 4 points total for Pilotage Endorsements.

Other - Maximum 10 Pts.

Experience Points - Total Possible: 100 Pts.

SECTION 3.4 Physical Requirements

a. Each applicant must provide proof of his/her current satisfactory completion of the physical standards for a First Class Pilot's License determined by the latest USCG Physical and Drug Testing Requirements.

b. Each applicant must be in good physical condition and have no problems climbing ladders or stairs; possess good night vision, depth perception and have no difficulty with hearing or speech.

c. Strength to perform average lifting up to 15 pounds and occasionally over 25 pounds; body agility and equilibrium involved in activities such as climbing and balancing under precarious conditions; arm, hand and finger dexterity with both hands involved in activities such as reaching, handling and feeling; good speaking and hearing ability; and good eyesight including good color perception, depth perception and night vision. Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the limitations.

ARTICLE 4 APPRENTICESHIP AND TRAINING

SECTION 4.1 Apprenticeship and Training

After acceptance as a Pilot Trainee, the applicant must undergo a training and apprenticeship program. The program is designed to familiarize the trainee with the workings of the Humboldt Bar Pilots Association, the interface between the Humboldt Bar Pilots Association and the other oversight agencies, and to demonstrate requisite skills and judgment. One other key goal of the apprenticeship program is to allow the trainee to acquire "local knowledge."

The apprenticeship and training will consist of the following components:

a. The length of the program shall consist of a minimum of one (1) year and a maximum of three (3) years. If ship traffic falls below 45 in a one year period, the Program may be extended by the HBHRCD Board of Commissioners.

b. The Pilot training and apprenticeship program is divided into two stages. Stage 1 is termed an "Observing Apprentice". Stage 2 is termed the "Apprentice Pilot". The "Observing Apprentice" pilot shall complete at least twenty (20) round trips (40 ship movements) across the Humboldt Bay Entrance before advancing to "Apprentice Pilot" status. One round trip shall consist of the riding of one ship inbound and riding one ship outbound. Riding of the same ship inbound and outbound is not necessary.

1. Of these 40 ship movements, at least 10 will be made during times of darkness or restricted visibility.
2. Of the 40 ship movements, at least 15 will be made during the winter.
3. Of these 40 ship movements, at least 5 round trips shall be made through the Fields Landing Channel of South Bay.

c. Maneuvering of any ship by an Apprentice Pilot shall be under direct supervision of a HBHRCD licensed Pilot. Ship handling skills will be observed and the Apprentice Pilot will be gradually passed through phases for more difficult assignments.

d. Apprentice pilots will be required to ride as observers aboard local vessel-assist tugs during at least ten days in the first six months of the training program.

e. A written evaluation shall be made after every ship movement involving an Apprentice Pilot by the HBHRCD licensed Pilot.

f. Simulator training and Bridge Resource Management (BRMP) training for Pilots will be required once during the training program.

g. A training file will be maintained by each apprentice pilot. The checklist will include, but not be limited to, the following items being verified as complete by the Humboldt Bar Pilots:

1. Minimum amount of trips to designated areas within the Port
2. Tugboat observer rides
3. Simulator training
4. Bridge Resource Management training for Pilots
5. Anchoring procedures
6. Lesson learned/incident case review
7. Tug utilization during piloting
8. Local weather patterns
9. Tides and currents
10. Communications
11. Copy of Federal Pilot's License
12. Proof of completion of radar observer unlimited

In addition, the HBHRCD will randomly survey vessel masters for their evaluation of each Apprentice Pilot's ability.

Lengths of each apprenticeship are individually based on assessment of the apprentice's performance. Full qualification is a gradual process, with the apprentice initially qualifying to perform more elementary tasks, then moving to increasingly complex and demanding assignments. Apprenticeships vary in length depending upon the apprentice's previous experience, licenses and qualifications.

Upon completion of the training program outlined above, and the Apprentice Pilot has demonstrated that he/she possesses the necessary skills and knowledge to serve as a licensed pilot for Humboldt Bay, the Humboldt Bar Pilot Association shall notify the HBHRCD that the Apprentice Pilot has completed the training program and shall recommend to the HBHRCD that the Apprentice Pilot be issued a HBHRCD Pilot License for the waters of Humboldt Bay.

The Humboldt Bar Pilots Association may recommend to the HBHRCD, the dismissal of an Observing Apprentice or an Apprentice Pilot from the training program at any time during the Pilot's first year in the program. The HBHRCD may dismiss an Observing Apprentice or an Apprentice Pilot from the program at any time if the HBHRCD determines that the Observing Apprentice or Apprentice Pilot is not making satisfactory progress in the program or that circumstances have changed such that there is no longer a need for an additional HBHRCD licensed Pilot.

ARTICLE 5 PROFESSIONAL DEVELOPMENT

SECTION 5.1 Professional Development

Safe piloting requires that each pilot continue to maintain and improve his or her skills. The Professional Development Program includes the following minimum standards for maintaining proficiency and professional growth. Each pilot will comply with the following in order to be eligible for annual HBHRCD Pilot License renewal:

a. Possess a current Federal Pilots License with an endorsement for radar observer unlimited.

b. Pass an annual physical examination as per USCG regulations and participate in a random drug screening program.

c. Undergo simulator training and Bridge Resource Management Training for Pilots at least once every five years.

d. Participate in incident case review and lessons learned sessions with other pilots at least twice each year.

e. Handle at least three ships supervised by a Humboldt Bar Pilot if the pilot has not been an active pilot for a twelve month period.

ARTICLE 6 OVERSIGHT AND ENFORCEMENT

SECTION 6.1 Oversight

The term oversight includes the aggregate of policies which have been adopted to monitor pilot performance and provide feedback on the effectiveness of qualification and training programs, including legal and administrative procedures for the enforcement of pilotage standards. The responsibility for oversight has been delegated by the State to the HBHRCD through the Harbors and Navigation Code.

SECTION 6.2 Enforcement

As previously indicated, pilots licensed by the HBHRCD in the Port of Humboldt Bay are subject to the jurisdiction of the Coast Guard suspension and revocation process whether piloting vessels in coastwise or in foreign trade. When warranted through the apparent commission of a prohibited act or the failure to meet standards on the part of a Coast Guard-licensed individual, the Coast Guard will initiate an investigation to determine the right of an individual to continue to hold a federal pilot's license. Further, when warranted through the apparent commission of a prohibited act, the HBHRCD Board retains it's jurisdiction over incidents.

SECTION 6.3 Casualty Investigations

The Coast Guard will investigate to determine cause and proper follow-up action for reportable casualties (groundings, allisions, collisions and personal injury meeting certain thresholds). Follow-up could include no action, recommending operational measures, mechanical solutions or enforcement action against those operating the vessel including the suspension and revocation procedures described above. Drug and alcohol testing is included in a Coast Guard investigation. The Coast Guard will work with the Pilot Association to bring together all pertinent information. The Pilot Association will be requested to advise the Coast Guard on standard practice issues that may come up during the investigation. This process is designed to assist in making an informed decision regarding follow-up actions including disciplinary actions AND/OR lessons learned opportunities.

SECTION 6.4 Casualties Below Reportable Threshold

Groundings, allisions, collisions, or other casualties with no or negligible damage below reportable levels shall result in Humboldt Bar Pilots Association review with probable Coast Guard independent review. The Coast Guard goal will be to identify lessons learned and share these and other relevant information with the Humboldt Bar Pilots Association and vessel operators as appropriate.

SECTION 6.5 Near Miss/Lessons Learned/Situations/Incidents

The "lessons learned" program shall balance the need for near miss information against effects of bringing near miss information to the record. Voluntary programs are historically ineffective for a number of reasons, including concern for maintaining a safe and effective Master-pilot relationship and natural hesitance to volunteer close-call information concerning one's own performance. In recent years the more significant near misses have been dealt with by the Coast Guard in a number of ways including:

- Letters of Concern to vessel management about bridge team performance issues.
- Letters of Warning to Master or vessel management; pilot or pilot management.
- Distribution of an incident report and lessons learned with no personnel action.
- Development or revising of Operational Procedures.
- Pilot management internal actions (procedures, training, etc).

a. Each Humboldt Bay Pilot will:

1. Report to the HBHRCD what reviews of the casualty or incident reports were undertaken and what actions will be taken to prevent similar casualties or incidents.

PASSED AND ADOPTED THIS 27TH DAY OF JANUARY 2000, BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER SMITH, COMMISSIONER CURLESS, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER, COMMISSIONER OLLIVIER

NOES:

ABSENT:

ATTEST:

JIMMY SMITH, President
Board of Commissioners

ROY CURLESS, Secretary
Board of Commissioners

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

AMENDMENT NO. 3 TO ORDINANCE NO. 15

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY AMEND ORDINANCE NO. 15 AS FOLLOWS:

Add Pilotage Rules and Regulations as previously approved as Ordinance No. 16 – Pilotage to General Tariff No. 1, Section 3.

PASSED AND ADOPTED THIS 13TH DAY OF APRIL 2000, BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER SMITH, COMMISSIONER CURLESS, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER, COMMISSIONER OLLIVIER

NOES:

ABSENT:

ATTEST:

Roy Curless

ROY CURLESS, PRESIDENT
Board of Commissioners

DENNIS HUNTER, SECRETARY
Board of Commissioners

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

AMENDMENT NO. 4 TO ORDINANCE NO. 15

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY AMEND ORDINANCE NO. 15, SECTION 3 – PILOTAGE, AS FOLLOWS:

Page 12, Section 4.1 Apprenticeship and Training (g) 3, change to read:

"Simulator training to include emergency ship handling."

Page 12, Section 4.1 Apprenticeship and Training (g) 4, change to read:

"Undergo Emergency Ship handling, Simulator training and Bridge Resource Management training for Pilots at least once every five years."

Page 11, Section 4.1 Apprenticeship and Training (b), add as fourth and fifth sentences:

"Upon acceptance into the Pilot Training Program, the Pilot trainee will be issued an 'Observing Apprentice Permit'. Upon successful completion of the observing apprentice requirement, the Harbor District will issue the trainee an 'Apprentice Pilot Permit'."

Page 12, Section 4.1 Apprenticeship and Training last paragraph, add as last sentence:

"If the HBHRCD dismisses a trainee from the program, the trainee's Observing Apprentice Permit or Apprentice Pilot Permit will be immediately revoked."

Page 14, Section 6.5 Near Miss/Lessons Learned/Situations/Incidents(a) 1. Change to read:

1. **"Report to the Chief Executive Officer of the HBHRCD on US Coast Guard Form 2692, the facts surrounding a reportable casualty (groundings, allisions, collisions, and personal injury, meeting certain thresholds) in a timely manner."**

Page 14, Section 6.5 Near Miss/Lessons Learned/Situations/Incidents create #2 under (a) that will read:

2. **"Report to the HBHRCD other reviews of the casualty or incident, which were undertaken and what action will be taken to prevent similar casualties or incidents."**

Page 6, Section 2.1 Pilotage on Humboldt Bay (f) change to read:

"Vessels are to boarded approximately 1 mile westward of HB Sea Buoy."

Page 3, Section 2.1 Pilotage on Humboldt Bay add paragraph (j), which will read:

"While navigating waters of Humboldt Bay, vessels must maintain no less than 2' of underkeel clearance based on most current information available."

PASSED AND ADOPTED THIS 21ST DAY OF DECEMBER, 2000 BY THE BAORD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER SMITH, COMMISSIONER CURLESS, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER, COMMISSIONER OLLIVIER

NOES:

ABSENT:

Roy Curless

Roy Curless, President

ATTEST:

Dennis Hunter, Secretary

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

AMENDMENT NO. 5 TO ORDINANCE 15

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY AMEND ORDINANCE 15, SECTION 3 – PILOTAGE, AS FOLLOWS:

Page 3, Section 2.1 Pilotage on Humboldt Bay (h) change to read:

"h. There shall be two Pilots plus additional Pilots as conditions warrant."

PASSED AND ADOPTED THIS 11TH DAY OF JULY, 2001 BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER PELLEGRINI, COMMISSIONER CURLESS, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER, COMMISSIONER OLLIVIER

NOES:

ABSENT:

Ronald A. Fritzsche

RON FRITZSCHE, President

ATTEST:

Roy Curless

ROY CURLESS, Secretary

HUMBOLDT BAY HARBOR, RECREATION
AND CONSERVATION DISTRICT

AMENDMENT NO. 6 TO ORDINANCE NO. 15

THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT DOES HEREBY AMEND ORDINANCE NO. 15, SECTION 3 – PILOTAGE, AS FOLLOWS:

Section 2.1 Pilotage on Humboldt Bay add paragraph (k) which will read:

"The Port Director or designee may grant permission to the Humboldt Bar Pilots Association to disembark the vessel in the vicinity of Buoy #5. This deviation from normal procedures may be granted due to the presence of the following conditions:

1. **The pilot is working aboard a foreign flag tugboat towing an ocean going barge.**
2. **Ocean swell conditions are considered to be unsafe for Pilot transfer at the time of sailing.**
3. **The master of the tugboat gives his or her approval.**
4. **The Pilot involved agrees that to follow this procedure would enhance the safety of the pilot transfer process from tugboat to pilot boat."**

PASSED AND ADOPTED THIS 24TH DAY OF OCTOBER, 2002 BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: COMMISSIONER PELLEGRINI, COMMISSIONER FRITZSCHE, COMMISSIONER HUNTER COMMISSIONER OLLIVIER

NOES:

ABSENT: COMMISSIONER CURLESS

Charles Ollivier, President

ATTEST:

Ronnie Pellegrini, Secretary

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

AMENDMENT NO. 7 TO ORDINANCE 15 Tariff Section No. 6 Item 14

ENACTING GENERAL TARIFF NO. 1, ESTABLISHING RULES, REGULATIONS, CHARGES, AND FEES, INCLUDING HARBOR FEES ON VESSELS AND CARGO IN CONNECTION WITH THE HUMBOLDT HARBOR AND BAY 38 FOOT, DEEP DRAFT NAVIGATION IMPROVEMENT PROJECT WITHIN THE JURISDICTION OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

The Board of Commissioners of the Humboldt Bay Harbor, Recreation, and Conservation District do ordain as follows:

Section 1. Amendment to Ordinance No. 15. Ordinance No. 15, as amended by Amendment Nos. 1 through 6, inclusive, of the Humboldt Bay Harbor, Recreation, and Conservation District is hereby amended as follows:

The following words are hereby deleted from Section II, Tariff Section No. 6 of Ordinance No. 15, as amended:

Miscellaneous Services Rates and Conditions; Item 14:

~~14 Harbor Usage~~

~~a. Vessels - five dollars ($5.00) per foot of draft based upon reported sailing draft at time of departure for any vessel using any portion of the Bar and Entrance Channel, and an additional five dollars ($5.00) per foot of draft based upon reported sailing draft for any vessel using any portion of the North Bay and Samoa Channels.~~

~~b. Cargo – seven and one-half cents (0.075) per short ton or eight and two hundred sixty five thousandths cents ($0.08265) per metric ton for any cargo on board a vessel using any portion of the Bar and Entrance Channel, and an additional seven and one-half cents ($0.075) per short ton or eight and two hundred sixty five thousandths cents ($0.08265) per metric ton for any cargo on board a vessel using any portion of the North Bay and Samoa Channels.~~

AND the following words inserted in place of the deleted text:

14 Harbor Usage

a. Vessels - five hundred dollars ($500.00) per commercial barge, ship, or other vessel over 200 feet in length or 20 foot of draft using any portion of the Bar, Entrance Channel, North Bay or Samoa Channels.

b. Cargo – fifteen cents ($0.15) per short ton or eight and two hundred sixty five thousandths cents ($0.1653) per metric ton for any cargo on board a vessel using any portion of the Bar and Entrance Channel, and an additional fifteen cents ($0.15) per short ton or eight and two hundred sixty five thousandths cents ($0.1653) per metric ton for any cargo on board a vessel using any portion of the North Bay and Samoa Channels.

Section 2. Severability. If any subsection, sentence, clause or phrase of this article is for any reason held to be invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The Board of Commissioners hereby declares that it would have adopted this ordinance, and each and every subsection, sentence, clause and phrase thereof not declared invalid or unconstitutional, without regard to whether any portion of the ordinance would be subsequently declared invalid or unconstitutional.

Section 3. Conflicts. All ordinances and parts of ordinances or resolutions, in conflict herewith, are hereby repealed to the extent of such conflicts and no further.

Section 4. Effective Date. The effective date of this ordinance is thirty (30) days after its adoption by the Board of Commissioners.

Section 5. Publication. This ordinance shall be published within 15 days from the passage thereof with the names of the members voting for and against them at least once in some daily newspaper of general circulation printed and published in the District.

PASSED AND ADOPTED THIS 24th DAY OF OCTOBER, 2019 BY THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BY THE FOLLOWING POLLED VOTE:

AYES: Doss, Kullmann, Higgins, Marks, Dale

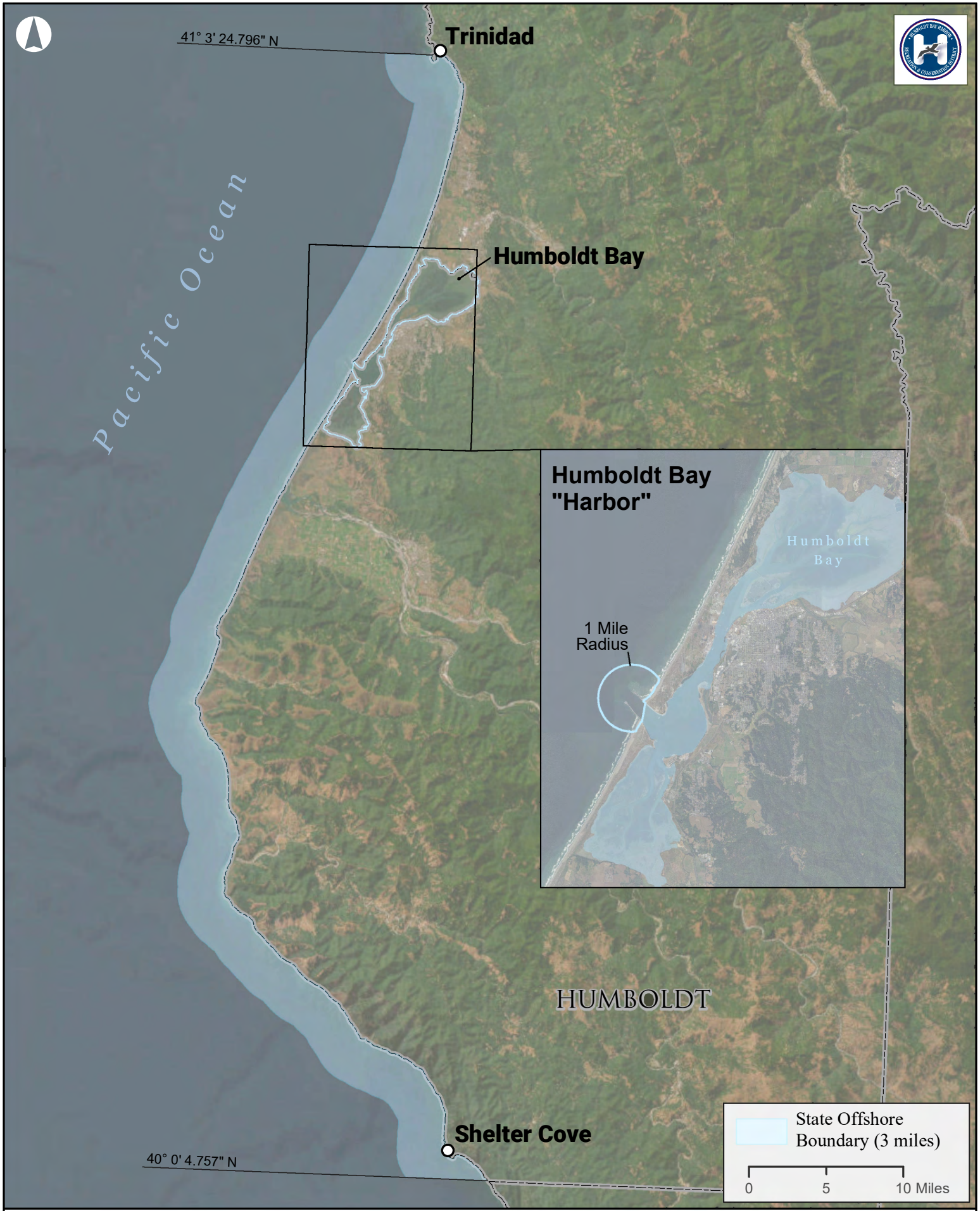
NOES: None

ABSENT: None

GREG DALE, PRESIDENT
Board of Commissioners

ATTEST:

LARRY DOSS, SECRETARY
Board of Commissioners



Humboldt Bay Area Harbor Safety Plan Boundary

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Map prepared for HBHRCD by:
PLANWEST PARTNERS, INC.
Map Date: 2/22/2023

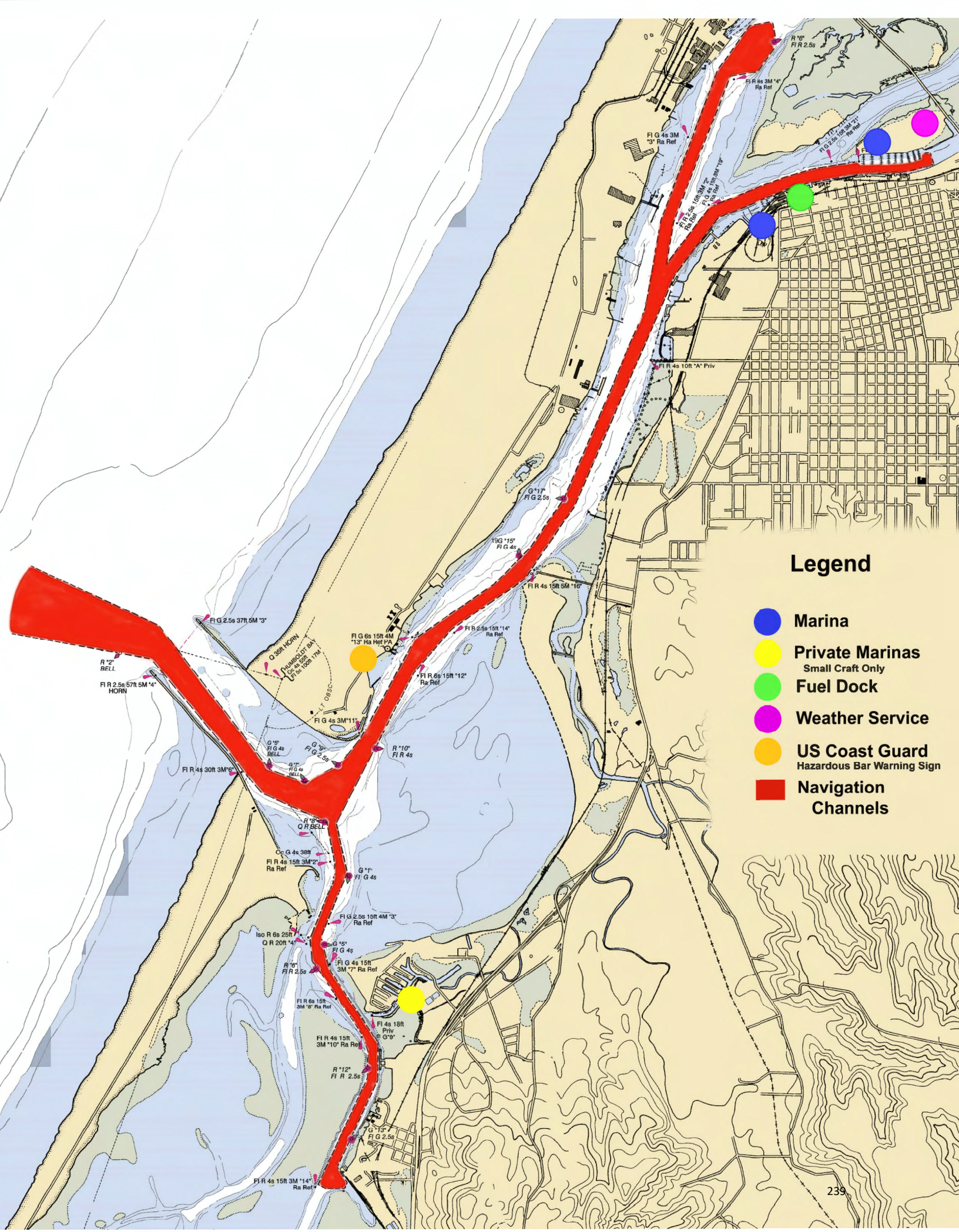
Path: D:\projects\current\HBHRCD\Harbor_Safety_Committee\mapdocs\Humboldt_Bay_Area_Harbor_Safety_Plan.mxd

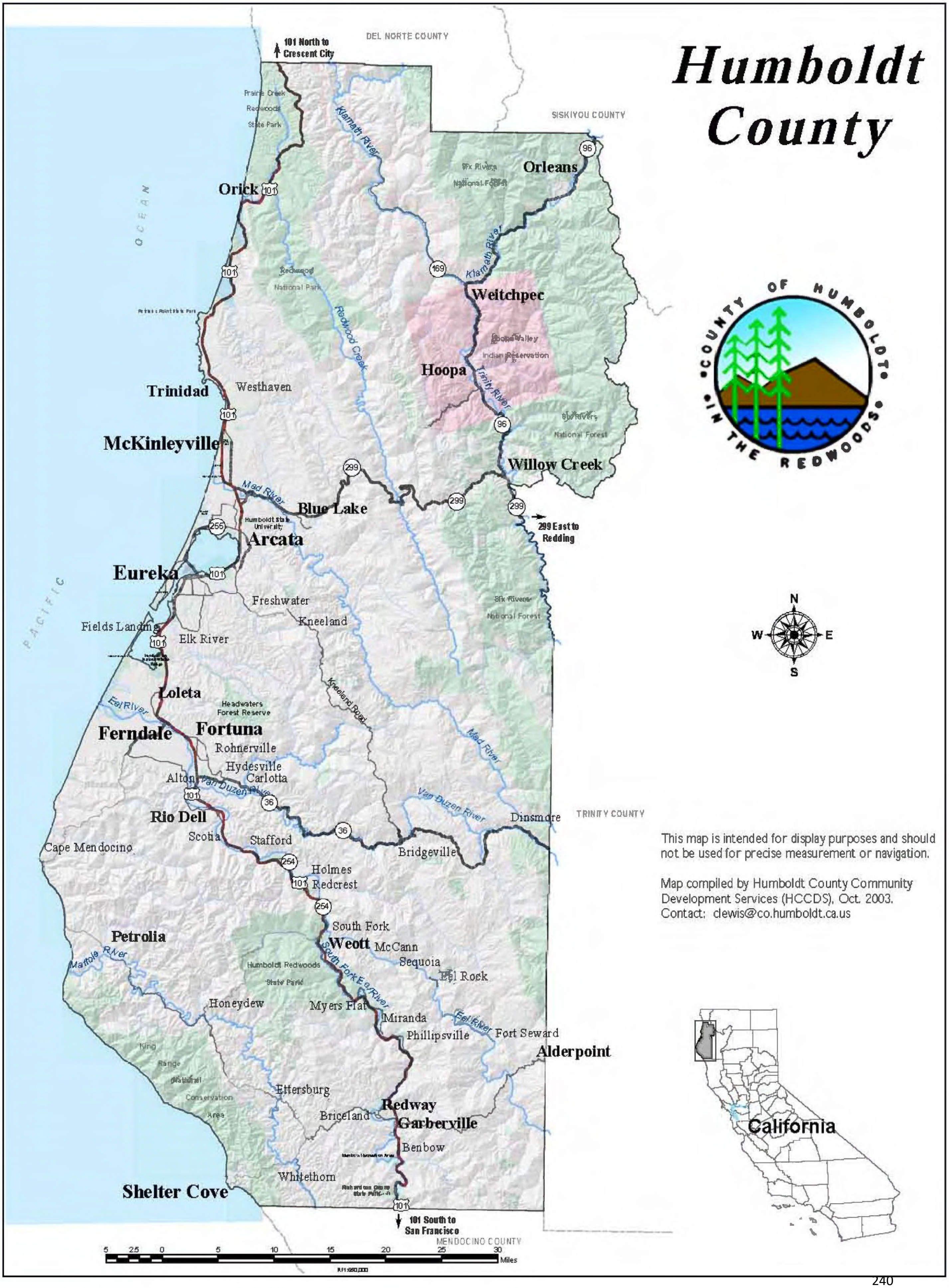
Humboldt Bay Area Federal Navigation Channels

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Map prepared for HBHRCD by:
PLANWEST PARTNERS, INC.
Map Date: 2/23/2023

Path: D:\projects\current\HBHRCD\Harbor_Safety_Committee\mapdocs\Humboldt_Bay_Area_Federal_Channels.mxd


Legend
Marina
Private Marinas
Small Craft Only
Fuel Dock
Weather Service
US Coast Guard
Hazardous Bar Warning Sign
Navigation Channels

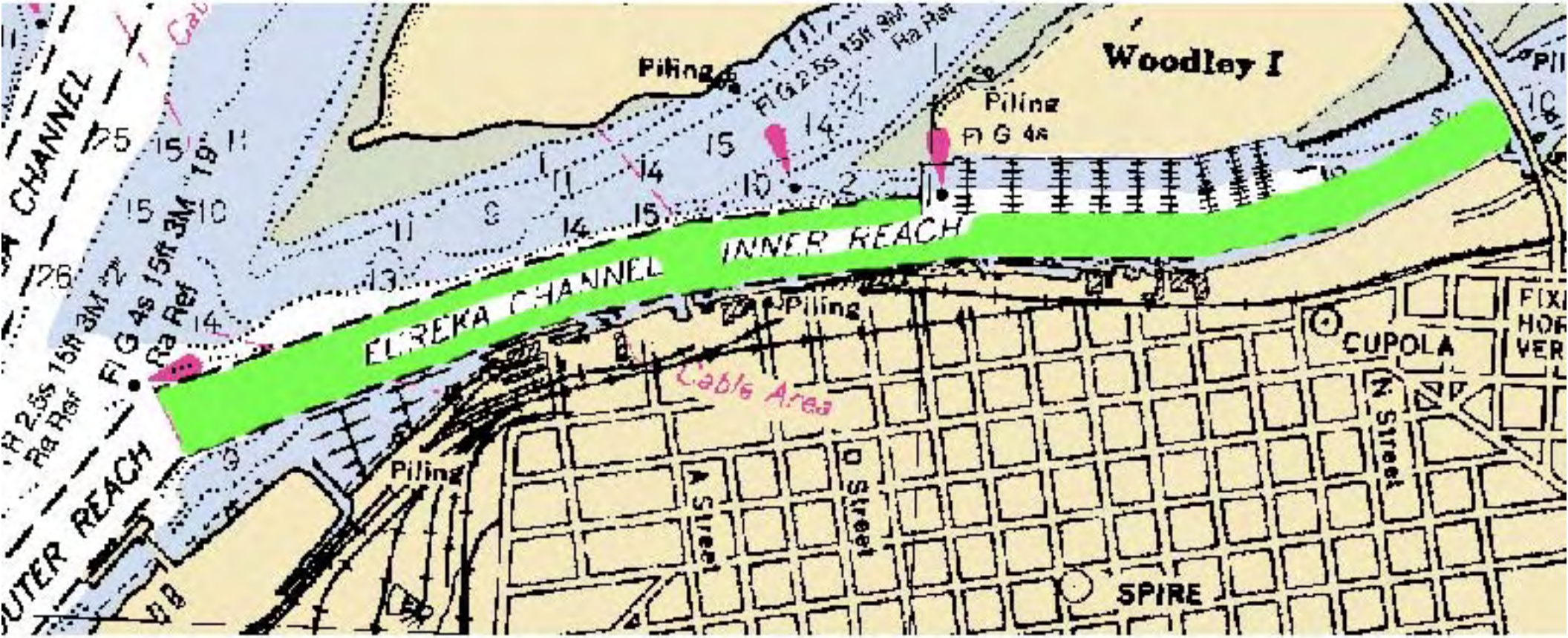

Humboldt County
DEL NORTE COUNTY
SISKIYOU COUNTY
TRINITY COUNTY
MENDOCINO COUNTY
PACIFIC OCEAN
101 North to Crescent City
299 East to Redding
101 South to San Francisco
Orick
Orleans
Weitchpec
Hoopa
Trinidad
Westhaven
McKinleyville
Willow Creek
Blue Lake
Arcata
Eureka
Freshwater
Kneeland
Fields Landing
Elk River
Loleta
Ferndale
Fortuna
Rohnerville
Hydesville
Carlotta
Alton
Rio Dell
Scotia
Stafford
Dinsmore
Bridgeville
Cape Mendocino
Holmes
Redcrest
South Fork
Weott
McCann
Sequoia
Petrolia
Honeydew
Myers Flat
Miranda
Phillipsville
Fort Seward
Alderpoint
Ettersburg
Briceland
Redway
Garberville
Benbow
Whitethorn
Shelter Cove
Klamath River
Redwood Creek
Trinity River
Mad River
Eel River
Van Duzen River
South Fork Eel River
Mattole River
Kneeland Road
Redwood National Park
Six Rivers National Forest
Hoopa Valley Indian Reservation
Headwaters Forest Reserve
Humboldt Redwoods State Park
Humboldt State University
COUNTY OF HUMBOLDT IN THE REDWOODS
N
S
W
E
California
This map is intended for display purposes and should not be used for precise measurement or navigation.
Map compiled by Humboldt County Community Development Services (HCCDS), Oct. 2003.
Contact: clewis@co.humboldt.ca.us
Miles

NO WAKE AREA (shown in green)

From Samoa Bridge to West Side of Eureka Public Marina

Also use extreme caution around the two fueling terminals in Humboldt Bay

Englund Marine and the Chevron Marine Terminal



The City of Eureka Municiple Code Section 100.14

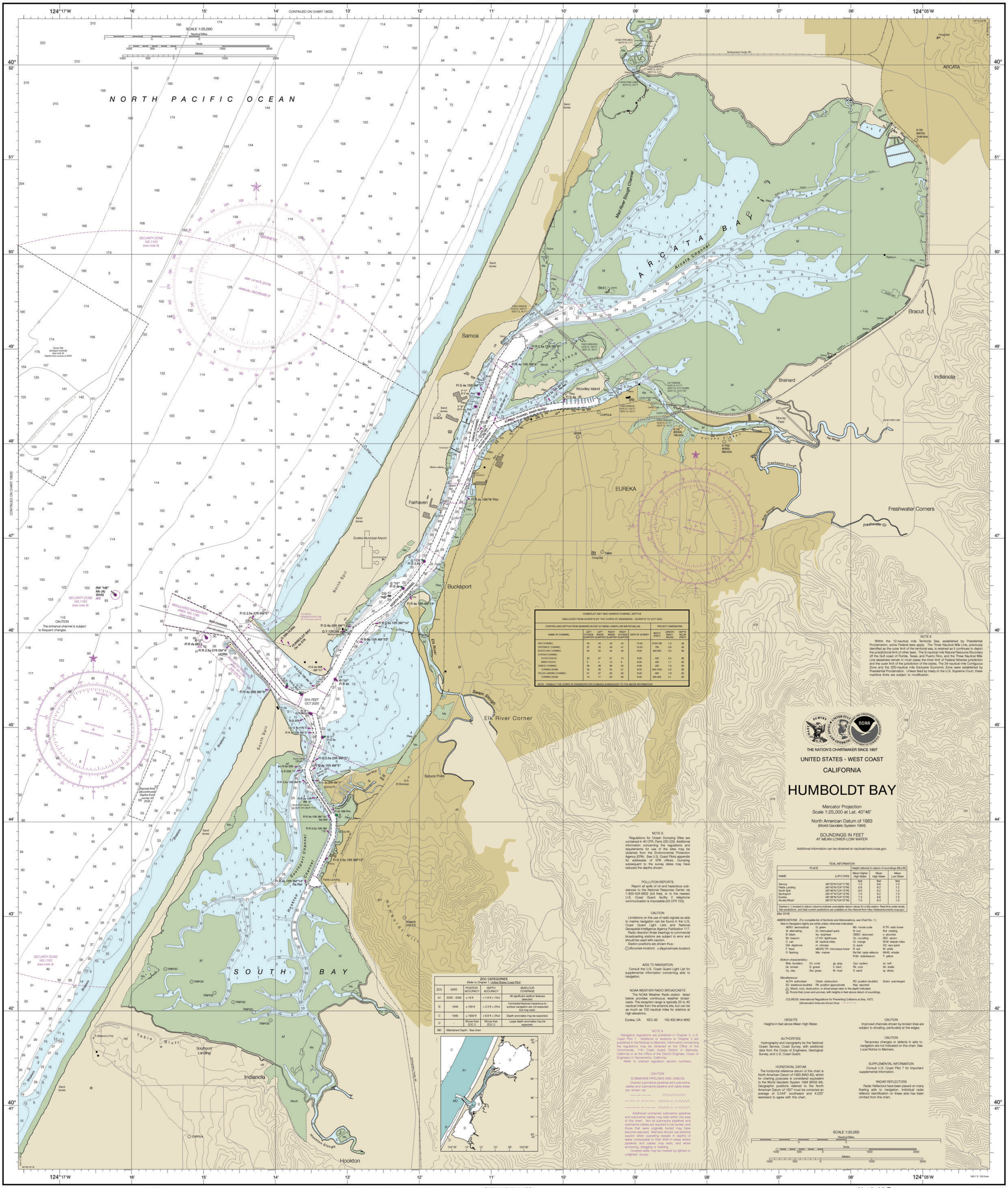
(B) It shall be unlawful for any person to operate a vessel at a speed that generates a noticable wake within the Eureka Inner Reach Channel, defined as that waterway along the Eureka mainland between the southern section of the Samoa Bridge and the westernmost extension of Eureka's Small Boat Basin.

Section 100.99 PENALTY. Whoever violates any provision of this chapter shall be guilty of a misdemeanor, and shall be subject to a fine not exceeding $1,000. Each day any person is in violation shall constitute a separate offense punishable as provided herein. ('63 Code, § 11-1.601) (Ord. 336-C.S., passed 3-18-81)

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

SOUNDINGS IN FEET

18622



18622

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

SOUNDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

Humboldt Bay
SOUNDINGS IN FEET - SCALE 1:25,000

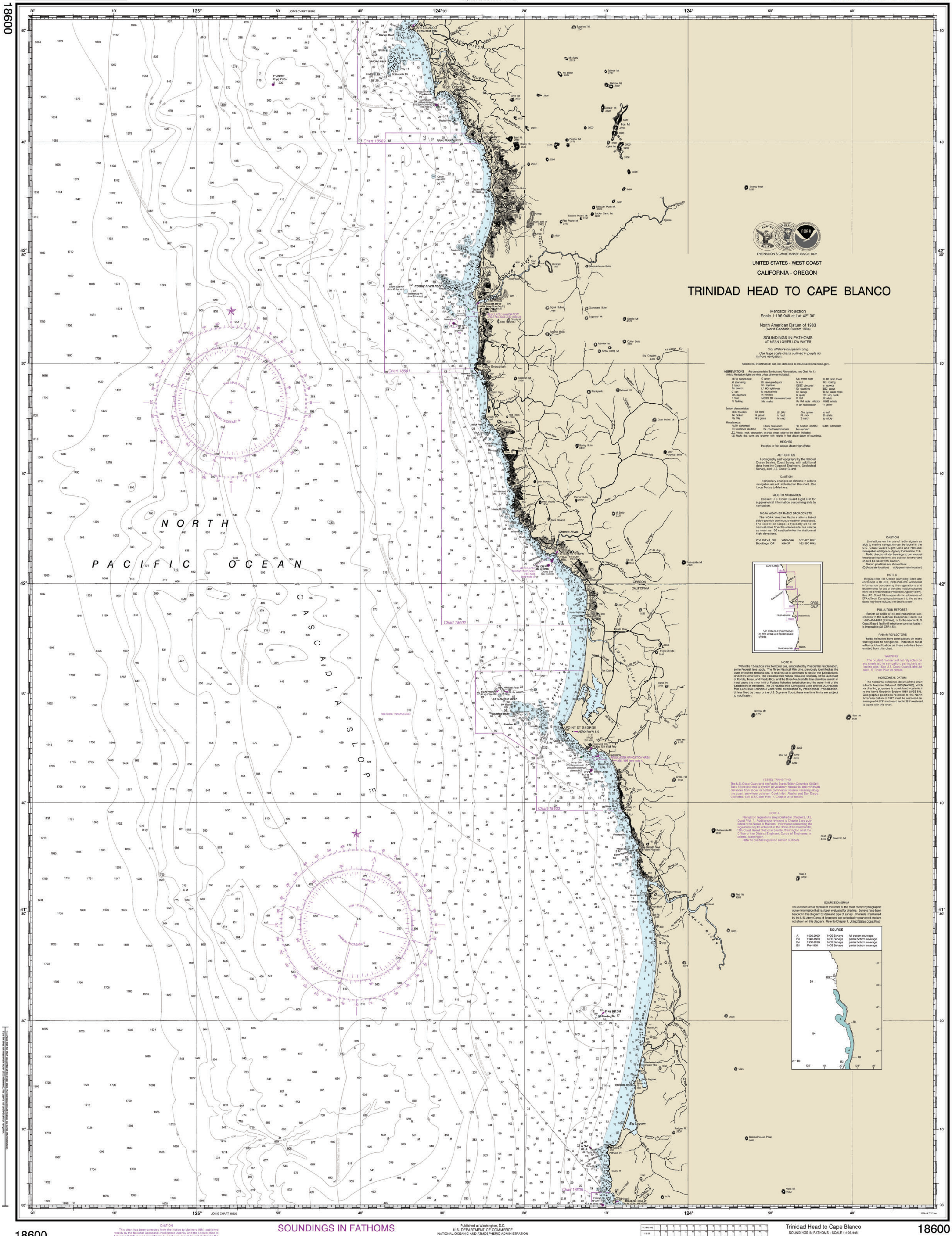
18622

Use ENC charts for the most up to date information. References to other charts may no longer be applicable.

56th Ed., Apr. 2018. Last Correction: 11/18/2021. Cleared through: LNM: 2522 (6/21/2022), NM: 2722 (7/2/2022)

(POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov



18600

CAUTION

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Use ENC charts for the most up to date information. References to other charts may no longer be applicable.

15th Ed., Mar. 2011. Last Correction: 6/2/2022. Cleared through: LNM: 2922 (7/19/2022), NM: 3122 (7/30/2022), CHS: 0622 (6/24/2022)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).

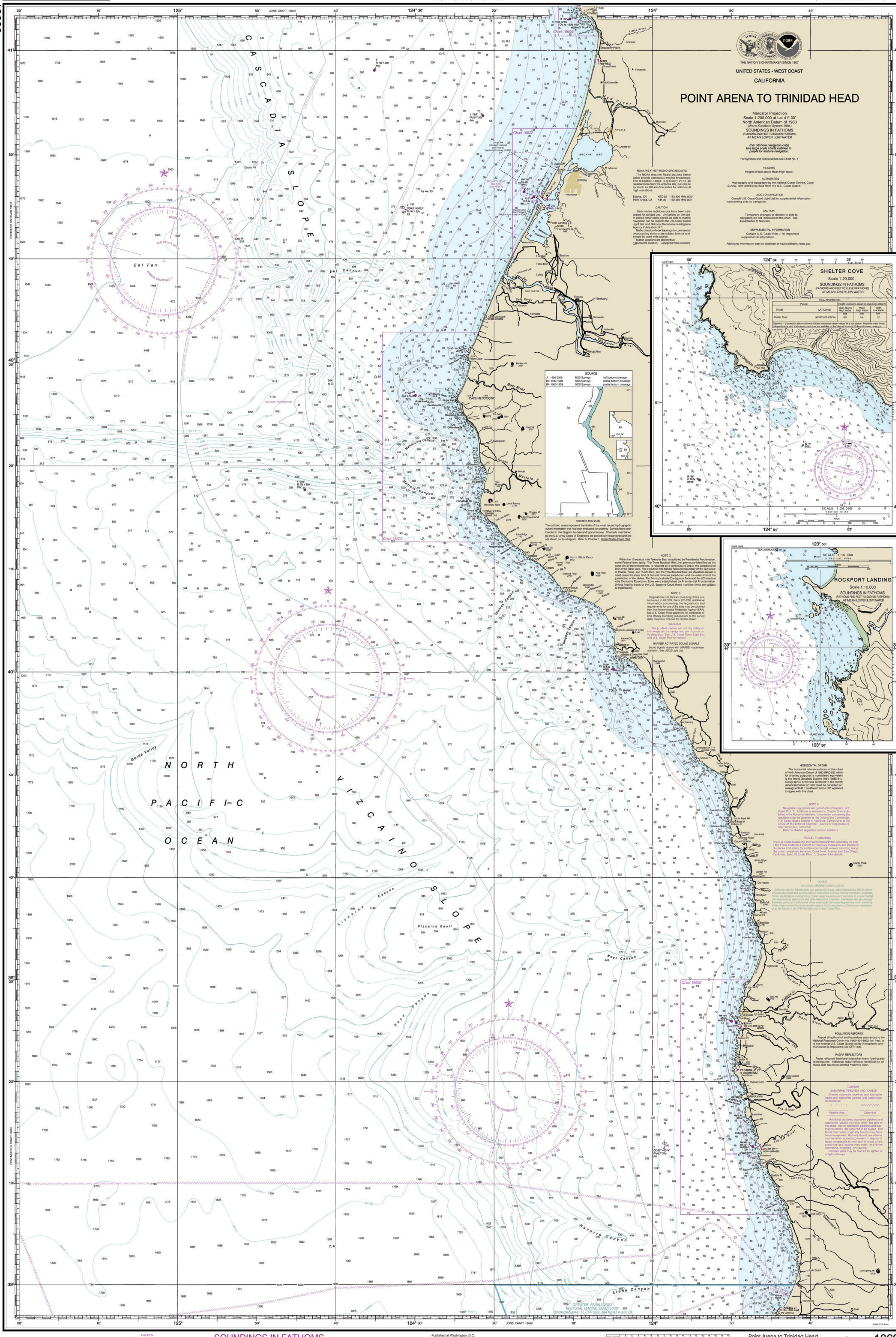
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

SOUNDINGS IN FATHOMS

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Trinidad Head to Cape Blanco
SOUNDINGS IN FATHOMS - SCALE 1:196,948

(POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod



18620

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO 11 FATHOMS)

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Point Arena to Trinidad Head
SOUNDINGS IN FATHOMS - SCALE 1:200,000

Use ENC charts for the most up to date information. References to other charts may no longer be applicable.

24th Ed., Feb. 2012. Last Correction: 5/25/2022. Cleared through:
LNM: 2922 (7/19/2022), NM: 3122 (7/30/2022)

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Humboldt Bay Dock Addresses

Humboldt Bay Berth Codes

Port Area	UNLOC	Channel	Commonly Known as	AIS Destination Code (with Dock Identifier)	AIS Destination Code (USCG Minimum Required)	Degrees, Minutes & Seconds N Latitude	Degrees, Minutes & Seconds W Longitude	Degrees, Decimal Minutes N Latitude	Degrees, Decimal Minutes W Longitude
Humboldt Bay	ACV	Mad River Slough	Mad River Slough Boat Ramp	US ACV MR 1-A	ACV MR 1-A	40° 51' 54.7"	124° 09' 01.9"	40° 51.912'	124° 09.032'
			Arcata Marsh and Wildlife Sanctuary Boat Ramp						
Humboldt Bay	ACV	Arcata Channel	Sanctuary Boat Ramp	US ACV AC 2-A	ACV AC 2-A	40° 51' 22.7"	124° 09' 54.9"	40° 51.377'	124° 09.915'
Humboldt Bay	ACV	Eureka Slough	Target Boat Ramp	US ACV ES 2-A	ACV ES 2-A	40° 48' 19.8"	124° 08' 32.0"	40° 48.330'	124° 08.533'
Humboldt Bay	ACV	Eureka Inner Reach	1091 Berth	US ACV IR 32	ACV IR 32	40° 48' 35.0"	124° 09' 06.5"	40° 48.583'	124° 09.092'
Humboldt Bay	ACV	Eureka Middle Channel	Wyvt Dock	US ACV MC 7	ACV MC 7	40° 48' 54.5"	124° 09' 27.0"	40° 48.908'	124° 09.450'
Humboldt Bay	IOR	Samoa Channel	Simpson Chip Export Dock	US IOR SC 1	IOR SC 1	40° 47' 58.0"	124° 11' 26.0"	40° 47.917'	124° 11.433'
Humboldt Bay	IOR	Samoa Channel	Redwood Terminal Berth 2	US IOR SC 3	IOR SC 3	40° 48' 12.4"	124° 11' 15.6"	40° 48.207'	124° 11.310'
Humboldt Bay	IOR	Samoa Channel	Unnamed HD Dock	US IOR SC 5	IOR SC 5	40° 48' 28.1"	124° 11' 16.0"	40° 48.468'	124° 11.267'
Humboldt Bay	IOR	Samoa Channel	Aquaculture Terminal Dock	US IOR SC 7	IOR SC 7	40° 48' 41.0"	124° 11' 11.0"	40° 48.683'	124° 11.183'
Humboldt Bay	IOR	Samoa Channel	Redwood Terminal Berth 1	IOR SC 9	IOR SC 9	40° 48' 58.6"	124° 10' 53.0"	40° 48.993'	124° 10.883'
Humboldt Bay	EKA	Eureka Middle Channel	Johnson Dock	US EKA MC 1	EKA MC 1	40° 48' 31.4"	124° 10' 15.7"	40° 48.523'	124° 10.262'
Humboldt Bay	EKA	Eureka Middle Channel	Bates Dock	US EKA MC 3	EKA MC 3	40° 48' 26.1"	124° 10' 09.0"	40° 48.585'	124° 10.150'
Humboldt Bay	EKA	Eureka Middle Channel	Fleming/Stoneford Dock	US EKA MC 5	EKA MC 5	40° 48' 37.7"	124° 10' 05.0"	40° 48.628'	124° 10.083'
Humboldt Bay	EKA	Eureka Inner Reach	Woodley Island Marina	US EKA IR 1	EKA IR 1	40° 48' 25.2"	124° 10' 00.0"	40° 48.422'	124° 10.000'
Humboldt Bay	EKA	Eureka Inner Reach	Eureka Public Marina	US EKA IR 2	EKA IR 2	40° 48' 11.0"	124° 10' 43.0"	40° 48.217'	124° 10.717'
Humboldt Bay	EKA	Eureka Inner Reach	Eureka Public Marina Ramp	US EKA IR 2-A	EKA IR 2-A	40° 48' 14.5"	124° 10' 34.5"	40° 48.242'	124° 10.575'
Humboldt Bay	EKA	Eureka Inner Reach	Commercial St. Dock	US EKA IR 4	EKA IR 4	40° 48' 11.5"	124° 10' 29.0"	40° 48.192'	124° 10.483'
Humboldt Bay	EKA	Eureka Inner Reach	Ice Plant	US EKA IR 6	EKA IR 6	40° 48' 19.0"	124° 10' 22.5"	40° 48.317'	124° 10.375'
Humboldt Bay	EKA	Eureka Inner Reach	Coast Seafoods	US EKA IR 8	EKA IR 8	40° 48' 19.5"	124° 10' 20.0"	40° 48.325'	124° 10.333'
Humboldt Bay	EKA	Eureka Inner Reach	Fishermens work area Dock	US EKA IR 10	EKA IR 10	40° 48' 20.5"	124° 10' 14.0"	40° 48.338'	124° 10.233'
Humboldt Bay	EKA	Eureka Inner Reach	C St. Dock	US EKA IR 12	EKA IR 12	40° 48' 20.1"	124° 10' 12.0"	40° 48.349'	124° 10.213'
Humboldt Bay	EKA	Eureka Inner Reach	Boardwalk	US EKA IR 14	EKA IR 14	40° 48' 21.2"	124° 10' 08.0"	40° 48.353'	124° 10.133'
Humboldt Bay	EKA	Eureka Inner Reach	F St Loading Dock	US EKA IR 16	EKA IR 16	40° 48' 22.1"	124° 10' 01.3"	40° 48.368'	124° 10.022'
Humboldt Bay	EKA	Eureka Inner Reach	Cato Dock	US EKA IR 18	EKA IR 18	40° 48' 22.4"	124° 09' 48.0"	40° 48.373'	124° 09.800'
Humboldt Bay	EKA	Eureka Inner Reach	J St. Dock	US EKA IR 20	EKA IR 20	40° 48' 22.1"	124° 09' 45.2"	40° 48.378'	124° 09.753'
Humboldt Bay	EKA	Eureka Inner Reach	Old Cato Dock (K St.)	US EKA IR 22	EKA IR 22	40° 48' 22.6"	124° 09' 42.2"	40° 48.377'	124° 09.703'
Humboldt Bay	EKA	Eureka Inner Reach	Adorni Dock	US EKA IR 24	EKA IR 24	40° 48' 22.8"	124° 09' 40.0"	40° 48.380'	124° 09.667'
Humboldt Bay	EKA	Eureka Inner Reach	Boness Govt Guest Dock	US EKA IR 26	EKA IR 26	40° 48' 24.6"	124° 09' 33.7"	40° 48.410'	124° 09.562'
Humboldt Bay	EKA	Eureka Inner Reach	HSU Crew Dock	US EKA IR 28	EKA IR 28	40° 48' 29.2"	124° 09' 20.6"	40° 48.487'	124° 09.343'
Humboldt Bay	EKA	Eureka Inner Reach	Samoa Bridge Boat Ramp	US EKA IR 30-A	EKA IR 30-A	40° 48' 30.0"	124° 09' 16.0"	40° 48.500'	124° 09.267'
Humboldt Bay	EKA	Eureka Outer Reach	Dock B	US EKA OR 2	EKA OR 2	40° 48' 05.0"	124° 10' 58.4"	40° 48.083'	124° 10.973'
Humboldt Bay	EKA	North Bay Channel	U.S. Coast Guard	US EKA NBC 1	EKA NBC 1	40° 48' 58.0"	124° 12' 02.0"	40° 48.967'	124° 13.033'
Humboldt Bay	EKA	North Bay Channel	Old Crowley Dock	US EKA NBC 2	EKA NBC 2	40° 48' 24.4"	124° 12' 07.0"	40° 48.407'	124° 12.117'
Humboldt Bay	EKA	North Bay Channel	Samoa Boat Ramp	US EKA NBC 3-A	EKA NBC 3-A	40° 48' 19.0"	124° 12' 46.0"	40° 48.317'	124° 12.767'
Humboldt Bay	EKA	North Bay Channel	Chevron Dock	US EKA NBC 4	EKA NBC 4	40° 48' 41.2"	124° 12' 46.0"	40° 48.687'	124° 12.767'
Humboldt Bay	EKA	North Bay Channel	Eureka Airport	US EKA NBC 5	EKA NBC 5	40° 48' 48.0"	124° 12' 31.0"	40° 48.767'	124° 12.517'
Humboldt Bay	EKA	North Bay Channel	Del Norte St. Pier	US EKA NBC 6	EKA NBC 6	40° 47' 28.5"	124° 11' 20.0"	40° 47.447'	124° 11.340'
Humboldt Bay	EKA	North Bay Channel	Fairhaven Terminal	US EKA NBC 7	EKA NBC 7	40° 47' 18.5"	124° 11' 41.0"	40° 47.308'	124° 11.683'
Humboldt Bay	EKA	North Bay Channel	Preston Properties	US EKA NBC 8	EKA NBC 8	40° 47' 34.4"	124° 11' 16.4"	40° 47.572'	124° 11.272'
Humboldt Bay	EKA	North Bay Channel	Kaiser Dock 1	US EKA NBC 9	EKA NBC 9	40° 47' 38.0"	124° 11' 23.0"	40° 47.633'	124° 11.550'
Humboldt Bay	EKA	North Bay Channel	Eureka Forest Products	US EKA NBC 10	EKA NBC 10	40° 47' 41.2"	124° 11' 16.0"	40° 47.687'	124° 11.267'
Humboldt Bay	EKA	North Bay Channel	Eureka Boat Yard/Coast GF	US EKA NBC 11	EKA NBC 11	40° 47' 44.4"	124° 11' 34.0"	40° 47.740'	124° 11.567'
Humboldt Bay	EKA	North Bay Channel	Unocal Dock	US EKA NBC 12	EKA NBC 12	40° 47' 48.0"	124° 11' 14.0"	40° 47.767'	124° 11.233'
Humboldt Bay	EKA	North Bay Channel	Unocal Dock Ramp	US EKA NBC 12-A	EKA NBC 12-A	40° 47' 46.1"	124° 11' 09.5"	40° 47.767'	124° 11.158'
Humboldt Bay	EKA	North Bay Channel	Kaiser Dock 2	US EKA NBC 13	EKA NBC 13	40° 47' 53.0"	124° 11' 02.4"	40° 47.883'	124° 11.040'
Humboldt Bay	EKA	North Bay Channel	Schneider Dock	US EKA NBC 14	EKA NBC 14	40° 47' 50.5"	124° 11' 12.0"	40° 47.842'	124° 11.200'
Humboldt Bay	EKA	North Bay Channel	Schneider Ramp	US EKA NBC 14-A	EKA NBC 14-A	40° 47' 51.5"	124° 11' 07.6"	40° 47.858'	124° 11.128'
Humboldt Bay	EKA	King Salmon Channel	Gills	US EKA KSC 1	EKA KSC 1	40° 44' 11.4"	124° 13' 11.5"	40° 44.190'	124° 13.192'
Humboldt Bay	EKA	King Salmon Channel	EZ Loading	US EKA KSC 3	EKA KSC 3	40° 44' 13.0"	124° 13' 05.0"	40° 44.200'	124° 13.083'
Humboldt Bay	EKA	King Salmon Channel	Johnny's Marina	US EKA KSC 5	EKA KSC 5	40° 44' 14.3"	124° 13' 02.3"	40° 44.238'	124° 13.038'
Humboldt Bay	EKA	Fields Landing Channel	Humboldt Bay Forest Products	US EKA FLC 2	EKA FLC 2	40° 43' 57.6"	124° 13' 09.3"	40° 43.960'	124° 13.155'
Humboldt Bay	EKA	Fields Landing Channel	Woody's Other Dock	US EKA FLC 4	EKA FLC 4	40° 43' 48.1"	124° 13' 11.0"	40° 43.768'	124° 13.183'
Humboldt Bay	EKA	Fields Landing Channel	South Bay Marina	US EKA FLC 6	EKA FLC 6	40° 43' 41.5"	124° 13' 13.7"	40° 43.692'	124° 13.228'
Humboldt Bay	EKA	Fields Landing Channel	Eureka Fisheries	US EKA FLC 8	EKA FLC 8	40° 43' 38.0"	124° 13' 15.5"	40° 43.650'	124° 13.258'
Humboldt Bay	EKA	Fields Landing Channel	County Boat Ramp	US EKA FLC 10-A	EKA FLC 10-A	40° 43' 34.0"	124° 13' 16.0"	40° 43.567'	124° 13.267'
Humboldt Bay	EKA	Fields Landing Channel	Fields Landing Boat Yard	US EKA FLC 12	EKA FLC 12	40° 43' 28.0"	124° 13' 22.6"	40° 43.432'	124° 13.380'
Humboldt Bay	EKA	Fields Landing Channel	Fields Landing Terminal	US EKA FLC 14	EKA FLC 14	40° 43' 24.4"	124° 13' 24.0"	40° 43.407'	124° 13.400'
Humboldt Bay	EKA	Hookton Channel	Hookton Slough Boat Dock	US EKA HC 2	EKA HC 2	40° 40' 38.8"	124° 13' 58.4"	40° 40.643'	124° 13.307'

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HUMBOLDT BAY HARBOR RECREATION & CONSERVATION DISTRICT

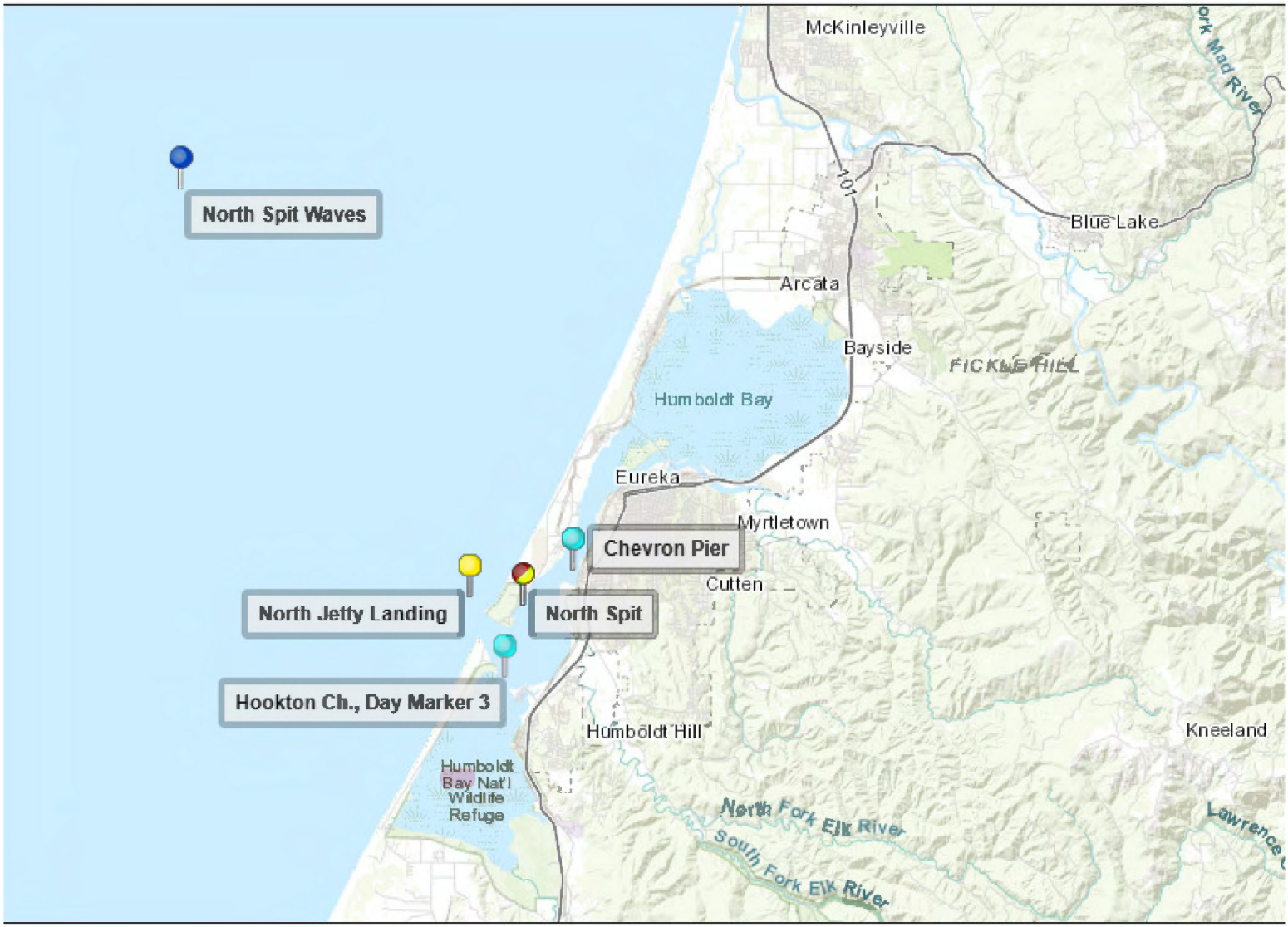
Not For Navigation Purposes - July 3, 2008

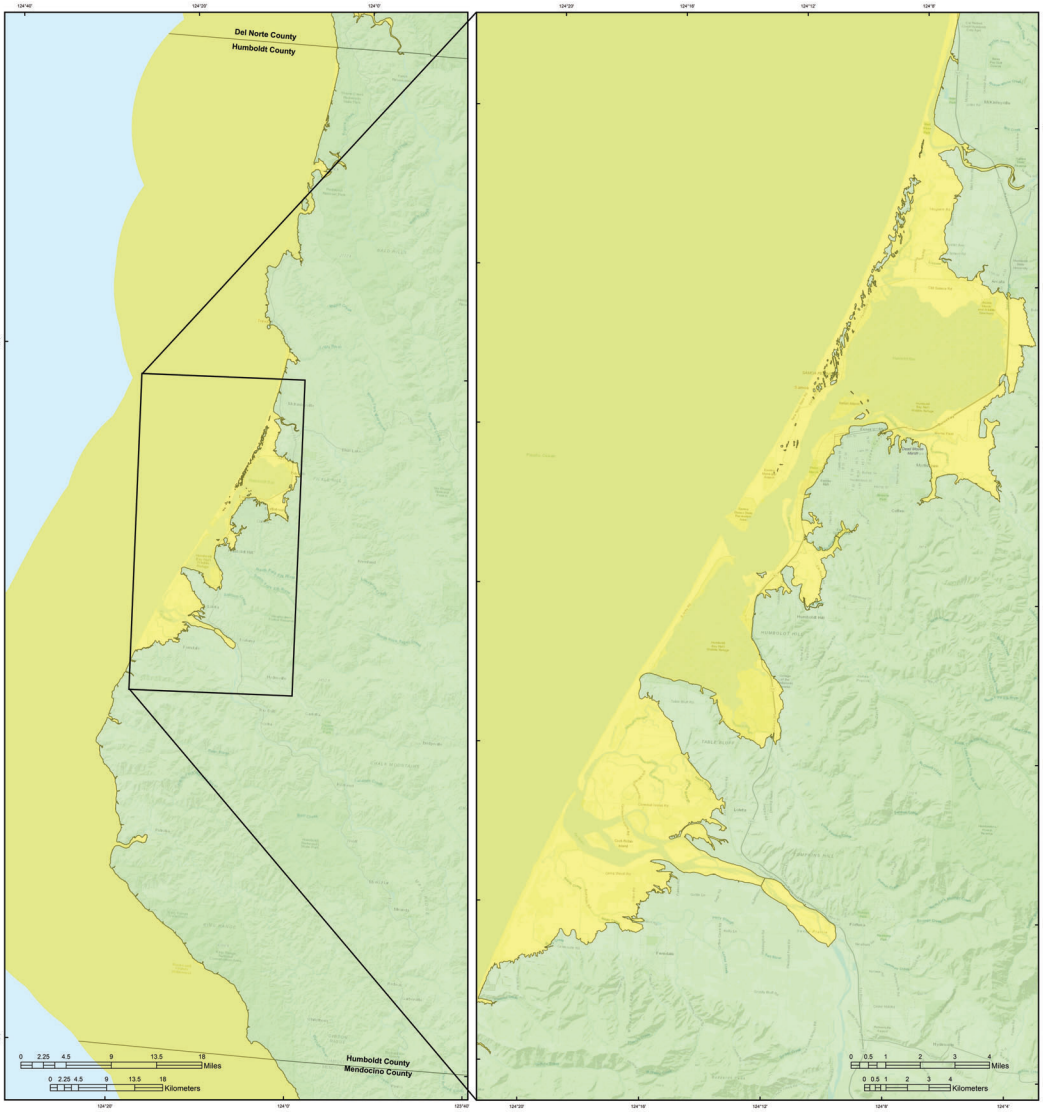
Humboldt Bay Berth Codes

Port Area	UNLOC	Channel	Commonly Known as	AIS Destination Code (with Dock Identifier)	AIS Destination Code (USCG Minimum Required)	Degrees, Minutes & Seconds N Latitude	Degrees, Minutes & Seconds W Longitude	Degrees, Decimal Minutes N Latitude	Degrees, Decimal Minutes W Longitude
Humboldt Bay	ACV	Mad River Slough	Mad River Slough Boat Ramp	US ACV MR 1-A	ACV MR 1-A	40° 51' 54.75"	124° 9' 1.90"	40° 51.912'	124° 9.032'
Humboldt Bay	ACV	Arcata Channel	Arcata Marsh and Wildlife Sanctuary Boat Ramp	US ACV AC 2-A	ACV AC 2-A	40° 51' 22.20"	124° 5' 54.6"	40° 51.370'	124° 5.910'
Humboldt Bay	ACV	Eureka Slough	Target Boat Ramp	US ACV ES 2-A	ACV ES 2-A	40° 48' 19.8"	124° 8' 32.00"	40° 48.330'	124° 8.533'
Humboldt Bay	ACV	Eureka Inner Reach	1091 Berth	US ACV IR 32	ACV IR 32	40° 48' 35"	124° 09' 05.5"	40° 48.583'	124° 9.092'
Humboldt Bay	ACV	Eureka Middle Channel	Wiyot Dock	US ACV MC 7	ACV MC 7	40° 48' 54.50"	124° 09' 27.50"	40° 48.908'	124° 9.458"
Humboldt Bay	IOR	Samoa Channel	Simpson Chip Export Dock	US IOR SC 1	IOR SC 1	40° 47' 55"	124° 11' 26"	40° 47.917'	124° 11.433'
Humboldt Bay	IOR	Samoa Channel	Redwood Terminal Berth 2	US IOR SC 3	IOR SC 3	40° 48' 12.4"	124° 11' 18.6"	40° 48.207'	124° 11.310'
Humboldt Bay	IOR	Samoa Channel	Unnamed HD Dock	US IOR SC 5	IOR SC 5	40° 48' 28.1"	124° 11' 16"	40° 48.468'	124° 11.267'
Humboldt Bay	IOR	Samoa Channel	Aquaculture Terminal Dock	US IOR SC 7	IOR SC 7	40° 48' 41"	124° 11' 11"	40° 48.683'	124° 11.183'
Humboldt Bay	IOR	Samoa Channel	Redwood Terminal Berth 1	US IOR SC 9	IOR SC 9	40° 48' 59.6"	124° 10' 53"	40° 48.993'	124° 10.883'
Humboldt Bay	EKA	Eureka Middle Channel	Johnson Dock	US EKA MC 1	EKA MC 1	40° 48' 31.4"	124° 10' 15.7"	40° 48.523'	124° 10.262'
Humboldt Bay	EKA	Eureka Middle Channel	Bates Dock	US EKA MC 3	EKA MC 3	40°48' 35.10"	124°10' 9.00"	40° 48.585'	124° 10.150'
Humboldt Bay	EKA	Eureka Middle Channel	Flemming/Staniland Dock	US EKA MC 5	EKA MC 5	40°48' 37.70"	124°10' 5.00"	40° 48.628	124° 10.083'
Humboldt Bay	EKA	Eureka Inner Reach	Woodley Island Marina	US EKA IR 1	EKA IR 1	40° 48' 25.3"	124° 10' 00"	40° 48.422'	124° 10.000'
Humboldt Bay	EKA	Eureka Inner Reach	Eureka Public Marina	US EKA IR 2	EKA IR 2	40° 48' 13.0"	124° 10' 43"	40° 48.217'	124° 10.717'
Humboldt Bay	EKA	Eureka Inner Reach	Eureka Public Marina Ramp	US EKA IR 2-A	EKA IR 2-A	40°48'14.5"	124°10' 34.5"	40° 48.242'	124° 10.575'
Humboldt Bay	EKA	Eureka Inner Reach	Commercial St. Dock	US EKA IR 4	EKA IR 4	40° 48' 17.2"	124° 10' 29"	40° 48.287'	124° 10.483'
Humboldt Bay	EKA	Eureka Inner Reach	Ice Plant	US EKA IR 6	EKA IR 6	40° 48' 19"	124° 10' 22.3"	40° 48.317'	124° 10.372'
Humboldt Bay	EKA	Eureka Inner Reach	Coast Seafoods	US EKA IR 8	EKA IR 8	40° 48' 19.5"	124° 10' 20"	40° 48.325'	124° 10.333'
Humboldt Bay	EKA	Eureka Inner Reach	Fishermens work area Dock	US EKA IR 10	EKA IR 10	40° 48' 20.3"	124° 10' 14"	40° 48.338'	124° 10.233'
Humboldt Bay	EKA	Eureka Inner Reach	C St. Dock	US EKA IR 12	EKA IR 12	40° 48' 20.7"	124° 10' 12.8"	40° 48.345'	124° 10.213'
Humboldt Bay	EKA	Eureka Inner Reach	Boardwalk	US EKA IR 14	EKA IR 14	40° 48' 21.2"	124° 10' 08"	40° 48.353'	124° 10.133'
Humboldt Bay	EKA	Eureka Inner Reach	F St.Loading Dock	US EKA IR 16	EKA IR 16	40° 48' 22.1"	124° 10' 01.3"	40° 48.368'	124° 10.022'
Humboldt Bay	EKA	Eureka Inner Reach	Caito Dock	US EKA IR 18	EKA IR 18	40° 48' 22.4"	124° 09' 48"	40° 48.373'	124° 9.800'
Humboldt Bay	EKA	Eureka Inner Reach	J st. Dock	US EKA IR 20	EKA IR 20	40° 48' 22.7"	124° 09' 45.3"	40° 48.378'	124° 9.755'
Humboldt Bay	EKA	Eureka Inner Reach	Old Caito Dock (K St.)	US EKA IR 22	EKA IR 22	40° 48' 22.6"	124° 09' 42.2"	40° 48.377'	124° 9.703'
Humboldt Bay	EKA	Eureka Inner Reach	Adorni Dock	US EKA IR 24	EKA IR 24	40° 48' 22.8"	124° 09' 40.5"	40° 48.380'	124° 9.675'
Humboldt Bay	EKA	Eureka Inner Reach	Bonnie Gool Guest Dock	US EKA IR 26	EKA IR 26	40° 48' 24.6"	124° 09' 33.7"	40° 48.410'	124° 9.562'
Humboldt Bay	EKA	Eureka Inner Reach	HSU Crew Dock	US EKA IR 28	EKA IR 28	40° 48' 29.2"	124° 09' 20.6"	40° 48.487'	124° 9.343'
Humboldt Bay	EKA	Eureka Inner Reach	Samoa Bridge Boat Ramp	US EKA IR 30-A	EKA IR 30-A	40°48'30.00"	124° 9'16.00"	40° 48.500'	124° 9.267'
Humboldt Bay	EKA	Eureka Outer Reach	Dock B	US EKA OR 2	EKA OR 2	40° 48' 05"	124° 10' 58.4"	40° 48.083'	124° 10.973'

Humboldt Bay Berth Codes

Port Area	UNLOC	Channel	Commonly Known as	AIS Destination Code (with Dock Identifier)	AIS Destination Code (USCG Minimum Required)	Degrees, Minutes & Seconds N Latitude	Degrees, Minutes & Seconds W Longitude	Degrees, Decimal Minutes N Latitude	Degrees, Decimal Minutes W Longitude
Humboldt Bay	EKA	North Bay Channel	U.S. Coast Guard	US EKA NBC 1	EKA NBC 1	40° 45' 59"	124° 13' 02"	40° 45.983'	124° 13.033'
Humboldt Bay	EKA	North Bay Channel	Old Crowley Dock	US EKA NBC 2	EKA NBC 2	40° 46' 24.4"	124° 12' 07"	40° 46.407'	124° 12.117'
Humboldt Bay	EKA	North Bay Channel	Samoa Boat Ramp	US EKA NBC 3-A	EKA NBC 3-A	40° 46' 19"	124° 12' 45"	40° 46.317'	124° 12.750'
Humboldt Bay	EKA	North Bay Channel	Chevron Dock	US EKA NBC 4	EKA NBC 4	40° 46' 41.2"	124° 11' 46.6"	40° 46.687'	124° 11.777'
Humboldt Bay	EKA	North Bay Channel	Eureka Airport	US EKA NBC 5	EKA NBC 5	40° 46' 46"	124° 12' 31"	40° 46.767'	124° 12.517'
Humboldt Bay	EKA	North Bay Channel	Del Norte St. Pier	US EKA NBC 6	EKA NBC 6	40° 47' 26.8"	124° 11' 20.9"	40° 47.447'	124° 11.348'
Humboldt Bay	EKA	North Bay Channel	Fairhaven Terminal	US EKA NBC 7	EKA NBC 7	40° 47' 18.5"	124° 11' 41"	40° 47.308'	124° 11.683'
Humboldt Bay	EKA	North Bay Channel	Preston Properties	US EKA NBC 8	EKA NBC 8	40° 47' 34.4"	124° 11' 16.4"	40° 47.573'	124° 11.273'
Humboldt Bay	EKA	North Bay Channel	Kuiper Dock 1	US EKA NBC 9	EKA NBC 9	40° 47' 38"	124° 11' 33"	40° 47.633'	124° 11.550'
Humboldt Bay	EKA	North Bay Channel	Eureka Forest Products	US EKA NBC 10	EKA NBC 10	40° 47' 41.2"	124° 11' 16"	40° 47.687'	124° 11.267'
Humboldt Bay	EKA	North Bay Channel	Eureka Boat Yard/Coast SF	US EKA NBC 11	EKA NBC 11	40° 47' 44.4"	124° 11' 34"	40° 47.740'	124° 11.567'
Humboldt Bay	EKA	North Bay Channel	Unocal Dock	US EKA NBC 12	EKA NBC 12	40° 47' 46"	124° 11' 14"	40° 47.767'	124° 11.233'
Humboldt Bay	EKA	North Bay Channel	Unocal Dock Ramp	US EKA NBC 12-A	EKA NBC 12-A	40°47'46.10"	124°11'9.50"	40° 47.767'	124° 11.158'
Humboldt Bay	EKA	North Bay Channel	Kuiper Dock 2	US EKA NBC 13	EKA NBC 13	40° 47' 52"	124° 11' 32.4"	40° 47.867'	124° 11.540'
Humboldt Bay	EKA	North Bay Channel	Schneider Dock	US EKA NBC 14	EKA NBC 14	40° 47' 50.5"	124° 11' 12"	40° 47.842'	124° 11.200'
Humboldt Bay	EKA	North Bay Channel	Schneider Ramp	US EKA NBC 14-A	EKA NBC 14-A	40°47'51.50"	124°11'7.60"	40° 47.859'	124° 11.128'
Humboldt Bay	EKA	King Salmon Channel	Gills	US EKA KSC 1	EKA KSC 1	40° 44' 11.4"	124° 13' 11.5"	40° 44.190'	124° 13.192'
Humboldt Bay	EKA	King Salmon Channel	EZ Landing	US EKA KSC 3	EKA KSC 3	40° 44' 12"	124° 13' 05"	40° 44.200'	124° 13.083'
Humboldt Bay	EKA	King Salmon Channel	Johnny's Marina	US EKA KSC 5	EKA KSC 5	40° 44' 14.3"	124° 13' 02.3"	40° 44.238'	124° 13.038'
Humboldt Bay	EKA	Fields Landing Channel	Humboldt Bay Forest Products	US EKA FLC 2	EKA FLC 2	40° 43' 57.6"	124° 13' 09.3"	40° 43.960'	124° 13.155'
Humboldt Bay	EKA	Fields Landing Channel	Woody's Other Dock	US EKA FLC 4	EKA FLC 4	40° 43' 46.1"	124° 13' 11"	40° 43.768'	124° 13.183'
Humboldt Bay	EKA	Fields Landing Channel	South Bay Marina	US EKA FLC 6	EKA FLC 6	40° 43' 41.5"	124° 13' 13.7"	40° 43.692'	124° 13.228'
Humboldt Bay	EKA	Fields Landing Channel	Eureka Fisheries	US EKA FLC 8	EKA FLC 8	40° 43' 39"	124° 13' 15.5"	40° 43.650'	124° 13.258'
Humboldt Bay	EKA	Fields Landing Channel	County Boat Ramp	US EKA FLC 10-A	EKA FLC 10-A	40°43'34.00"	124°13'16.00"	40° 43.567'	124° 13.267'
Humboldt Bay	EKA	Fields Landing Channel	Fields Landing Boat Yard	US EKA FLC 12	EKA FLC 12	40° 43' 26"	124° 13' 22.8"	40° 43.433'	124° 13.380'
Humboldt Bay	EKA	Fields Landing Channel	Fields Landing Terminal	US EKA FLC 14	EKA FLC 14	40° 43' 24.4"	124° 13' 24.2"	40° 43.407'	124° 13.403'
Humboldt Bay	EKA	Hookton Channel	Hookton Slough Boat Dock	US EKA HC 2	EKA HC 2	40°40'38.60"	124°13'18.40"	40° 40.643'	124° 13.307'


North Spit Waves
McKinleyville
Blue Lake
Arcata
Bayside
Humboldt Bay
Eureka
Myrtletown
Chevron Pier
Cutten
North Jetty Landing
North Spit
Hookton Ch., Day Marker 3
Humboldt Hill
Kneeland
Humboldt Bay Nat'l Wildlife Refuge
North Fork Elk River
South Fork Elk River
101



Map Preparation by: Kate Thomas, CGS

California Geological Survey

Tsunami Hazard Area Map

County of Humboldt

March 11, 2021

PURPOSE OF THIS MAP

This Tsunami Hazard Area Map was prepared to assist cities and counties in identifying their tsunami hazard for tsunami response planning. It is intended for local jurisdictional coastal tsunami hazard planning uses only. This map, and the information presented herein, is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.

The Tsunami Hazard Area Map was compiled with the best currently available scientific information and represents an area that could be exposed to tsunami hazards during a tsunami event. It is primarily based on inundation limits corresponding to a 975-year average return period tsunami event model. These limits have been extended to reflect potential local tsunami sources not considered in probabilistic analysis and are also modified to reflect the practical need to define limits that coincide with geographic features or city streets.

MAP EXPLANATION

Tsunami Hazard Area

Outside Hazard Area

METHOD OF PREPARATION

Tsunami modeling was performed by AECOM Technical Services and the University of Southern California funded through the California Governor's Office of Emergency Services by the National Tsunami Hazard Mitigation Program and through FEMA. Recent tsunami modeling used probabilistic tsunami hazard analysis to compute tsunami waves from sources from around the Pacific Ocean resulting in inundation models that are associated with different probabilities of exceedance over time. The tsunami modeling process allows for wave evolution over a variable bathymetry and topography used for inundation mapping. The California Geological Survey (CGS), Seismic Hazards Program, Tsunami Unit used the 975-year average return period tsunami model, with a 5% probability of exceedance in 50 years, as a basis for the minimum hazard level; this minimum hazard level along with a suite of credible local scenario events not included in the probabilistic analysis helped define the extent for inundation mapping.

For the probabilistic modeling the bathymetric/topographic data that were used in the tsunami models consist of a series of nested elevation grids. Deep ocean modeling was prepared using SRTM30+ bathymetric data (30 arc-second resolution). National Centers for Environmental Information coastal digital elevation models with a 1/3 arc-second (~10-meters) resolution and a "Mean High Water" vertical datum was used as the near-shore grids since these data represent a more conservative sea level for the intended use of the tsunami modeling and mapping.

In order to enhance the 10-meter resolution inundation data, we used higher resolution digital topographic data (e.g., 1-meter resolution LIDAR digital elevation models) to refine the location of the maximum inundation area. The location of the inundation area was refined by using digital imagery (e.g. recent National Agriculture Imagery Program imagery) and digital terrain data on a GIS platform with consideration given to historic inundation information. This information was verified, where possible, with workshops and fieldwork coordinated with local county personnel.

Data from the CGS Tsunami Inundation Maps for Emergency Planning (2009) and the enhanced high-resolution mapping of the 975-year return period probabilistic tsunami inundation model results were initially used as a minimum spatial constraint for the placement of the tsunami hazard area. Guidance from local stakeholders, including emergency managers, first responders, and subject matter experts was used to help advise CGS on the placement of the final hazard area in places that would help the public and government safely evacuate during a tsunami event.

The accuracy of the hazard area shown on these maps and in these data is subject to limitations in the accuracy and completeness of the mapping conducted by the CGS. While an attempt was made to define a maximum tsunami hazard extent at any location along the coastline, it remains possible that the actual tsunami hazard area may be greater as required by the local agencies.

ADDITIONAL INFORMATION

Please refer to the following websites for additional information on the construction and/or intended use of the Tsunami Hazard Area Maps:

State of California Geological Survey Tsunami Information:
www.conservation.ca.gov/cgs/tsunami

California Governor's Office of Emergency Services, Earthquake, Tsunami, and Volcano Program:
https://www.caloes.ca.gov/cal-oes-divisions/earthquake-tsunami-volcano-programs

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State of California, 2009. Tsunami Inundation Map for Emergency Planning, (map name*) Quadrangle, Humboldt County; produced by California Emergency Management Agency, California Geological Survey, and University of Southern California – Tsunami Research Center; Dated June 1, 2009.

* 2009 Humboldt County Quadrangles

Arcata North/ Tyee City	Ferndale	Orick
Arcata South	Fern Canyon	Rodgers Peak/Trinidad
Cannibal Island	Fields Landing	Shelter Cove
Eureka	Fortuna	Trinidad/Cranmell

CITATION FOR THIS MAP

State of California, 2021. Tsunami Hazard Area Map, Humboldt County; produced by the California Geological Survey and the California Governor's Office of Emergency Services; dated 2021, displayed at multiple scales.

NOTE

The tsunami hazard areas are based on the State of California 2009 Tsunami Inundation Maps for Emergency Planning and the enhanced high-resolution, 975-year return period probabilistic tsunami inundation model results. The boundary of the tsunami hazard area is defined by the California Geological Survey, local stakeholders, including emergency managers, first responders, and subject matter experts, are consulted on the placement of the final hazard area in places that would help the public and government safely evacuate during a tsunami event. The Redwood Coast Tsunami Work Group Mapping Subcommittee is a fundamental part of the process to develop the methodology for locating the boundary of the Tsunami Hazard Area Maps. Mapping Subcommittee members include Vicki Ozaki, Troy Nicolini, and Ryan Aylward. Without their devotion to improving the resilience for the residents and visitors of Humboldt County, this map and these associated data would not be such a successful product.

DISCLAIMERS

The California Governor's Office of Emergency Services (Cal OES), the University of Southern California (USC), AECOM Technical Services, and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this Tsunami Hazard Area Map nor the data from which the map is derived. The State of California shall not be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

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ESRI Basemap: The map provides coverage for the world down to a scale of ~1:72k. Coverage is provided down to ~1:4k for the continental United States. Tsunami Hazard Area boundaries may reflect updated digital orthophotographic and topographic data that can differ significantly from contours shown on the base map.

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California Geological Survey
Geologic Information and Publications
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