Lower Columbia Region Harbor Safety Plan

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Chapters:

Lower Columbia Region Harbor Safety Committee

Harbor Safety Plan Introduction

A. Purpose

The Harbor Safety Plan (HSP) of the Lower Columbia Region Harbor Safety Committee (LCRHSC) is provided as an information and educational tool. The HSP is intended to complement existing regulations by advising the mariner of unique conditions and requirements that may be encountered in the Lower Columbia Region by providing these standards and protocols as developed by local experts. This document will be updated periodically with current versions posted on our web page: www.lcrhsc.org.

B. Procedures

The elements of the HSP are developed by subcommittees of the LCRHSC. For specific issues, stakeholders and subject matter experts are included to assure the broadest perspectives on measures considered.

C. Guidelines and Standards of Care (SOC)

Standards and protocols included in the Harbor Safety Plan address operational and environmental issues unique to the Lower Columbia Region. **The Harbor Safety Plan is not intended to supplant or otherwise conflict with federal, state or local regulations developed under legal authorities.** Nor is the HSP intended to replace the good judgment of a vessel's master in the safe operation of his/her vessel.

The Columbia River SOCs:

- Were cooperatively drafted by regulators and industry representatives and provide information unique to the river system.
- Are to be implemented in accordance with all International, Federal, State and Local regulations, and the normal practices of good seamanship.
- Constitute the Minimum Standards of Care to be used in all referenced operations on the Columbia River System.

D. Harbor Safety Committee

The Lower Columbia Region Harbor Safety Committee (LCRHSC) is an open forum comprised of public and private stakeholders with vital interests in assuring safe navigation and maritime practices to protect the environment, property and personnel on the waterways within the Lower Columbia Region. LCRHSC stakeholders accomplish their mission by adopting or developing appropriate standards and guidelines that address environmental and operational elements of maritime operations unique to the Lower Columbia Region. The LCRHSC 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 LCRHSC strives to ensure reliable and efficient marine transportation.

E. Geographic Area

This HSP encompasses the Columbia River and its navigable tributaries from the seaward approaches to the Columbia River Entrance to Bonneville Dam.

F. Captain of the Port (COTP) Zone

For all commercial vessel and waterways management marine safety, port security and environmental issues in the Lower Columbia Region, COTP Portland (located at Sector Portland) is the primary Coast Guard authority. The legal boundaries for the Captain of the Port are set forth in 33 Code of Federal Regulations 3.65-10. 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.

G. Washington Department of Ecology (DOE)

For all commercial vessel and waterways management, marine safety, port safety and environmental protection and spill preparedness and response issues in Washington state waters, including the Washington waters of the Columbia River, the DOE Spills Prevention, Preparedness, and Response Program is the primary state authority responsible for dealing with vessel and facility incidents that impact or could potentially impact state marine resources. The state's jurisdiction extends to activities occurring in the coastal waters within the U.S. territorial seas, and state interests may even extend beyond those limits to the extent the event would likely impact state waters and resources.

Similar to the U.S. Coast Guard, DOE conducts vessel examinations utilizing accepted industry standards for non-tank vessels, as well as conducting fuel and cargo oil transfer monitoring inspections for operations in Washington waters. In addition, the agency responds to and investigates all marine incidents and accidents involving covered vessels (tank vessels and other commercial vessels of 300 gross tons or more).

H. Oregon Department of Environmental Quality (DEQ)

DEQ's marine oil spill prevention program is responsible for the prevention and response to oil spills in Oregon's waters. Such spills pose a major threat to Oregon's waters, air, land and wildlife. The state's jurisdiction extends to activities occurring in the coastal waters within the U.S. territorial seas and inland waterways such as the Columbia and Willamette Rivers.

Lower Columbia Region Harbor Safety Committee

Aids to Navigation Guidelines

A. Aids to Navigation (ATON) Guidelines

1. Purpose/ Scope

To provide guidelines to be followed by all vessels operating in the Lower Columbia Region.

2. General Information

The waters of the Lower Columbia Region are marked to assist navigation using the U.S. Aids to Navigation System. This system encompasses buoys and beacons conforming to the International Association of Lighthouse Authorities. The U.S. Aids to Navigation (ATON) System is intended for use with nautical charts. The exact meaning of a particular aid to navigation may not be clear to an individual unless the appropriate nautical chart is consulted. Additional important information supplementing that shown on charts is contained in the *Light List, Coast Pilot* and *Sailing Directions.*

Information can be found at the websites below:

Light List	http://www.navcen.uscg.gov/pubs/lightlists/lightlists.htm
Coast Pilot	http://www.nauticalcharts.noaa.gov/
Sailing Directions	http://www.nga.mil/

ATONs in the Lower Columbia Region are regularly reviewed. These reviews, known as the Waterway Analysis and Management System Studies (WAMS), are conducted by the U.S. Coast Guard with input from pilots and other waterway users.

3. Cautions using Aids to Navigation

The aids to navigation depicted on charts comprise a system of fixed and floating aids that have varying degrees of reliability. Mariners should not rely solely on any single ATON, particularly a floating aid. With respect to buoys, the buoy symbol is used to indicate the approximate position of the buoy body and sinker, which secures the buoy to the seabed. These limitations include inherent imprecision in position fixing methods, prevailing atmospheric and river conditions, the slope and the material making up the riverbed, the fact that the buoys are moored to sinkers by varying lengths of chain, and the fact that the buoy body and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits. Due to the forces of nature, the position of the buoy body can be expected to shift inside and outside the charting symbol.

Buoys may be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of natural causes, collisions, or other accidents. Mariners should not rely solely upon the position or operation of floating ATON, but also use bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy may be marking.

4. Actions if Discrepancies to Aids to Navigation are Identified

- If you see an ATON discrepancy, (buoy off station, light extinguished, etc.) contact the Coast Guard. Your timely report could prevent an accident.
- If underway, contact the Coast Guard Sector Columbia River by VHF or cell phone at 503-861-6211 or (866) 284-6958.

- If not underway, or if merely commenting on ATON, contact Commander, Thirteenth Coast Guard District (dpw) either by mail (Henry M. Jackson Federal Building, 915 2nd Ave, Seattle, WA 98174-1067) or by phone at 206-220-7270.

Vessel operators are required to notify the Coast Guard of any damage or destruction of aids to navigation by 46 Code of Federal Regulations (CFR) 4.05-20, and there is a penalty for noncompliance. Occasionally, aids to navigation are struck, causing damage and displacement or complete loss, without the knowledge of the Coast Guard. The result is diminished protection for marine traffic due to the failure of vessel operators to furnish notice of these collisions to the nearest local Coast Guard unit as required by law and regulation. All vessel operators who witness another vessel or individual damage or destroy an aid to navigation, or believe an aid is not watching properly or is off station in accordance with the Coast Guard *Light List*, should report the incident to the nearest Coast Guard unit. The CFR excerpt below provides more details on reporting discrepancies.

TITLE 33--NAVIGATION AND NAVIGABLE WATERS
CHAPTER I--COAST GUARD, DEPARTMENT OF TRANSPORTATION
PART 62--UNITED STATES AIDS TO NAVIGATION SYSTEM
Subpart D--Public Participation in the Aids to Navigation System

Section 62.65 Procedure for reporting defects and discrepancies.

(a) Mariners should notify the nearest Coast Guard facility immediately of any observed aids to navigation defects or discrepancies.

(b) The Coast Guard cannot monitor the many thousands of aids in the U.S. Aids to Navigation System simultaneously and continuously. As a result, it is not possible to maintain every aid operating properly and on its charted position at all times. Marine safety will be enhanced if persons finding aids missing, sunk, capsized, damaged, off station, or showing characteristics other than those advertised in the Light List, or other publication, promptly inform the Coast Guard. When making the report to the Coast Guard the mariner should consult the Light List to ensure the correct geographical information is used due to the similarity of names and geographical areas.

(c) Procedures for reporting defects and discrepancies:
  (1) Radio messages should be prefixed “Coast Guard" and transmitted directly to a Government shore radio station listed in Chapter three of Radio Navigation Aids Publication, 117, for relay to the relevant District Commander.
  (2) Telephone, e-mail, or facsimile messages may also be used to advise the nearest Coast Guard unit of defects or discrepancies in aids to navigation.
  (3) Via our Web portal at *http://www.navcen.uscg.gov.*

5. Changes to Aids to Navigation

The Coast Guard frequently evaluates its system of aids to navigation to determine whether the conditions for which the aids were established have changed. Some of the conditions that are considered include environmental changes, i.e., shoaling, type and amount of vessel traffic, and improved equipment technology. When changes occur, the feasibility of improving, relocating, or discontinuing aids is considered. Comments on

proposed changes should be addressed to: Commander (dpw), Thirteenth Coast Guard District, 915 Second Avenue, Seattle, WA 98174-1067.

All recommendations of changes to Aids to Navigation are requested to be forwarded to the LCRHSC as well as to Coast Guard Sector Columbia River/ MSU Portland.

The CFR excerpt below provides more details on the specific information that should be provided.

TITLE 33--NAVIGATION AND NAVIGABLE WATERS
CHAPTER I--COAST GUARD, DEPARTMENT OF TRANSPORTATION
PART 62--UNITED STATES AIDS TO NAVIGATION SYSTEM
Subpart D--Public Participation in the Aids to Navigation System

Section 62.63 Recommendations.

(a) The public may recommend changes to existing aids to navigation, request new aids or the discontinuation of existing aids, and report aids no longer necessary for maritime safety. These recommendations should be sent to the appropriate District Commander.

(b) Recommendations, requests and reports should be documented with as much information as possible to justify the proposed action. Desirable information includes:
    (1) Nature of the vessels which transit the area(s) in the question, including type, displacement, draft, and number of passengers and crew.
    (2) Where practicable, the kinds of navigating devices used aboard such vessels (e.g., magnetic or gyro compasses, radio direction finders, radar, loran, and searchlights).
    (3) A chartlet or sketch describing the actual or proposed location of the aid(s), and description of the action requested or recommended.

6. Interference with Aids to Navigation

In accordance with 33CFR 70.01: "No person shall obstruct or interfere with any aid to navigation established and maintained by the Coast Guard, or any private aid to navigation established and maintained in accordance with Title 33, Code of Federal Regulations, Parts 64, 66, or 67. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and be subject to a fine not exceeding the sum of $500 for each offense, and each day during such violation shall be considered a new offense."

7. Private Aids to Navigation

Private aids to navigation (PATON) include all marine aids to navigation operated in the navigable waters of the United States other than those operated by the Federal Government or those operated in State waters for private use. The U.S. Coast Guard Commandant controls PATON and permission is required for new PATON or changes to existing PATON. To get permission to establish and maintain, discontinue, change, or transfer ownership of a private aid to navigation, submit a "Private Aids to Navigation Application" (CG-2554) to Coast Guard District 13. To request this form, write

Commander, Thirteenth Coast Guard District, 915 Second Avenue, Room 3510, Seattle, WA 98174-1067; call (206) 220-7270; or go to http://www.uscg.mil/d13/oan/paton.htm.

Lower Columbia Region Harbor Safety Committee

Columbia River Anchorage Guidelines

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A. Columbia River Anchorage Guidelines

1. *Purpose*

The Columbia River Anchorage Guidelines are intended to raise awareness of and mitigate hazards common to anchoring in the Columbia River System. Common hazards include (but are not limited to):

- Traffic,
- Local Weather Patterns,
- Changing River Volumes,
- Tides,
- Currents,
- Fishing Activities,
- Recreational River Usage, and
- Lack of immediate availability of Tug and Launch Services.

River conditions constantly change. Masters, Pilots and Agents must take all current and impending circumstances into account a) when anchoring vessels and b) while vessels are at anchor in order to avoid swinging into the channel, collisions, allisions and groundings.

The Columbia River Anchorage Guidelines:

- Were cooperatively drafted by regulators and industry representatives and provide information unique to the river system and its anchorages that may be required in order to anchor safely.
- Are to be implemented in accordance with all International, Federal, State and Local regulations, and the normal practices of good seamanship.
- Constitute the Minimum Standards of Care to be used in all anchoring operations on the Columbia River System.

2. *Scope*

The Columbia River Anchorage Guidelines apply to the use of all ***Designated*** and ***Non-Designated Anchorages*** in the Columbia River System.

3. *Authority*

The U. S. Coast Guard is authorized under the Ports and Waterways Safety Act (33 CFR § 109.07) to direct the anchoring of vessels. Individual Masters and Pilots will anchor vessels in a safe position for their size, draft and duration at anchor. Pilots are available on short notice to reposition ships that may have worked out of position. Vessel Masters shall immediately contact a Pilot for repositioning their vessel when required.

4. *Deviations from Guidelines*

The Master or Pilot (in consultation with the Captain of the Port) may deviate from these guidelines when an alternate approach will provide an equivalent or higher level of safety. Vessel Masters shall inform the ***U.S. Coast Guard Sector Portland 503-240-9311*** and the appropriate Pilot organization (***Columbia River Pilots 503-289-9922*** or the ***Columbia River Bar Pilots 503-325-2641***), when such deviations are anticipated or have occurred.

5. *Length of Vessel Stay*

In accordance with 33 CFR 110.228(b) (3) no vessel may occupy a designated anchorage for more than 30 consecutive days without a permit from the Captain of the Port. Vessels remaining at a designated anchorage for more than seven days may be contacted by the US Coast Guard to obtain an update on the vessels' operational status.

6. *Definitions*

- ***Bunkering*** is the transfer of fuel.
- ***Bankfull Stage*** is a given stage determined by the U.S. Army Corps of Engineers and used to schedule releases from reservoirs. Normally, Bankfull Stage is below Flood Stage.
- ***Columbia River Datum (CRD)*** is the plane of reference from which river stage is measured on the Columbia River from the lower Columbia River up to Bonneville Dam, and on the Willamette River up to Willamette Falls. Equals 1.82 feet above ***M***ean ***S***ea ***L***evel (equivalent to NGVD) at Vancouver, Washington.
- ***Common Names*** are names in common use locally that do not coincide with the names listed in 33 CFR 110.228.
- ***Designated Anchorages*** are those anchorages listed in 33 CFR 110.228.
- ***Lightering*** is the transfer of cargo in bulk from one vessel to another vessel while at anchor.
- ***Non-Designated Anchorages*** are other viable anchorages that are not designated in 33 CFR 110.228.
- ***River Mile*** is the distance in statute miles beginning at the mouth of the Columbia River. Tables for converting statute miles to nautical miles are contained in Coast Pilot 7.
- ***Mean Lower Low Water (MLLW)*** tidal datum is the average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent datum of the National Tidal Datum Epoch.

7. *Anchorage Names*

The following table lists the ***CFR Designated Name*** and ***Common Name*** for each ***Designated Anchorage***.

	Designated Anchorage (As listed in the CFR)	***Common Name***	***Common Names of anchorages adjacent to or included in other anchorages***
1.	***Astoria North Anchorage***	North Anchorage	• Between Buoys 37 and 39 • Above Buoy 39 • The Hole (below Buoy 43)
2.	***Astoria South Anchorage***	South Anchorage	• Below Buoy 40 • Between Buoys 40 and 42 • Above Buoy 42
3.	***Longview Anchorage***	Longview Anchorage	• TBN
4.	***Cottonwood Island Anchorage***	Cottonwood Island Anchorage	• Rainier Anchorage • Below Buoy 36 • Above Buoy 36
5.	***Prescott Anchorage***	Prescott Anchorage	• Prescott Anchor • Prescott Anchor Buoy
6.	***Kalama Anchorage***	Kalama Hole	• Kalama Anchorage • Turning Basin (Hole) • Sandy Island
7.	***Woodland Anchorage***	Woodland Anchorage	• Columbia City Anchorage
8.	***Henrici Bar Anchorage***	Henrici Bar Anchorage	• Fish Trap • Willow Point
9.	***Lower Vancouver Anchorage***	Lower Vancouver Anchorage	• Morgan's (Above Pipeline) • Hewlitt Point (Below Pipeline) • Caterpillar Island • Reeders
10.	***Kelley Point Anchorage***	Upper Vancouver Anchorage	• Kelly Point Hole
11.	***Upper Vancouver Anchorage***	Upper Vancouver Anchorage	• Lower Buoy • Below Upper Buoy • Upper Buoy • Below Power Line • Power Line • Above Power Line

8. *References*

USCG Authority 33 Code of Federal Regulation (CFR), Part 109, Ports and Waterways Safety Act, 33 CFR 110.228; 33 USC 1221 et seq; 33 USC 471; 49 USC 1655 (g)(1); 49 CFR 1.46 ((c)(1)); Inland Rules of the Road.

B. General Guidelines for All Anchorages

1. *Anchoring Procedures*

The vessel Master and crew shall:

Prior to Anchoring:

a. Review the General and Specific Guidelines in this document and the Coast Pilot concerning your anchorage.
b. Confer with your Pilot to ascertain expected condition changes while at anchor.
c. Establish a Point of Contact to order tug assistance.
d. Establish and document the lead time for tug arrival with the Point of Contact.
e. Have a gangway rigged and ready for use.
f. Clear ***anchors*** for letting go. All classed foreign and domestic vessels subject to Title 33 Code of Federal Regulation (CFR), Part 164 transiting the Columbia River, shall have the required number of operational anchors as designated for that class of vessel.

Master's Orders to include orders to keep Engines on Standby:

a. During conditions of forecast high winds,
b. In crowded anchorages during tidal changes, and
c. In anchorages with poor holding ground.
d. Call the Master and Duty Engineer immediately should the anchor start to drag.

While at Anchor:

Maintain a proper Deck Watch at all times. Deck Watch personnel shall:

a. Check the condition of the anchors and anchor gear while making periodic rounds of the vessel.
b. Continuously monitor the vessels position as well as other vessels, paying particular attention to potential of dragging anchor or swinging toward a hazard.
c. Monitor VHF channels 16 and 13 at all times.
d. Confirm vessel's position and under keel clearance at a minimum of once per hour, more frequently if weather conditions deteriorate.
e. Monitor weather forecasts on a regular basis.
f. Call the Master and Duty Engineer immediately if the anchor is dragging.

Maintain a proper Engine Room Watch at all times. Engine Watch personnel shall remain ready to answer all bells in the event of dragging or losing an anchor.

2. *Response to Changing Conditions*

During Periods of Restricted Visibility
All of the above plus:

a. Maintain Bridge Watch with Licensed Deck Officer.
b. Maintain Traffic Watch on Radar.

When Gale Warnings are in Effect (Sustained Winds of 28 – 47 Knots)
All of the above plus:

a. The Bridge Watch must be maintained by a Licensed Deck Officer.
b. Engines on Standby, ready to provide immediate propulsion.

When Storm Warnings are in Effect (Sustained Winds exceed 48 knots)
All of the above plus:

a. Consider increasing the scope of anchor chain.
b. Determine the availability and locations of potential stand by tugs (with appropriate size and horsepower), which could assist the vessel in holding position.
c. Assess the need to have tugs alongside.
d. Assess the need for a Pilot and get one onboard if necessary.

3. *General Anchorage Hazards*

Low Water
Low Water occurs when the River Stage is about 5 feet above the Columbia River Datum (CRD) and can be expected to occur between the months of September and November.

During periods of Low Water adequate consideration shall be given to:

- Under keel clearance to avoid the increased possibility of grounding.
- Tidal currents may begin to flow upriver during on flood tides.
- Vessels are more likely to swing at anchor.
- If vessels drag anchor, they may ground, block the channel, or alide with other objects.

When anchoring during periods of Low Water, Pilots and Masters should evaluate the following factors:

- The size of the vessel compared to the characteristics of the anchorage.
- Reduction of the scope of the anchor to the minimum necessary to safely hold the vessel.
- The anticipated length of stay in anchorage with regard to tide cycles.
- Anticipated operations while at anchor and their impact on the ability of the vessel to get underway.
- The amount of anchor chain that the vessel carries.
- The size of other vessels in the anchorage (and in particular, large vessels).
- Proximity of other vessels within the anchorage.
- Anticipated under keel clearance.
- Potential for grounding or dragging anchor.

High Water
High Water occurs when the River Stage is about 10 feet above CRD and can be expected to occur between the months of January and June.

During periods of High Water adequate consideration shall be given to:

- The higher potential of dragging anchor because of high water flows.
- Anchor chains may be fouled by floating debris.
- The current in the anchorage may exceed 5 knots or more.
- When high water conditions approach the Bankfull Stage (maximum safe water level which will not overflow the river banks) other moorings may become submerged resulting in more demand for anchorages.

C. Additional Guidelines for Specific Anchorages

The Additional Guidelines provide locally generated information (in addition to that provided in 33 CFR 110.228 (a) (1) and other published authorities). The prudent mariner should study all generally available information and then supplement that information with the information contained in this guideline.

1. *Astoria North Anchorage*

Common Local Alternative Name
Anchorage positions are referred to according to their proximity to the closest buoy. "The Hole" refers to the deep anchorage position just west of Buoy 43.

Location
Between River Miles 14.0 and 17.8

- US Chart # 18521
- BA Chart # 2839
- 33 CFR 110.228 (a) (1)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 24' (7.32M) to over 45' (13.72M) MLLW. Deeper anchorages are to the east. All vessels are encouraged to arrive with drafts of 23' (7M) or less to facilitate maximum use of anchorage grounds.

Buoys
There are no anchorage buoys.

Vessel Sizes
Normally this anchorage is limited to vessels under 760' (231.6M) LOA and 106' (32.4M) breadth.

Anchorage Capacity
This anchorage approximately 2.5 miles long and is divided into anchorage spots approximately every ½ mile. Under normal conditions, there is room for six vessels to be anchored within this anchorage area; however "The Hole" just west of Buoy 43 is normally kept vacant for deep draft vessels in unusual situations or emergencies or short term anchoring.

Vessel Orientation at Anchor
Vessels normally stem the prevailing Columbia River current. On slack currents or when winds oppose the prevailing current vessels can swing in any direction.

Grounding Potential
Normally the risk of grounding in this anchorage is low for the first few days. As the length of stay increases, a vessel's anchor may walk out of position increasing the risk of grounding or blocking the channel.

Bunkering and Lightering
Bunkering may occur in the Astoria North Anchorage. Lightering operations are limited to the transfer of the fish cargo of processing vessels.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may not occupy this anchorage.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. They may be required to reposition their anchor after two days or move up river after seven days.

Special Considerations
Additional considerations specific to the Astoria North Anchorage include:

- Limited space is available in this anchorage for the size of the vessels that typically anchor here; care must be taken to avoid crowding.
- Vessels over 760’ (231.6M) LOA or 106’ (32.3M) breadth may be anchored under special circumstances and may require a tug standing-by.
- When the anchorage is crowded ebb current may be required for anchoring.
- Anchoring in fog is not recommended in a crowded anchorage.
- Vessels over 28’ (8.53M) draft should not be anchored in Astoria North Anchorage due to the probability of dragging anchor. A vessel with over 28’ (8.53M) of draft may require tug(s) to standby.
- This anchorage should be vacated in anticipation of Hurricane Force winds.
- Ships can swing into the channel at the change of the tide. With ships in both Astoria North and South Anchorages they can swing towards each other and block the channel.
- Ships that stay three or more days should expect to be repositioned due to the tendency for the anchor to walk out of position.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels.
- During the winter (usually between November and March), winds change direction and force at short notice with the passing of fronts. Anchored vessels must maintain a close watch on their position and be prepared to use their engines to prevent dragging into other ships or going aground and will swing on tidal changes.
- This anchorage should not be used for extended stays during the winter season.

Emergency Situations
Tugs are not normally available on short notice but can be arranged with approximately six hours notice by contacting the vessel’s agent or pilots on VHF channel 13. Pilots are normally available within an hour, but can arrive earlier in an emergency.

2. *Astoria South Anchorage*

Common Local Alternative Name
Anchorage positions are referred to according to their proximity to the closest buoy.

Location
Between River Miles 15.0 and 18.2

- US Chart # 18521
- BA Chart # 2839
- 33 CFR 110.228 (a) (2)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 20’ (6.10M) to over 45’ (13.73M) MLLW. Deeper anchorages are on either end.

Buoys
There are no anchorage buoys.

Vessel Sizes
Normally this anchorage is limited to vessels under 650’ (198.12M) LOA. Positions on either end are only suitable for smaller vessels in good conditions.

Anchorage Capacity
This anchorage approximately 2.75 miles long and is divided into anchorage spots approximately every ½ mile. Under normal conditions, there is room for four vessels to be anchored within this anchorage area.

Vessel Orientation at Anchor
Vessels normally stem the prevailing Columbia River current. On slack currents or when winds oppose the prevailing current vessels can tend in any direction.

Grounding Potential
Normally the risk of grounding in this anchorage is low for the first few days. As the length of stay increases, a vessel’s anchor may walk out of position increasing the risk of grounding or blocking the channel.

Bunkering and Lightering
Bunkering may occur in the Astoria South Anchorage. Lightering operations are limited to the transfer of the fish cargo of processing vessels.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may not occupy this anchorage.

Length of Vessel Stay
This is a short term anchorage and stays are normally limited to less than two days.

Special Considerations
Additional considerations specific to the Astoria South Anchorage include:

- Limited space is available in this anchorage for the size of the vessels that typically anchor here; care must be taken to avoid crowding.
- Vessels over 650’ (198.12M) may be anchored under special circumstances and may require a tug standing-by.
- When the anchorage is crowded ebb current may be required for anchoring.
- Anchoring in fog is not recommended.
- Vessels over 26’ (7.93M) draft should not be anchored in Astoria South Anchorage due to the probability of dragging anchor.
- This anchorage should be vacated in anticipation of Storm Force winds.
- Ships can swing into the channel at the change of the tide. With ships in both Astoria North and South Anchorages they can swing towards each other and block the channel.
- Ships that stay more than one day may have to be repositioned due to the tendency for the anchor to walk out of position.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels.
- During the winter (usually between November and March), winds change direction and force at short notice with the passing of fronts. Anchored vessels must maintain a close watch on their position and be prepared to use their engines to prevent dragging into other ships or going aground and vessels will swing during tidal changes.
- This anchorage should not be used for extended stays during the winter season.

Emergency Situations
Tugs are not normally available on short notice but can be arranged with approximately six hours notice by contacting the vessel’s agent or pilots on VHF channel 13. Pilots are normally available within an hour, but can arrive earlier in an emergency.

3. *Longview Anchorage*

Common Local Alternative Name
Longview Anchorage

Location
Between River Miles 64.0 and 66.0

- US Chart # 18524
- BA Chart # 2849
- 33 CFR 110.228 (a) (3)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 29’ to 40’ CRD.

Buoys
There are no anchorage buoys.

Vessel Sizes
Normally this anchorage is limited to vessels under 650’ (198.17M) LOA.

Anchorage Capacity
This anchorage runs from Buoy 23 to the Longview Bridge (approximately 1.5 miles long) and can accommodate five vessels.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream; in lower water conditions vessels will stem the tide. Vessels will stem the prevailing wind in slack water conditions.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Longview Anchorage. Lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations

Additional considerations specific to the Longview Anchorage include:

- Vessels over 600’ (182.93M) in length are better situated just above Buoy 23 because of more room to swing.
- Loaded ships should use caution as they tend to move toward channel while at anchor.
- Vessels greater than 650’ (198.12M) in length may use the anchorage with a tug standing by.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels, and barges.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground and are more likely to swing on tidal changes.

Emergency Situations

Tugs are normally not available on short notice and can require a three hour notice. They can be notified on channels 16, 13 or by contacting the vessel’s agent.

4. *Cottonwood Island Anchorage*

Common Local Alternative Name
Cottonwood Island Anchorage is a long anchorage and can be described as Above buoy #36, Below buoy #36, and Rainier Anchorage.

Location
Between River Miles 66.7 and 71.2

- US Chart # 18524
- BA Chart # 2849
- 33 CFR 110.228 (a) (10)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 19’ to over 40’ CRD.

Buoys
There are no anchorage buoys.

Vessel Sizes
Normally this anchorage is limited to vessels under 650’ (198.17M) LOA.

Anchorage Capacity
This anchorage is 4.5 miles long. If vessels are anchored 0.25 miles apart, the anchorage can accommodate three vessels above buoy #36 and 10 vessels below buoy #36.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream; in lower water conditions vessels will stem the tide. Vessels will stem the prevailing wind in slack water conditions.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Cottonwood Island Anchorage. Lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations
Additional considerations specific to the Cottonwood Island Anchorage include:

- Vessels over 600' (182.93M) in length are better situated above Cottonwood Island light 33, because there is more room to swing.
- Loaded ships should use caution as they tend to move toward the channel while at anchor.
- Vessels greater than 650' (198.12M) in length may use the anchorage with a tug standing by.
- Depths to over 40' CRD exist within the lower 1.5 miles of the anchorage off Rainier.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels, and barges.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground and are more likely to swing on tidal changes.

Emergency Situations
Tugs are normally not available on short notice and can require a three hour notice. They can be notified on channels 16, 13 or by contacting the vessel's agent.

5. *Prescott Anchorage*

Common Local Alternative Name
This location is between the upstream end of the Prescott Beach area and the downstream bound of the inactive Trojan Nuclear power plant site near Coffin Rock. It can also be referred to as Prescott Anchor or Prescott Anchor Buoy.

Location
Between Columbia River Miles 72.1 and 72.5

- US Chart # 18524
- BA Chart # 2849
- 33 CFR 110.228 (a) (11)
- Coast Pilot 7 Chapter 10

Anchorage Depth(s)
Depths range from 52’ to over 65’ CRD.

Buoys
One stern buoy is located in the anchorage.

Vessel Sizes
It is expected that this anchorage will generally be reserved for large and deeply laden vessels, as determined by Columbia River Pilots. Vessels using the Prescott Anchorage are expected to use the stern buoy.

Anchorage Capacity
This anchorage is 0.4 miles long. It is intended to accommodate one vessel.

Vessel Orientation at Anchor
Vessels will anchor facing upstream, positioned an appropriate distance upstream of the stern buoy, and will be secured to the stern buoy while at anchor.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in Prescott Anchorage; ship-to-ship and ship-to-barge lightering operations are only allowed when a stern buoy is utilized.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port. These vessels are required to use a stern buoy.

Length of Vessel Stay
No vessel shall remain at anchor in the Prescott Anchorage for longer than 72 hours without the permission of the Captain of the Port.

Special Considerations
This anchorage includes the portion of the Columbia River with some of the greatest natural depths (over 65') between the Portland/Vancouver area and the Pacific Ocean. As such, it is the only area in this portion of the river in which a fully laden vessel can safely be anchored at any point in either the daily tidal cycle or the seasonal water level cycle.

This anchorage was expressly created so that a stern buoy could be placed in that location. These buoys allow a vessel to anchor safely without the risk of swinging into the channel or swinging towards shore, and without the need for a high-powered tug to remain on station using its engine to hold the stern of the ship in place for many hours at a time.

The fact that the water depth in the Prescott Anchorage is favorable close to shore means vessels at anchor there could impact local residents. In order to manage possible impacts to these residences, the Anchorages Subcommittee of the Lower Columbia Region Harbor Safety Committee (LCRHSC) has created the following guidelines. Additional considerations specific to the Prescott Anchorage include:

- Vessels at anchor in the Prescott Anchorage will reduce their use of high intensity deck lights to the minimum consistent with the safety of the vessel and crew, and with the Rules of the Road.

- Vessels at anchor in the Prescott Anchorage will reduce their use of onboard generators to the minimum necessary for safe vessel operations.

- Vessels at anchor in the Prescott Anchorage will perform no on-deck vessel repair or maintenance between the hours of 8 pm and 8 am, nor hold cleaning, nor conduct any other activities that create excessive noise or odors.

Emergency Situations
Tugs are normally not available on short notice and can require a three hour notice. They can be notified on channels 16, 13 or by contacting the vessel's agent.

6. *Kalama Anchorage*

Common Local Alternative Name
Kalama Anchor is the common name for the Kalama Turning Basin area (just above Coffin Rock). Sandy Island describes the upper portion of the anchorage.

Location
Between River Miles 73.2 and 76.2

- US Chart # 18524
- BA Chart # 2849
- 33 CFR 110.228 (a) (4)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths in the anchorage range from 26’ (7.93M) to over 40’ (12.19 M) CRD.

Buoys
There are no anchorage buoys.

Vessel Sizes
No length restrictions in the turning basin area. The area off Sandy Island will accommodate vessels under 600’ (182.93 M).

Anchorage Capacity
It is permissible to anchor one vessel in the turning basin area. A tug will be required to standby the vessel and not allow it to swing because of the close proximity to the channel. The area off Sandy Island is approximately 1.25 miles long and will accommodate six vessels.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream. In lower water conditions vessels will stem the tide. Vessels will stem the prevailing wind in slack water conditions.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Kalama Anchorage. Lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations
Additional considerations specific to the Kalama Anchorage include:

- Vessels greater than 650’ (198.12M) in length may use the anchorage with a tug standing by.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels, and barges.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground and are more likely to swing on tidal changes..

Emergency Situations
Tugs are normally not available on short notice and can require a three hour notice. They can be notified on channels 16, 13 or by contacting the vessels agent.

7. *Woodland Anchorage*

Common Local Alternative Name
Columbia City Anchorage

Location
Between River Miles 83.6 and 84.3

- US Chart # 18524
- BA Chart # 2849
- 33 CFR 110.228 (a) (5)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 8’ (2.44 M) to over 40’ (12.19 M) Columbia River Datum (CRD).

Buoys
There are no anchorage buoys.

Vessel Sizes
Generally for vessels under 600’ (182.93 M) in length.

Anchorage Capacity
This is a small anchorage approximately 0.75 miles long. This anchorage will accommodate up to three vessels.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream. In lower water conditions vessels will stem the tide. Vessels will stem the prevailing wind in slack water conditions.

Grounding Potential
Normally, the risk of grounding at this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Woodland Anchorage. Lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations

Additional considerations specific to the Woodland Anchorage include:

- Columbia City is a remote anchorage and not currently used.
- Vessels greater than 600’ (182.88M) in length may use the anchorage with a tug standing by.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground and are more likely to swing on tidal changes.

Emergency Situations

Tugs are normally not available on short notice and can require a three hour notice. They can be notified on channels 16, 13 or by contacting the vessels agent.

8. *Henrici Bar Anchorage*

Common Local Alternative Name
Fish Trap, Willow Point (not Willow Bar)

Location
Between River Miles 91.6 and 93.9

- US Chart # 18525
- BA Chart # 2849
- 33 CFR 110.228 (a) (6)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Useable depths range from 22’ (6.71 M) to over 33’ (10.06 M) CRD.

Buoys
There are no anchorage buoys.

Vessel Sizes
Generally for vessels under 600’ (182.93 M) in length.

Anchorage Capacity
Henrici Bar Anchorage is a narrow anchorage about 2 miles long, and will accommodate up to eight vessels.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream. In lower water conditions vessels will stem the tide. Vessels will stem the prevailing wind in slack water conditions.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Henrici Bar Anchorage. Lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations

Additional considerations specific to the Henrici Bar Anchorage include:

- This is a remote anchorage and not currently used.
- Vessels greater than 600’ (182.88M) in length may use the anchorage with a tug standing by.
- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground and are more likely to swing on tidal changes and are more likely to swing on tidal changes.

Emergency Situations

Tugs are normally not available on short notice and can require a two hour notice. They can be notified on channels 16, 13 or by contacting the vessels agent.

9. *Vancouver Lower Anchorage*

Common Local Alternative Name
Willow Bar Lower Anchorage

Location
Between River Miles 96.2 and 101.0

- US Chart # 18525
- BA Chart # 2849
- 33 CFR 110.228 (a) (7)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 25’ (7.62 M) to over 40’ (12.19 M) CRD.

Buoys
There are no anchorage buoys.

Vessel Sizes
Normally this anchorage is limited to vessels under 600’ (182.93M) LOA.

Anchorage Capacity
This anchorage is approximately 4 miles long. Under normal conditions, up to fourteen vessels may be anchored within this anchorage area and are arrayed from upstream to downstream.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream, stemming the prevailing Columbia River current.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur in the Willow Bar anchorage; barge to barge petroleum lightering operations are allowed in this anchorage. Ship-to-ship and ship-to-barge lightering operations are not allowed in this anchorage.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay

Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations

Additional considerations specific to the Willow Bar Anchorage include:

- Limited space available in this anchorage and the size of the vessels that typically anchor here, care must be taken to avoid crowding.
- Vessels greater than 650' (198.12M) in length may use the anchorage with a tug standing by.
- Pipeline is located between River Mile 100.16 and 100.45. Vessels do not anchor in this area.
- A Rock Pile is located on Morgan Bar and lies in position Lat. 45° 41' 49.8823" N, Long. 122° 46' 06.0792" W (outside the designated anchorage boundaries). Minimum depth at the Rock Pile is 13' (3.96M) below CRD.
- Anchoring vessels and vessels in the anchorage should anticipate the effects of changes in wind, current, and water level, in order to avoid potential swinging into the channel or other vessels.
- During seasonal low water anchoring vessels must remain aware of a) their under keel clearance, b) the potential for grounding and c) the increased probability of swinging on tidal changes.
- The preferred location for barge-to-barge lightering operations is in the anchorage area abeam of Reeder Point Light 28 at the lower end of Caterpillar Island. A WDFW boat launch is located at the lower end of the slough behind Caterpillar Island.

Emergency Situations

Tugs are normally available on short notice and can be notified on channels 16, 13 or by contacting the vessels agent.

10. *Kelley Point Anchorage*

Common Local Alternative Name
Vancouver Upper Anchorage, Kelley Point Hole

Locations
Kelley Point Anchorage
Between River Miles 101.6 and 102.0

Vancouver Upper Anchorage
Between River Miles 102.6 and 105.0

- US Chart # 18526
- BA Chart # 2849
- 33 CFR 110.228 (a) (8)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depth is a minimum of 50’ (15.24M) CRD.

Buoy
No buoys are available.

Tugs
Vessels must be attended by a tug at all times.

Vessel Sizes
The anchorage is open to vessels of any size.

Anchorage Capacity
One vessel may be anchored within this anchorage.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream, stemming the prevailing Columbia River current.

Grounding Potential
Normally the risk of grounding in this anchorage is low.

Bunkering and Lightering
Bunkering may occur. Lightering operations are not allowed.

Cargoes of Particular Hazard

Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port.

Length of Vessel Stay
This is a short stay anchorage. After seven days vessels may be contacted by the USCG for status.

Special Considerations
Additional considerations specific to the Kelley Point Anchorage include:

- In this anchorage it is important to anticipate, to the degree possible, the effects of changes in wind, current, and water level, both upon the anchoring vessel and other nearby vessels, and barges.
- This is a high traffic area.

Emergency Situations
Additional tugs are normally available on short notice and can be notified on channels 16, 13 or by contacting the vessels agent.

11. *Vancouver Upper Anchorage*

Common Local Alternative Name
Hayden Island Upper Anchorage

Location
Between River Miles 102.57 and 105.20

- US Chart # 18526
- BA Chart # 2849
- 33 CFR 110.228 (a) (9)
- Coast Pilot 7 Chapter 2

Anchorage Depth(s)
Depths range from 35’ (10.67M) to over 50’ (15.24M) CRD.

Buoys
Two stern buoys are located in the anchorage.

Buoy Usage
Vessels over 650’ (198.12M) LOA will use one of the two stern buoys if available. Under normal conditions, vessels 650’ (198.12M) LOA or less may elect to anchor without using a stern buoy.

Vessel Sizes
The anchorage is open to vessels of any size.

Anchorage Capacity
Under normal conditions, up to seven vessels may be anchored within this anchorage area and is arrayed from west to east.

Vessel Orientation at Anchor
Vessels normally anchor facing upstream, stemming the prevailing Columbia River current.

Grounding Potential
Normally the risk of grounding in this anchorage is low. Deep draft anchorages are generally to the West. Vessels not using a stern buoy need to pay close attention to swinging while at anchor.

Bunkering and Lightering
Bunkering may occur in any Hayden Island anchorage; ship-to-ship and ship-to-barge lightering operations are only allowed when a stern buoy is utilized. Barge-to-barge lightering operations are allowed above the power line crossing only and do not require a stern buoy.

Cargoes of Particular Hazard
Vessels carrying a Cargo of Particular Hazard as listed in 33 CFR 126.10 may occupy this anchorage with permission from the Captain of the Port. These vessels may be required to use a stern buoy.

Length of Vessel Stay
Vessels normally remain at this anchorage for no more than seven days. After seven days vessels may be contacted by the USCG for status.

Special Considerations
Additional considerations specific to the Hayden Island Anchorage include:

- There are four water leases along the north shore of Hayden Island (numbered 1 through 4 on the enclosed Chart). The water leases are privately controlled tug and barge marshaling areas. Each marshaling area covers approximately five-acres. Frequently, rafted barges are moored in these areas and tug and barge activity can be heavy, especially late at night or in the early morning hours and shall be considered while anchoring and during the vessels stay at the anchorage.
- Limited space available in this anchorage and the size of the vessels that typically anchor here, care must be taken to avoid crowding.
- The effects of changes in wind, current, and water level, both upon the anchoring vessel and upon other nearby vessels, and barges.
- During seasonal periods of low water levels (usually between September and November) anchoring vessels must remain aware of their under keel clearance while at anchor and of the possibility of going aground.
- Vessel anchoring at the lower buoy must attach to the stern buoy due to the proximity of barges moored at water lease #1.
- Vessels anchored at the Power Lines are in proximity to barges moored at water lease #2 and #3.

Emergency Situations
Tugs are normally available on short notice and can be notified on channels 16, 13 or by contacting the vessel agent.

D. Offshore Anchoring

1. *Caution*

The practice of anchoring offshore should only be considered in an emergency situation. Should such emergency arise, vessel Masters are cautioned to carefully consider:

- The inherent dangers of anchoring on a lee shore.
- Relevant anchoring exclusion zones.
- Prevailing and forecast weather.
- Currents and tides.
- Traffic.
- The anchor holding characteristics of the anticipated anchor location and their ground tackle.
- The requirements of their vessel for adequate maneuvering (sea) room, considering the time it takes to provide propulsion, heave anchor, their vessel's handling characteristics and the area, wind, currents, tides, sea state, weather and visibility.

2. *Emergency Offshore Anchoring Requirements*

In general, vessel Masters should always consider standing offshore in preference to anchoring offshore.

- Any vessels requiring an offshore anchorage must immediately notify Coast Guard Sector Portland, the Bar Pilots and their agent.
- The vessel Master shall be prepared to give the nature of the vessels' distress, desired anchor position, depth of water, bottom type, and number of anchors and shots of chain to be used.
- The vessel will be required to maintain a full Bridge Navigation Watch and Engines on Standby, ready for immediate maneuvering.
- The vessel will be placed on a communications schedule with the Coast Guard and will be required to get underway as soon as safely possible.

Lower Columbia Region Harbor Safety Committee

Bunkering Guidelines

Table of Contents

A. Bunkering Guidelines

1. Purpose

The waters of the Columbia River system are environmentally sensitive and a precious environmental and economic resource. Bunkering operations, while routine in many parts of the country, do in fact pose risks different than those normally expected of standard shore to ship refueling operations.

Some bunkering operations are conducted while vessels are at berth and may be conducted simultaneously with cargo operations. This adds some additional risk to bunkering operation and the personnel involved for which additional precautions are necessary. The procedures associated with bunkering operations are covered below.

These Bunkering Guidelines:

- Were cooperatively drafted by regulators and industry representatives. They provide information unique to this river system, its operations, and are required in order to bunker safely.
- Are to be implemented in accordance with all International, Federal, State and Local regulations, and the normal practices of good seamanship.
- Constitute the Minimum Standards of Care (SOC) to be used in all bunkering operations on the Lower Columbia Region.

2. Authorities

Bunkering operations are subject to U.S. Coast Guard regulations, Title 33 Code of Federal Regulations (CFR) Parts 153, 155, 156 and Title 46 CFR Sub Chapter D Tank Vessels. If bunkering operations are conducted within Washington waters, Washington State regulations addressing oil transfer operations also apply. Vessels intending to conduct bunkering operations while at anchor should also carefully review the guidance in the anchorage chapter of this Harbor Safety Plan (HSP).

Regulators frequently monitor fuel / oil transfer operations in the Columbia River system based on the level of risk, amount of fuel / oil, familiarity with company operations, procedures and track records. Regulating agencies may stop any bunkering operation or prohibit planned operations due to safety concerns or unacceptable risk.

3. Definitions

- ***Bunkering*** is a bulk oil transfer operation to replenish a self-propelled vessel with fuel or lubricating oil.
- ***Delivering Vessel*** is the vessel delivering the fuel or lube oil in a bunkering operation.
- ***Designated Anchorages*** are those anchorages listed in 33 CFR 110.228 and detailed in the Anchorage chapter of the HSP.
- ***Heavy weather*** is sustained winds from 34 to 47 knots or higher gusts (Gale Warnings).

- ***Lightering*** is the transfer of cargo in bulk from one vessel to another vessel while at anchor.
- ***Receiving Vessel*** is the vessel receiving the fuel or lube oil in a bunkering operation.
- **Zone of Concern (ZOC)** encompasses the delivering vessel and that portion of the receiving vessel adjacent to the location of the bunker barge and/or transfer manifold. The ZOC is different for every bunkering operation since it takes into account the particular bunkering barge, where it is secured to the receiving vessel, and where the transfer hoses will be rigged.

4. References

- 33 CFR 153 Notice of Discharge and Removal of Discharged Oil
- 33 CFR 155 Oil or Hazardous Material Pollution Prevention Regulations for Vessels
- 33 CFR 156 Oil and Hazardous Material Transfer Operations
- 46 CFR 30-40 Tank Vessels
- 317-40 Washington Administrative Code (WAC) Bunkering Operations
- 173-184 WAC Vessel Oil Transfer Advance Notice and Containment Requirements

5. Applicable Industry Standards

The following references contain worldwide industry standards, and should also be consulted for applicability to bunkering operations:

- Oil Companies International Marine Forum Guidelines (OCIMF) Ship to Ship Transfer Guide
- Oil Spill Risks from Tank Vessel Lightering - published by the Commission on Engineering and Technical Systems (CETS)

B. General Guidelines for Bunkering Operations

1. Heavy Weather

a. **Wind:** Vessels will not come alongside in preparation for bunkering at anchor or pier side if sustained winds are at or exceed 34 knots or wind gusts exceed 40 knots. If bunkering operations have already begun when sustained winds reach 34 knots or gusting over 40 knots personnel in charge of bunkering operations will continuously monitor environmental conditions and take any additional measures necessary to reduce risk of injury, vessel damage or pollution, and prepare for worsening weather. When sustained winds reach 40 knots bunkering operations will cease and hoses will be drained and disconnected. Personnel should consult separate guidance issued by Sector Portland and the Harbor Safety Committee regarding anchoring procedures relevant to all vessels.

Underway bunkering is not allowed under any conditions within the Lower Columbia River system.

b. **Seas:** For bunkering operations from one vessel to another vessel while at anchor, operations will cease, with hoses drained and disconnected when waves or swells reach 3 ft. The wind and sea conditions criteria have been developed with industry input and are used by operating companies in the area. These standards are based on historical observations and experience in handling these vessels under prevalent conditions.

c. **Sheltered Waterway:** The foregoing wind and sea guidelines may not be applicable when a receiving vessel is being bunkered at a wharf or pier in a sheltered waterway. A waterway is considered to be sheltered when area around the ZOC is protected from the prevailing wind or seas. The criteria for securing a bunkering operation in these types of locations would be dependent upon adverse movement of either the receiving vessel or delivering vessel caused by the prevailing wind or sea conditions.

2. Personnel / Safe Access between Vessels

The delivering vessel and receiving vessel shall each have a designated **Person in Charge (PIC)** that is in charge of the transfer on their respective vessels. The receiving vessel shall provide safe access in order to facilitate face to face communications between the receiving and delivering vessels for purposes of a pre-transfer conference and other required communications. The acommodation ladder should be the first choice, but if the ladder is inaccessible from the delivering vessel, a SOLAS approved pilot's ladder should be used instead. A Jacob's ladder is not an appropriate means of access between vessels.

3. Mooring Equipment

All parties will use fenders of sufficient size and type to prevent steel to steel contact between the two vessels. Mooring lines will be of sufficient size and type to hold the delivering vessel alongside the receiving vessel during expected tidal, wave, and wind conditions.

4. Tug Availability

During bunkering operations in moderate to heavy weather conditions involving vessels at anchor, at least one tug will remain on scene and ready to render assistance until bunkering is completed, and all hoses are disconnected and returned aboard their respective vessels. The attending tug(s) must have sufficient horsepower to maneuver and control at least the delivering vessel involved in the bunkering operation under all conditions. Bunkering operations may take place without direct tug assistance, once the mooring portion of the operation has been completed. The attending tug or a designated tug must be on immediate standby in the area to render assistance in less than 30 minutes. This standard does not apply to delivering vessels that are self propelled.

5. Number of Vessels Involved

A vessel may receive bunkers and lubricating oils from two separate delivering vessels at the same time, provided:

a. Each transferring vessel has a separate PIC unless otherwise approved by the **Captain of the Port (COTP).**

b. That each system is completely separate from the other or is otherwise affirmatively isolated or segregated by means of blank (spectacle) flanges which may be visually verified.

c. Bunkering will not take place simultaneously with Lightering operations.

6. Flow Rate, Topping Off and Gauging Procedures

Flow rates, topping off and gauging procedures should be conducted in accordance with OCIMF Ship to Ship Transfer Guide and if in Washington waters, with Washington State Bunker and Oil Transfer Rules.

7. Declaration of Inspection (DOI)

A Declaration of Inspection (DOI) must be filled out and signed by both PICs prior to the start of a bunkering if either vessel has a total capacity of 250 barrels (10,500 U.S. gallons) or more. The DOI must include the information required by the references in Section A.4 of this guideline.

8. Watchkeeping

A qualified PIC shall be on watch and monitor the oil transfer operation on the receiving and delivering vessels of which they are in charge at all times. A qualified deck officer shall maintain a navigation/anchor watch on the bridge of a vessel that is anchored. The receiving vessel and the attending PIC of the delivering bunkering barge/tank vessel will ensure the monitoring and maintaining of sufficient mooring for all conditions as required by the DOI.

9. Required Notifications

If the receiving or delivering vessel has a total capacity of 250 barrels (10,500 U.S. gallons) or more, the delivering vessel or facility operator will ensure notification is made to the USCG of the time and place of each transfer operation at least 4 hours before it begins

For bunkering operations in Washington State waters, the delivering vessel or facility operator must submit an advance notice of oil transfer (ANT) Washington State Department of Ecology (DOE) via fax (see Enclosure 1) or through the Ecology ANT website (see Enclosure 2). This notice must be sent at least 4 hours prior to commencement of each transfer operation of more than 100 gallons. Providing advance notice using the Washington State website will also fulfill the USCG advance notice requirements.

10. Washington State Requirements for Response Equipment

In addition to the individual Vessel Response Plan requirements, the following pollution prevention and mitigation measures must be met for bunkering operations in Washington State waters:

a. When bunkering operations at a rate exceeding 500 gallons per minute take place, and when it is safe and effective to do so, containment boom capable of encircling the entire operation must be in place with at least a five foot stand-off from the vessel; or boom must be positioned to provide for the maximum containment of any oil potentially spilled. Each vessel or facility that delivers oil at a rate exceeding 500 gallons per minute is obligated to have developed and implemented pre-booming strategies using safe and effective thresholds under WAC 173-180 or 173-184. These thresholds are approved by DOE.

b. Where it is not safe and effective to pre-boom transfer operations then such length of boom will be made available on scene and ready for immediate deployment such that the boom could be completely in place within 1 hour of detection of a spill, unless the vessel has an equivalent compliance plan approved by Washington DOE and accepted by the USCG COTP.

c. The standby booming requirement can be met by the equipment normally carried by barge or by a dedicated response vessel or by both.

d. If this requirement is met without a response vessel then a small boat capable of deploying the boom in a timely fashion must be on scene and immediately available.

e. If both the barge and the response vessel contribute toward this requirement, the equipment must be compatible.

f. Adequate personnel shall be on scene to take appropriate actions on the vessels, while simultaneously deploying boom.

g. Personnel shall be trained in deploying boom and the boom and response equipment shall be prepared so that it can be deployed with a minimum of delay.

11. Anchorage Management

Vessels desiring to bunker in designated anchorages in Columbia River are reminded to consult the Columbia River Pilots on securing anchorage reservations. When bunkering at anchor, the preferred side for the delivering barge/vessel will be the lee side or side away from the main shipping channel. For example: Willow Bar anchorage will receive bunkers on port side of anchored vessel and Hayden Island will be on starboard. Both examples are during ebb tide conditions.

Bunkering operations are normally permitted in Astoria North Anchorage, Astoria South Anchorage, Longview Anchorage, Kalama Anchorage, Woodland Anchorage, Henrici Bar Anchorage, and Kelley Point Anchorage and may occur in the Willow Bar and Hayden Island anchorages.

C. Guidelines for Bunkering Operations during Cargo Operations

1. Overview

This section outlines the process for essential communication between the agents, bunker barge operators (tankermen), the designated vessel contact for cargo operations (e.g. Chief Mate), the terminals Marine Department and shoreside cargo personnel to ensure a safe and productive work environment when bunkering a vessel at the same time as cargo operations are being conducted. A quick reference guide is provided as Enclosure 3.

2. Initial Agreement

The agent will ensure notice of bunkering operations is given to the vessel crew, terminal operator and the bunkering company. If there is a potential interaction with shoreside cargo operations, the vessel's master will notify the shoreside cargo personnel prior to the bunkering. In the event of a spill, the vessel's contact for cargo operations will immediately notify any cargo personnel operating in the area.

Points of contact and contact information (e.g., phone/cell numbers) will be shared among the terminal, vessel and bunkering company personnel who will be working during that bunkering operation. Having this contact information serves as the cross check that all parties are aware of the planned bunkering operation.

3. Essential Communications: Contact between Tankerman, Vessel and Terminal

The designated facility will be notified of planned bunkering operations by the agent, bunker supplier or vessel's master. The designated vessel contact for cargo operations (e.g. Chief Mate) will meet with the bunker barge representative (tankerman) and vessel contact for bunkering operations (e.g. Chief Engineer) prior to beginning the bunkering operation. This will allow the tankerman to learn the details of the planned cargo operation that might present possible conflicts. The designated facility contact will then give notice to the cargo personnel that bunkering operations are about to begin. These contacts may be in addition to or simultaneous with the required pre-transfer conference with the person in charge of receiving bunkers.

4. Zone of Concern (ZOC)

Tankermen, terminal personnel and vessel personnel all must be mindful of and take particular care when cargo operations take place anywhere in the vicinity of the ZOC. On container vessels, particular care must be takend when working the outer three stacks of containers adjacent to the ZOC and bunker barge when the transfer is in progress, and immediately before and after the bunkering operation.

Since virtually all bunker oil transfer operations in Washington waters require the vessel(s) and facilities involved to be surrounded by oil containment boom prior to oil transfer commencing, all personnel involved in cargo loading/lashing operations need to be particularly alert for small vessel boom deployment and retrieval operations adjacent to the ship both immediately before and after the bunkering operation takes place. If at any time in the judgment of the tankerman the bunkering operation is at risk due to

ongoing cargo operations he will secure the fuel transfer to the ship and contact the vessel representative.

5. Tankerman Check Sheet

In making contacts with the designated facility and vessel points of contact, the tankerman needs to identify the following:

1) Where possible the bunkering barge should be secured to the receiving vessel such that there is no overlap between the Zone of Concern (ZOC) and any areas in which cargo operations will take place. If this is not feasible, then any overlap should be minimized.
2) What is the ZOC for this bunkering operation, taking into account the particular bunkering barge, where it is secured to the receiving vessel, and where the transfer hoses will be rigged?
3) Are there any loading, discharging, lashing, or other cargo operations planned within or near the ZOC?
4) When does the terminal or wharf plan to work within or near the ZOC?
5) Can the cargo be worked in a specific time frame so possible conflicts with the ZOC are avoided?
6) When do shoreside personnel plan to shut down cargo operations for breaks, lunch, etc.?

6. Incident Response

The Tankerman shall be alert to the crane and cargo operations that have been planned to work near the barge.

The Tankerman shall determine the proper action to take regarding oil transfer process should any incident occur which affects the safety of the operation including the safety of the boom deployment personnel and vessels.

Any incident will require direct communications between the parties involved who shall be readily available. This will allow for adjustments to working plans to correct conflicts.

7. Long Term Incident Resolution

The Port/Terminal Operations Department's management personnel, vessel representative, and the barge operator will discuss mutually agreeable adjustments in the cargo and bunkering operations to minimize tankerman exposures that may be determined as the result of an incident and the post incident investigation. Ideas and lessons learned will be shared between all parties including the other port terminals.

Advance Notice of Oil Transfer

To: Prevention Section
Dept. of Ecology, Spills Program

FAX: **1-800-664-9184** or **E-mail** to OilTransferNotifications@ecy.wa.gov

* - **Indicates required fields by rule** Questions about Advance Notice of Transfers can be answered by calling 360-407-7390	
*Delivering Company Name:	
*Company Address:	
*Company Contact Name:	*Contact Phone Number: ( )
*Start Date: (mm/dd/yy)	*Start Time: (hhmm)(24-hr clock)
*Duration (hh.mm): (decimal hours)	
Deliverer Type: (Check one)	Vessel ☐ Fixed Facility ☐ Mobile ☐
*Name of Deliverer:	
Receiver Type: (Check one)	Vessel ☐ Fixed Facility ☐
*Name of Receiver:	
Berth Location:	Anchor Location:
*Address or Location of Transfer:	
*City of Transfer:	

*Product or Type of Oil(s): 1 2 3 / /	*Quantity: Gallons ☐ or Barrels ☐ 1 2 3 / /

Purpose of Transfer: ☐ Cargo ☐ Fueling ☐ Lube/Hydraulic ☐ Waste Oil ☐ Bilges

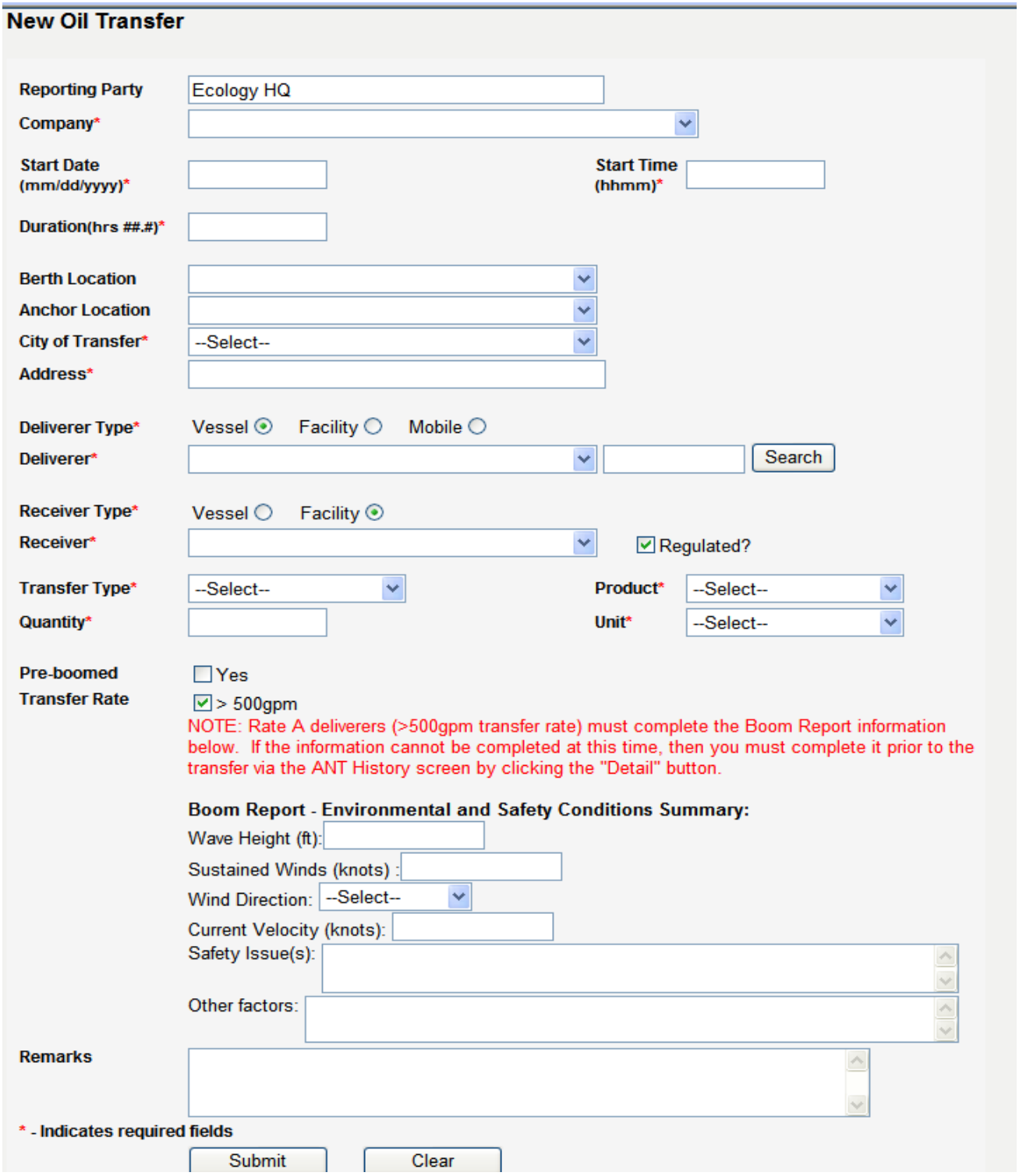
*Pre-boomed? Yes: ☐ No ☐

Comments:

Ecology is an equal opportunity employer. To receive this form in an alternate format, please contact the Spills Prevention Program at (360) 407-7390 (voice) or 711 and 1-800-833-6388 (TTY)

ECY 070-175 (11/06)

ANT Entry Form Website: https://secureaccess.wa.gov/ecy/ants



New Oil Transfer

Reporting Party: Ecology HQ

Company*:

Start Date (mm/dd/yyyy)*: Start Time (hhmm)*:

Duration(hrs ##.#)*:

Berth Location:

Anchor Location:

City of Transfer*: --Select--

Address*:

Deliverer Type*: Vessel ◉ Facility ○ Mobile ○

Deliverer*: Search

Receiver Type*: Vessel ○ Facility ◉

Receiver*: ☑ Regulated?

Transfer Type*: --Select-- Product*: --Select--

Quantity*: Unit*: --Select--

Pre-boomed: ☐ Yes

Transfer Rate: ☑ > 500gpm

NOTE: Rate A deliverers (>500gpm transfer rate) must complete the Boom Report information below. If the information cannot be completed at this time, then you must complete it prior to the transfer via the ANT History screen by clicking the "Detail" button.

Boom Report - Environmental and Safety Conditions Summary:

Wave Height (ft):

Sustained Winds (knots) :

Wind Direction: --Select--

Current Velocity (knots):

Safety Issue(s):

Other factors:

Remarks

* - Indicates required fields

Submit Clear

QUICK REFERENCE GUIDE REGARDING BUNKERING VESSELS DURING CARGO OPERATIONS

1. Vessels contract for bunkers
   - Oil Companies notify barge operators
   - Agents coordinate delivery notifications with barge operators and terminals
   - Bunker Barge arrival time and duration of pumping is established

2. Vessel Arrives for Cargo Operations
   - Agent coordinates bunker barge arrival
   - Terminal plans operations
   - Cargo Plan, Cargo Flow Sheet (CFS) or Crane Letter of Operations (CLO) is prepared
   - Outlines what cargo is to be moved in what sequence
   - Terminal will plan around bunker operations if possible
   - Terminal gives CFS/CLO to Agent to pass to Chief Engineer and tankerman

3. Bunker Barge Arrives for Bunker Operations
   - Optimal placement of the barge to minimize ZOC exposure
   - Vessel ensures “Bunker Operation Sign” is posted at the shore side gangway.
   - Vessel and bunker barge surrounded by containment boom when safe and effective to do so, or deliverer submits Boom reporting Form to WA Department of Ecology and puts alternative measures in place to mitigate impacts of any spill that may occur.
   - DOI is signed by receiving vessel “PIC” and tankerman
   - Tankerman/Chief Mate/Chief Engineer should have a copy of Cargo Flow Sheet or Crane letter (CFS/CLO)
   - Tankerman should understand what cargo adjacent to the barge is to be handled and when
   - Tankerman shall have contact with the vessel superintendent at all times

4. Vessel cargo operations commence
   - Lashers/longshoremen sent aboard to free cargo
   - Crane lowered over hold/hatch to be worked
   - Work commences in accordance with CFS/CLO
   - Lashers/longshorement sent aboard to secure cargo

5. Bunker operations could start before, during or after cargo operations
   - Tankerman, Chief Mate & vessel superintendent must understand where the stevedore operator is relative to the Cargo Flow Sheet or Crane letter and the bunkering process

Lower Columbia Region Harbor Safety Committee

Dam Lockage Guidelines

A. Dam Lockage Guidelines

1. Purpose/ Scope

To provide uniform guidelines to be followed by all personnel operating vessels and/or tows through locks, as per 33 CFR, section 207.718, on the Columbia and Snake Rivers. The term “Vessel" used in this chapter includes all connected units, tugs, barges, tows, boats or other floating objects.

2. General Information

a. The vessel operator shall conduct a pre-locking meeting (Work Safety Assessment) with all required personnel. This shall include, but not be limited to, the following:

   1) Use of proper Personal Protective Equipment.
   2) Position of deck crew while maneuvering and mooring.
   3) Monitoring mooring bit ties.
   4) Monitoring tow position in lock between yellow lines.
   5) Risk assessment and mitigation of all known or potential hazards.
   6) Any special locking instructions provided by the lock operator.
   7) Communication requirements.
   8) Number and location of lines and tie off bits to be used.

b. The vessel operator shall ensure mooring bit ties are properly monitored to assure the vessel remains in a safe position. During the entire lockage, the vessel operator shall constantly attend the wheelhouse, be aware of the vessel’s position, and monitor radio channel 14 on frequency 156.700 MHz, or otherwise be constantly able to communicate with the Lock Master. At a minimum, vessels shall be as vigilantly manned as if underway.

c. Lockage shall not be construed as being routine. Lockage has inherent risks and hazards including changes in the force of water movement impacting the tow throughout the lockage.

d. Vessel operator shall request notification from the Lock Master of all gate openings before they are actually opened.

e. When approaching a lock the vessel operator shall ensure that all radars are either in the off or stand by position, as early as safe navigation permits, but always before entering the lock.

B. Procedures

1. Arrival

a. The vessel operator shall contact the Dam by radio a minimum of 30 minutes out and pass vessel dimensions and whether there is hazardous cargo to Lock Master. When a tug draws more water than the barges in tow both drafts are to be passed.

b. The vessel operator shall ask the Lock Master if a normal lockage is expected or are there any changes to the locking process currently in place.

c. The vessel operator shall enter the lock on green light and with a verbal OK to enter from the Lock Master. A red signal light shall indicate it is not safe to proceed.

d. The vessel operator shall ensure that a qualified crew member, wearing appropriate personal protective equipment, is positioned on the tow early enough to provide the vessel operator with accurate and timely safe guidance information during the approach to the lock.

e. A qualified crew member on the bow shall visually inspect the lock chamber to ensure that the gates are fully opened, no drift is present in the chamber and no overhead hazards exist that shall interfere shall the lockage.

f. The vessel operator shall maneuver into the lock while being assisted by both visual signals and radio communications from the qualified crew member.

2. Lockage

a. The vessel operator shall ensure the vessel and/or tow is secured, between the yellow lines, in a manner permitting minimal lateral and minimal fore and aft movement. A minimum of two lines shall be used for tows of empty barges and four lines shall be used for any tow with at least one load in it.

b. The vessel and/or tow shall be tied to at least two (where practicable) floating mooring bits with ropes or lines adequate to ensure that there is no fore or aft movement of the vessel and that lateral movement is minimized. Redundancy can further reduce risk; where practicable, four mooring lines can provide greater security than two lines. Besides mooring procedures, mooring lines that are in good serviceable condition are essential in preventing movement of vessel and/or tow in the lock.

c. After the vessel and/or tow is secured in locks, a qualified crew member shall visually inspect the yellow line and the stern of the boat and notify the vessel operator of the distance between the stern and the yellow line. The vessel operator shall add the distance between the stern of the vessel and the yellow line into the tow's length to ensure the overall length does not exceed 650'. The vessel operator shall then report to the Lock Master that the tow is in position between the yellow lines and is secured.

d. When Lock Master arrives at the head of the vessel and/or tow, the vessel operator shall ask for verification that the bow of the vessel and/or tow is at or behind the yellow line. (The Lock Master may observe the position of the vessel by using remote control video cameras and may not actually walk on the lock wall.)

e. The vessel operator shall maintain continual monitoring of mooring lines and vessel movement during the entire lockage.

3. Departure

a. Prior to departure a qualified crew member shall pass the completed lock slip to the Lock Master, if requested.

b. The vessel operator shall not leave the locks until a green light is visible and a horn signal or verbal OK has been received from the Lock Master.

c. The vessel operator shall develop as much understanding as is reasonable and prudent regarding traffic in the departure area prior to moving out of the lock. The vessel operator shall always exercise due caution to avoid the development of an unsafe situation.

d. Deck personnel shall release lines and provide guidance for lock clearance and traffic avoidance for the vessel operator, both by visual signal and radio communication, until the vessel and/or tow is safely clear of the lock and all traffic or other hazards to safe navigation.

Lower Columbia Region Harbor Safety Committee

Incident Management Guidelines for Initial Actions and Communications

Table of Contents

A. Incident Management Guidelines

1. Purpose

The Lower Columbia Region Incident Management Guidelines are intended to describe the expected initial actions and communications for commercial vessels and agencies involved in a marine incident. The Harbor Safety Committee is committed to ensuring vessels safely transit the waters of the Lower Columbia Region while also keeping these waters from environmental damage caused by vessel casualties.

The Harbor Safety Plan is not intended to supplant or otherwise conflict with federal, state or local regulations developed under legal authorities. Nor is the HSP intended to replace the good judgment of a vessel's master in the safe operation of his/her vessel or a pilot while piloting a vessel.

The Lower Columbia Region Incident Management Guidelines:

- Were cooperatively drafted by regulators and industry representatives and provide information unique to the river system.
- Are to be implemented in accordance with all International, Federal, State and Local regulations, and the normal practices of good seamanship.
- Constitute the Minimum Standards of Care to be used in all referenced operations on the Columbia River System.

2. Authorities

Incident reporting is subject to U.S. Coast Guard regulations, Title 46 Code of Federal Regulations (CFR) Part 4, Washington State Administrative Code regulations, and Oregon Administrative Rules addressing incident notifications. Vessels should carefully review the guidance in this chapter of the Harbor Safety Plan (HSP) for incident management.

3. Definitions

- **Marine Casualty** is an event caused by or involving a vessel and includes, but is not limited to: grounding, collision, or strike of (allison with) a bridge; loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel; an occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including but not limited to fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, auxiliary power-generating equipment, or bilge-pumping systems; loss of life; an injury that requires professional medical treatment (treatment beyond first aid); or an occurrence involving significant harm to the environment as defined in 46 CFR 4.03-65.
- **Near- Miss Situation** is an incident in which a pilot, master, or other person in charge of navigating a vessel, successfully takes action of a non-routine nature to avoid: a collision with another vessel, structure or aid to navigation; the grounding of a vessel; or damage to the environment.

- **Unified Command** is an organizational structure formed to coordinate the strategy for a unified response to a discharge or substantial threat of discharge of oil or a release or substantial threat of a release of a hazardous substance.

4. References

- 33 CFR 153 Notice of Discharge and Removal of Discharged Oil
- 33 CFR 155 Oil or Hazardous Material Pollution Prevention Regulations for Vessels
- 40 CFR 300.210 Federal Contingency Plans
- 40 CFR 300.211 OPA Facility and Vessel Response Plans
- 40 CFR 300.300 Discovery or Notification
- 40 CFR 355 Emergency Planning and Notification
- 40 CFR 370 Hazardous Chemical Reporting: Community Right-to-Know
- 46 CFR 4 Marine Casualties and Investigations
- 46 USC 6301 Investigation of Marine Casualties
- Chapter 173-182 Washington Administrative Code (WAC) Oil Spill Contingency Plan
- Chapter 340-142 Oregon Administrative Rules (OAR) Oil and Hazardous Materials Emergency Response Requirements
- Chapter 856-010 Oregon Administrative Rules (OAR) Oregon Board of Maritime Pilots
- Northwest Area Contingency Plan (NWACP)

5. Reporting Requirements

For oil or hazardous material spills, reports must be made to the required federal and state agencies and as required in the vessel or facility response plan, if applicable. Part B of this guidance contains contact information for the USCG, Washington State and Oregon State.

As soon as is practicable, a vessel shall notify the USCG of any of the following:

1. Marine casualty as defined in 46 CFR 4.05-1*;*
2. Pollution reporting requirements in 33 CFR 151.15;
3. Defect or discrepancy in an aid to navigation;
4. Hazardous condition as defined in 33 CFR 160.204;
5. Improper operation of vessel equipment required by 33 CFR;
6. Situation involving hazardous materials as required by 49 CFR 176.48; or
7. Hazardous vessel operating condition as defined in 33 CFR 160.215.

A casualty on a vessel must be reported if it occurs upon the navigable waters of the U.S. (46 CFR 4.05); and involves one of the following:

1. An unintended grounding, or an unintended strike of (allision with) a bridge;
2. An intended grounding, or an intended strike of a bridge, that creates a hazard to navigation, the environment, or the safety of a vessel;
3. A loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel;
4. An occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including but not limited to fire, flooding, or failure of or damage to fixed fire-extinguishing systems, life-saving equipment, auxiliary power-generating equipment, or bilge-pumping systems;
5. A loss of life; or
6. An injury that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties.

Whenever a marine casualty meets one or more of the criteria above, it must be reported to the Coast Guard on a "Report Of Marine Accident, Injury Or Death" (CG-2692) Form.

It is encouraged that vessel operators submit an Incident Report for incidents, near-miss events, or unsafe situations that don't meet one of these reporting criteria, but you feel would be useful to the Coast Guard efforts in promoting marine safety.

B. Emergency Communications

1. Overview

This information is designed to assist foreign and domestic commercial vessels in easily communicating with appropriate agencies regarding various emergencies or unusual situations while operating in the Lower Columbia Region. This document is not intended to suggest a departure from existing procedures set forth by the International Maritime Organization and Federal Communications Commission for the handling of Distress or Urgency communications. Nor is this to be considered a departure or substitution from taking action in accordance with the vessel’s required response plans. The Lower Columbia Region is served by the Captain of the Port (COTP) command center.

For incidents other than spills to water, the COTP will notify Washington and Oregon State agencies of any potential spill situations as described in existing law and implementing protocols. In such circumstances, a decision will be made whether there is a need or advantage to stand up a Unified Command to address concerns associated with the situation. A determination will be made if a Unified Command is required based on the circumstances of each situation, jurisdictional responsibilities, and guidance found in the Northwest Area Contingency Plan.

2. Spills, Marine Casualties, and Other Reportable Events

These include collisions, anchor dragging, grounding, oil spills and hazardous material releases of any amount, equipment casualties, loss of propulsion (including even brief losses) and any other situation which results in the loss of vessel control or possible loss of control but does not immediately put lives at risk. Drifting for repairs is not permitted within the COTP zone. Vessels are expected to have fully functioning propulsion and steering while underway or at anchor or a standby/escort tug(s) will be required.

3. Contact Information

AGENCY	PURPOSE	COMMUNICATIONS
National Response Center	**Oil & Hazardous Material Spills**	(800) 424-8802 or VHF channel 16
Washington State (Emergency Management Division)	**Oil & Hazardous Material Spills**	(800) 258-5990
Oregon State (Oregon Emergency Response System)	**Oil & Hazardous Material Spills**	(800) 452-0311
USCG	**Search and Rescue**	VHF channel 16
USCG COTP	**Vessel Casualties, Equipment Failures**	(503) 240-9311 or VHF channel 16
Local Emergency Response	**Bridge Allisions**	911

VHF Channels

- Channel 13 -- Bridge to Bridge. For passing and safety communications between vessels.
- Channel 16 – International Distress and Calling. For Distress, Urgency and Safety traffic and general calling.
- Channel 18 – Marine Exchange channel. Use for communications with Merchants Exchange and Maritime Fire and Safety Association (MFSA).

Additional Helpful Telephone Numbers

- USCG COTP Command Center (503) 240-9311
- USCG Group Astoria Operations Center (503) 861-6140
- Merchants Exchange (503) 228-4361
- Maritime Fire and Safety Association (503) 220-2055
- Oregon Department of Transportation (503) 362-0457

- Washington Department of Transportation (360) 905-2135
- Oregon Board of Maritime Pilots (503) 673-1530

C. Oil or Hazardous Material Spill

1. Overview

Oil or hazardous material spills, as well as threats of spills, are regulated under the National Contingency Plan (NCP) and state laws. The response to a spill incident on the lower Columbia River will be "ramped up" to provide adequate equipment and trained personnel to effectively respond to the highest quantity of product that will most likely be released. Under the federal plan, response to spills or potential spills (like groundings) that affect state, tribal, or local waters are coordinated between agencies. Because of the nature of the Columbia River, spills can quickly impact both Washington and Oregon state waters. The USCG fills the role of Federal On Scene Coordinator for oil and hazardous materials spills on the navigable waterways in the Lower Columbia Region. Washington Department of Ecology (DOE) and Oregon Department of Environmental Quality (DEQ) act as the State On Scene Coordinator(s) for spills and impacts to state waters. Together with the responsible party (the spiller), these agencies make up the Unified Command (UC). The UC coordinates responses, mitigation, and cleanup efforts for spills in the Lower Columbia Region to protect public health and safety, response personnel, and the environment.

The USCG, Washington State, and Oregon State have legal requirements for vessel response plans, including notification requirements if there is a spill or a potential spill. Any vessel over 400 gross tons must have a vessel response plan for oil and hazardous material spills that is approved by the USCG. Any non-tank vessel over 300 gross tons operating in Oregon and Washington waters must have a vessel response plan for oil spills that is approved by DEQ and DOE. For tank vessels of any size operating in Oregon and Washington waters, the vessel must have a vessel response plan that is approved by DEQ and DOE. These state requirements may be met by enrolling in the umbrella plan covering the Lower Columbia and Willamette Rivers or filing a plan submitted by the vessel owner or operator with the states. The umbrella plan for the Lower Columbia Region is managed by the Maritime Fire and Safety Association (MFSA).

2. Actions for an Oil or Hazardous Material Spill

1) **Stop the flow of product** by quickly closing valves and secure systems.
2) **Warn personnel of hazards** and enforce safety and security measures.
3) **Shut off the ignition sources** by stopping motors, electrical circuits, and restricting open flames.
4) **Contain/control the spill** by deploying boom or sorbent on the deck and in the water.
5) **Make notifications** to appropriate agencies/groups using your Vessel or Facility Response Plan.

Do not use cleaning or dispersing agents on the spilled oil. The use of these products is strictly controlled by federal and state laws and regulations and will result in fines or penalties.

3. Oil/ Hazardous Material Spill Reporting

This is not an all-inclusive list; operators must follow their vessel response plan as per applicable laws and regulations. If at a facility, the facility response plan requirements must be followed. The following notifications to agencies are required for spills on the Columbia River:

- National Response Center 800-424-8802
- Washington State Emergency Management Division 800-258-5990
- Oregon Emergency Response System 800-452-0311

The Maritime Fire and Safety Association (MFSA) can be reached at (503) 220-2055 if the vessel is covered by the umbrella plan.

D. Vessel Grounding

1. Overview

The unplanned grounding of a vessel is a threat to the environment, the vessel itself, and to safe navigation of the waterway. Any grounding that causes vessel structural damage should be treated as a potential spill until the situation is evaluated by the vessel operator/owner and federal and state agencies. Utmost caution should be taken to prevent further damage to the vessel or pollution of the environment.

2. Actions for a Vessel Grounding

After addressing the immediate safety concerns associated with any vessel grounding (except for a planned grounding that does not create a hazardous situation) the vessel Master and/or Pilot must ensure the COTP is contacted immediately via VHF-FM CH 16 or at (503) 240-9311. The COTP will initially treat the situation as a distress situation and the first priority is to mitigate or respond to any threat to human life. Then the COTP may establish a communications schedule and request the vessel to periodically update its situation. If the waterway is blocked or needs to be closed, a Safety Marine Information Broadcast will be sent.

The master, or pilot, will be asked to provide the following information:

a) Vessel Name
b) Vessel Intentions
c) Position/Heading/Situation/Relative position
d) Vessel Type/Cargo/Ballast
e) Type of grounding (stable, unstable)
f) Type of bottom (sand, rock, mud)
g) Drafts (Forward, amidship, and aft on both sides, before and after grounding)

h) Vessel damage, if any
i) Pollution (cargo/bunkers)
j) Injuries/missing personnel
k) Tank soundings - Ensure ALL tanks/voids are sounded and when completed those results are passed to the COTP immediately.
l) Traffic Management Problems
m) On-scene weather conditions

The vessel must secure all necessary watertight closures to maximize watertight integrity and subdivision.

Coast Guard response personnel and state investigators may respond to the scene for initial assessment and on scene communications and supervision. The vessel may be directed to safe anchorage or mooring if it touched bottom but is still underway or easily refloated. The COTP will work with the vessel and Unified Command to initiate pollution response as necessary.

If the vessel is aground on a soft bottom, time is critical, and it has been determined there is no appreciable damage or additional risk of flooding, the Master/Pilot may immediately attempt to refloat the vessel following consultation with the Coast Guard. The vessel's Master and/or Pilot must be satisfied that any immediate attempt to refloat the vessel would minimize or not cause any further damage. If the vessel is holed (flooding/leaking) the Coast Guard will typically make an on scene assessment before permitting an attempt to refloat and/or move the vessel.

If the vessel's hull is firmly fixed to the bottom such that the vessel cannot immediately refloat under its own power or without causing a risk to its structural integrity or the environment, the vessel will be directed to develop, and submit a salvage plan to the COTP or Unified Command for approval prior to attempting to refloat.

This plan should be developed as required in the vessel response plan and in conjunction with their Qualified Individual (QI), owners, and classification society. The plan should address all stability and hull strength concerns. (Note: Owners and operators of oil tankers and offshore barges must have prearranged, prompt access to computerized shore based damage stability and residual structural strength calculation programs as per 33 CFR 155.240.)

The vessel may be instructed to keep propulsion on standby and the bridge manned in case the vessel floats free. Tugs may be required. The vessel will be required to activate the vessel response plan to minimize any pollution threat or have a pollution response contractor on standby if the vessel does not have a vessel response plan. Keep in mind the need for standing by, emergency search and rescue, a medical evacuation, weather conditions, weather forecast, and any lightering plans.

The type of bottom (mud, sand, gravel, rock) and the speed of the vessel (underway, maneuvering with tugs, dragged anchor in high winds) will most often determine the severity of the incident and the level of precautions to be taken until the vessel refloats. In most cases, a class society and/or marine surveyor will be required either on scene or to inspect damage and verify repairs.

E. Vessel Collision

1. Actions for a Vessel Collision

After a collision the COTP must be immediately contacted via VHF-FM CH 16 or at (503) 240-9311. A collision should be considered an extremely urgent situation until deemed otherwise. The first action is to minimize the risk to the safety of life. The COTP may establish a communications schedule and request the vessel(s) to give periodic updates to the situation. If the waterway is blocked or needs to be closed, a Safety Marine Information Broadcast will be issued.

The master, or pilot, will be asked to provide the following information:

a) Vessel(s) name(s)
b) Vessel Intentions
c) Position/Heading/Situation/Relative position
d) Vessel Type(s)/Cargo/Ballast
e) Vessel Damage
f) Pollution (cargo/bunkers)
g) Injuries/missing personnel
h) Tanks soundings - Ensure ALL tanks and voids are sounded, and communicate the results to the COTP immediately.
i) Traffic management problem
j) On-scene weather conditions

The vessel must secure all necessary watertight closures to maximize watertight integrity and subdivision.

Coast Guard response personnel and state investigators may respond to the scene for initial assessment and on scene communications and supervision and may form a Unified Command. If the vessels are joined, they may be directed not to separate until all necessary response and towing vessels are on scene and a determination of the vessels stability has been made and concurred on by the COTP or Unified Command, and the master. The vessel will be asked to rig towing lines to the waterline, set out embarkation ladder, prep life saving gear, and have fire/towing & salvage plans ready. If vessel(s) are not joined, are stable, and have propulsion, they may be moved to a safe anchorage with an escort.

Notifications will be made to federal, state and local authorities. If cargo is potentially flammable or toxic the COTP will advise all responders of fire/explosion danger, and the vessel(s) should not engage equipment. Efforts should be made to assess wind

direction, approach up wind, and notify downwind fire boards. The COTP will work with the vessel and Unified Command to initiate pollution response as necessary.

In most cases, a class society surveyor will be required either on scene or to inspect damage and verify repairs. Keep in mind the need for tugs standing by, emergency search and rescue, medical evacuation, and current or future weather conditions.

F. Bridge Allison

1. Actions for a Bridge Allision

Response to a bridge allision is similar in nature to a vessel collision. After an allision with a bridge the COTP must be immediately contacted via VHF-FM CH 16 or at (503) 240-9311 and 911 called to notify emergency services and the Department of Transportation of the incident. A bridge allision should be considered an extremely urgent situation until deemed otherwise. The first action is to minimize the risk to the safety of life. The COTP may establish a communications schedule and request the vessel to give periodic updates to the situation. If the waterway is blocked or needs to be closed, a Safety Marine Information Broadcast will be issued. The difference between a vessel collision and a bridge allision pertains to notifying the port authority and local bridge administration, which may result in closing the bridge or waterway.

The master, or pilot, will be asked to provide the following information:

a) Vessel Name
b) The name/location of the bridge involved in the allsion.
c) Vessel Intentions
d) Position/Heading/Situation/Relative position
e) Vessel Type/Cargo/Ballast
f) Type of allision (hard contact, glancing blow, high or low speed)
g) Vessel damage, if any
h) Known injuries to people on or near bridge, and damage to bridge
i) Pollution (cargo/bunkers)
j) Injured or missing shipboard personnel
k) Tank soundings - Ensure ALL tanks and voids are sounded, and communicate results to the COTP immediately.
l) Traffic Management Problems
m) On-scene weather conditions

G. Loss of Propulsion

1. Overview

Loss of propulsion means a reduction or loss of propulsion power from the failure of a critical propulsion system. Any reduction or loss of propulsion power must be reported because the vessel cannot maneuver as described on the maneuvering information fact sheet and cannot establish propulsion ranging from full ahead to full astern movements.

A significant percentage of propulsion failures occur on vessels with direct drive diesel propulsion plants. These problems typically occur when a vessel is reducing speed or changing direction, where a stop or backing bell is ordered. 33 CFR 164.25(a)(5) requires testing of the vessel's propulsion in the ahead and astern mode 12 hours prior to port entry. Programming engine slow down to properly reduce from sea speed to maneuvering speed for temperature management should be handled to enable conducting the propulsion tests. Failure of the air start system upon first use at port entry has been shown typically to be due to problems that can be minimized by increased vigilance in checking or testing of the air system.

In addition to air start system failures, fuel switching is another cause of failure. Vessels utilizing two fuel types can minimize risk by conducting a positive risk assessment prior to initiating the change. Prior to switching fuels, the master should positively evaluate the situation, taking into account these and other factors:

- Traffic conflicts and general congestion.
- Weather/sea/current conditions.
- Vessel's current operating condition.
- Local tug availability.
- Proximity to navigationally challenging portions of the transit.

2. Actions for a Loss of Propulsion

When a vessel experiences a loss of propulsion during River or Bar transit, contact the COTP immediately or as soon as practical following the casualty via VHF CH 16 or at (503) 240-9311.

The master and/or pilot must:

1) Anchor or obtain tugs immediately.
2) Immediately inform the COTP via VHF CH 16 or (503) 240-9311 and establish a communications schedule.
3) Place the emergency generator on line.
4) Identify the source of the problem, conduct and test repairs.
5) If at sea:
   a) Track the vessel's position in relation to land, determine and monitor the drift rate.
   b) Set the anchor detail.

The following information will be needed as soon as possible:

a) Vessel Name
b) Position/Heading/Situation/Relative position
c) Vessel type & Cargo/Ballast
d) Is the vessel blocking the channel?
e) Any details on casualty/Estimated Time of Repair (ETR) if possible
f) Vessel propulsion system (steam, diesel, etc.)

g) Draft of vessel
h) Traffic Management Problems
i) On-scene weather conditions
j) Any Assistance Required
k) Vessel's Intentions

The U.S. Coast Guard may:

1. Require immediate tug assistance.
2. Assist in locating nearest tug capabilities.
3. Issue Captain of the Port orders as appropriate to ensure required responses are undertaken.
4. Issue a Safety Marine Information Broadcast.
5. Hire tug(s) directly if COTP order to obtain tug assistance is not complied with in a timely manner.
6. Require classification society inspection, technical representative oversight, and Coast Guard inspection and/or approval of repairs
7. Apply some or all of the above for partial propulsion or steering losses.

The vessel may be directed to the nearest safe anchorage if conditions permit. The vessel will remain at the safe anchorage until the COTP is satisfied with the condition of the vessel. If the vessel has a total loss of propulsion and is unable to make it to the nearest safe anchorage it should anchor in the channel. The Coast Guard will issue a Safety Marine Information Broadcast if the waterway is blocked or needs to be closed. Immediate action should be pursued to unblock the waterway. Anchoring in the channel will be coordinated with the pilot.

The vessel may be directed to obtain immediate tug assistance. The current tides and weather will be a factor in the situation. A USCG representative may be sent to the vessel due to the fact that this is a reportable marine casualty. In most cases, the vessel will receive a COTP order not to proceed from safe anchorage until a full report from the vessel's classification society is received and accepted by the COTP. This report usually must identify the apparent cause of the problem and the actions taken to correct the problem.

H. Loss of Steering

1. Actions for a Loss of Steering

When a vessel experiences a loss of steering during River or Bar transit, contact the COTP immediately via VHF-FM CH 16 or at (503) 240-9311 or as soon as practical following the casualty. The COTP may establish a communications schedule and request the vessel to periodically update situation.

The master or pilot will be asked to provide the following information:

a) Vessel Name
b) Vessel Type & Cargo/Ballast

c) Is the vessel blocking the channel
d) Twin or Single Screw
e) Position/Heading/Situation/Relative position
f) Extent of Casualty (total loss, primary only) & estimated time for repairs
g) Draft of vessel
h) Traffic Management Problems
i) On-scene weather conditions
j) Any Assistance Required
k) Vessel's Intentions

The COTP will determine whether there has been a related casualty (grounding, collision, and allision). The vessel should be directed to the nearest safe anchorage as determined by the pilot and/or the COTP (if conditions permit). The vessel will remain at the safe anchorage until the COTP is satisfied with the condition of the vessel. If the vessel has a total loss of steering and is unable to make it to anchorage it should try to anchor in the channel, using its anchor(s) and engine(s) to maintain its position. A Safety Marine Information Broadcast may be issued.

Consider the need for tugs standing by, changing weather conditions, and the effect of tide shift. Ships and tows with loss of power pose a significant risk to the area, and should not transit without tug assist and special precautions. If the vessel is or may block the waterway, a Safety Marine Information Broadcast will be sent to inform mariners. Immediate action should be pursued to unblock the waterway.

I. Loss of Navigation Equipment

1. Actions for a Loss of Navigation Equipment

In the event a vessel experiences a loss of navigation equipment, the master, pilot, agent or representative of the vessel must contact the COTP immediately. During working hours contact the Port State Control Branch at (503) 240-9339 and after hours contact the Duty Officer at (503) 240-9311.

Vessels required to carry an Automatic Identification System (AIS) under federal or international regulations must have a properly installed, operational, type approved AIS. The AIS Pilot Plug, on each vessel over 1,600 gross tons, on international voyage, shall be available for pilot use, easily accessible from the primary conning position of the vessel, and near 120 volt, AC power, 3-prong receptacle. If either the AIS or the pilot plug are inoperable, the master, pilot, agent or representative of the vessel should notify the USCG COTP and the Columbia Bar Pilots and/or the Columbia River Pilots.

Depending on the situation, certain restrictions may or may not be imposed on the vessel. If it is deemed safe, the vessel may be allowed to transit into the port on the condition that repairs are completed before departure. If the loss of operation occurs during outbound transit, the vessel may be directed to anchor and make repairs.

Depending on the equipment, and the next port of call, arrangements may be made to allow the vessel to depart and conduct repairs at the next port.

J. Equipment Failures

1. Overview

A vessel's Master shall immediately notify the COTP of any mechanical or operational deficiency that would reduce the vessel's capabilities.

2. Actions for Equipment Failures

The vessel's master, or pilot, shall *immediately* relay the following information:

a) Nature of the defect, deficiency, damage, failure or breakdown of the vessel's, machinery or navigational/radio equipment.
b) Type of vessel, cargo and fuel capacity.
c) Location and proximity to land or other navigational hazards.

Upon initial assessment, the vessel's master or pilot may be asked the following additional information:

- On-scene weather, visibility, tide, current, wind and sea state.
- Traffic density.
- Maneuverability of the vessel.
- Proposal to mitigate the deficiency.

3. Safety Measures for Types of Equipment Failures

The following decision table serves as a guideline to vessel Masters to make timely and effective decisions to ensure an equivalent level of safety during a mechanical or operational deficiency.

Defects/ Deficiencies	**Additional Safety Measure**
Propulsion loss/ reduced capabilities while underway	• Immediately obtain the services of a tug of adequate size and horsepower or anchor • Inform the COTP at the onset of the incident and whenever situational changes warrant • Make both anchors ready for letting go • Prepare to anchor at the closest anchorage upon direction of the COTP • Correct deficiency before departing
Loss or reduction of steering capabilities or ship service generator	• Immediately obtain the services of a tug of adequate size and horsepower • Inform the COTP at the onset of the incident and whenever situational changes warrant • Make both anchors ready for letting go • Prepare to anchor at closest anchorage or moor at nearest

Defects/ Deficiencies	**Additional Safety Measure**
	harbor of safe refuge upon direction of the COTP • Correct deficiency before departing
Loss of all radars	• Transit only in daylight and good visibility • Inform the COTP at the onset of the incident and whenever situational changes warrant • Correct deficiency before departing
Gyro failure	• Transit only in good visibility • Inform the COTP at the onset of the incident and whenever situational changes warrant • Correct deficiency before departing
Automatic Radar Plotting Aid (ARPA) failure	• Inform the COTP at the onset of the incident and whenever situational changes warrant • Correct deficiency before departing
Missing navigation chart(s)	• Contact agent to supply chart(s) at entrance to Columbia River or appropriate pilot station.
Propulsion/ electrical power reduction or main engine maintenance while at anchorage	• Obtain the services of a tug of adequate size and horsepower, and the permission of the COTP prior to taking the plant off line. • Inform the COTP at the onset of the incident and whenever situational changes warrant

Lower Columbia Region Harbor Safety Committee

Columbia River Lightering Guidelines

A. Columbia River Lightering Operations

1. The waters of the Columbia River are environmentally sensitive and a valuable economic and environmental resource. Lightering operations, while considered routine in many parts of the country, do in fact pose significant risks beyond those normally expected of standard ship to shore cargo transfer operations.

2. These guidelines represent the cooperative efforts of the U.S. Coast Guard, Washington State, Oregon State, and industry leaders to develop the best way to mitigate risks to the environment during lightering operations within the Lower Columbia Region.

3. These guidelines are Standards of Care (SOC) for lightering and topping-off (reverse lightering) operations in the Lower Columbia River region of the USCG Sector Portland Captain of the Port (COTP) zone. As such, it is expected that industry members follow them, educate and enforce them among industry groups, and make recommendations to the U.S. Coast Guard and Lower Columbia Region Harbor Safety Committee as changes are needed. In order to best mitigate risks, non-emergency requests for lightering operations that do not meet these standards must be made well in advance, and include a description of how the operation can be conducted with an equivalent level of safety. Full compliance with these standards of care will be considered a mitigating factor in the event of a spill or marine casualty.

4. Federal and state representatives may conduct announced and unannounced monitoring of lightering operations. Companies should expect to be monitored the first time they lighter in the Columbia River. The frequency of monitoring will be determined by the level of risk, familiarity with company operations, procedures and track records. Lightering operations may be stopped or prohibited due to safety concerns or unacceptable risks.

5. USCG Sector Portland, the Harbor Safety Committee, and other affected stakeholders will periodically review the safety record of lightering operations to determine if changes are needed to promote safer operations.

B. Definitions

In addition to the terms defined in applicable federal regulations, the following definitions apply:

- ***Lightering*** is the transfer of cargo in bulk from one vessel to another vessel while at anchor.
- ***Service Vessel*** is the vessel receiving the cargo in a lightering operation or delivering the cargo in a topping-off (reverse lightering) operation.
- ***Ship to be lightered (STBL)*** is the vessel delivering the cargo in a lightering operation or receiving the cargo in a topping-off (reverse lightering) operation.

C. Applicable Regulations

Lightering operations must be conducted in strict accordance with the letter and intent of all regulations. In particular, lightering operations fall under the following regulations:

- 33 CFR 151 (MARPOL implementation)
- 33 CFR 153 Notice of Discharge and Removal of Discharged Oil
- 33 CFR155 Oil or Hazardous Material Pollution Prevention Regulations for Vessels
- 33 CFR 156 Oil and Hazardous Material Transfer Operations
- 46 CFR 30-40 Tank Vessels
- WAC 173-184 Vessel Oil Transfer Advance Notice and Containment Requirements

In addition to the above regulations, vessels engaged in lightering operations must adhere to the vessel's Oil Transfer Procedures and should consult the Oil Companies International Marine Forum Guidelines (OCIMF) Ship to Ship Transfer Guide.

D. Standards of Care

1. **Location:** Lightering operations, for vessels at anchor, may be conducted in any anchorage pre-approved for lightering operations by USCG Sector Portland. These anchorages are described in the separate Columbia River Anchorage Guidelines. Lightering operations in anchorages not pre-approved for lightering, or involving an emergency with the vessel being lightered, may be approved by USCG Sector Portland on a case-by-case basis.

2. **Lightering Plans:** Companies will submit a lightering plan to Coast Guard Sector Portland at least four days prior to the proposed date of lightering or when the vessel's Notice of Arrival is required. It is understood that it is the nature of marine industry to have unforeseen schedule changes. However, all possible effort must be made to submit a lightering plan in time for this office to review it, and arrange for lightering monitors. Individual requests for a shorter time period may be considered on a case-by-case basis, but will generally not be granted for other than safety reasons.

Companies can either develop a general fleet lightering plan for each type of operation (ship to ship, ship to barge, barge to barge) or can submit individual plans prior to each event, covering the details of that specific operation. Fleet lightering plans will be approved and maintained on file at the Sector Portland for review when an "Advance Notice of Lightering" is received. All lightering plans should also be available for inspection when the Coast Guard or State monitors a lightering operation, or upon request. Once a company has a fleet plan approved, they only have to submit the Advance Notice Form. Both types of lightering plans should include the following elements:

a. Exact/anticipated location(s) of lightering operations. Locations used beyond the scope of a fleet plan should be added to the Advance Notice Form, when necessary.
b. Names, official numbers, lengths, and other pertinent data for all vessels and barges, including details of any State approved contingency plans.
c. Date of transfer, and estimated start and stop times. Note if the operation will be restricted to daylight hours. For fleet plans, this information is included in the Advance Notice form.
d. The maximum limiting weather and sea conditions, if different than the SOC limits.
e. Total cargo capacity of the barge(s) and the STBL, and volumes of transfers (for fleet plans this is included on Advance Notice form.
f. Planned spill response equipment to be either on scene, pre-staged, or on standby, as per the SOC.
g. General description of written transfer procedures, as required by 33 CFR 155. This should include maximum flow rate, means of communication, overfill protection devices, and topping off procedures.
h. Proper shipping name, type, and characteristics of product.
i. Mooring and fendering configuration between participating vessels.
j. Location and disposition of standby tugs during lightering operation.
k. The final destination of the product.
l. If vapor balancing will be conducted (if yes, must comply with all applicable regulations).
m. General narrative of how the company intends to implement the SOC.

3. **USCG Notification:** The agent, owner, or operator of the STBL will ensure that USCG Sector Portland receives the lightering plan in writing at least four days prior to the proposed date of lightering or when the vessel's Notice of Arrival is required. In accordance with 33 CFR 156.118 or 33 CFR 156.215 as may be applicable, a finalized date and time notification will be submitted within 24 hours of the lightering operations. A lightering notification form is enclosed with these guidelines.

The vessel being lightered (STBL) **shall** advise USCG Sector Portland and Columbia River Pilots dispatch when lightering has actually begun, and when the last consecutive operation has concluded, or if lightering is secured for any emergency reason. These notifications can be accomplished by phone to USCG Sector Portland at 503/240-9301, or by VHF Channel 16, using the call sign COAST GUARD SECTOR PORTLAND, then shifting to the frequency specified. The Coast Guard may initiate a Broadcast Notice to Mariners, advising nearby traffic of the operation, and to proceed with due caution in the immediate area. The Columbia River Pilots are reached through their Portland dispatch office at (503) 289-9922 or e-mail to dispatchers@colrip.com.

4. **Wind:** Expected weather conditions during the expected duration of the operation must be reviewed by the personnel conducting the pre-transfer conference, and agreement made on measures to be taken if unfavorable weather (wind, lightning) is expected. Vessels will not come alongside in preparation for lightering if sustained winds are at or exceed 30 knots. If lightering operations have already begun when sustained winds reach 30 knots, vessel masters and Persons-in-Charge of lightering operations will take any additional prudent measures necessary to reduce risk and prepare for worsening weather. If sustained winds reach 40 knots (as determined by the STBL) lightering operations will cease, and hoses drained. The Persons-in-Charge and vessel masters will then determine if, given the high winds, the transfer hoses can be safely disconnected.

5. **Current:** If river stages are forecast to exceed long-term mean flows for intended lightering anchorages, or currents are expected to exceed 3 knots, vessel masters and the Persons-in-Charge shall exercise prudence and due care in determining the proper ground tackle and mooring line arrangement to handle the anticipated conditions. If river stages are forecast to reach or exceed “BANKFULL” stages, or the current in the anchorage is 5 knots or more, the Service Vessel should not come alongside. If, during the lightering operation the above-described river conditions occur, the transfer will cease and hoses drained. The vessel masters and Persons-in-Charge will then exercise prudence in determining if the transfer hoses can be safely disconnected.

6. **Personnel:** A separate Person-in-Charge will be assigned for each vessel involved in the lightering. The appropriate work-hour regulations of 46 CFR will be adhered to. Additional personnel, such as pollution control representatives and safety advisors may be assigned but in no way relieve the vessel masters or Persons-in-Charge of their responsibilities and authority as described in the applicable regulations of 33 and 46 CFR.

7. **Mooring equipment:** All parties will use fenders and mooring lines of sufficient size and type in accordance with industry practice and/or the Oil Companies International Marine Forum Guidelines (OCIMF).

8. **Tug availability:** During lightering operations at anchorage, a tug of sufficient horsepower to control the Service Vessel involved in the operation shall be available to render assistance in less than 30 minutes. For barge-to-barge lightering, either a suitable tug for each barge, or one tug capable of maneuvering both barges must be immediately available at the lightering location. For deep-draft vessels, whenever conditions prevent the arriving STBL from using a stern anchor or making fast at the stern to an anchor buoy, an assist tug should remain on station, immediately available at the lightering location. The designated tug and company shall be listed in the 24 hour advance notice.

9. **Response equipment**: Both the STBL and the Service Vessel must make appropriate arrangements for Average Most Probable Discharge (AMPD) response resources prior to commencing the transfer. The name and contact number of the AMPD response provider will be provided in the 24 hour advance notice.

10. **Washington State Requirements**: Vessels conducting lightering in Washington State waters must comply with the transfer and pre-booming requirements of WAC 173-184. This includes submitting an Advance Notice of Transfer at least 24 hours before lightering to the Washington State Department of Ecology. The notice can be submitted online at https://secureaccess.wa.gov/ecy/ants, via e-mail to OilTransferNotifications@ecy.wa.gov or via fax to (800) 664-9184.

11. **Number of vessels involved**: Lightering operations will normally involve not more than one ship to be lightered and one Service Vessel. In some cases, a "bridge" barge may be utilized and this procedure should be addressed in the lightering plan. Bunkering will not take place simultaneously with lightering.

12. **Flow rate, topping off and gauging procedures:** Conducted in accordance with the individual vessel's oil transfer procedures and OCIMF standards.

13. **Bridge watch**: A qualified deck officer of the vessel being lightered, fluent in English, shall maintain a bridge radio watch on VHF Channels 13 and 16 during lightering. The watch officer is expected to keep a close watch on the lightering operation and be alert for any approaching commercial traffic capable of posing a hazard to the operation. For vessels at anchor, if the watch determines that the anchors are dragging, the masters and persons-in-charge will be immediately notified. In the case of attending and/or assist tugs, a licensed officer, capable of taking any necessary action, will remain on the bridge and maintain a radio watch on CH 16 and the lightering operation working frequency.

14. **Air Quality Standards:** Lightering operations on the Columbia River are subject to air pollution regulations in both Oregon (Oregon Administrative Rules 340-232-0110) and Washington (SWCAA 491-040). Vessels lightering while made fast to a marine facility may not lighter gasoline or gasoline-like products unless a vapor recovery system is used. Lightering of gasoline and gasoline-like products at a facility or at anchor on **Clean Air Action Days** is prohibited unless vapor recovery systems are used. Clean Air Action Days are announced by the air pollution control agencies in both states when conditions are especially likely to lead to unhealthy ozone concentrations. Under ongoing adverse air quality conditions, lightering without vapor recovery may be prohibited altogether for up to two days. On third and subsequent days, lightering would only be allowed between the hours of 2 PM and 2 AM. To determine if a Clean Air Action Day has been or will be called, contact the Oregon Air Quality boards at (503) 225-5555, ext.8054, (503) 229-5359 and the Washington SWCAA at (360) 574-3058.

15. **Alternative Lightering Plans:** Requests to conduct lightering operations which vary from these standards must be made well in advance to USCG Sector Portland. The alternative plan must include a description of how the operation will be conducted with an **equivalent or greater level of safety** to this standard of care.

ADVANCE NOTICE OF LIGHTERING OPERATIONS

This form, or the equivalent information, must be sent to USCG Sector Portland via fax at **(503) 240-9302** or emailed to D13-PF-SectorPortland-SCCInbox@uscg.mil a minimum of 24 hours prior to commencing transfer operations. Start/stop times are assumed to be accurate to within 1 hour. Changes should be made by either a revised fax/email or by telephone to the Coast Guard Operations Center at **(503) 240-9301**. USCG Sector Portland will accept one notification for both the service vessel and STBL. It is the company's responsibility to ensure anchorage reservations are made separately through the Columbia River Pilots dispatch at **(503) 289-9922**.

Location of Operation: _____ Date of Operation: _____

Time Alongside: _____ Estimated Separation Time: _____

_____

Estimated Start Time: _____ Estimated Stop Time: _____

Ship to be Lightered (STBL): _____ Official No: _____ Flag: _____

Total Cargo Capacity of STBL: _____

Service Vessel: _____ Official No: _____ Flag: _____

Total Cargo Capacity of Service Vessel: _____

Product to be Transferred: _____ Amount (bbls): _____

Product to be Transferred: _____ Amount (bbls): _____

Person-in-Charge, STBL: _____ Telephone: _____

Person-in-Charge, Service Vessel: _____ Telephone: _____

OSRO, STBL: _____ Telephone: _____

OSRO, Service Vessel: _____ Telephone: _____

Standby Tug Name/Company: _____ Telephone: _____

STBL Company Point of Contact: _____ 24 Hour Telephone: _____

I certify that this lightering operation will be conducted in accordance with the Columbia River Harbor Safety Plan Lightering Standards of Care and my company's lightering plan, particularly with regard to the limiting weather and river condition parameters.

Signature: _____ Company: _____

Date/Time Submitted: _____

This form is (check one): ☐ ORIGINAL ☐ UPDATE to form dated: _____

Lower Columbia Region Harbor Safety Committee

Navigation Practices

A. Purpose

To describe customary navigation practices on the Columbia River in order to reduce the increasing number of close quarter situations within the channel the Corps of Engineers is federally authorized to maintain.

B. Definitions

The federally maintained channel is depicted on the NOAA charts by dashed black lines. The U.S. Army Corps of Engineers is authorized to maintain a 600-foot wide channel in the Lower Columbia River designed for deep draft ship traffic by dredging restrictive shoaling to provide an authorized depth of 43 feet below CRD or MLLW. On the Mouth of the Columbia River (MCR) the U.S. Army Corps of Engineers is authorized to maintain a channel 2,640-foot wide to depths of 55 and 48 feet below MLLW.

The natural navigable channel is the width of the river where there is sufficient water for navigation outside the federally maintained channel. For most shallow draft vessels this may be the 18 or 30 foot contours on the NOAA charts.

C. Problem

As navigation with electronic charts becomes more commonplace, there has been an increasing trend by shallow draft vessels navigating within the confines of the federally maintained channel. Whether for ease of navigation, or the mistaken belief that navigating outside the dashed lines on the chart borders on negligence, this trend causes more close quarter situations with deep draft ships and is a hazard to safe navigation.

D. Procedure

Shallow draft vessels not requiring the additional dredged depth are reminded that navigation outside the federally maintained channel where there is sufficient water depth is a customary practice on the Columbia River and is often the most prudent one when navigating near deep draft vessels that require the dredged channel depth.

In some cases, a tug and barge or ship in ballast may leave the federally maintained channel to allow more room when meeting a deeply loaded ship.

Lower Columbia Region Harbor Safety Committee

Harbor Safety Plan Enforcement

A. Harbor Safety Plan Enforcement

1. Purpose/ Scope

Standards and protocols included in the Lower Columbia Region Harbor Safety Plan address operational and environmental issues unique to the Columbia River. The Harbor Safety Plan is not intended to supplant or otherwise conflict with federal, state or local regulations developed under legal authorities or replace the good judgment of a ship's master in the safe operation of his/her vessel. The Harbor Safety Plan is intended to complement existing regulations by advising the mariner of unique conditions and requirements that may be encountered in the Columbia River and adjacent navigable waters and the standards and protocols developed by local experts for ensuring greater safety in light of those conditions and requirements.

2. Authorities

The U.S. Coast Guard (USCG) is responsible for the regulation of vessel movements and inspections through the authority vested with the Captain of the Port. The USCG also establishes requirements for vessel operation and other related port safety controls.

Washington State and Oregon State are responsible for protecting state lands and water through the authority granted by state law. State regulations include, but are not limited to, requirements for: inspections of facilities and vessels operating in or affecting state waters; contingency and response plans to improve safety and reduce the risk of incidents; spill notifications to the state; and water quality standards.

In the event of a regulatory violation, the appropriate state or federal agency must be notified. Federal and state agencies have the power to impose criminal and civil penalties for violations.

B. Enforcement Procedures

Upon notification or determination of a failure to follow the guidelines as described in the Harbor Safety Plan, the Lower Columbia Region Harbor Safety Committee (HSC) may request the USCG or other appropriate agency take action to correct the problem.

The HSC may also request federal and state agencies forward to the committee any comments or suggestions from harbor users concerning their experiences with existing safety and enforcement mechanisms.

Lower Columbia Region Harbor Safety Committee

REQUIRED CHARTS AND PUBLICATIONS GUIDELINES

Table of Contents

A. Introduction

These guidelines provide information on charts and publications required for commercial vessels operating in the Lower Columbia region.

No person may operate or cause the operation of a vessel unless the vessel has the required marine charts and publications of the area prior to entering U.S. waters or departing a U.S. port.

Commercial vessel requirements are contained in 33 CFR 164 and all vessels should have appropriate charts and publications for the areas they are operating in. The information for the charts and publications should be currently corrected for the areas to be transited.

"Currently corrected" means the charts are corrected with changes contained in all Notices to Mariners published by the National Imagery and Mapping Agency, or equivalent foreign government publication.

The Required Charts and Publications list and guidelines:

- Were cooperatively drafted by regulators, pilots, and industry representatives and provide information unique to the river.
- Are to be implemented in accordance with all International, Federal, State and Local regulations, and the normal practices of good seamanship.

B. Chart Requirements

Marine charts of the areas to be transited should be published by NOAA's National Ocean Service (NOS) and satisfy the requirements below. Acceptable alternatives to NOAA charts are addressed in Section G of this document.

- Charts must be of a large enough scale and have enough detail to make safe navigation of the areas possible.
- Charts must be corrected through the most recent Notice to Mariners or an approved publication as described in Section G.

C. Guidelines for Vessels Missing Charts

The vessel master must report directly or through their agent to the Captain of the Port (COTP) if the vessel is missing any of the required or current navigational charts. The master will be required to obtain the proper charts prior to entering U.S. waters. Note that some foreign flagged vessels may report they are missing U.S. charts; however, if they have the appropriate updated foreign charts for their transit those charts will be accepted instead (refer to Section G of the guidelines). Vessel masters or agents may contact the COTP to verify if the charts the vessel has on board are sufficient for their transit.

Required charts must be acquired before entering the Columbia River. The vessel may be required by the COTP to have the appropriate charts delivered via helicopter or another vessel prior to entering the Columbia River, or be escorted in. Faxed charts are not an acceptable alternative for missing charts.

In all cases, the vessel shall have the charts in sufficient time to support appropriate voyage planning. Vessel masters shall not rely on last minute chart deliveries and the services of the pilot to make their transit. The bridge team shall remain fully engaged in voyage planning and execution of the voyage plan along with the services of the pilot, whose input, based on local knowledge, may require the voyage plan formulated by the vessels bridge team to be adjusted during various stages of the transit while in pilotage waters.

D. Local Notice to Mariners (LNM)

The Thirteenth Coast Guard District publishes a weekly LNM. Use this LNM or US Notice to Mariners to keep your charts and publications current. The LNM covers aids to navigation, charts, channel depths, marine construction, military operations, bridge repair/construction, significant marine events and other information of interest to mariners. Mariners are urged to take advantage of automatic chart distribution as a quick and easy way to ensure the most up to date charts are on board.

The information from the Local Notice to Mariners (LNM) and the yearly Special Local Notice to Mariners (SLNM) can be found at: HTTP://WWW.NAVCEN.USCG.GOV/. The LNM and SLNM are produced only in an electronic format and no longer mailed.

The web address for the US Notice to Mariners and corrections by chart number is: HTTP://WWW.NAUTICALCHARTS.NOAA.GOV/MCD/UPDATES/LNM_NM.HTML.

E. Required Charts for Areas to be Transited

General Charts	Admiralty Chart Number	U. S. Chart Number	U.S. ENC Chart Number *
Columbia River			
Pacific Ocean To Harrington Point	n/a	18521	US50R11M
Harrington Point To Crims Island	n/a	18523	US50R12M
Crims Island To Saint Helens	n/a	18524	US50R13M
St. Helens To Vancouver	n/a	18525	US50R14M
Vancouver To Bonneville	n/a	18531	US50R19M
Entrance to Lord Island	2839	n/a	n/a
Lord Island to Vancouver &	2849	n/a	n/a

Portland			
Willamette River			
Port of Portland	n/a	18526	US50R15M
Swan Island Basin	n/a	18527	US50R16M
Portland To Walnut Eddy	n/a	18528	US50R17M

* NOAA Electronic Navigational Chart (ENC) numbers are listed for vessels navigating using Electronic Chart Display and Information Systems (ECDIS) that comply with International Maritime Organization (IMO) requirements for SOLAS class vessels.

F. Required Publications

Commercial vessels must have corrected versions of the following publications available for the area to be transited:

- U.S. Coast Pilot.
- Coast Guard Light List.
- Tide tables published by private entities using data provided by the National Ocean Service.
- Tidal current tables published by private entities using data provided by the National Ocean Service, or river current publication issued by the U.S. Army Corps of Engineers or a river authority.
- U.S. Coast Guard International – Inland Navigation Rules.

G. Alternative Charts and Publications

If a ship uses foreign charts and publications such as Canadian or British Admiralty (BA), then these need to meet 33 CFR 164.33(b) requirements. This states that alternative charts or publications may be substituted for a U.S. chart or publication if:

- The chart is of large enough scale and has enough detail to make safe navigation of the area possible, and must be currently corrected.
- The publication, or applicable extract, must singly or in combination contain similar information to the U.S. Government publication to make safe navigation of the area possible.
- The publication or applicable extract must be currently corrected, with the exceptions of tide and tidal current tables, which must be the current editions.

Lower Columbia Region Harbor Safety Committee

Restricted Visibility Guidelines

A. General

Conditions of restricted visibility require mariners observe extra caution as set forth in Rule 19 of the applicable International or Inland Rules of the Road. Under certain circumstances, vessels may transit the Columbia and Willamette Rivers safely in reduced visibility provided a positive evaluation is made by the Master and Pilot (if employed). This risk analysis should include, but is not limited to, the maneuvering characteristics of the vessel, quality of the vessel's radar picture and navigational system, the vessel's size and draft in relation to the area to be transited, quality of the vessel's bridge team, vessel traffic and congestion in the area, anticipated visibility along the route, and special circumstances to be encountered.

B. Local Conditions

The Columbia River deep water navigation channel stretches from the mouth of the Columbia River to the Vancouver/Portland harbor, a distance of approximately 115 miles. Weather along the route consists of a series of microclimates. For example, about 40 miles from the mouth of the river is the area known as Skamokawa. This name derives from a Native American term meaning "smoke on the water". There may be fog in the Skamokawa area but not elsewhere on the route.

In the spring and fall with clear skies and calm winds, radiation fog can generate in the evening in the low lands along the river and become dense along portions of the river. This fog will usually dissipate with a light breeze or as daytime temperatures rise. In the summer, sea fog (advection fog) can generate offshore and gradually move inland with westerly winds to cover the Columbia River Bar and inland.

C. Standards

1. When coastal fog restricts visibility on the Columbia River bar and its approaches, the vessel's Master and Pilot (if employed) should assess all variables and determine whether it is safe for a vessel to enter the river. In some cases, it may be safer to wait offshore until visibility improves.

2. In situations of restricted visibility, a vessel that is underway may proceed along its intended passage with caution.

3. Vessels intending to dock in restricted visibility should be able to visually see the intended wharf for the entire length of the vessel. However, the Master and Pilot (if employed) may assess all variables and determine that the best course of action is to proceed to the dock.

4. Vessels at dock or anchored in a safe anchorage should not commence movement if visibility is less than 0.5 miles unless the Master and Pilot (if employed) assess all variables and determine that the vessel can proceed safely.

D. Critical Maneuvering Areas (CMA)

There are areas to the Columbia-Willamette Rivers where additional standards of care are required due to the restrictive nature of the channel, proximity of hazards, or the prevalence of adverse currents. Vessels of 1,600 gross tons or more, tugs with barges 1,600 gross tons or more, or vessels with hazardous cargo should not transit CMAs when visibility is less than 0.5 miles.

Locations on the Columbia-Willamette Rivers identified as Critical Maneuvering Areas are:

- Vancouver Railroad Bridge Main Channel.
- Vancouver Railroad Bridge North Portland Harbor.
- I-5 Interstate Bridge.
- Lady Island Towers.
- Vicinity of Washougal dolphin.
- Garrison Rapids.
- Portland Bridges between the Broadway and Hawthorne Bridges.

E. Special Notes

- Small vessels (under 20 meters in length) take on an increased risk in restricted visibility due to difficulty in detecting these vessels with radar. Smaller vessels should use radar reflectors to increase the possibility of being detected by other vessels.
- Vessels without radar should not attempt to get underway in areas of restricted visibility.

Nothing in these guidelines shall be construed to require a vessel's Master to commence a transit in reduced visibility. The Master/Pilot's judgment and years of experience are the cornerstones of safe navigation.

Lower Columbia Region Harbor Safety Committee

Severe Weather and Natural Disaster Guidelines

Table of Contents

A. Severe Weather and Natural Disaster Guidelines

1. Purpose

These guidelines provide preparation and prevention standards to be considered in the event of severe weather or natural disaster events in the Lower Columbia Region. They consolidate best practices and provide general guidelines to mitigate risks. However, they do not replace actions and good judgment to be taken by the prudent mariner during specific situations.

2. Definition of Severe Weather

Severe weather is any weather or natural activity that could negatively impact operations. Examples include: high winds, storms, extreme heat, flooding, extreme high and low water levels, or natural disasters such as tsunamis, volcanic eruptions or earthquakes.

Determining if there are severe weather concerns should be based on the operations and capabilities of each vessel or facility and the observed or predicted conditions.

3. Monitoring Weather Conditions

The National Weather Service (NWS) provides weather updates, forecasts and advisories. This information is available at WWW.WEATHER.GOV. Weather forecasts are broadcast on VHF Channel 2W (Frequency 162.40 MHz) for Astoria and VHF Channel 1W (Frequency 162.55 MHz) for Portland.

Severe weather advisories are divided into different categories and provide a general guide of the anticipated severity of an event. The USCG will announce this information on VHF Channel 16 and then broadcast updates on Channel 22A. The USCG may also provide information through the Local Notice to Mariners.

In general, the different categories mean:

Alert =	Event is possible
Watch =	Increased threat
Warning =	Threat imminent or is occurring

4. Lower Columbia Region Considerations

Due to the nature of the river system, localized areas may be impacted to various degrees by the different types of severe weather and each should be considered separately along with any operational demands.

Specific anchorages may have weather condition limits where additional tugs would be required.

B. Vessels in Severe Weather

In all cases, the vessel master and pilot should evaluate the current and forecasted weather and the impact on vessel movement, and if necessary, delay movement, call for additional tugs, or take other appropriate measures to ensure safe operations.

Masters and pilots should consult the Coast Pilot and other sources of local knowledge when transiting high risk areas, and be prepared for strong tides, currents, and weather conditions.

Severe weather may cause a temporary closure of the Columbia River bar. The USCG Captain of the Port (COTP) may restrict passage or close the bar based on weather conditions under 33 CFR 165.1325. Weather conditions may also result in restrictions on commercial vessel passage by pilots.

C. Tugs and Tows in Severe Weather

Tug masters must be especially aware of severe weather risks. The areas to be transited, observed and forecasted weather, and tidal/current conditions should be considered when deciding tow configurations, cargo, and size and type of barges to be used. Tugs and tows should be particularly aware of bar conditions and high wind conditions throughout the river.

During periods of severe weather, tug masters should consider:

- Closing all watertight openings on the tug and tow.
- Reducing speed when necessary.
- Posting a lookout to monitor the tow in addition to the forward lookout.
- Checking gear, including bridle, pendant, chafe gear, drum and brake to ensure compliance with 33 CFR 164.74.

D. Facility and Cargo Operations in Severe Weather

Each facility has its own unique operating concerns which are affected by the complexity of the operation and weather conditions. Facilities should consider incorporating severe weather contingencies in their operations manual. As appropriate to the facility, the severe weather plan should address the following:

- Standards and responsibilities for monitoring weather and taking appropriate actions, including after hours, and reporting as appropriate to the Coast Guard.
- Monitoring mooring arrangements.
- Shore crane securing and tie-down requirements.
- Appropriate locations and heights of cargo based on the predicted event.
- Relocating or securing hazardous materials.
- Securing general operating equipment.
- Minimum number, size, and positioning of lines for expected weather conditions.
- Standards for making rounds of the facility, and ensuring the satisfactory material condition of mooring facilities, cleats, bollards, piers, etc.
- Plans and criteria for moving vessels to alternate locations if needed.
- Any unique aspects of the terminal or pier that could affect safe mooring.
- Maximum number of barges/vessels permitted to raft together for expected weather conditions.
- Standards for securing rafted vessels to each other and to the pier.
- Adequate staffing to conduct operations in severe weather conditions.

Port, pier, terminal and dock authorities, operators, and owners are encouraged to conduct annual reviews of internal severe weather procedures specific to cargo operations at their facilities. Procedures should be updated and distributed to key personnel to ensure the safety of employees, cargo, equipment, the public and the environment during periods of severe weather.

E. Recreational Vessels in Severe Weather

Recreational owners and operators should be proactive and consider:

- Monitoring USCG advisories (including small boat advisories, bar restrictions) on VHF Channel 16 and 22A.
- Be aware that commercial traffic monitors VHF Channel 13.
- Evaluating the voyage plan based on current and predicted weather conditions.
- Determining if PFDs should be worn and that an adequate supply is available.
- Ensuring that all prudent actions have been taken to minimize water entry into the vessel.
- Checking the condition of anchor and mooring lines, pendants, fendering, and chafing gear.
- Moving vessel to safe area or remove from water before severe weather.
- Be cautious when using heaters during cold weather events.
- Keeping a safe distance from dam spillways during high flows, especially in the spring and winter.

F. Bridges in Severe Weather

Use the Coast Pilot and Notice to Mariners to determine if severe weather could affect bridge operations and impact your voyage plan. There are several bridges over the major waterways in the Lower Columbia Region and their operations could be curtailed due to severe weather. General bridge operations are outlined in the Coast Pilot and emergent issues will be addressed either through the Local Notice to Mariners or Broadcast Notice to Mariners.

G. Dredging Operations in Severe Weather

Companies should develop written guidance for operations supervisors to take into account current and forecasted weather. The guidance should clearly identify weather conditions that would halt operations or require moving to a safe anchorage or mooring. Operations supervisors should be especially aware of how their operations impact navigable waterways and should consider the following issues:

- Modifying/securing operations under certain weather conditions.
- Identifying a safe anchorage/moorage for each job.
- Proactively consider the activity’s impact on safe navigation in all weather conditions.

H. Oil Transfers during Severe Weather

Vessels should follow the Lightering Guidelines, Anchorage Guidelines, and Bunkering Guidelines in this Harbor Safety Plan. Facilities should follow the severe weather procedures in their facility operations manual. For facilities and vessels transferring to or from a vessel of 250 bbls capacity or more, regulations are located in 33 CFR 156.

For oil transfers in Washington waters, Washington State oil transfer rules are located in Washington Administrative Code (WAC) 173-180 and WAC 173-184. Oil deliverers are required under state regulations to include weather criteria in making determinations for safe and effective transfer operations and pre-booming. WAC 317-40 addresses requirements for bunkering operations of vessels 300 gross tons or more. Companies are strongly urged to incorporate weather criteria into their oil transfer procedures.

I. Potential Captain of the Port (COTP) Actions

If individuals or vessels are not taking actions to mitigate the risks posed by severe weather, the COTP is authorized under various federal laws to take or direct certain actions, including:

- Direct bunkering and lightering operations to cease.
- Direct hazardous materials and explosives loading to cease.
- Direct changes in mooring configuration or location for vessels at terminals.
- Direct vessel movements to seek shelter, alter or hold position to protect the port, environment, and mariners.
- Require stand-by tugs or tugs in attendance.

J. Reporting Problems to the Coast Guard

Everyone should take ownership in making the waterways safe during severe weather. Mariners should report any actual or potential problems on or near the water to the Coast Guard at (503) 861-6211 or via VHF on channel 16.

The Coast Guard may issue directions to responsible parties to compel action or may take action to mitigate unsafe situations.

Lower Columbia Region Harbor Safety Committee

Small Vessels and Make Way Rule Guidelines

Table of Contents

A. Overview

1. Purpose

Recreational vessels and commercial vessels, including tankers, freight ships, containerships, and tugs with barges in tow share the waters of the Lower Columbia Region. This guideline provides information for small recreational vessels and explains the "Make Way Rule" (also known as Rule 9) for vessel operations in the Lower Columbia Region.

2. Small Vessel Risks

Recreational boaters and commercial fishermen transit the navigational shipping lanes and approaches to port facilities and marine terminals. Small vessels transiting in the vicinity of the Lower Columbia Region are subjected to numerous risks including: wakes, narrow transit areas, severe weather, and limited visibility from larger ships.

Small vessel operators should be aware that large commercial deep draft vessels cannot immediately stop or alter course due to large amounts of inertia and draft constraints. The inability of deep draft vessels to stop or alter course presents a high risk to a small vessel if the operator is unaware of the contents of the COLREGS 72 (Rules of the Road) Rule 9: Narrow Channels.

Small vessel operators must be aware of and comply with their obligations under COLREGS 72 (Rules of the Road), specifically Rule 9, Narrow Channels.

Large vessels constrained by their draft may transit on the edge of or outside the navigation lanes and if smaller vessels are anchored too close to the navigational lanes they may be in harm's way. Small vessel operators that anchor, fish or troll near navigation lanes are advised to remain aware of their proximity to the shipping lanes and to other vessels using such lanes and take necessary actions and precautions.

Small vessel operators should be aware of the factors that could make it difficult to see them. Small vessels such as kayaks, personal watercraft, and vessels with a low profile may be difficult to spot if there is a rising sun or setting sun. Once a small vessel is close to the bow or side of the larger vessel it may no longer be visible to the wheelhouse or the lookout on the larger vessel which creates a serious hazard to safe operations. Containers or other cargo carried on deck of container ships can potentially cause blind spots that extend ahead of the vessel.

On a sunny weekend or during fishing seasons, large numbers of small boats may be out. The crowded conditions create the potential for serious marine accidents. Memorial Day, Labor Day and the Rose Parade are times of extreme congestion by small vessels.

B. Make Way Rule (Rule 9)

(a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway positioned on her starboard side as is safe and practicable.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.

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

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e)

(i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(i). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(ii) and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d).

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

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

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

C. Boater Education Requirements and Opportunities

There are several groups that provide education to small vessel operators. Examples of subjects that are covered by these courses are: Boating Safety, Sailing Skills& Seamanship, Weekend Navigator, How to Read a Nautical Chart, Personal Watercraft Course, and others. These courses can be found locally. The table below lists groups that offer classes and their websites where you can find more information.

Organization	Education Topics	Website
US Coast Guard Auxiliary	Boating Safety, Rules of the Road, Basic Rescue	www.cgaux.org
U.S. Power Squadrons	Boating Safety, Rules of the Road, Basic Rescue	www.usps.org
Washington State Parks	Mandatory Boat Operator Course	www.parks.wa.gov/boating/boatered/
Oregon State Marine Board	Mandatory Boat Operator Course	www.boatoregon.com/osmb/

The U.S. Coast Guard operates a Boating Safety Hotline, (800) 368-5647, that dispenses information and references for local classes.

In Washington State, operators of motorboats with 15 horsepower or greater are required by law to take a boater safety education course. Boaters can take an education course in a classroom, online or at home. The Washington Boating Handbook is available at www.boat-ed.com/wa/handbook/pdf_index

In Oregon State, operators of motorboats with more than 10 horsepower are required to carry a Boater Education Card. Boaters can take an education course in a classroom or online or complete an equivalency exam. Additional information is available at www.boatoregon.com/osmb/boated/

An education card from Oregon or Washington is accepted by the other state as meeting the boater education requirements.

D. Reporting Accidents

Federal and state law require boating accidents be reported. Reports are confidential and used by the state and USCG for statistical reports as allowed by state law.

Washington State law requires the operator of a recreational vessel involved in an accident in Washington waters to file a Washington Boat Accident Report when:

- Loss of life occurs
- Injury occurs which requires medical treatment beyond first aid
- A person disappears from a vessel under circumstances that indicate death or injury
- Property damage is in excess of $2,000, or there is complete loss of a vessel

This report is available at www.parks.wa.gov/boating/accidents/.

In Washington State, if there is an injury, disappearance or death, a report must be submitted within 48 hours. Reports on other accidents must be submitted within 10 days. If the operator cannot submit the report, the owner of the vessel is responsible. Reports must be submitted to the city or county law enforcement agency that has authority where the accident occurred. If you are not sure which agency has authority, contact the Washington State Boating Programs by calling (360) 902-8555 or by e-mail at boatlaw@parks.wa.gov. Information is also available at www.parks.wa.gov/boating/accidents/. Failure of an operator to submit a report can result in a fine.

Oregon requires the operator of every vessel involved in an accident resulting in injury or death of any person, *or* total property damage in excess of $2,000 to file a written report. Reports must be submitted within 48 hours in case of death or injury, 10 days in accidents involving only property damage. Forms are available at www.boatoregon.com/osmb/safety/docs/boatingacc.pdf

Recreational Boaters - Please

Make Way

- Large vessels must navigate within the channel.
- By law, small vessels must give ships and barges room to safely pass. Maximum fine: $5,000.
- Keep a good lookout at all times. If you have to move, take your anchor with you. They can foul propellers.
- Tow operators may have difficulty seeing over some barges. Keep well clear.
- Five or more short blasts on the large vessel's horn is the **danger signal**. Boats in the way must move clear immediately.
- Avoid joining hog lines that protrude out into the channel.
- Large vessels need room to maneuver. Keep well clear when they are turning.
- Contact large vessels on marine VHF radio channels 13 and 16.

For Your Safety...

This publication brought to you by the Oregon State Marine Board, US Coast Guard and the Columbia River Towboat Association

Emergencies

VHF-FM Radio: Channel 16

VHF radios are an important safety tool for recreational boaters. Here are basic rules on their use. If in distress (threatened by grave and imminent danger):

1) Make sure the radio is on.
2) Select Channel 16.
3) Press/hold the transmit button
4) Speak slowly, and clearly, and say: MAYDAY, MAYDAY, MAYDAY
5) Give the following information:
- Vessel name and/or description
- Position and/or location
- Nature of emergency
- Number of people aboard

6) Release the transmit button
7) Wait for 10 seconds. If no response, repeat "MAYDAY" call.

Cell Phone: 9-1-1

Cell phones are less dependable than VHF radios but in the urban setting may still be useful.

1) Dial 9-1-1
2) Tell operator that you have a marine emergency. Be ready to provide the same information required in item 5 above.

Phone Numbers

Multnomah Sheriff	(503) 988-6788
Columbia Sheriff	(503) 366-4614
Clackamas Sheriff	(503) 655-8218
US Coast Guard	(503) 240-9301
Oregon State Police - Salem	(503) 861-6212
8-5 p.m.	(503) 378-3720
after hours	(503) 378-2575
Angling report & regs	(503) 872-5268

Boating Safety Tips

- Check weather, tide and river conditions. Find links at www.boatoregon.com.
- File a float plan with friends or relatives.
- Don't overload your boat.
- Wear your life jacket. Each person on board must have an appropriately sized life jacket.
- All youth 12 and younger must wear their life jacket.
- Carry a good anchor and plenty of rope. Never anchor from the stern.
- ***Boat Safe, Boat Sober***

Is your boat properly outfitted?

Motorboats 16 to less-than 26 feet shall carry the following equipment:

- **One Coast Guard approved** personal flotation device of an appropriate size readily accessible for the intended wearer - Type I, II or III wearable for each person on board and one Type IV.
- **Sound devices:** A boat less than 39 feet 4 inches (12 meters) must carry a sound signalling device such as a whistle or compressed air horn.
- **One B-I type approved fire extinguisher** when no fixed fire extinguishing system is installed in machinery space(s). (Fire extinguishers are not required on outboard motorboats less than 26 feet in length and of open construction.)
- **An approved carburetor backfire flame arrestor** for inboard motors not exposed to the atmosphere above the gunwhale.
- **An effective muffling system** for the exhaust of each internal combustion engine.
- **A ventilation system**, the particular type dependent upon when the boat was built.
- **Lights** (required only when underway or at anchor between sunset and sunrise, and during periods of restricted visibility).

To learn more about the Lower Columbia Region Harbor Safety Committee and the local Harbor Safety Plan visit www.lcrhsc.org today

Lower Columbia Region Harbor Safety Committee

Towed Barge
Standard of Care

A. Towed Barge Standard of Care

1. Purpose

The Columbia River Towed Barge Standard of Care is intended to eliminate conflicts between towing vessels conducting astern towing and deep-sea vessels on the lower Columbia River with a resulting improvement in navigation safety.

2. Background

The most predominant method of barge towing on the lower Columbia River is in the "push" or "river" mode of towing, whereby a towboat or tugboat faces up directly against the stern, or into a towing "notch" on the stern of a barge, and connecting to the barge with a system of wires or with a mechanical articulated connection system in the cases of articulated tug-barge units (ATB's). For the purposes of this standard of care, towing a barge in the alongside towing mode is considered equivalent to the push mode.

Since the earliest days of navigation on the river, it has been necessary on occasion for barges to be towed on a tow wire or hawser in the astern towing mode. This mode of towing may be required when the towing vessel or the tow is not equipped or suitable for utilizing the push mode, visibility over the tow is impaired or non-existent, or weather conditions preclude using the push mode. The last factor is particularly the case for barges being towed across the Columbia River Bar, whether entering or departing the river.

The concerns that most commonly arise with respect to towed barge operations being addressed by this SOC are:

- The ability of the towing vessel to safely control the tow under all anticipated river conditions during a transit.
- The tracking characteristics of the tow in the astern mode.
- Communications between towing vessels and deep-sea vessels on the lower Columbia River.

3. Scope

Geographic Area of Applicability

This SOC applies to all towed barge operations on the lower Columbia River between the Astoria Port Docks at approximately mile 13+00 and to the Bonneville Dam, and the Willamette River from mile 0+00 at Kelley Point to Oregon City locks. Occasionally, when rough weather or operational restraints prohibit making up astern or releasing below the Astoria Bridge this can be accomplished in the Astoria South Anchorage.

Vessels Covered by the SOC

This SOC applies to towed astern barge operations. The standard does not apply to log raft towing operations, short-duration astern towing operations as in harbor shifts or tug assist operations, or operations that take place outside of the main shipping channel.

B. General Requirements

The master and pilots of both deep-sea vessels and tugs towing barges astern should have due regard for the needs and considerations of each other's respective vessels.

The master of a tug towing astern should ensure that the tug is able to exert positive control of their towed vessel(s) at all times. Positive control means that the Master is able to maintain the tow on a stable track astern and maneuver the tow under all reasonably anticipated river conditions during a transit.

The tug master should ensure that appropriate voyage planning takes place to identify one-way traffic and holding areas which require close coordination and passing arrangements with deep-sea vessels in both meeting and overtaking situations. During the voyage planning process, the Master of the towing vessel should identify cable and pipeline crossings and ensure that in these areas the towing gear is not allowed to drag on the bottom.

The master of a tug towing astern should be familiar with the inherent towing characteristics of the towed barge or vessel. The length of the tow wire should be maintained at the minimum length necessary to maintain control and maximize the directional stability of the tow.

The deck officer on watch on a towing vessel is required to meet the Federal pilotage requirements as per 46 CFR 15.812 as may be applicable to their respective vessels.

When either the tug or the deep draft vessel recognizes that a meeting or overtaking situation is developing, they should communicate directly on the bridge-to-bridge radio and coordinate their actions in accordance with the Inland Rules of the Road to accomplish a safe passage. As a general rule, tugs with tows should give maximum channel clearance to laden deep sea vessels.

C. Tail/Tag Boat Requirements

Tail/tag boats should be used for transit both inbound and outbound when:

- The towing characteristics of the towed barge or vessel, regardless of the cargo carried, are such that it does not reasonably remain in the same trackline as the towing vessel.
- The tow is a loaded oil barge of more than 25,000 barrels capacity being towed astern. A loaded barge is defined as a barge carrying cargo of more than 25% of its cargo-carrying capacity.

A rule of thumb for the barge to be considered "under positive control" is that the barge should be able to track within one barge width either side of the tug's trackline. A barge that yaws or "runs" continuously from side to side in an unpredictable manner, or consistently in excess of one barge width either side of the tug's trackline would be considered not under positive control.

Loaded barges not carrying oil or hazardous materials being towed astern that are under positive control at all times do not require a tail/tag boat.

Towing vessel masters and/or their respective operating companies should develop procedures to be followed for determining the necessity of tail/tag boats and how the tail/tag boat is to be used during the transit.

The tag/tail boat should be of sufficient size, configuration, and horsepower to keep the towed barge behind the tugboat when full underway.

Particular care should be exercised when planning and executing tandem tow operations. Triple tows should never be considered on the Columbia River, but if emergency circumstances require it, permission from the COTP is needed.

D. Communications

Clear and timely communications between the deep-sea and towing vessel are absolutely essential to safe navigation. The primary communication method is by VHF radio on channel 13. All vessels should ensure that the automatic identification systems (AIS) on their respective vessels are updated, properly programmed and operating.

The master and pilots of both deep-sea vessels and tugs towing barges astern should respond to security calls when appropriate and encourage timely and thorough bridge-to-bridge communications to effect safe passing arrangements.

Tows intending to use an anchorage in the Lower Columbia River should refer to the Anchorage chapter for additional information and contact requirements.

1. Security Call Checkpoints

In addition to the information provided by AIS, a voluntary system of security call checkpoints is recommended to be used at all times when using the ship channel and during periods of reduced visibility. These calls are broadcast on the bridge-to-bridge radio (VHF channel 13). Both tugs with tows and pilots of deep-sea vessels are encouraged to participate in the checkpoint system. When reporting at the points listed below, the following information should be provided:

- Tug/vessel identification.
- Tug/vessel type.
- Current position or check point.
- Direction of travel.

Example- "Tug Sirius with a loaded oil barge on the wire is inbound Morgan's 40 for Willbridge"

The following list of checkpoints is recommended, but may not be inclusive of all locations or situations when the use of a security call would be appropriate.

INBOUND FOR PORTLAND		
NAME	**LOCATION**	**REASON**
Columbia River Buoy "2"	Abeam Buoy "2"	Traffic inbound/outbound Columbia River
Buoy "14"	Abeam Buoy "14"	Meeting at Tansy Point Turn and Astoria Bridge
Astoria Bridge or Tongue Point	Mile 13+30 or Mile 18	Outbound traffic from Harrington Point
Elliot Point	Mile 28	Skamokawa traffic
Three Tree	Mile 31	Skamokawa traffic
Cliffton Dikes	Mile 39	Bugby Hole traffic
Westport 66	Mile 46	Eureka Channel traffic
Beaver Dock	Mile 54	Stella Turn
Lord Island Towers	Mile 63	Longview Outbound traffic
Kalama	Mile 75	Traffic to Martin Island
Columbia City	Mile 84	Warrior Rock, Duck Club traffic
Morgan's 40	Mile 100.5	When passing or entering Willamette River

OUTBOUND FOR ASTORIA/COLUMBIA RIVER ENTRANCE		
NAME	**LOCATION**	**REASON**
Columbia Grain	Mile 01	Traffic vicinity of river mouth
Fales 17	Mile 93	Inbound traffic in Duck Club area
Martin Island	Mile 80	Kalama traffic
Cottonwood 36	Mile 70	Longview traffic
Fisher Island 5	Mile 59	Traffic inbound near Stella
Westport 68	Mile 46	Traffic inbound to Bugby Hole
Wauna	Mile 42	Traffic near Bugby Hole
Steamboat Reach	Mile 36	Skamokawa Turn traffic
Elliot Point	Mile 28	Miller Sands traffic
Astoria Bridge	Mile 14	Inbound traffic from Col Riv Bar
Buoy 14	Abeam buoy 14	Inbound traffic from Col Riv Bar

Harbor Safety Plan
Appendix 1: Glossary

Term	Definition
Bunkering	The transfer of fuel.
Bankfull Stage	A given stage determined by the U.S. Army Corps of Engineers and used to schedule releases from reservoirs. Normally, Bankfull Stage is below Flood Stage.
Captain of the Port (COTP)	The Coast Guard officer designated by the Commandant to command a Captain of the Port Zone as described in Part 3 of Title 33 Code of Federal Regulations.
Captain of the Port (COTP) Zone	A zone specified in Title 33 Code of Federal Regulations, Part 3 and, for coastal ports, the seaward extension of that zone to the outer boundary of the EEZ.
Columbia River Datum (CRD)	The plane of reference from which river stage is measured on the Columbia River from the lower Columbia River up to Bonneville Dam, and on the Willamette River up to Willamette Falls. Equals 1.82 feet above *M*ean *S*ea *L*evel (equivalent to NGVD) at Vancouver, Washington.
Lightering	The transfer of cargo in bulk from one vessel to another vessel while at anchor.
Lower Columbia Region Zone	The zone encompasses the Columbia River and its navigable tributaries from the seaward approaches to the Columbia River Entrance to Bonneville Dam.
Mean Lower Low Water (MLLW)	Tidal datum that is the average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent datum of the National Tidal Datum Epoch.
River Mile (RM)	The distance in statute miles beginning at the mouth of the Columbia River. Tables for converting statute miles to nautical miles are contained in Coast Pilot 7.
Stakeholder	Those individuals or groups who can have an affect on, or be affected by, maritime operations and other events with the coastal marine environment.
Standard of Care (SOC)	Standards of Care are the procedures and practices that experienced and prudent maritime professionals follow to ensure safe, secure, efficient and environmentally responsible maritime operations. Standards of Care are “good marine practices” that are developed and published to provide a guide for maritime professionals to consider and incorporate into their decision making process**. Standards of Care complement the laws and regulations and should they seem to conflict with law or regulation, the law or regulation always takes precedence.**
State	For purposes of this Plan, we mean the State of Washington or State of Oregon.
Under Keel Clearance (UKC)	The vertical clearance under the keel of a ship to the channel bottom.
Vessel Response Plan (VRP)	The oil spill response plan, to which the vessel is subject, as required by Federal and/or State regulations.

Harbor Safety Plan
Appendix 2: Acronyms

AC	Area Committee
ACOE	(United States) Army Corps of Engineers
AIS	Automatic Identification System
AMSC	Area Maritime Security Committee
ANT	Advance Notice of Transfer
APIS	Advance Passenger Information System
ATB	Articulated Tug Barge
ATON	Aids to Navigation
AWO	American Waterways Operators
BTM	Bridge Team Management
CDC	Certain Dangerous Cargo
CFR	Code of Federal Regulations
COLREGS	Int'l Regulations for Avoiding Collisions at Sea (Rules of the Road)
COTP	Captain of the Port
CRD	Columbia River Datum
DEQ	(Oregon State) Department of Environmental Quality
DOE	(Washington State) Department of Ecology
DWT	Deadweight Tons
ECDIS	Electronic Chart Display and Information Systems
eNOAD	Electronic Notice of Arrival/Departure System
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
GRP	Geographic Response Plan
GT	Gross Tons
HSC	Harbor Safety Committee
HSP	Harbor Safety Plan
ITU	International Telecommunication Union
IMO	International Maritime Organization
LCR	Lower Columbia Region
LCRHSC	Lower Columbia Region Harbor Safety Committee
LNM	Local Notice to Mariners
LOA	Length Over All
MARPOL	International Convention for the Prevention of Pollution From Ships
MDA	Maritime Domain Awareness
MLLW	Mean Lower Low Water
MMSI	Maritime Mobile Service Identity
NOA	Notice of Arrival (i.e., U.S. 96 hour Notice of Arrival)
NOD	Notice of Departure

NOAA	National Oceanic And Atmospheric Administration
NRC	National Response Center
NTVRP	Non Tank Vessel Response Plan
OCIMF	Oil Companies International Marine Forum Guidelines
OPA	Oil Pollution Act of 1990
OSRO	Oil Spill Removal Organization
PIC	Person in Charge
RCP	Responsible Carrier Program
RCW	Revised Code of Washington (State)
RM	River Mile
RRT	Regional Response Team
SLNM	Special Local Notice to Mariners
SOC	Standard of Care
STBL	Ship to be Lightered
SOLAS	Safety of Life at Sea
STCW	Standards for Training, Certification, and Watchkeeping for Seafarers
TSS	Traffic Separation Scheme
UKC	Under Keel Clearance
USCG	United States Coast Guard
VRP	Vessel Response Plan
WAC	(State of) Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WX	Weather