

COOS BAY HARBOR SAFETY PLAN



Coos Bay Harbor
Safety Committee

February 2018

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1. Executive Summary

1.1 Introduction

The Coos Bay Harbor Safety Committee (CBHSC) is a volunteer committee comprised of industry stakeholders; local, state and federal agencies; and waterway user groups to help improve local coordination and leadership within the harbor. The committee was created under the recommendation of the Interagency Committee for the Maritime Transportation System (ICMTS) and the MTS National Advisory Council (MRSNAC) which were created following a report to Congress from the Maritime Transportation System (MTS) Task Force in September of 1999.

The purpose of the CBHSC is to recommend actions to improve the safety, security, mobility and environmental protection of Coos Bay and its waterways through:

- Effective communication and coordination between stakeholders
- Alignment with local, state and federal laws and regulations
- Identification and mitigation of hazards to navigational safety
- Collaboration with governmental agencies to improve and promote maritime and environmental safety within the committee's area of responsibility.

The Coos Bay Harbor Safety Committee (CBHSC) is an open forum comprised of public and private stakeholders in Oregon with vital interests in assuring safe navigation to protect the environment, property, and personnel on the waterways within the Coos Bay Region.

The CBHSC stakeholders accomplish the mission by adopting or developing appropriate standards and guidelines that address environmental and operational elements of maritime operations unique to the Coos Bay Region.

The CBHSC provides an inclusive, cooperative and equitable venue for addressing waterways issues to ensure the continuation and improvement of prudent management practices for our local waterways. Throughout the process, the CBHSC strives to ensure reliable and efficient marine transportation.

The CBHSC Charter is included in this plan under Appendix A.

1.2 The Harbor Safety Plan.

The plan has been adopted by Coos Bay in an effort to maintain and promote safety among all of the harbors users and create a platform for communication and collaboration. Guidance in setting up this Harbor Safety Committee and in developing this plan was taken from the US Coast Guard Navigation Circular (NVIC) 1-00; by attending other harbor safety committee meetings and from existing harbor safety plans from the states of Washington and California. The CBHSC's area of responsibility begins at the seaward approaches into Coos Bay and continues into the bay, and includes navigable tributaries within the bay.

Coos Bay Harbor Safety Plan

1.2.1 Plan Implementation

The Coos Bay Harbor Safety Plan (CBHSP) is intended to complement existing regulations by advising the mariner of unique conditions and requirements that may be encountered in the region by providing standards of care and protocols developed by local experts. The CBHSP will be implemented through consensus agreement and cooperation from industry members, state and federal agencies, pilots and the Port of Coos Bay to follow the plan to the fullest extent possible barring any unforeseen circumstance that may warrant a change. The CBHSP is not intended to replace the good judgment of a ship's master in the safe operation of his/her vessel.

1.2.2 Plan Maintenance

The CBHS Committee will review the Harbor Safety Plan on an annual basis to ensure all information is up to date. Recommendations may be made to incorporate new information or additional standards of care at any regular meeting of the CBHS Committee. Plan updates are included in Appendix L and recommendations in Appendix I.

1.3 Harbor Safety Committee

The Committee General membership is responsible for providing recommendations, direction, and support within the committee's area of responsibility.

1.3.1 Chair:

The seven (7) member Board is made up of individuals representing the following waterway users.

1. Coos Bay Pilot Association
2. Stevedoring Company
3. Marine Terminal Operator, lower bay
4. Marine Terminal Operator, upper bay
5. International Oregon Port of Coos Bay
6. Fishing Representative
7. Public Representative

Officers are nominated and elected by a vote of a simple majority of a quorum of the Managing Board. Candidates for Officers are selected from the membership of the Managing Board. Officer Positions include Chair, Vice Chair, and Secretary.

1.3.2 Members:

Members consist of individuals from companies, organizations, state and federal agencies as defined in the Charter.

Names and contact information can be obtained by emailing the Coos Bay Harbor Safety Committee at Coosbayharborsafety@gmail.com.

2 General Information

2.1 Geographical Boundaries

The Committees geographic region of responsibility (in blue boxes) begins at the seaward approach into Coos Bay, continues into the Bay and includes navigable tributaries within the Bay.

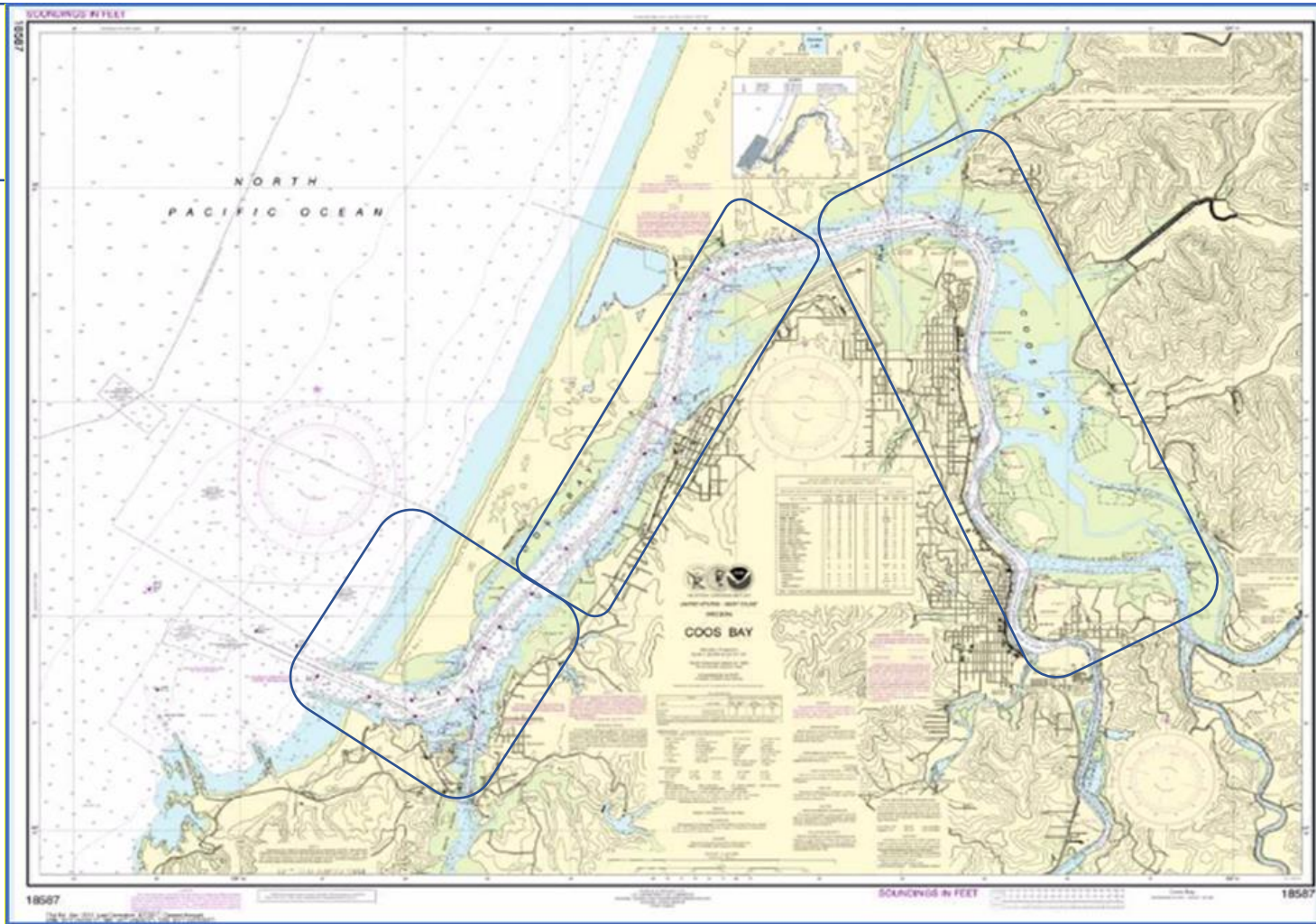


FIGURE 1 - NOAA CHART COOS BAY AND CBHSC AREA OF RESPONSIBILITY

Coos Bay Harbor Safety Plan

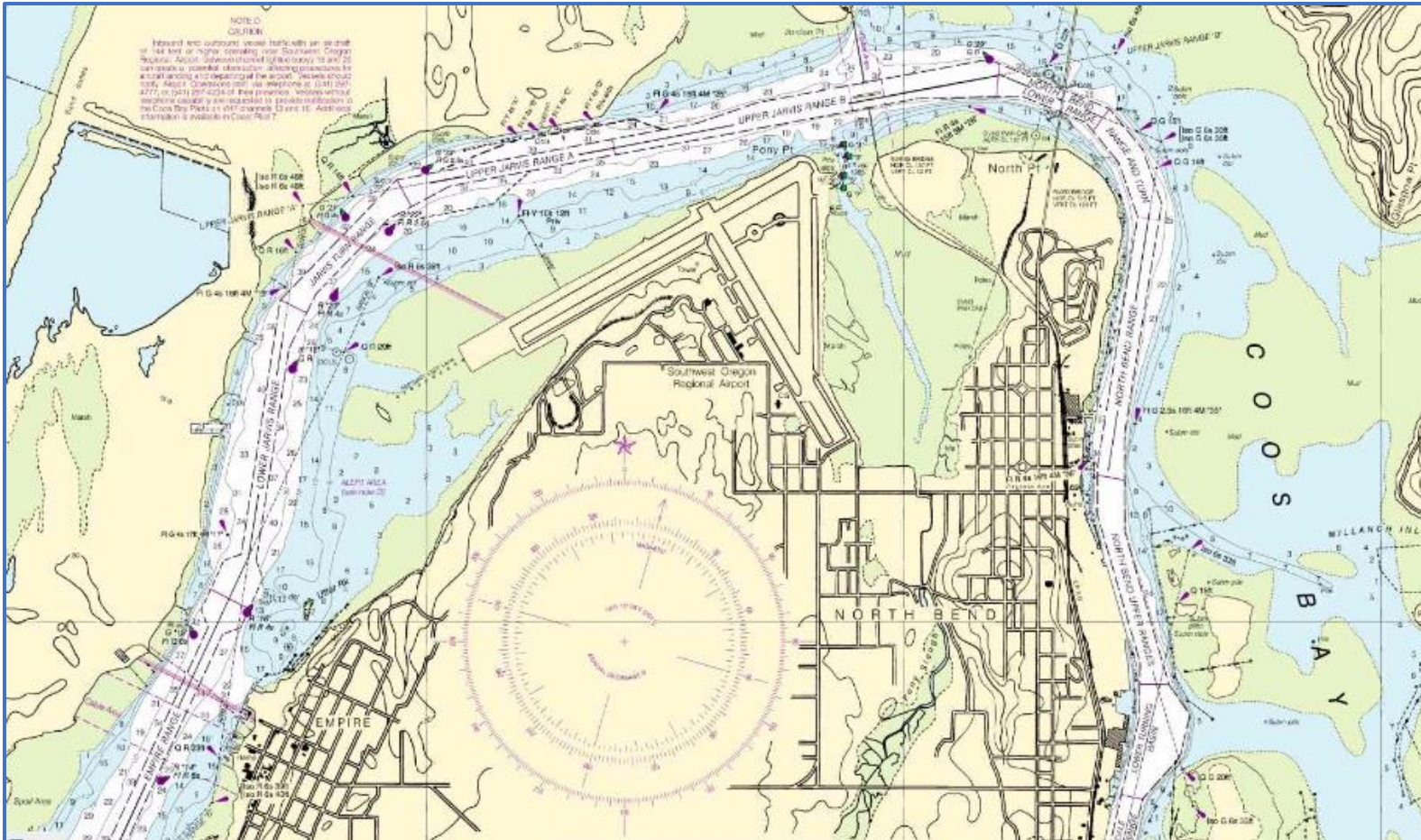


FIGURE 3 - SECTION OF CHART 18587- TOWNS OF EMPIRE AND NORTH BEND

Section of Chart 18587 showing the towns of Empire and North Bend and the airport in between.

Coos Bay Harbor Safety Plan

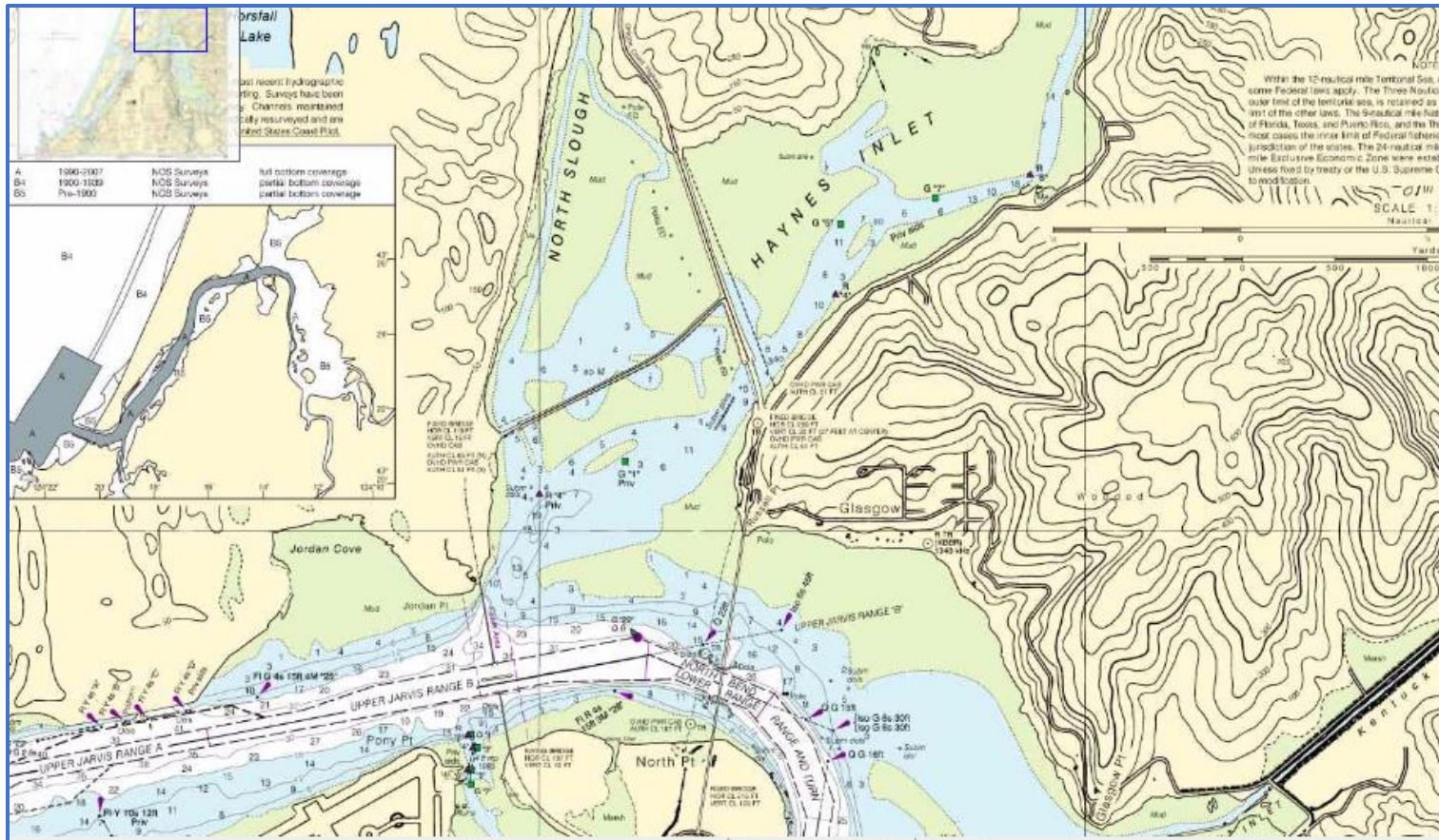


FIGURE 4 - SECTION OF CHART 18785 - JORDAN COVE TO HAYES INLET

Coos Bay Harbor Safety Plan

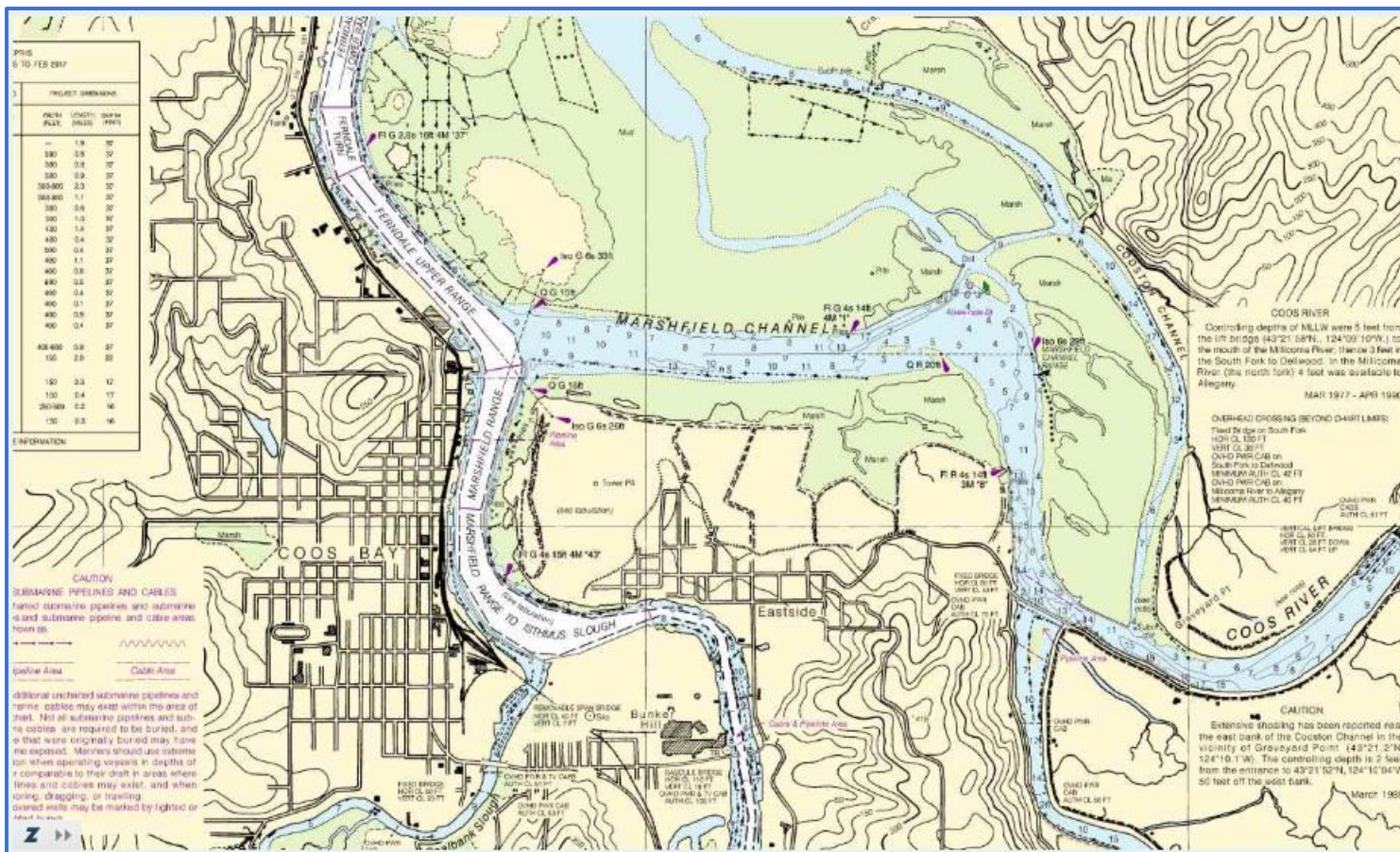


FIGURE 5 - SECTION OF CHART 18785 - TOWN OF COOS BAY, MARSHFIELD, COOSTON CHANNEL, ISTHMUS SLOUGH AND THE COOS RIVER



FIGURE 6 - SECTION OF CHART 18580 - OREGON COAST SHOWING COOS BAY

2.2 Economic and Historical Background

Coos Bay is the largest coastal harbor between San Francisco and Puget Sound, and Oregon's second busiest maritime port. The federally authorized and maintained deep-draft navigation channel is under the management and oversight of the US Army, Corps of Engineers. Manufactured forest products and wood fiber exported from the port's marine terminals continue to make it one of the leading wood products shipping centers of North America. The Port imports and exports logs and exports large quantities of wood chips which are used in making paper products and biomass fuels.

The port's vision is to promote the optimal use of Coos Bay's deep-water port for the enhancement of the economy and quality of life in the region.

Historically, wood products, commercial fishing, and shipping have been the mainstays of the Bay area's economy; more recently tourism has become an important segment. Though it has waned, the port is still one of the leading centers for the lumber and wood products industry. The area is also known for its 32 million pounds of seafood landed annually by crabbers (Dungeness crab), trollers and trawlers fish for chinook salmon, albacore tuna, and pink shrimp.

Oregon International Port of Coos Bay is designated a State Port; consequently, members of the Board of Commissioners are appointed by the Governor and confirmed by the Oregon Senate for 4-year terms. Commissioners must be residents of the Port District.

The Port Authority, the Oregon International Port of Coos Bay, is controlled by a Board of Port Commissioners and an Executive Director. Harbor regulations, under Oregon Revised Statute 777, are prescribed by the Port Commissioners and enforced by the Executive Director. The Port owns 700 acres of the property but they do not operate any of the maritime facilities with the exception of the Charleston Marina. The marina is located just inside the entrance to Coos Bay and is home to a fishing and recreational fleet of 400-500 boats.

3 Coos Bay

Thirty-three (33) miles north of Cape Blanco, Coos Bay is used as a harbor of refuge and can be entered at any time except in extreme weather. From the entrance, the bay extends northeast for 8 miles with widths of 0.3 to 1 mile, then bends southeast for about 4 miles to the mouth of Isthmus Slough. The dredged channel through the bay is bordered by marshland and intersected by several sloughs.

The entrance to Coos Bay is located at latitude 43° 22' North/Longitude 124 ° 22' West. The Coos Bay Sea Buoy is approximately 173 nautical miles/320 km south of the Columbia River, and 367 nautical miles/680 km north of the entrance to San Francisco Bay.

3.1 Prominent features

Coos Head is a good guide to the entrance. The sand dunes north toward Umpqua River are prominent. The entrance to the bay is protected by jetties. A light with a seasonal sound signal marks the north jetty. A lighted whistle buoy ((RW “K” MO (A) Whis)) is 1.8 miles west-north-west of the entrance. The channels are marked with lighted ranges, lights, buoys and day beacons. Although no longer lighted, Cape Arago Lighthouse is a prominent 44-foot white octagonal tower attached to a building on a rocky, partially wooded island close inshore, 2.5 miles north of the cape.

3.2 Routes

There is usually a current sweeping either north or south just off the jetties, and this current should be guarded against. The entrance ranges should be watched carefully until clear of all dangers. The south current is often encountered during the summer. With strong south winds during the winter, the current sometimes sets to the north.

Approaching from any direction in thick weather, great caution is essential. The currents are variable and uncertain. Velocities of 3 to 3.5 knots have been observed offshore between Blunts Reef and Swiftsure Bank, and greater velocities have been reported. The most favorable time for crossing the bar is on the last of the flood current, and occasionally it is passable only at this time.

3.3 Coos Bay Channel

Coos Bay’s short 15-mile Federal navigation channel helps ensure that inbound and outbound cargoes move rapidly and efficiently through the harbor's marine terminals to domestic and international markets. Travel time from ocean to land is only 90 minutes.

Coos Bay Harbor Safety Plan

3.3.1 Depths and Widths

A Federal Project provides for a 37-foot deep and nominal 300-foot-wide channel across the bar to the railroad swing bridge at Pony Point, and then is 400-foot-wide to the end of the navigation channel at a point 1.1 mile above the mouth of Isthmus Slough, and thence, 22 feet to Millington, 14.7 miles above the entrance to the bay. Turning basins at North Bend and Coos Bay have depths of 37 feet.

COOS BAY, ISTHMUS SLOUGH AND CHARLESTON CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS • SURVEYS TO NOV 2016							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)					PROJECT DIMENSIONS		
NAME OF CHANNEL	OUTSIDE QUARTER	HALF OF CHANNEL	OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (MILES)	DEPTH (FEET)
ENTRANCE RANGE	39	39	40	8-16	—	1.9	37
ENTRANCE RANGE AND TURN	38	44	33	11-16	300	0.8	37
COOS BAY INSIDE RANGE	38	38	38	11-16	300	0.8	37
COOS BAY RANGE	37	37	36	11-16	300	0.9	37
EMPIRE RANGE	30	37	30	10-16	300-800	2.3	37
LOWER JARVIS RANGE	34	38	21	10-16	300-800	1.1	37
JARVIS TURN RANGE	37	41	34	1-16	300	0.6	37
UPPER JARVIS RANGE A	37	37	35	1-16	300	1.0	37
UPPER JARVIS RANGE B	35	37	36	1-16	400	1.4	37
NORTH BEND LOWER RANGE	36	39	36	1-16	400	0.4	37
RANGE AND TURN	34	39	38	10-16	500	0.4	37
NORTH BEND RANGE	33	38	35	10-16	400	1.1	37
NORTH BEND UPPER RANGES	35	38	37	1-16	400	0.8	37
LOWER TURNING BASIN	37	38	38	10-16	800	0.5	37
FERNDALE LOWER RANGE	32	38	34	9-16	400	0.4	37
FERNDALE TURN	20	33	35	9-16	400	0.1	37
FERNDALE UPPER RANGE	8	27	24	9-16	400	0.9	37
MARSHFIELD RANGE	28	25	17	9-18	400	0.4	37
MARSHFIELD RANGE TO							
ISTHMUS SLOUGH	19	17	25	9-18	400-600	0.9	37
ISTHMUS SLOUGH	19	20	19	4-85	150	2.0	22
CHARLESTON CHANNEL							
ENTRANCE	18	19	18	10-18	150	0.3	17
ENTRANCE TO BASIN	18	18	16	10-16	150	0.4	17
BASIN	15	15	16	10-16	250-000	0.2	16
BASIN TO BRIDGE	16	18	16	10-16	150	0.3	16

NOTE: CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

FIGURE 7 - CHANNEL DEPTHS, 2016 SURVEY

3.3.2 Tidal Range

Tidal Ranges

- Mean 5.6 feet/1.7 meters
- Diurnal 7.3 feet/2.2 meters
- Maximum 12 feet/3.7 meters
- Tidal ebb to 3 knots

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3.3.3 Dredging Plans

The USACE maintains the 15.2-mile federal navigation channel and the Charleston channel to the Bascule bridge, South Slough. Dredging for the federal projects is completed based on annual appropriations and critical needs. The Oregon International Port of Coos Bay holds and maintains a Unified dredging permit for 18 public and private terminals and marinas within the bay. This permit authorizes these facilities to fund and conduct dredging operations within their authorized dredge prism. Dredging operations can be conducted under the Unified permit during the authorized In-Water Work Period (IWWP) from October 1st to February 15th. An IWWP Variance may be requested and approved on a case-by-case basis.

3.3.4 Coos Bay Channel Modification Project

The Port of Coos Bay is proposing to deepen and widen the Federal navigation channel through a project that will expand the existing channel from -37 feet depth and a nominal 300 feet width to -45 feet depth and nominal 450 feet width from the channel entrance to river mile 8.2.

3.4 Charleston Channel

The channel is maintained 150 feet wide and 20 feet deep and starts upstream of Buoy 6A and ends at the Bascule Bride. The channel is mostly used by recreational boaters and the commercial fishing fleet.

3.5 Anchorage

Anchorage for small craft is available almost anywhere in the bay outside the dredged channels. However, there are no dedicated anchorages outside of Coos Bay or within the harbor for larger commercial vessels. The bottom conditions outside the harbor are sandy with moderate holding power. Inside the harbor within the channel, the bottom is sandstone mixed with sand/silt. While anchoring in the channel by deep draft vessels can be accomplished under certain circumstances at the Pilot's discretion, it is not frequently done.

Due to the rapid and severe onset of weather from the North Pacific Ocean, anchorage in the ocean outside of Coos Bay is reported not safe and is dangerous during the winter months. Like all unprotected areas along the Oregon coast, large swells and heavy winds characterize the area during the winter. These conditions can suddenly and unexpectedly besiege the unwary with catastrophic results. The prevailing direction of both swell and wind will drive disabled or improperly handled vessels onto the shore.

While desired, there are currently no designated anchorage areas off the coast or within the channel, primarily due to the grounding of the M/V New Carissa in 1999 off the coast of Coos Bay.

3.6 Layberths

There are no designated layberths, but vessels may request and coordinate the use of a private berth/docks with the facility in question.

3.7 Navigational Dangers

- Guano Rock, on the south side of the entrance channel and 280 yards northwest of Coos Head. It never uncovers even during extreme low tides.
- Submerged Jetties:
 - A submerged section of the north entrance jetty extends about 450 yards west of the visible jetty, and a submerged section of the south entrance jetty extends about 100 yards west of the visible jetty. Because of the submerged jetties, it is reported that there are breakers in these areas most of the time. Extreme care must be exercised at all times.
 - A submerged jetty extends 500 yards off the east shore of Coos Bay just inside the entrance, 0.8 miles northeast of Coos Head. In entering with a strong northwest wind, large vessels have difficulty in making the turn and may find themselves being set toward the submerged jetty.
- Coos Bay Rail Bridge: This is a swing bridge kept in the open position when no trains are crossing. Mariners should use extreme caution when passing through the bridge because of unpredictable changing winds, currents, and sea conditions reported in this area. The location of the Upper Jarvis ranges in relation to the bridge opening is offset 35 feet to the North, resulting in vessel passing closer to the center support of the bridge.
- Southwest Oregon Regional Airport: For safety reasons, the FAA limits the height of vessel transiting in front of the runway. Inbound and outbound vessel traffic near the Airport may affect procedures for aircraft landing and departing at the airport. Vessels with an air draft of 144 feet or greater present a potential obstruction to airspace that requires advisories be issued to aircraft by air traffic controllers, and in some cases, runway use may need to be restricted. See Special Navigational Conditions for more for more details.
- Crab Fishing Gear: Heavy concentrations of fishing gear may be expected off Coos Bay and along the coast between December 1 and August 15, from shore to about 30 fathoms. To reduce the destruction of fishing gear by vessels and to reduce the fouling of propellers and shafts by fishing gear, Washington Sea Grant, Washington State University Extension has coordinated an agreement between towboat operators and crab fishermen for the establishment of towboat lanes along the Pacific coast between San Francisco, California and Cape Flattery, Washington. Copies of the agreement showing fishing areas and towboat lanes may be obtained from Washington Sea Grant, Washington State University Extension, Box 88, South Bend, WA 98586; telephone 360-875-9331 and have been distributed to the towboat operators and the Dungeness crab fishery. This information can also be obtained on the Washington State University website:

Coos Bay Harbor Safety Plan

<https://wsg.washington.edu/wordpress/wp-content/uploads/Towlane-Chartlets-WA-OR-CA.pdf>.

- However, despite the ongoing issue of crab gear being caught up in towboat propellers and towing gear, there are no designated tow boat lanes for the Coos Bay area during the crabbing season.

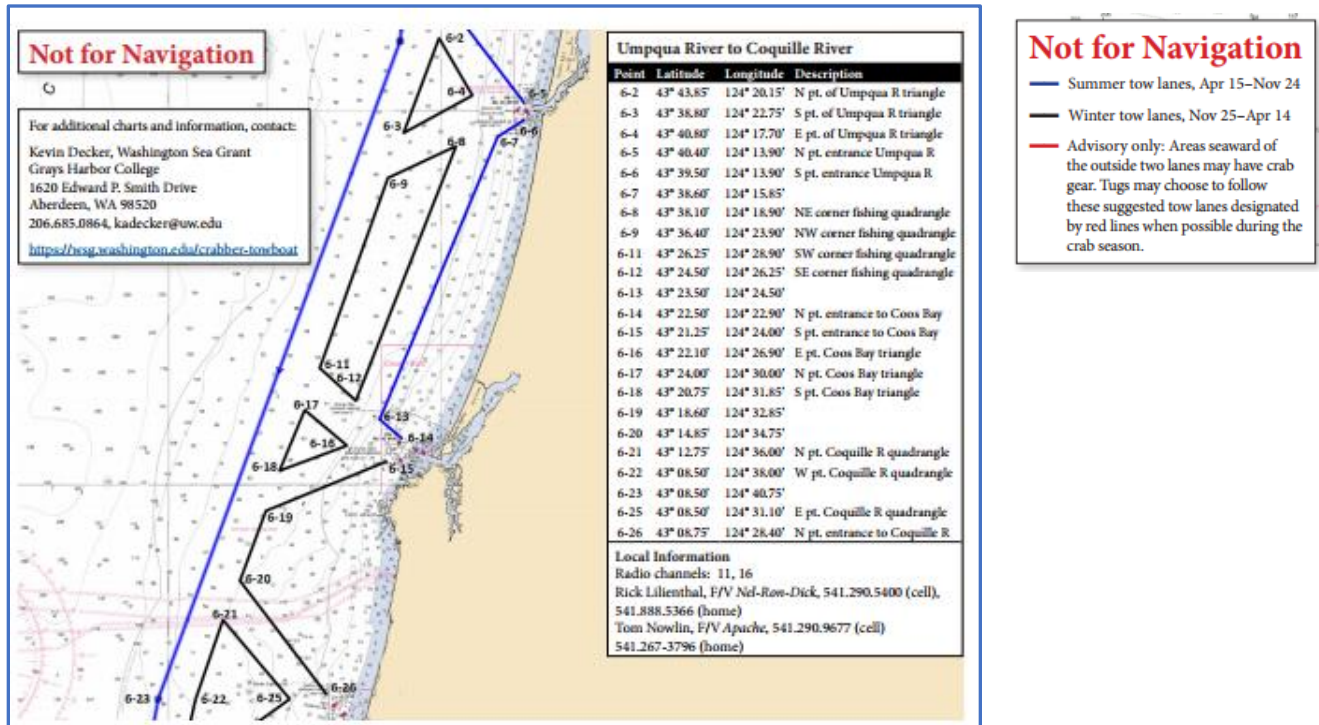


FIGURE 8 - COOS BAY TOW LANES

In June of 2017, The Oregon Dungeness Crab Commission has provided thumb drives containing the tow boat lanes along the coast in OR and WA and where the crab fisher traditionally drop their ports. These thumb drives were distributed by CBHSC to the tugboats companies (Amex, Foss, Dunlap, Brusco, Sause Brothers,). By educating both groups as to where the towing lanes and crabbing areas are, the CBHSC hopes to minimize the conflict between the two user groups.

3.8 Bridges

Coos Bay channel has three bridges running across it. Two are fixed and the other is a swing bridge for the railroad.

- The Coos Bay Link railroad bridge: This swing bridge is located 7.5 miles above the entrance, has a swing span with a vertical clearance of 12 feet in the closed position and a horizontal clearance of 197 feet in the open position. The bridgetender monitors VHF channel 18A and works on channel 13 when they are on the bridge for a train crossing. The rest of the time the bridge is unmanned and kept in the open position. For railroad status, information can be obtained from Coos Bay Rail Link at (541) 266-7245.

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- The McCullough Memorial bridge is a fixed highway bridge, 8.7 miles above the entrance, has a clearance of 123 feet vertical clearance at the channel's edge and 149 feet vertical clearance at the center of the span at Mean Lower Low Water (MLLW) tide and have a horizontal clearance of 515 feet.
- 100 yards west of the McCullough bridge is an overhead power cable bridge has a vertical clearance of 167 feet.

The Charleston Channel has one bridge:

- Bascule (Charleston) Bridge: Horizontal clearance is 80 feet and vertical clearance in the closed position is 22 feet (it is a lift cantilever bridge). There are overhead power cables on the south side of the bridge with a vertical clearance of 71 feet.

3.9 Pilotage

There is no Vessel Traffic System (VTS) covering the Coos Bay area or any other harbor along the Oregon Coast.

Pilotage is compulsory for all foreign vessels and all U.S. vessels under registry (except fishing and sail vessels). Pilotage is optional for U.S. vessels in the coastwise trade that have onboard a Pilot licensed by the Federal Government for these waters. Pilotage for Coos Bay, its tributaries, and Yaquina Bay is available from the Coos Bay Pilots Association. 686 N Front Street, Coos Bay, OR 97420; Telephone (541) 267- 6555.

The pilot boats monitor VHF-FM channels 13 and 16 and use channels 12 and 18A as working frequency. The pilot boats, COOS BAY and NORTH BEND, are 76 and 72 feet respectively long tugs with black hulls, orange bands around the house, and white superstructure. The pilot boats use the standard pilot lights (red over white) at night. Vessels are handled 24-hours a day, with weather permitting. Arrangements for pilots are usually made by ships' agents or by telephone. A 24-hour notice of the time of arrival is requested. The pilots usually board vessels about 2 miles NW of Coos Bay Approach Lighted Whistle Buoy K. Vessels are requested to maintain a speed of about 6 to 7 knots and rig the ladder, without man-ropes, about 2.5 meters (8.2 feet) above the water.

The pilots were asked about emergency procedures in the event that a ship lost power or lost steering. In nearly all cases, the pilots would allow the ship to drift forward and easily set the side of the ship into the sand. In all cases, the pilots have a standby tug (the pilot boat) which is able to influence the movement of the ship. The pilot boat always moves just ahead of the ship or alongside depending upon the orders from the pilot. The Pilots would always avoid having the ship end up crossways in the channel with a bow on one side and the stern on another side of the channel.

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3.10 Towage

There are seven tugs available and are used for docking and mooring. There are no federal or state rules or guidelines establishing escort or ship assist requirements for vessels visiting Coos Bay, OR. Escort and ship assist tugs should meet classification society standards appropriate for escort and ship assist tugs.

Escort and ship assist tugs in Coos Bay which meet the requirements for large vessels operating in narrow channels shall have their bollard pull (ahead and astern) measured as provided 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 Coos Bay Harbor Safety Committee.
- (3) Companies providing escort and ship assist tugs shall provide the Coos Bay Harbor Safety Committee with the results of the bollard pull measurements verified pursuant to these provisions.
- (4) Escort and ship assist 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 and/or ship assist of large vessels in Coos Bay.

An escort and/or ship assist tug determined by the Coos Bay Harbor Safety Committee to be a "bona fide sister tug" may be used with the same (ahead and astern) bollard pull as the certified sister tug.

The braking force shall be re-measured after any modifications 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 Coos Bay Harbor Safety Committee.

Notwithstanding any other provision of this plan:

- (1) The vessel master remains responsible for the safe navigation and maneuvering of the vessel in all circumstances. The requirements outlined in this plan are in addition to, and not a limitation of, any other responsibilities created by custom, law, or regulation.
- (2) Where an emergency exists, the vessel master may adjust the minimum escort and/or ship assist tug requirements. For purposes of this plan, an emergency is defined as any of, but is not limited to, the following:
 - (A) the imminent and immediate danger to the vessel, its cargo or its crew;
 - (B) the imminent and immediate danger to a marine terminal, ship assist or escort tug;
 - (C) the 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 plan.

Coos Bay Harbor Safety Plan

TABLE 1 - COOS BAY TOWING VESSELS

Vessel Name	Registered Owner	Type	Call Sign	Horsepower	Bollard Pull
Coos Bay	Coos Bay Pilots	Propeller	WY 6046	1,700	lbs
North Bend	Coos Bay Pilots	Propeller	WUR 9793	2,000	lbs
Oregon Escort	Coos Bay Pilots	Z Drive Tug	WDD 5907	6,700	lbs
Captain Louie	Knutson Towboat	Tug	WR 7513	1,750	lbs
Centennial	Knutson Towboat	Z Drive Tug	WCY 3200	3,000	lbs
Captain Harold	Knutson Towboat	Propeller	WDG4952	2,500	lbs
Casey H	Billeter Marine	Propeller	WDH 7360	2,700	lbs

Contact information for the towboat companies can be found in Appendix B of this plan.

3.11 United States Coast Guard

The US Coast Guard is present in the area providing its search and rescue, law enforcement and marine safety and pollution response services through the following units:

3.11.1 Operational Units:

U.S Coast Guard Sector North Bend: Sector North Bend is co-located with Air Station North Bend and is oversees all operations of Sector North Bend Units. They also support operational units by providing administrative, supply, medical, engineering and communication services.

Sector North Bend Units:

- Coast Guard Cutter Orcas – the 110-foot Island Class patrol boat has been stationed in Coos Bay, OR, since 1989.
- U. S. Coast Guard Aids To Navigation Team (ANT) Coos Bay was established in 1976 and is located near the mouth of Coos Bay in the fishing and tourist community of Charleston, Oregon. Their area of responsibility ranges over 240 miles of the Oregon coast and includes 5 lighthouses, 18 primary buoys, 43 secondary buoys and 156 other lights, day beacons and fog signals.
- Coos Bay Coast Guard Station: The Station located in the town of Charleston, is on the south side of Charleston Boat Basin, 0.7 miles southeast of Coos Head. and provide search and rescue operations from the Coos River to Cape Bianco. During the summer months, Station Coos Bay operates Search and Rescue Detachments Coquille River in Bandon, OR.
- North Bend Coast Guard Air Station is at the North Bend Municipal Airport.
- Coos Head Watch Tower is staffed during breaking bar season. The watchstander logs all vessels heading out who call into the tower and provides general lookout services.

Other Units are:

- Station Depoe Bay

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- Station Yaquina Bay
- Station Umpqua River
- Station Siuslaw River
- Station Chetco River

3.11.2 Marine Safety Units

While the operational units are located within the Coos Bay area, the Captain of the Port is based out of Sector Columbia River, Astoria OR, providing vessel and facility inspections, pollution response and investigation services to Coos Bay.

3.12 Harbor Regulations

The port authority, Oregon International Port of Coos Bay, is controlled by a Board of Port Commissioners and an Executive Director. Harbor regulations are prescribed by the Port Commissioners and enforced by the Executive Director. The port manager's office is at 125 Central Avenue, Suite 300, Coos Bay, OR 97420.

3.13 Docks

Most of the deep-draft facilities in the Port of Coos Bay are in the cities of Coos Bay and North Bend. The following are the still **active and /or useable docks**:

3.13.1 Commercial Docks:

1. Cape Arago Dock/Sause Brothers (River Mile (RM) 5.4, utility/work dock)
2. D.B. Western Inc. (RM 5.6, utility/work dock, vessel repair, and construction)
3. Southport Lumber Company/Southport Forest Products (RM 6.3, dead load barge slip)
4. Roseburg Coos Bay Shipping Terminal ("Roseburg") (RM 7.9, export woodchips)
5. Ocean Terminals Dock (RM 11, inbound and outbound logs)
6. K2 Export (RM 11.5, outbound logs)
7. Tyree Oil terminal (RM 12.5 oil dock for vessels – tug and fishing vessels)
8. Oregon Chip Terminal (RM 12.5, outbound woodchips)
9. Bayshore Dock/Sause Brothers (RM 12.7, tug and barge berths)
10. ORC Operations (RM 15, currently closed)
11. Georgia Pacific (RM 15, logs in / chips out)
12. Coastal Fibre (RM 17 chips out)

3.13.2 Government Docks:

- US Army Corps of Engineers (USACE) Coos Bay Moorage Dock and
- US Coast Guard (USCG) Orcas Dock (RM 13.2, USCG and USACE vessel berths)

Contact information these facilities are located in Appendix B of this plan.

3.14 Towns and Waterways

3.14.1 South Slough

Shoal and navigable only for small boats, extends 4 miles south from its junction with Coos Bay near the entrance. A Federal project provides for a 17-foot entrance channel extending south from the junction for about 0.6 miles to the Charleston Boat Basin, thence a 16-foot channel continues to a highway bascule bridge. The channel from the junction with Coos Bay to Charleston Boat Basin is subject to shoaling. Mariners are advised to seek local knowledge when transiting this area.

3.14.2 Charleston Boat Basin

Operated and maintained by the Port of Coos Bay, is 0.3 miles north of Charleston, across the slough from Barview. The basin is used by commercial and sports fishermen. About 500 berths with electricity, gasoline, diesel fuel, water, ice, a launching ramp, and marine supplies are available. A pump out station and wet and dry winter boat storage are available in the basin. A repair facility at the basin has a drydock that can handle vessels to 300 tons, 90 feet long, and 30 feet wide, and a marine railway that can handle craft 70 feet long, 22 feet wide, and 6 feet draft for hull and engine repairs. Electronic repairs can also be made at the basin. Four fish piers are in the basin, and three fish packing facilities are just south of the basin on South Slough. Coos Bay Coast Guard Station is on the south side of the basin.

A Coast Guard buoy storage area is in Coos Bay about 150 yards E of the channel and about 2.5 miles above the entrance jetties.

The highway bridge over South Slough, 1 mile south of the entrance, has a bascule span with a clearance of 22 feet. Power and television cables south of the bridge have a least clearance of 71 feet.

The west shore of Coos Bay as far as the bend is formed by a sandspit covered with dunes, partly wooded, and in some places as much as 90 feet high. On the E shore and above the bend are low rolling hills with houses and several prominent buildings.

3.14.3 Haynes Inlet and North Slough

Haynes Inlet and North Slough join the bay through a common entrance on the north side and are navigated by small boats. Haynes Inlet and North Slough channels are marked by private day beacons. A causeway with a fixed bridge over North Slough has a clearance of 15 feet. The causeway extends east and joins the State highway fixed bridge over Haynes Inlet, which has a clearance of 20 feet (27 feet at center).

3.14.4 North Bend

North Bend is 9.5 miles above the Coos Bay entrance and is a city that transitioned from sawmills and factories to its present tourism economy. A number of the docks where lumber is shipped are located in North Bend. The North Bend Fire Department has a small fireboat and launches from existing boat ramps. Coos Bay, 12 miles above the entrance, is the second city on the bay and is the distributing center for the area, which is primarily devoted to lumbering, fishing, and agriculture.

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3.14.5 Empire District

The City of Coos Bay also includes the Empire district, which is 4 miles above the entrance. North Bend and Coos Bay form practically one continuous city extending along the shore from North Point to the mouth of Coalbank Slough.

Three sloughs empty into Coos Bay between the city of Coos Bay and Coos River.

- Coalbank Slough which is unused by boats.
- Isthmus Slough is used for logging operations to Millington. The highway bridge across the slough has a bascule span with a clearance of 18 feet. The overhead power and television cables just north of the bridge, and the overhead power cable 0.9 miles south of the bridge have clearances of 100 and 150 feet, respectively.
- Catching Slough is navigable for several miles by light-draft vessels. The fixed highway bridge across the mouth has a clearance of 40 feet. The power cable for about 1.7 miles above the bridge have a minimum clearance of 57 feet; other overhead cables upstream have clearances of 13 feet.

3.14.6 Coos River

The river empties through two channels into the bay at its head. The north unmarked channel follows the east side of the bay and empties abreast of North Bend. Marshfield Channel, marked by a lighted range, lights, and buoy, crosses the flats and empties abreast the city of Coos Bay. Coos River divides at a point 3.2 miles above Graveyard Point into South Fork and Millicoma River. A highway bridge across the river, 0.9 miles above Graveyard Point, has a lift span with clearances of 28 feet down and 54 feet up. The least clearance of the overhead power cables crossing Millicoma River is 40 feet. Allegany, 7.5 miles above the confluence, is the head of navigation on Millicoma River. Dellwood, 8.2 miles above the confluence, is the head of navigation on South Fork. A fixed highway bridge crossing South Fork 0.5 mile above the confluence has been removed; two concrete piers remain. A fixed highway bridge crossing South Fork 1.9 miles above the confluence has a clearance of 38 feet. Several overhead power and telegraph cables cross South Fork; least clearance is 42 feet

4 Coos Bay Harbor Conditions

Regional Harbor Conditions This section provides a description of existing and expected conditions of weather, tidal ranges, tidal currents and other factors which might impair or restrict visibility or impact vessel navigation.

4.1 Weather

4.1.1 Fog

The area is subject to fog conditions very similar to many west coast ports. Fog can be found anywhere within Coos Bay and its tributaries. Fog occurs mostly during summer and fall though is known to occur during other seasons too.

4.1.2 Storms

During the winter is when the port experiences heavy weather with increasing winds and storm conditions. Weather delays, driven by storms including gale and storm winds (winds in excess of 39 miles per hour), are infrequent in the area and account for only 3-10 days per year.



FIGURE 9 - HEAVY WEATHER AT THE COOS BAY BAR

4.1.3 Prevailing winds

Prevailing winds in the offshore sector are southerly winds, 15-30 knots, in the summer and most of the year but shifting to northerly winds in the winter. Prevailing NW winds and winter southerly storms.

- 25 knots winds and above affect big ship movements
- 20-25 knots winds affect commercial fishing and recreational boats
- Consistently heavier north winds during the summertime
- Winter winds from the south
- 35-knot winds typically associated with fronts
- 90-knot sheer winds once or twice a year
- Wind blows across channel out of North Slough
- Tugs and tows get set by winds onto aids to navigation

Deep draft ships are warned of anchoring offshore during winter while awaiting calmer winds to transit. The rapid and severe onset of weather may expose the vessel to the risk of dragging ashore.

Existing Mitigations:

- Pilots move ships in during the morning when it is calmer before winds pick up
- Have ample warning of approaching fronts

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- The warning signs and lights at the entrance of the bay to alert operators to bar conditions
- Warning signs and lights at CG Station and boat ramps alert operators to bar conditions
- Telephone numbers available from which to obtain bar conditions
- Tune into AM radio channel 1610 as per the Bar warning sign
- Continuing education

NOAA provides weather forecast and actual weather conditions can be obtained online.

4.2 Tide and Currents

Since the tides at Coos Bay are semi-diurnal (occurring twice per day) there are two flood tides, two ebb tides, and four (4) slack tides (2 high slack and 2 low slack) in almost every 24 hour period. The times of high and low tides and the times of the tidal currents move nearly an hour forward every day.

At Coos Bay, the ebb tide is the condition which causes the most challenging conditions at the bar channel entrance. A strong ebb tide (often abetted by a strong river current) rushes out of the entrance channel. When it meets a strong onshore wind, sea, and swell, the waves can become very steep and then fall or break.

Tidal currents at the entrance are stated to travel in the direction 100° true during flood tides. This is generally an easterly direction into the harbor. During ebb tides (water moving out of the harbor) the direction of the current is 280° true. Predicted tidal currents vary from around one knot to almost 4 knots. Current observations in the entrance to Coos Bay indicated a velocity of about 2 knots. The greatest observed ebb velocity was a little over 3 knots. During long runouts, an ebb current of 5 knots has been reported at Guano Rock.

The tidal range between Mean Lower Low Water (MLLW) and mean higher high water (MHHW) is 7.5 feet near the open sea channel entrance at Charleston and 6.7 feet approximately in Empire. The lowest high tides are 4.2 to 5 feet above MLLW. Extreme low and high water are 3.0 feet below and 10.5 feet above MLLW, respectively. Based on measured tide data at Charleston, the tides are above +6 feet MLLW about 75% of the time and above +7 feet MLLW about 10% of the time.

In summary:

- Currents 3 knots and can be 5 knots at buoy #4 in jaws of jetty entrance
- Less than 3 knots in sloughs and creeks
- The tidal range of 7 feet on average
- Port area currents are tidal but during high river stages and heavy rains, the tide can be river driven
- There are cross-currents at:
 - The railroad bridge coming out of North Slough
 - Marshfield Channel junction coming down Coos River
 - Charleston coming out of South Slough

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- Jarvis Turn

Existing Mitigations:

- Pilotage for required vessels
- Local knowledge of most port users
- Tide and current tables and predictions
- Tug companies have policies about what can be done on ebb and flood tides
- USACE tide gauges along the river can be used
- USCG announcements for the time of next tide change
- When the water is brown you know that somethin' ain't right
- NOAA provides river flow rate information

New ideas:

Information exchange can be improved between members of the port community through the Harbor Safety Committee. For example:

- The USACE could share tide gauge information with other users.
- The Sheriff's Department may share river height gauge information currently collected for flood prediction.
- The Sheriff's Department may include the Harbor Safety Committee membership to emergency notifications to expand information input.
- Tug companies could share policy information based on local knowledge

4.3 Other Weather Conditions

4.3.1 *Crossing the Bar:*

One of the main differences between Coos Bay and other harbors is the occasional occurrence of a "breaking bar" at the channel entrance. The "breaking bar" is a condition where the predominantly westerly seas and swells (often in storm conditions) meet an outgoing ebb tide which causes the waves to become quite steep, and to cascade onto the sea below. These breaking waves are very challenging to small craft and have led to several serious incidents over the years.

While this breaking bar can create spectacular conditions for small craft, the deep-water ship channel rarely experiences conditions closing the bar. The number of days per year when the bar channel is closed to shipping averages between 3 and 10 days per year.

The bar is the area where the deep waters of the Pacific Ocean meet with the shallower waters near the mouth of the river. Most accidents and deaths that occur on coastal bars are from capsizing. Coastal bars may be closed to recreational boats when conditions on the bar are hazardous. Failure to comply with the closure may result in voyage termination and civil and/or criminal penalties. The regulations are enforced by Coast Guard boarding teams. Improper loading and/or overloading are major causes of capsizing. Improper/overloaded boats have less stability and less freeboard, which can allow seas to break into the vessel, causing the boat to become even less stable. Boats are more likely to capsize when crossing the bar from the ocean because the seas are on the stern

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and the boater may have less control over the vessel. Boaters must make sure the bar is safe prior to crossing

There are four tides each day (two high and two low) in the Pacific Northwest. Tidal currents may gain tremendous velocity, particularly when the ebb current is augmented by river runoff. It is extremely dangerous to get caught on the bar during strong ebb current. Even on days that are relatively calm, fast-moving ebb can create bar conditions that are too rough for small craft.

Observed weather and bar conditions are updated every four hours or more frequently if there is a significant change in weather. Marine Information Broadcasts on Channel 16 VHF FM are conducted by the Coast Guard when hazardous bar conditions and restrictions are put in place or are lifted. Mariners are strongly encouraged to monitor channel 16 VHF/FM for all notices and weather updates. The AM radio broadcast is audible within a 6-mile radius from the Coast Guard Station in Charleston. It provides a continual broadcast on radio station 1610 AM containing bar conditions, bar restrictions, and local weather.

Bar Name	Report Time	Status	Restrictions	Conditions
Quillayute River	9/14/2017 @ 1600 PDT	No Restrictions	No Restrictions	SEAS ARE ALL AREAS 1-3 FOOT SWELLS, WINDS ARE 10 KNOTS FROM THE NORTH AND THE VISIBILITY SEAWARD IS UNLIMITED.
Grays Harbor	9/14/2017 @ 1624 PDT	No Restrictions	No Restrictions	ALL AREAS 2-4 FOOT SWELL S. WINDS ARE 5-10 KNOTS FROM THE NORTHWEST. VISIBILITY IS 3 NAUTICAL MILES. THE GRAYS HARBOR BAR REMAINS UNRESTRICTED.
Columbia R. (Cape D)	9/14/2017 @ 1715 PDT	No Restrictions	No Restrictions	MAIN CHANNEL AND PEACOCK SPIT 3-5 FEET WITH ROLLING SWELLS. MIDDLE GROUNDS 2-4 FEET WITH ROLLING SWELLS. CLATSOP SPIT 2-4 FEET WITH ROLLING SWELLS. WINDS ARE 10-15 FROM THE NORTHWEST, VISIBILITY 09 NAUTICAL MILES, RESTRICTIONS: NONE.
Tillamook Bay	9/14/2017 @ 1528 PDT	No Restrictions	No Restrictions	TIPS CALM, ALL OUTSIDE AREAS 1-2', WINDS 5 KNOTS FROM THE SOUTH, VISIBILITY 6 NAUTICAL MILES. BAR IS UNRESTRICTED.
Depoe Bay	9/14/2017 @ 1547 PDT	No Restrictions	No Restrictions	HOLE: 1-3FT, MIDDLE GROUNDS: 1-3FT BOUY LINE: 1-3FT, NORTH REEF: 1-3FT, FLAT ROCK: 1-3FT, WINDS: LIGHT AND VARIABLE, VISABILITY: 06 NAUTICAL MILES, RESTRICTION: NONE.
Yaquina Bay	9/14/2017 @ 1530 PDT	No Restrictions	No Restrictions	JETTY TIPS AND MAIN CHANNEL: 2-4 FOOT SWELL, WINDS: LV, VISIBILITY: 05 NAUTICAL MILES WITH A SHORE LINE HAZE. THE BAR IS UNRESTRICTED
Sluiceway River	9/14/2017 @ 1547 PDT	Restricted	Recreational:16 / Uninspected Passenger Vessels:-	IN ALL AREAS 3-5FT SWELLS. WINDS: LIGHT AND VARIABLE. VISIBILITY: 5 NAUTICAL MILES. RESTRICTIONS: RECREATIONAL VESSELS 16FT TO THE JETTY TIPS.
Umpqua River	9/14/2017 @ 1451 PDT	Restricted	Recreational:16 / Uninspected Passenger Vessels:-	SOUTH, BUOY LINE, AND MID GROUNDS: 2-4' OCCASIONAL 6' ROLLING SWELL, MID-NORTH: 2-4' STEEP SWELLS OCCASIONAL BREAKS, WINDS: SOUTH 5-10 KNOTS VISIBILITY: 06 NM RESTRICTED 16' REC/ 0' Uninspected Passenger Vessels.
Coos Bay	9/14/2017 @ 1313 PDT	No Restrictions	No Restrictions	IN ALL AREAS 2-4 LONG OCEAN SWELLS. WINDS ARE LIGHT AND VARIABLE. VISIBILITY IS 3 NAUTICAL MILES.
Coquille River	9/14/2017 @ 1656 PDT	Restricted	Recreational:16 / Uninspected Passenger Vessels:16	2-4 FOOT LONG OCEAN SWELLS. WINDS ARE FROM THE NORTH 5-10 KNOTS. VISIBILITY IS 3 NAUTICAL MILES.
Rogue River	9/14/2017 @ 1102 PDT	No Restrictions	No Restrictions	ROGUE RIVER ENTRANCE BUOY: 3-5 FOOT. TIPS OF THE ROGUE RIVER JETTIES: 1 FOOT CENTER TO SOUTH 1-3 FOOT OCCASIONAL BREAKS NORTH. WINDS: NORTH 5 KNOTS. VISIBILITY: 6 NAUTICAL MILES
Chetco River	9/14/2017 @ 1321 PDT	No Restrictions	No Restrictions	CHETCO RIVER ENTRANCE BUOY: 2-4 FOOT. MAIN CHANNEL TO SALMON ROCK: 1-2 FOOT. TIPS OF THE CHETCO RIVER JETTIES: CALM. WINDS: NORTH WEST 10 TO 15 KNOTS. VISIBILITY: 6 NAUTICAL MILES

FIGURE 10 - NATIONAL WEATHER SERVICE - LOCAL BAR OBSERVATIONS

As a public service Radio Station KBBR (1330 kHz) broadcasts bar conditions once each hour during the summer months. Current weather advisories are also posted at the Coast Guard Station in Charleston. You can also access current bar conditions and restriction on your smartphone or handheld device by going to, <http://www.wrh.noaa.gov/pqr/marine/BarObs.php>, as seen above.¹

Existing Mitigations:

- Check the weather and tide conditions by:
 - Monitor Marine Information Broadcasts on Channel 16 VHF FM
 - Tune in to AM radio channel 1610 and Public Radio Station KBBR (130 kHz)

¹ The US Coast Guard published a handout which addresses the hazards of crossing the bar. The content of this handout, available at https://www.uscg.mil/d13/dpw/docs/Coos_Bay_Bar_Crossing_Handout.pdf

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- Log into NOAA's website <http://www.wrh.noaa.gov/pqr/marine/BarObs.php>
- Check with other boaters or the Coast Guard to find out the condition of the bar.
- Always know the stage of the tide
- Cross the bar during slack water or on a flood tide, when the seas are normally calmest.

If you are caught on a rough bar running in:

- Make sure everybody aboard is wearing a personal flotation device.
- Keep the boat square before the seas.
- Keep the boat on the back of the swell. Ride the swell and stay clear of the following wave.
- Avoid sudden weight shifts from passengers, cargo or gear moving around in the boat. If possible, have passengers lie down as near the centerline of the boat as possible. Do not allow the waves to catch your boat on the side (beam). This condition is called broaching, and can easily result in capsizing.

4.4 Special Navigation Conditions

4.4.1 North Jetty conditions

In 2012, the Army Corps of Engineers completed a Major Maintenance Report (MMR) for the Coos Bay Jetties

Concerns (in order of greatest to least risk):

- North Jetty root and north spit sediment management (breach of North Spit)
- Structural stability of North Jetty head
- Structural stability of North Jetty trunk
- Structural stability of South Jetty root

MMR looked at 19 potential measures (individual project elements) used to create 9 alternatives (various combinations of measures). The 9 alternatives were evaluated against each other and the existing condition and the following were the preferred solutions:

Proposed mitigation:

- Buried revetment at log spiral bay (as seen by the dark blue line in Figure 12 below)
- Rebuild 400 linear feet of jetty root to +16' MLLW (light blue)
- Re-nourish log spiral bay
- Repair a low reach of north jetty root to +20' MLLW (pink)
- Repair targeted reaches of the north jetty trunk (green)
- Rubble-mound head at present location (pink)



FIGURE 11 - JETTY AND AREAS OF PROPOSED ALTERNATIVES

Engineering, Research and Design Center (ERDC) is currently conducting a physical model of the entrance to determine detailed jetty head design.

This project is currently in Detailed Design Report phase (DDR). After the DDR phase is completed, the Plans and Specifications phase (P&S) begins. After P&S phase is completed, rock procurement and construction phase begins. This is an evolving project.

Existing mitigation:

- Pilots know to proceed clearly out of the channel before turning north or south.
- Charts indicate submerged sections of the jetty

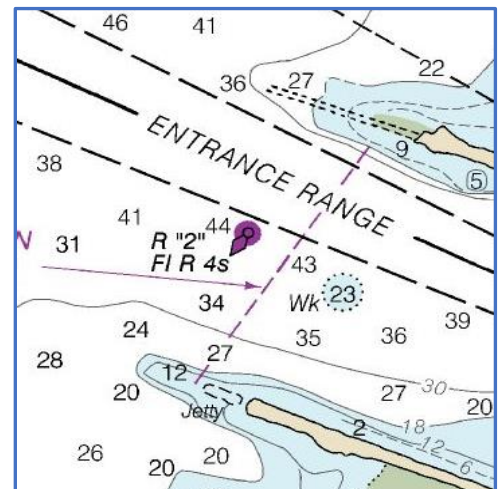


FIGURE 12 - CHART SHOWING SUBMERGED JETTIES

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4.4.2 Upper Jarvis Range Location:

As previously mentioned with regards to the Coos Bay Rail Bridge, mariners should use extreme caution when passing through the bridge because the location of the Upper Jarvis ranges in relation to the bridge opening is offset 35 feet to the North, resulting in vessel passing closer to the center support of the bridge and potentially alliding with it. The Upper Jarvis Range, while centered in the channel is not centered to the bridge opening.

Existing Mitigation:

- Mariners need to be aware of this offset.
- Chart 18587 clearly indicates the location of range in relation to the swing bridge in its open position.

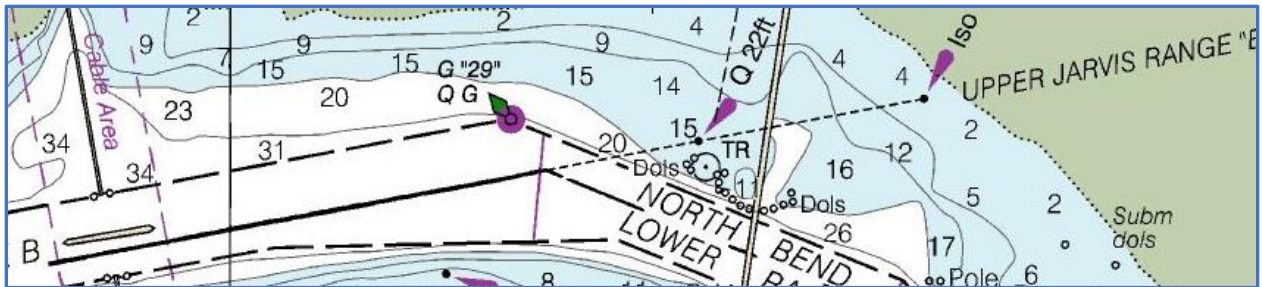


FIGURE 13 - CHART SHOWING UPPER JARVIS RANGE AND BRIDGE ALIGNMENT

4.4.3 FAA Air Draft Restrictions

NOAA recently added the following information in the Coast Pilot regarding vessels with a vertical clearance of 144ft and above.

Vessel Reporting Advisory

Operations in the Vicinity of Southwest Oregon Regional Airport

Inbound and outbound vessel traffic near Southwest Oregon Regional Airport may affect procedures for aircraft landing and departing at the airport. Vessels With an air draft of 144 feet or greater present a potential obstruction to airspace that require advisories be issued to aircraft by air traffic Controllers and in some case, runway use may need to be restricted. Notification by vessels exceeding 144 feet air draft (including raised cranes or other cargo gear), when operating in vicinity of the airport is essential to provide aircraft important notice of potential airspace obstruction during instrument approaches.

Vessels with an air draft height of 144 (44 meters) or greater are advised to report the following information:

- The vessel's name, a point of contact and a call-back method of communication to the ship.
- The vessel's maximum air draft height (including masts, cranes, antenna or other projections).
- If inbound from sea, report time of arrival at Coos Bay Channel Lighted Buoy 15 (with at least 10 minutes advance notice), and again when past Coos Bay Channel Lighted Buoy 20.
- If outbound to sea, report time of arrival at Coos Bay Channel Lighted Buoy 20 (with at least 10 minutes advance notice), and again when past Coos Bay Channel Lighted Buoy 15.

Notification can be made to the Airport Operations staff via telephone at 541-297-4777 or 541-297-4234. Vessels without telephone capability are requested to provide notification to the Coos Bay Pilots on VHF-FM channels 13 and 16, to be relayed to the Airport operations personnel.

FIGURE 14 - FAA ADVISORY IN THE COAST PILOT

Upon notification, Airport traffic controllers will notify in and outbound aircraft, or restrict the runway until the vessel has passed. This information is also included in Chart 18587 as Note D Caution:

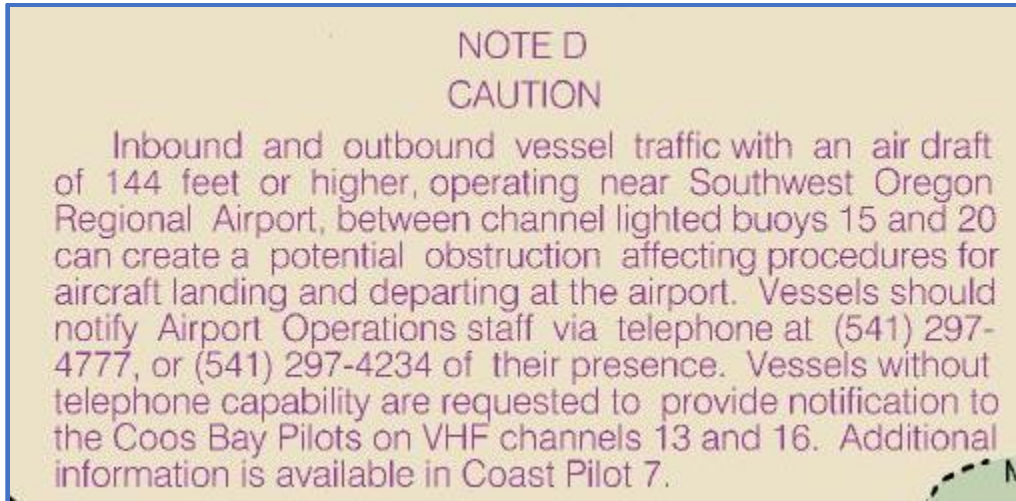


FIGURE 15 - FAA ADVISORY IN CHART 18587

NOTE: Pilots monitor VHF 13 and 16 only when on duty on vessels.

4.4.4 Upper Bay Shoaling.

The USACE has not dredged the navigation channel past RM 12.8 to 15.2 since 2010, due to lack of deep draft vessel traffic.

4.4.5 Transiting Rail Road bridge.

All vessels should ensure the Rail bridge is open, as it swings shut when trains are expected to pass over it. The train/bridge schedule is variable and not posted anywhere online or made publicly available. The bridge master can be reached via radio or telephone when they are on the bridge. Pilots onboard commercial vessels also ask the tugboats ahead of them, about the status of the bridge.

Swing bridges are required to have lights. Each swing span of every through swing bridge shall be lighted with three lanterns so that when viewed from an approaching vessel the swing span when closed will display three red lights on top of the span structure (see CFR 118.70 Lights in swing bridges).

Mariners should use extreme caution when passing through the bridge because of unpredictable changing winds, currents, and sea conditions reported in this area.

5 Conditions specific to Navigation Rule 9 - Narrow channel

This section is an assessment of current safety problems or conflicts with commercial, recreational, sailing and fishing vessels as it relates to a violation of Rule 9 (Narrow Channels Rule) of the Inland Navigational Rules Act (33 USC 2009). Each section of Rule 9 (*in italics*) has been broken down and issues for each assessed.

5.1 Keeping to starboard side outer limit of the channel

“(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.”

There are currently no issues.

5.2 Down-bound right of way

Not applicable as the Coos River is not a Western river.

5.3 Impeding passage of vessels that only navigate in the channel

“(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.”

This has not been a major issue as most small vessels are aware to operate outside of the deep draft vessel channel when ships are approaching.

5.4 Fishing vessels impeding the passage of any other vessel

“(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.”

5.4.1 Recreational fishing vessel

Recreational fishing vessels fish in the main channel and are known to tie up or anchor by the bridge pylons. This type of operation may create a navigational hazard for other waterway users by impeding or restricting their passage.

Recommendations:

Increase education of the waterway users to the potential hazards within the Coos Bay user community.

5.4.2 Derelict crab pots

Assessment

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Some recreational fishing vessels never recover their crab pots that were either dropped in the channel or drift over into the channel. Vessels navigate over crab pots which results in their lines, and associated debris, getting caught in the propellers. This has caused multiple vessels to lose propulsion/steering and is a safety risk when vessels try to retrieve the entangled pots as they are not equipped to do so.

Recommendations

Increased education to the recreational crabbing community and commercial operators.

The Dungeness crab commission has derelict crab cop recovery program in place which involves financial incentive to fishermen to recover the pots.

5.4.3 Seasonal recreation fishermen

Assessment

The density of recreational fisherman, especially during fall salmon season, can pose hazards to navigation. The North Bend range is the most popular place for recreational salmon fishing in the Fall when there can be hundreds of small vessels in and out of the channel.

Recommendation

Increased education to the salmon fishing community regarding Rules of the Road and safe boating practices.

5.5 Crossing narrow channel

(d) A vessel must 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 must use the signal prescribed in Rule 34(d) (§ 83.34(d)) if in doubt as to the intention of the crossing vessel.

There are currently no issues.

5.6 Overtaking in a narrow channel

(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) (§ 83.34)(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) (§ 83.34)(d)). (ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13 (§ 83.13).

There are currently no issues.

5.7 Vessel approaching a bend or area that obscures other vessels

(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) (§ 83.34(e)). (g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.”

There are currently no issues.

6 Aids to Navigation

This section describes the fixed navigational hazards specific to the region and the aids to navigation systems in place to minimize the risk of contact with these hazards.

6.1 Types of Aids to Navigation

6.1.1 Rough Bar Advisory Sign

Coos Bay bar is a regulated navigation area and as such, the Coast Guard has established Coos Bay South Slough Regulated Navigation Warning Sign, a rough bar advisory sign, on the east end of the breakwater at Charleston Boat Basin in about 43°20'48"N., 124°19'18"W to promote safety for small-boat operators. The sign is diamond-shaped, painted white with an international orange border, and with the words “Rough Bar” in black letters. The sign is equipped with two quick flashing amber lights that will be activated when hazardous conditions exist and the bar is restricted to recreational and uninspected passenger vessels. Boaters are cautioned, however, that if the lights are not flashing, it is no guarantee that the sea conditions are favorable.



In accordance with 33 CFR 165.1325, the U.S. Coast Guard has the authority to restrict all recreational and uninspected passenger vessels from crossing the bar when hazardous conditions exist. Failing to comply with posted bar restrictions may result in a maximum civil penalty of \$25,000.00



Additional warning signs are located at the boat ramps areas in Charleston and Empire. These signs are blue in color and have amber flashing lights that read: Warning When Flashing, Bar Restrictions in Effect, Tune to 1610 AM. When the amber lights are flashing on any of the warning signs hazardous conditions are present and a bar restriction is in place and mariners should tune in to listen to the restriction information.

6.1.2 Automatic Identification System (AIS)

AIS allows ports and ships installed with the system to automatically know where ships are located as viewed on the radar screen and share pertinent information about each vessel. While not currently used by the port of Coos Bay, AIS receiving capabilities could be installed and be used to the advantage of the agencies, the port, and ship husbandry companies. Since the port does not have Vessel Traffic Management System or use AIS; vessel transiting Coos Bay are responsible for their own safe passage.

6.1.3 Differential Global Positioning System (dGPS)

Differential Global Positioning System (dGPS) is an enhancement to Global Positioning System that provides improved location accuracy, from the 15-meter nominal GPS accuracy to about 10 cm in case of the best implementations.

The United States Coast Guard (USCG) runs its National dGPS (NGDS) on the longwave radio frequencies between 285 kHz and 325 kHz near major waterways and harbors. The USCG's

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NGDPS is jointly administered with U.S. Department of Transportation's Federal Highway Administration. It consists of broadcast sites located throughout the inland and coastal portions of the United States. While available in the area, it is unreliable and not frequently used.

6.2 Evaluation of Navigational Hazards

Any channel modifications will require a new review of the Aids to Navigation (ATON) needs and any changes to the positioning of ATON by the USCG should be reviewed by CBHSC. The list of ATON under review by the USCG and CBHSC is included in Appendix C of this plan.

As previously mentioned, Coos Bay has several navigational hazards most of which are outside of the Federal navigational channel and as such are more likely to be a concern to small boats that can navigate outside of the channel. Deep draft vessels should still be aware of some of these hazards as they are located close to the channel; ex: submerged jetties and Guano Rock.

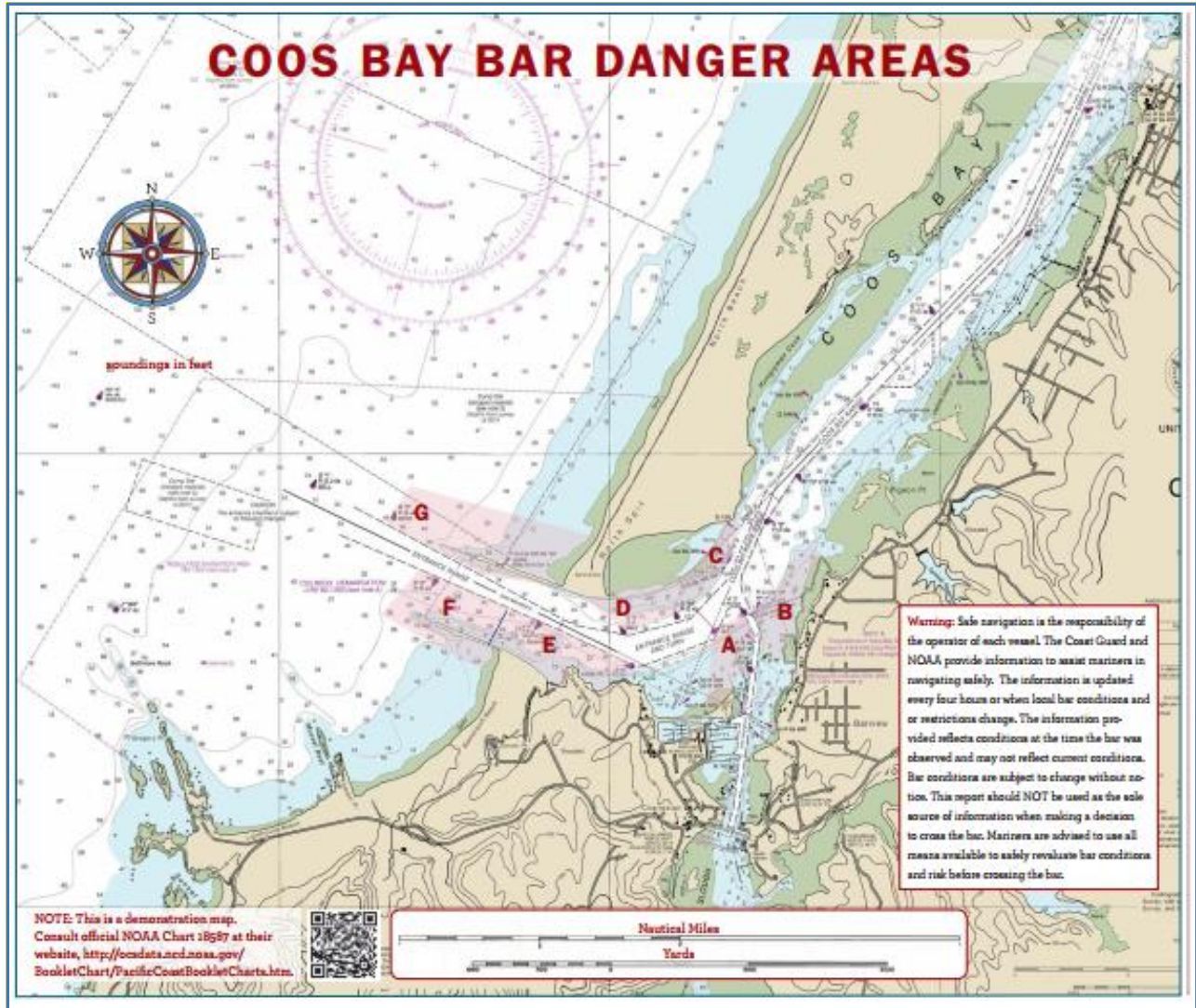


FIGURE 16 - COOS BAY BAR DANGER AREAS²

6.2.1 *Navigational hazards affecting boats*

- A. South Slough Sand Spit. As you leave the Charleston Boat Basin, the South Slough Sand Spit extends north and parallel to the channel from South Slough Red Lighted Marker #8, approximately 450 yards north towards South Slough Red, Lighted Marker #4. South Slough Lighted Buoy 2 marks the north end of the sand spit. It is dangerous. **DO NOT CROSS THIS AREA.**
- B. South Slough/Charleston Channel submerged jetty. From the entrance to the Charleston Channel from Green Lighted Marker #1, shoreward marks the end of the submerged jetty. This jetty is visible only at low water. When departing the Charleston Boat Basin, stay in the South Slough Charleston Channel to the left of Green Lighted Marker #1 at all times.

² https://www.uscg.mil/d13/dpw/docs/Coos_Bay_Bar_Crossing_Handout.pdf

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- C. Sandspit, North Beach. This area, commonly known as the cribs is located shoreward of buoy 7 and is dangerous due to its shallow depth and submerged jetties. Occasionally, on strong ebb tides, breakers will form in this area. This area should also be avoided because of the possibility of aground or striking submerged jetties and pilings. Inbound and outbound commercial tugs and deep draft vessels also pass close to channel boundaries and cannot stop for obstructions or small vessels in the channel.
- D. The area north of Coos Bay Channel lighted buoy 5 and 5A. This area is shallow and can be very dangerous when there are any large swells on the bar or during ebb tide. Breakers are very common in this area, and without warning. While vessels transit this area on occasion, this area should be avoided. The main channel is the safest navigable water.

6.2.2 Navigational hazards affecting vessels

- E. South Jetty, Guano Rock area. This is a very dangerous area because of shoals extending out from the south jetty to the entrance channel. Breakers are frequently experienced from Guano Rock Lighted Whistle Buoy 4 and sometimes breaks onto Coos Head extending out to sea. Exercise extreme care in this area at all times, especially on ebb tides. Submerged rock by the channel entrance only has about 10 feet of water above it at low tide. *Buoy R 4 marks the rock, but it has washed downstream from the rock and the US Coast Guard is not planning on changing it.*

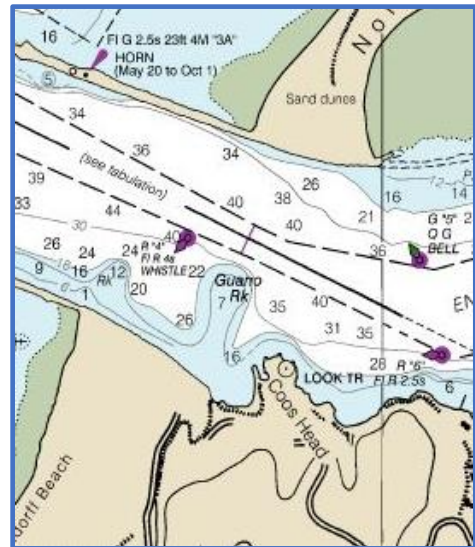


FIGURE 17 - GUANO ROCK BY COOS HEAD

- F. South jetty submerged 100 yards. The outward end of the south jetty is submerged from the visible end of the jetty. NEVER CROSS THIS AREA. There are breakers in this area most of the time. When departing the bar southbound, be sure to pass seaward of Coos Bay south jetty Lighted Gong Buoy 2 before turning to the south.
- G. North jetty submerged. The North Jetty extends approximately 300 yards to the West of the visible tip. The seaward end of the jetty is submerged from the visible tip towards Coos Bay North Jetty Lighted Whistle Buoy 3. NEVER CROSS THIS AREA. There are breakers in this area most of the time. When departing the bar northbound, be sure to pass seaward of Coos Bay North Jetty Lighted Whistle Buoy 3 before turning to the north.”

6.3 Action Summary on Aids to Navigation

The list of ATON under review by the USCG and CBHSC is included in Appendix C of this plan.

7 Spill Response

7.1 Coos Bay Response Cooperative

The Coos Bay Response Cooperative, Inc. (CBRC) is a non-profit marine industry-owned association consisting of the terminal operators in the Coos Bay harbor. CBRC was formed in 1994 and acts as an initial responder. Additional contractors would be called out as necessary depending on the nature and duration of the response. Within 24 hours, the responsible party will bring additional contractors as necessary and reasonable.

The CBRC has developed this "Umbrella" Oil Spill Contingency Plan (Plan) to cover general commercial vessels calling at berths in Coos Bay. Oil Terminal Owner/Operators and Tank Vessels including Self Propelled Tankers and Tank Barges are covered by their respective Vessel/Facility Plans and may site the resources listed in the Plan if they are members of the CBRC and have executed appropriate Service Agreements. The geographic area covered by this Plan consists of Coos Bay from the Isthmus Slough Bridge at river mile 15 to the mouth (at river mile 0). Pollution response equipment accessible to CBRC is located at the following facilities/locations: Roseburg Coos Bay Shipping Terminal; Ocean Terminal; Carson Davis Oil, Tyree Oil, Market Avenue and SOMAR and includes, boom, boom boat, skimmers, skiffs, storage tanks, cab over truck and high-power jets.

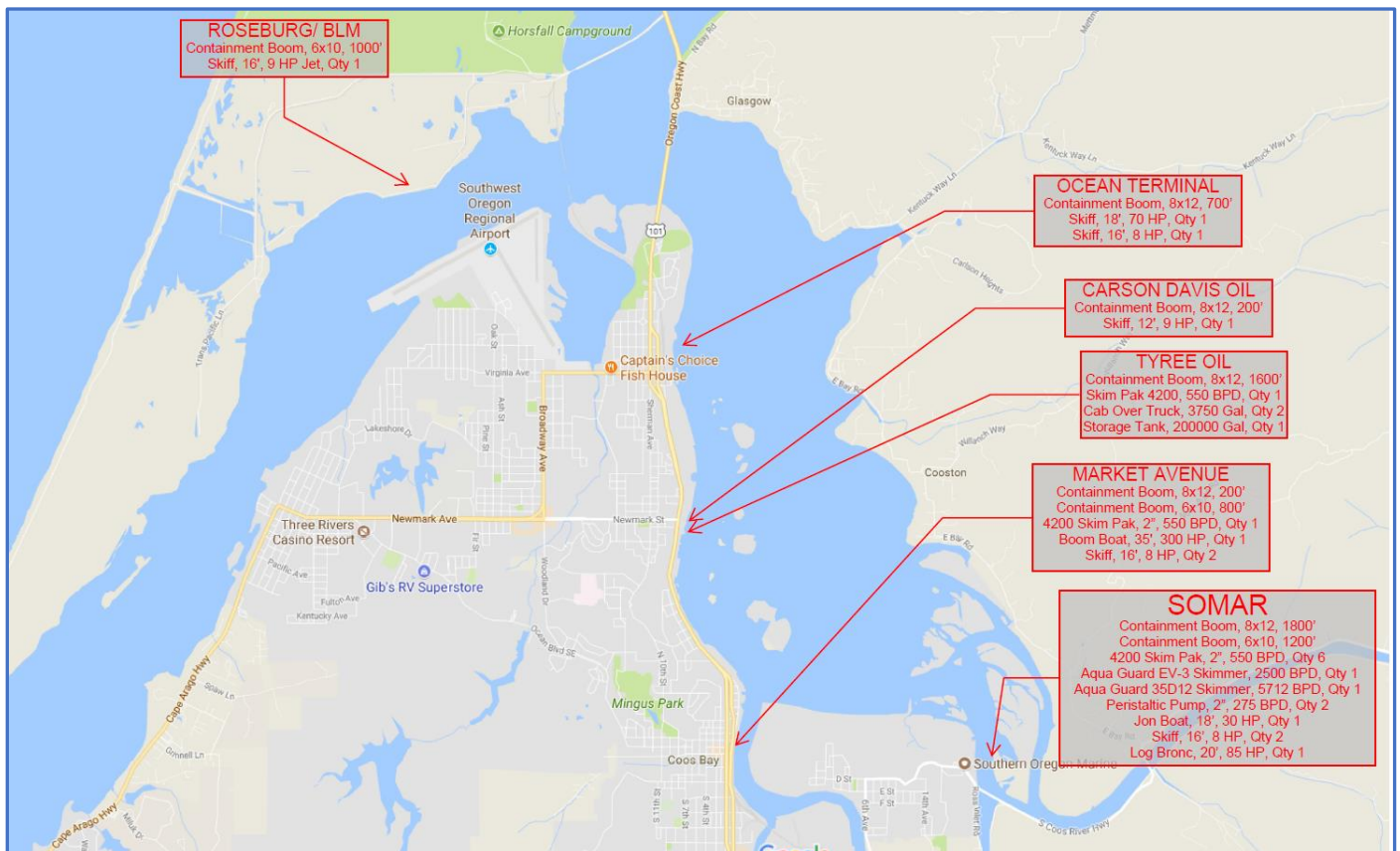


FIGURE 18 - CBRC OIL SPILL EQUIPMENT LOCATION MAP

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In response to a spill, responsible parties, Oil Spill Response Organizations as well as Federal, State and local agencies will implement an Incident Command Systems to effectively respond to the incident.

7.2 US Coast Guard

The US Coast Guard has spill response equipment located in a trailer at the Coos Bay Air Station and the Pacific Strike Team will be mobilized in response to a spill.

Response activities will follow the Coos Bay Geographic Response Plan.

8 Maritime Security Conditions

There are no current maritime security concerns and there has been no increase in Maritime Security Levels since the implementation of the Maritime Transportation Security Act, (MTSA), in 2002 and Codes of Federal Regulation (CFR) that govern ship and facility security (33 CFR 101, 103, 104 and 105).

The Act and CFR's require that facilities that receive foreign flagged vessels greater than 100 gross tons (GT), cruise ships or facilities that handle certain dangerous cargos develop and implement a security plan to help deter criminal and terrorist activities. Each Facility Security Plan (FSP) will be reviewed and approved by the Captain of the Port (COPT) and the facility audited on an annual basis.



FIGURE 19 - M/V FLORA PIONEER DEPARTING ROSEBURG COOS BAY TERMINAL

There are three maritime security levels (MARSEC), with level 1 being the lowest and 3 the highest. Facilities normally operate at MARSEC level is level 1, but this can be increased to higher levels by the Captain of the Port based on the credibility and specificity of security threats to the area, leading to the possibility of port closure when at MARSEC Level 3.

While this Harbor Safety Plan addresses safety concerns, there may be issues between safety and security, where depending on the situation, one will take a secondary position to the other. An example of this is an increase in MARSEC level where the implementation of additional security measures may affect existing safety procedures or concerns, such as closing access/exit doors to restrict and better control unauthorized access to the facility, pier or ship.

It is important to be aware of this relationship in developing any new safety procedures or recommendations.

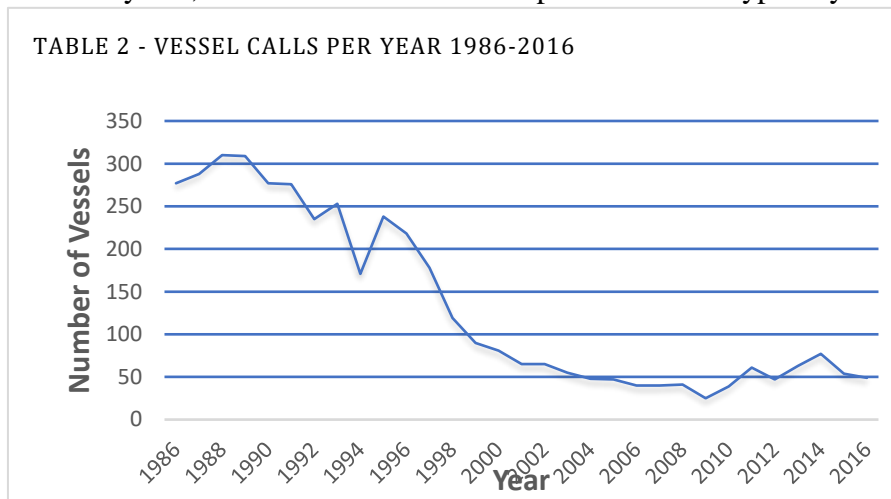
9 Vessel Traffic and Cargos

9.1 Commercial Vessels

Vessel cargo consists primarily of wood products and the number of large ships using the Coos Bay area has fallen off since the year 2000. During the past two years (2015-2016), a total of 100 ships have visited the Coos Bay Harbor complex. This equates to approximately one ship per week. While documented records were not available, tug and barge traffic has been approximately 200-400 per year.

Despite a continued drop in deep draft vessel calls since 1990, future projections indicate an increase in vessel arrivals into the port of Coos Bay.

Over the years, while the **number** of deep draft vessels typically calling on Coos Bay terminals



has decreased, their size has increased from an average of 45,422 Metric Tonnes to an average of 52,894 Metric Tonnes with a projected near-term vessel size of 70,400 Metric Tonnes as seen in Appendix D.

This increase in vessel size creates its own set of safety concerns that the CBHSC should keep

an eye on. Some of these concerns include:

- the suitability of the navigational channel (is the channel deep enough; are the turning basins large enough) and
- the maneuverability and responsiveness of these large vessels in a waterway with a projected increase in vessel traffic as well as
- the increase pollution potential of these larger vessels.

There are currently no issues that need attention from the CBHSC.

There are no vehicle or passenger ferries or cruise ships in or calling Coos Bay.

9.2 Commercial Fishing Vessels

The Coos Bay area was once a very large fishing area. Dungeness Crab, Chinook salmon are the primary commercial fisheries in Coos Bay with Albacore tuna and pink shrimp coming in second. The recent decline of the fisheries has diminished the fishing fleet, but the fleet still numbers some 85-100 vessels operating from the area. These vessels are both moored in the harbor as well as trailered to the marina for launching.

According to the US Coast Guard, in 2016, sixteen of the eighteen casualties involved commercial fishing vessels.

In addition to the commercial fishing fleet, there are five U.S. Coast Guard inspected passenger vessels which take customers out fishing during the season.

9.3 Recreational Boating

Recreational boaters are a safety concern in Coos Bay, as the operators do not always know the navigational rules of the road, keep a proper lookout or keep their boats in good operating conditions.

According to 2016 statistic collected and analyzed by the Oregon State Marine Board, the number one cause of fatal accidents this year was a 3-way tie of Force of Wave/Wake, Hazardous Waters and Operator Inexperience/Error with most of the accidents happening while crabbing/fishing and relaxing.

The US Coast Guard Auxiliary offers free vessel safety checks, boat safety training and reading material to help educate the recreational boating community regarding boating safety practices, rules of the road, Oregon boating laws and Coos Bay navigational hazards. Vessel Safety Checks are available by appointment in the Coos Bay, North Bend, Lakeside, Winchester Bay, Reedsport, and Bandon areas.

9.4 Vessel Traffic

This section provides 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.

9.4.1 Vessel Traffic System

There is no Vessel Traffic System (VTS) in Coos Bay. The small amount of existing traffic is managed by the pilots. The larger vessels are generally handled a single ship at a time, which produces a one-way traffic pattern.

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9.4.2 Notice of Arrivals

The National Vessel Movement Center (NVMC) was established to track notice of arrival information from ships entering U.S. ports. If a ship's voyage time is 96 hours or more, they must submit a Notice of Arrival (NOA) at least 96 hours before entering the U.S. port or place of destination. If a ship's voyage time is less than 96 hours, they must submit an NOA before departure, but at least 24 hours before entering the port or place of destination. This regulation applies to U.S. and foreign vessels bound for or departing from ports or places in the United States.

Notwithstanding the USCG requirement of 96 hours advance notice of arrival, the pilots request at least a 24-hour advance notice of arrival. This ensures they will be able to reach the pilot boarding station at the proper time, as well as advise the Master of the ship if there are potential delays in entering the harbor.

9.4.3 Vessel Routing

The risk of a grounding/collision generally increases the closer a vessel transits to shore. The higher risk areas were generally 25 nautical miles (nm) from land along the entire West Coast.

The West Coast of the United States has a voluntary agreement between the States, shipping companies, and the US Coast Guard. This agreement governs coastal traffic patterns. Using the Pacific States/BC Task Force Voluntary Routing Guide, tug and barges typically remain between 5-25 miles from the coast. Tank barges remaining at least 25 miles from the coast. Tank ships are obliged to stay greater than 50 miles from shore unless making port entry.

There is no specific or secondary routing for vessels transiting Coos Bay besides staying within the navigation channel as marked in NOAA Chart 18785 and following the Rules of the Road and the Law of Tonnage.

10 History of Accidents and Near Misses

This section reviews the history and types of all accidents and near-accidents which have occurred within the region during the past two years (2016-2017) and any corrective actions or programs taken to alleviate recurrences.

10.1 Statistics Year 2016

A total of 18 marine casualties were reported in 2016. Sixteen of the casualties involved commercial fishing vessels and included the following incidents: one (1) involved a grounding, one (1) involved a crewmember injury, three (3) involved vessel sinking and loss of life, described in the following section; three (3) involved loss of steering and eight (8) involved loss of propulsion. The other two marine casualties involved a crewmember injury onboard a bulk carrier and a reduction of propulsion onboard a tug.

10.2 Statistics Year 2017

A total of 6 marine casualties have been reported for 2017, as of July 7, 2017. Four of the casualties involved commercial fishing vessels and included three incidents of loss of propulsion and one incident with a loss of power. The other two casualties involved a loss of propulsion on an ATB (articulated tug and barge) and a crewmember injury onboard a bulk carrier.

10.3 Recent Accidents

Summary of recent accidents can be found in Appendix E.

10.4 Historical Accidents of Significance

10.4.1 *Grounding of the M/V New Carissa*

The M/V NEW CARISSA, a 639-foot bulk freight ship of Panamanian registry, was operated by TMM Co. Ltd., of Tokyo and owned by Green Atlas Shipping S.A. of Panama. On the night of 3 February 1999, there were 26 crewmen on board. The vessel carried no cargo, as it was inbound from Japan to pick up 37 thousand tons of wood chips at Coos Bay, Oregon. However, a strong ocean storm, with winds that reached 39 knots and seas up to 26 feet, was hitting the Central Oregon Coast that night. The Coos Bay pilot assigned to join the ship indicated that it would not enter the bay under those conditions and that he would join the ship the next day. During the storm, the ship dragged anchor and drifted towards shore. The crew tried to weigh anchor and move the ship, but during the early morning hours of 4 February, it went hard aground about 150 yards off a stretch of remote, undeveloped sandy beach three miles north of Coos Bay, Oregon.

The grounding of the M/V NEW CARISSA was unusual in that the ship became grounded twice, the response set a precedent by burning the ship's oil on board, and extraordinary means, including 69 rounds from a Navy destroyer and an MK-48 torpedo from a nuclear-powered submarine, were attempted to sink the ship in order to reduce the risk of a major oil spill.

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The M/V NEW CARISSA casualty did not occur while entering or transiting Coos Bay. The vessel's master chose to wait out the storm at anchor instead of proceeding to sea and awaiting the pilot. Anchoring offshore has been restricted since this casualty.

10.5 Near Misses

According to the US Coast Guard, there have no records of near misses. This does not mean that they do not occur.

10.6 Loss of Propulsion/Steering

There is currently no guidance for vessels coming in and out that are having difficulty with steering/propulsion. Procedures will very much depend on how disabled the vessel is and its location in the Bay/ river.

Loss of Propulsion and Loss of Steering are reported to the US Coast Guard.

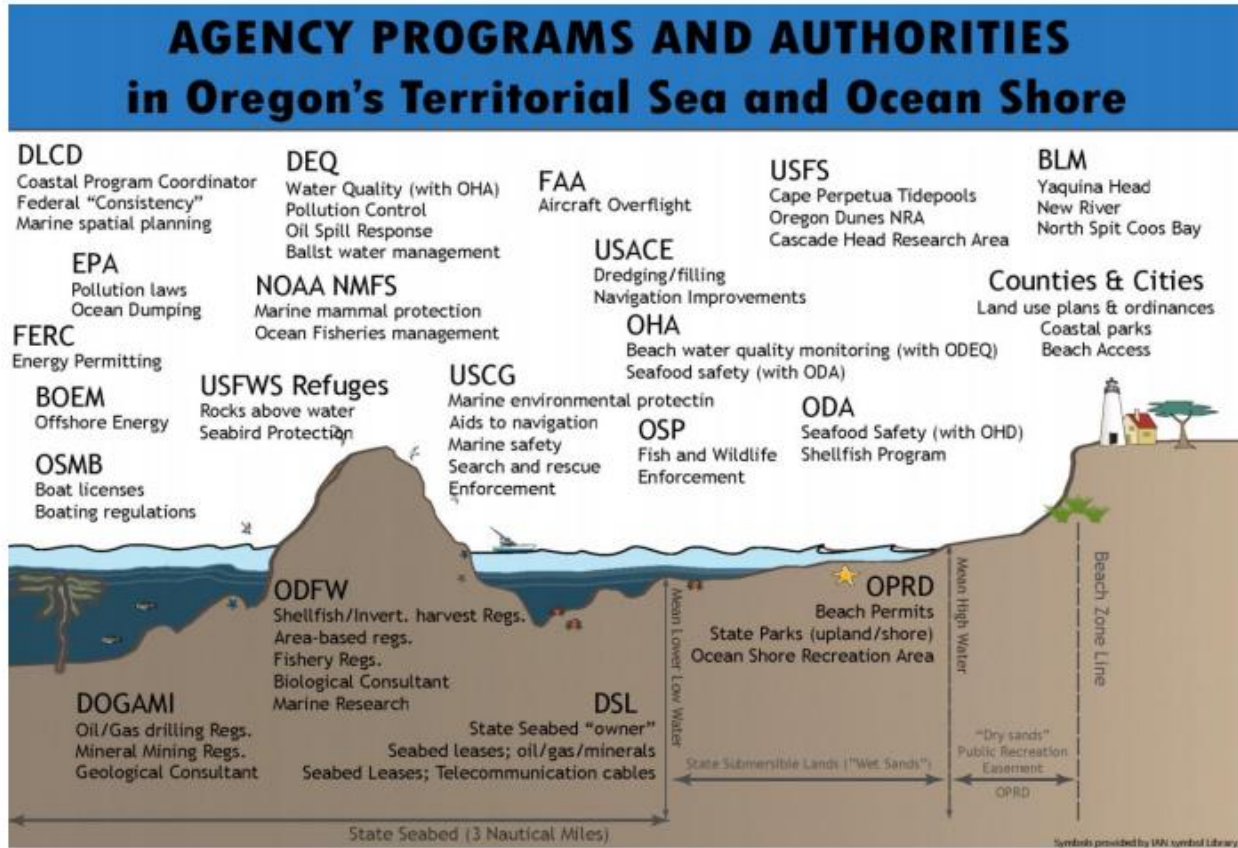
10.7 Corrective actions or programs

No corrective measures or programs have been taken or established by the CBHSC.

Boater education and information regarding weather and bar conditions continue to be distributed by the US Coast Guard, Coast Guard Auxiliary, Dungeness Crab Commission, NOAA and other agencies/entities.

11 Federal, State, And Local Agencies and Laws

As can be seen from the image below, many agencies have responsibility and authority over Oregon’s territorial sea and ocean shore. However, of those listed only a few have jurisdictional authority and programs with direct impact on the maritime safety of the harbor.



Source: ODFW and Oregon Department of Land Conservation and Development (DLCD)

FIGURE 20 - JURISDICTIONAL AREAS OF OREGON AGENCY PROGRAMS AND AUTHORITIES

11.1 Federal Laws

The two Federal agencies with jurisdiction over the safety of Coos Bay Harbor are the US Coast Guard and the Army Corps of Engineers.

11.1.1 US Coast Guard (USCG)

The Captain of the Port has varying levels of jurisdiction extending to the outer limit (200 nautical miles) of the EEZ for foreign and domestic vessels.

The US Coast Guard has several lines of authority and program activities that relate to Oregon's territorial sea. The USCG (1) is the lead agency for oil-spill response and cleanup and is the on-scene coordinator for planning and response; (2) maintains search-and-rescue stations, including air stations at Warrenton (Astoria) and North Bend (Coos Bay); (3) has authority over buoys and

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markers to regulate vessel operations. The USCG has a program of routine Marine Environmental Patrols along the ocean shore to locate and ensure the safe removal of any hazardous materials or debris that may be washed ashore. The USCG is also responsible Harbor Security and Investigations of marine incidents and accidents.

- Regulations regarding vessel safety fall under Title 46 Code of Federal Regulations (CFR); Shipping
- Regulations regarding safe navigation and security fall under Title 33 CFR Navigation and Navigable Waters parts 1-199

11.1.2 Army Corps of Engineers (USACE)

The Corps is responsible for building and maintaining coastal navigational projects, including jetties, navigation channels, and navigational structures under the Rivers and Harbors Act (33 USC 401 - 709b and 2201 - 2329). Material dredged from coastal ports is frequently disposed in ocean waters at sites designated by the Environmental Protection Agency (EPA). Placement of dredged materials at these ocean sites is regulated under sections 102 and 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) administered by the EPA or the Corps under section 404 of the Clean Water Act (CWA). The Corps also has permit authority over work performed by others in navigable waters under section 10 of the Rivers and Harbors Act, Section 404 of the CWA, and section 103 of the MPRSA.

- Regulations regarding navigation fall under Title 33 CFR Navigation and Navigable Waters parts 200-399

Other Federal Agencies with jurisdiction over the maritime interests are listed in Appendix F.

11.2 State

11.2.1 Department of State Lands

The Department of State Lands is responsible for management of publicly owned submerged and submersible land. The public has rights to use the beds and banks of navigable waterways for any legal activity, such as boating, fishing, and swimming. The following are typical uses of state-owned submerged and submersible lands:

- Houseboats
- Boat ramps
- Docks, floats, and wharfs
- Marinas and moorages
- Marine industrial facilities
- Bridges
- Utilities and pipeline crossings
- Sand and gravel operations
- Remedial cleanup
- Non-water dependent commercial uses (restaurants for example)

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Any of the uses described above require an authorization from the Department of State Lands. Authorizations include leases, licenses, easements, registrations and short-term access agreements. The Department of State Lands also issues two types of permits and authorizations:

- Removal-fill permits for removal or fill activity in waterways and wetlands
- Proprietary waterway authorizations for use of state-owned waterways

11.2.2 Department of Environmental Quality

Oil Spill Contingency Planning Act (ORS 468B.300) requires an oil spill prevention and emergency response plan approved by the Department of Environmental Quality prior to the operation of onshore or offshore oil or gas facilities or operation of tanker, cargo, or passenger vessels in state waters of the Pacific Ocean, estuaries to the head of tide water, the Columbia River, and the Willamette River to Willamette Falls. This act includes legislative policy, provides the DEQ with authority to adopt standards for preparing contingency plans, and lists minimum requirements for such contingency plans. The act establishes an Oil Spill Prevention Fund, creates an Oregon coast safety committee, and establishes a wildlife rescue training program.

11.3 Local Laws

There are currently no local laws in effect that pertain to ports safety.

11.4 Existing and proposed Laws and Regulations

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

11.4.1 Change to state pilotage laws

House Bill 2695 does not require local knowledge for tugboat operators. The Pilots are working with the US Coast Guard to make sure this is not the case and that some local knowledge is in place. Tugs sailing under registry from Canada to Coos Bay only are not required to take a state licensed Pilot.

12 Educational Needs

An assessment of the need for establishing or upgrading existing educational or public awareness programs for all waterway users.

12.1 Seasonal and Recreational Boaters

The Coast Guard reminds boaters to adhere and pay attention to bar restrictions while traveling rivers in the area. Deaths in bar-related accidents have been reported along the coast of Oregon each year. Failure to comply with rules and regulations could result in financial penalties, imprisonment, and forfeiture of the owner's vessel and equipment.

Boaters should check weather reports and ensure they have the proper safety and communication equipment before getting underway. To check local bar conditions, call the nearest Coast Guard station or tune the radio to 1610 AM. For up to date bar status or restrictions visit:

http://www.wrh.noaa.gov/pqr/marine/bars_mover.php³

While information is provided to the community, accidents still happen. The CBHSC recognizes the need for additional education and outreach programs to both the recreational and commercial boating community.

³ United States Power Squadron, Coos Bay website <http://www.usps.org/lc/coos/page3.html>

13 Communications

13.1 Current ship-to-ship and ship communication

Radios:

- The USCG monitors channel 16
- The USCG provides notice to mariner, navigation safety update on channel 22A
- The pilot boats monitor VHF-FM channels 13 and 16 and use channels 12 and 18A as working frequency.
- Tugboats over 26' in length are subject to the Bridge to Bridge Radio act and required to monitor Channel 16 (distress) and Channel 13 (communications). In Coos Bay, towboat operators primarily work 7A followed by 65. The Pilots work 18A.
- Coos County Sheriff boats use and monitor channel 16 when underway.

Cellular Phones:

- The use of cell phones/texting devices and phone applications aboard US Coast Guard boat force assets is not authorized without the permission of the coxswain. At no time will the operator of the boat use a cell phone or texting device.
- Cell phones are not used on the bridge by Pilots.

13.1.1 Current ship-to-shore communication systems used in the region

- Radios – VHF marine band
- Cellular Phones

13.2 Low propagation, or silent areas within the region

There are currently no low propagation or silent areas, however,

- Channel use is busy during fishing season and causes Pilot to change channels.

13.3 Strategy to address communication deficiencies.

There are currently no deficiencies that need to be addressed by the Harbor Safety Committee.

14 Bridge User Requirements

This section includes an assessment of current schedule for bridge openings, the adequacy of the ship to bridge communications and the physical limitations affecting vertical and horizontal clearances.

14.1 Rail Bridge

According to 33 CFR 117, the draw of the Port of Coos Bay railroad bridge, mile 7.5 at North Bend, shall be maintained in the fully open position, except for the crossing of trains or maintenance.

14.1.1 *Schedule:*

The trains do not follow a regular schedule due to the lack of demand. This is why there is no published schedule for when the Rail Bridge will be closed.

14.1.2 *Communications*

Bridge tenders only monitor the radio when they are on duty when a train is passing. At times, Pilots sometimes have difficulty reaching the bridgetenders on the radio and have to resort to using the landline, or the duty cell number.

Alternatively, if the Pilot cannot get hold of bridgetender, the Pilots will ask the tugs to verify the position of the bridge for them.

14.1.3 *Clearances*

As previously mentioned, vessels following the Upper Jarvis Range light will have to be aware of their proximity to the middle span of the open rail bridge.

15 Best Maritime Practices - TBC

15.1 Background

Best Marine Practices (BMPs) are not to be confused with regulations as they have no legal status. Instead, they provide guidance by the HSC to the maritime community on how a prudent mariner would proceed under specified circumstances. BMPs are clear and concise, as well as easily-accessed and understood by the mariner. It is hoped that such practical, hands-on safety measures will have broad appeal in the maritime community and reduce personnel, vessel and environmental casualties while facilitating the flow of maritime commerce.

Below are Best Maritime Practice “BMP” Guidelines⁴:

BMP should “NOT” be considered as follows:

1. A regulation, enforced by a regulatory agency
2. An underground regulation—it cannot be enforced by any regulatory agency

BMP should be considered as follows:

1. A common-sense measure or practice that would normally be employed by a prudent mariner
2. A useful tool that promotes safety and adds value and is not an exercise in generating paper
3. The result of “brainstorming at the grassroots level” by each HSC
4. An improved process or procedure that may originate as a recommendation from the HSC
5. “Best Maritime Practice” is an accepted and agreed upon method to conduct an operation or process that will enhance safety for vessels, personnel, dockside facilities and marine resources
6. A good example of a “Best Maritime Practice” would be the San Francisco and Los Angeles/Long Beach Harbor Safety Committees’ recommended procedure with respect to bunker barge transfer operations while alongside containers vessels at terminals.
7. Include as a disclaimer that the “BMP” is not in conflict with nor do they replace existing regulations which are already in place

15.2 The BMP Process

1. Once a “BMP” is developed it should be communicated to members of the harbor community in one of or all of the following manners
 - a. Incorporated into related procedure manuals or references made to the particular “BMP”
 - b. Posted on the Port of Coos Bay web page for the public at large
 - c. Distributed in the form of brochures
 - d. Referenced in the “Coast Pilot” as appropriate
2. “BMP” should also be included in the Committee’s Harbor Safety Plan

⁴ The California Department of Fish and Game, Office of Spill Prevention and Response (OSPR) presented these guidelines to the California Harbor Safety Committees at their Summit on 11/3/2009

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3. “BMP” should be reviewed or revisited annually to determine if they can be improved upon, or even discontinued as the case may be

15.2.1.1 Coos Bay Best Maritime Practices

BMP’s adopted by the CBHSC are included in Appendix G.

16 Monitoring & Plan Enforcement

This section includes suggested mechanisms that will ensure that the provisions of the plan are fully, uniformly and regularly enforced.

The Committee developed guidelines for vessels operating in this region to ensure safe, reliable, and environmentally sound marine transportation. Although the Committee cannot enforce these guidelines under state, federal, or local law, they institutionalize sound marine operating practices as Standards of Care that responsible vessel operators follow voluntarily. The Committee depends on its members, local, state, and federal agencies and the maritime community to monitor compliance with the Standards of Care.

Observed violations or deviations from this Plan should be referred to the Committee, Coast Guard, or State or local authorities for evaluation and possible enforcement under applicable federal and state law or regulation. If the Committee finds significant deviations, it will evaluate and may recommend more stringent enforcement, and, as appropriate, state, federal, or local rulemaking.

The following briefly summarizes Plan provisions requiring enforcement and the parties who directly monitor compliance. State and/or federal regulations cover some Plan sections discussed below, while others are guidelines.

1. Aids to Navigation: Federal regulations control all Aids to Navigation. Report any problems to the Coast Guard.
2. Anchorages: Federal regulations control anchorages. Pilots and Coast Guard normally monitor compliance with anchorage requirements. Violations are to be reported to the Coast Guard.
3. Harbor Depths, Channel Design, and Dredging: Federal law and regulations govern the harbor depths and dredging. Report any problems to the U.S. Army Corps of Engineers or port authorities.
4. Contingency Routing: Pilots and the Coast Guard monitor compliance, which the Coast Guard enforces. Violations are to be reported to the Coast Guard. Appendix H is a placeholder for the Coast Guard directive for emergency dispersal.
5. History of Accidents and Near Misses in the Harbor: This chapter's provisions are maintained by the Coast Guard and the Oregon Marine Board. Questions or concerns may be directed to them.

Oregon:

Oregon responsibilities of a boat operator at an accident scene: (ORS 830.475, 830.480, OAR 250-010-0110). Anyone involved in a boat accident must give name, address, other required information and aid to injured person(s), including transportation to a hospital if treatment appears necessary or is requested by injured person(s).

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- Leaving a boat accident scene before performing operator's duties is a Class C felony punishable by five years in jail and/or a \$100,000 fine.
- Boat operators involved in an accident resulting in death, injury or property damage exceeding \$2000 must report the accident to the State Marine Board on a Marine Board Accident Report Form:

- within 48 hours of an accident resulting in death or injury;
- within 10 days of an accident causing property/equipment damage only.

Occupants are responsible for making accident report when the operator is physically incapable of doing so.

In the case of immediate need of assistance, waterway boaters should call 911.

US Coast Guard:

Under the general marine casualty reporting provisions of 46 C.F.R. part 4, the owner, operator, or person in charge of a vessel must report marine casualties involving a grounding, allision (a moving vessel hitting a fixed object), or loss of propulsion that impacts the maneuverability of the vessel, impacts the vessel's seaworthiness, or fitness for service or route, loss of life, injury requiring professional medical treatment, property damage in excess of \$35,000, or significant harm to the environment. 46 C.F.R. § 4.05-1.

The initial report must be made immediately by telephone to Sector Columbia River Investigations Department at 503-861-2242, followed by a written report (Form CG-2692), within five days of the marine casualty. This report must include any necessary alcohol or drug testing required by the regulations,

6. Communications: This Chapter mandates that highest quality communications standards are used in Coos Bay Harbor. Discipline programs reducing congestion, interference, unnecessary/ excessive use of high power settings, and frequency misuse. All radio users in the harbor area, as well as Committee members, can help the Coast Guard, the Oregon Department of Fish and Wildlife, and the Federal Communications Commission (FCC) monitor these standards. Violations are to be reported to the FCC and to the Harbor Safety Committee.

Waterway users can file complaints with FCC using an online complaint form. You can also file a complaint by calling 1-888-CALL-FCC (1-888-225-5322) voice, 1-888-TELL-FCC (1-888-835-5322) TTY; faxing 1-866-418-0232, or writing to:

Federal Communications Commission
Consumer & Governmental Affairs Bureau
Consumer Inquiries and Complaints Division
445 12th St., SW
Washington, DC 20554.

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You can help FCC resolve your complaint more quickly by providing as much of the following information as possible:

- (1) the date and time the material was aired;
 - (2) the call sign, channel, or frequency of the station;
 - (3) the city and state where the complaint occurs; and
 - (4) as many details as possible about the content of the broadcast to help the FCC determine whether the material was improper. It is also helpful to include your address, e-mail and phone numbers.
7. **Bridges:** Federal regulations govern bridge operations. Improper bridge management incidents are to be reported to the Coast Guard District 13 Bridge Management Section (800) 982-8813 or to Sector Columbia River, Waterway Management Division at 503-861-2242.
 8. **Small Craft:** The main small vessel potential safety problem is a violation of the U.S. Inland Navigation Rules (1980), Rule 9: impeding the progress of large vessels within channels. Pilots and the Coast Guard monitor compliance with Rule 9. Recreational boat navigation violations are to be reported to the Coast Guard or any readily available local law enforcement authority including the Coos County Sheriffs.
 9. **Tug Escort/Ship Assist:** There is currently no tug escort and/or ship assist regulatory requirements for Coos Bay harbor. The USCG and the Pilots have the authority to require escort and ship assist vessels on a case by case basis.
 10. **Pilotage:** Pilots should remain in service on inbound vessels until they reach safe berth and on outbound vessels until 1mile past K buoy. The US Coast Guard and pilots monitor compliance. Report any deviations from the standard procedures or Standards of Care of this Plan made by pilots or other vessel operators to the Committee or Coast Guard.
 11. **Under-keel Clearance and Inclement Weather:** Pilots to monitor for compliance. Violations are to be reported directly to the Coast Guard. Report violations regarding reduced visibility to USCG.

16.1 Enforcement Authorities

The Committee formally requests that its members, as well as all agencies with enforcement and monitoring authority within the scope of the Plan, monitor compliance with Plan guidelines and provisions. Furthermore, it is very important that members of the local maritime community, who regularly conduct business in the harbor area and have the strongest presence, assist in monitoring by acting as the eyes and ears of the Committee. Please report infractions of Plan guidelines, violations of state and federal regulations and any unsafe practices to the following bodies, as appropriate:

1. The Coast Guard - 24/7 Command Duty Officer: Violations of federal regulations or Plan guidelines, and unsafe practices

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- (503) 861-2242
- 3. The Coos County Sheriff Marine Division: Violations of state laws, local ordinances;
 - (541) 396-7830
- 4. Oregon Department of Fish and Wildlife: NON- EMERGENCY notifications for violations of state regulations;
 - (503) 947-6000
- 5. Department of Environmental Quality: Violations of state law governing oil transfers at marine facilities;
 - (800) 452-4011

The Committee encourages the local maritime community and agencies that monitor regulatory compliance to notify the Committee of marine safety and environmental concerns by email at Coosbayharborsafety@gmail.com or attending the regular monthly meetings and make a report to the Committee.

Should the Committee find that Plan guidelines are not routinely followed, it will evaluate more-stringent approaches to enforcement, including, as appropriate, state, federal, and local rulemaking

17 CBHSC Recommendations and Accomplishments

17.1 Recommendations

The CBHSC has submitted recommendations to the community. These can be found in Appendix I of the plan.

17.2 Accomplishments

The CBHSC has accomplished the following:

- FAA review of the vessel transit height restriction and agreement that aircraft movements will be controlled to allow the safe passage of vessels with an air draft greater than 144 feet.
- Distribution of thumb drives to the towing and crabbing community with charts/plots showing the designated tow lanes and the crabbing areas to help both avoid operating each other's areas.

18 Implementation of CBHSC Action Items

Action items derived from Harbor Safety Committee meetings will be reviewed by the committee and assigned to an individual or to a subcommittee to execute within a given time frame.

Action Items and their status are tracked in the table found in Appendix J.

19 Applicable Regulations and Guidelines

USCG Ports and Waterways Safety Regulations, 33 CFR Subchapter P

- Part 160 Ports and Waterways General
- Part 162 Inland Waterways Navigation Rules
- Part 163 Towing of barges
- Part 164 Navigation Safety Rules
- Part 165 Regulated Navigation Areas
- Part 169 Ship Reporting Systems

USCG Pollution Regulations, 33 CFR Subchapter O

- Part 151 Vessels Carrying Oil, Chemicals, Garbage, and Ballast Water
- Part 153 Control of Pollution
- Part 154 Facilities Transferring Oil or Hazardous Material in Bulk
- Part 155 Oil/Hazardous Material Pollution Prevention Regulations for Vessels
 - Non-Tank Vessel Contingency Plan Regulations
 - Tank Vessel Contingency Plan Regulations
 - Salvage and Marine Firefighting
- Part 156 Oil/Hazardous Material Transfer Operations
- Part 158 Reception Facilities for Oil, Noxious Liquid Substances, and Garbage
- Part 159 Marine Sanitation Devices

USCG Maritime Security Regulations, 33 CFR Subchapter H

- Part 101 General
- Part 103 Area Maritime Security
- Part 104 Vessel Security
- Part 105 Facility Security

Guidelines for Under Keel Clearance in Coos Bays is on average 10% and is established by each vessel in consultation with the pilots.

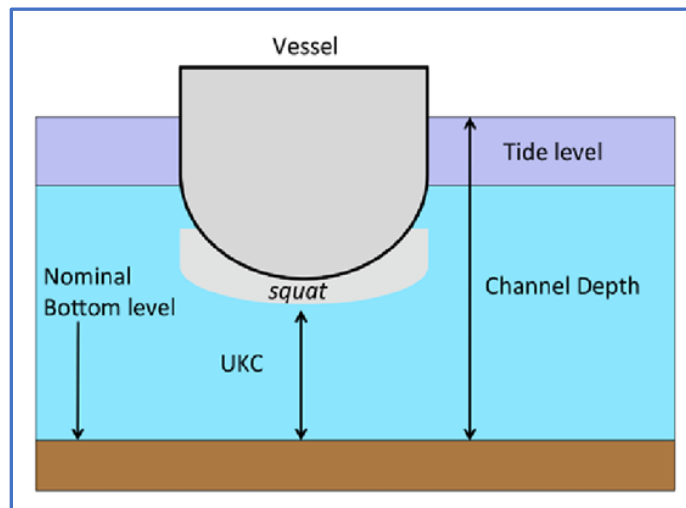


FIGURE 21 - UNDER KEEL CLEARANCE (UKC)

20 Funding

This section shall provide recommendations for funding projects that the committee intends to recommend or initiate; and consider the imposition of user fees, and assess existing billing mechanisms as potential funding sources.

There are currently no projects the committee would like to see funded nor are user fees or other mechanisms used to generate funding being considered at this stage.

21 Competitive Aspects

This section shall identify and discuss the potential economic impacts of implementing the provisions of the harbor safety plan and describe the significant differences in the restrictions that could vary from port to port within the region.

There are currently no identified economic impacts brought about by the implementation of the recommendations of the harbor safety plan, nor does the plan impose any additional restrictions that would render Coos Bay less favorable as compared to other ports in the area.

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22 APPENDICES

Appendix A:	Coos Bay Harbor Safety Committee Charter	A-I
Appendix B:	Contact Information for Coos Bay	B-I
Appendix C:	ATON Review	C-I
Appendix D:	Historical Vessel Statistics	D-I
Appendix E:	Recent Marine Accidents	E-I
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Appendix H:	US Coast Guard Regulations, Directives, Advisories and NVIC's	H-I
Appendix I:	List of Recommendations presented to the Community	I-I
Appendix J:	List of Coos Bay Harbor Safety Committee Action Items	J-I
Appendix K:	U.S. Coast Guard Waterways Analysis and Management (WAMS)	K-I
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Appendix A - Coos Bay Harbor Safety Committee Charter

Separate Document

Appendix B - Contact Information for Coos Bay

Separate Document

Appendix C – ATON review

Separate Document

Appendix D - Historical Vessel Statistics

Separate Document

Appendix E – Recent Accidents

Separate Document

Appendix F – Federal Agencies and Jurisdictions

Separate Document

Appendix G – Best Marine Practices

Separate Document

Appendix H – US Coast Guard Regulations, Directives, Advisories, NVICS

Separate Document

Appendix I– List of Recommendations presented to the Community

Separate Document

Appendix J– List of Action Items

Separate Document

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Appendix K– U.S. Coast Guard Waterways Analysis and Management

Separate Document

Appendix L– Annual Plan updates and changes

Separate Document