PUGET SOUND PILOTS
Protecting Puget Sound Since 1935

GENERAL GUIDELINES FOR VESSELS TRANSITING RESTRICTED WATERWAYS OR PORTS

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These Advisory Guidelines are offered by Puget Sound Pilots as a convenience to the shipping industry in predicting what is likely to be needed for vessel movements in the affected areas. Each transit is unique with regard to the type and class of vessel, the existing weather, waterway conditions, wind, moored vessels, crane position and numerous other variable conditions. These general guidelines do not represent the views or opinions of all individual pilots relative to a situation and are not intended to do so. In all cases, the authority and judgment of the individual pilot(s) dispatched to the vessel are controlling and all decisions on the matters covered by these guidelines will be made by the pilot(s) dispatched to the job.

GENERAL DEFINITIONS

1. **Tugs:** Unless a more specific requirement is expressed, any reference to "tugs" in these guidelines refers to tugs of suitable power and configuration for the transit.
2. **Minimum Requirements:** These guidelines are minimum requirements and may be modified depending upon the circumstances of any particular transit.
3. **Tug Configuration and Rating:** Specific tug references in these Guidelines refers to:
   a. Tractor Class tugs are tugs powered by two or more omni-directional propulsion units, being fitted with Voith Schneider or Azimuth Stern drive or Azimuth Tractor drive.
   b. Conventional Class tugs are tugs powered by twin screw propellers.
   c. Tug Ratings refer to the following minimum ahead bollard pull in metric tons (For tugs built prior to 1/1/2020, a tug's certified bollard pull may not be more than 5% below that required by this Guideline.)

Tractor Class

Class Rating	Metric Tons
T8	≥75
T6	≥60
T5	≥50
T4	≥40

Conventional Class

C6	≥60
C4	≥40
C2	≥20

   d. In cases where a T8 class tug is specified, two T5 tugs or one T5 and one T4 tug may be substituted for one T8 class tug. In normal circumstances the total number of tugs should not exceed four.
   e. Vessels with bollards and/or chocks rated below the tonnage of the assigned tugs may require additional tugs to enable the effective application of the tug's power.

4. **Bow Thruster:** Unless a more stringent requirement is expressed, any reference to "Bow Thrusters" in these guidelines refers to a fully documented and available bow thruster of suitable power. If the bow thruster is not fully functional, an additional tug(s) may be required.
5. **4% Bow Thruster:** As used in these guidelines, the term "4% Bow Thruster" refers to bow thruster(s) with documented and 100% available horsepower (1.34 HP/KW) greater than or equal to 4% of the vessel's certified deadweight tonnage (DWT).

MAIN ENGINE POWER & RESPONSE

1. The vessel's maneuvering revolutions and corresponding speeds should be posted and available to the pilot upon boarding. As a baseline, the RPM/Speed table should be that established by the builder of the vessel but must be updated to reflect any changes from the installation of engine power limiters or other modifications.
2. All vessels maneuvering in the Puget Sound Pilotage district should be able to promptly attain the RPMs listed for all maneuvering RPMs posted in the vessel's wheelhouse including Dead-Slow, Slow, Half and Full Ahead or Astern.
3. Any vessel unable to attain its posted RPMs in a timely manner because of engine maintenance or failure, engine power limiting devices (EPLs), or any other reason may be subject to additional transit requirements such as wind or current restrictions, additional escort/assist tugs, additional pilots or other requirements deemed necessary by Puget Sound Pilots.
4. At the time of ordering a pilot, the following questions should be answered:
    a. Is the vessel equipped with an engine or shaft power limiter?
        i. If yes, is the limiter mechanical or electronic?
    b. If so equipped, will the vessel's EPL be disabled for the pilotage transit?
    c. If not disabled, what is the time required to disable the EPL?

VESSEL SPACING

1. It is recommended that all final berthing positions provide for a minimum of 10% of the vessel's length in clearance to other vessels (including barges) or shoal areas.
2. For vessels over 900 feet in length it is recommended that all final berthing positions provide for a minimum of 100 feet clearance to other vessels (including barges) or shoal areas.

VERTICAL CLEARANCE

Vessels transiting under any fixed objects including bridges, overhead cables, or gantry cranes should maintain a minimum of 3.1 meters (10 feet) of clearance at all times. A vessel's maximum, full air-draft should be used for these calculations.

HORIZONTAL CLEARANCE

1. With the exception of the Duwamish River and Hylebos Waterway, there should be net horizontal clearance available at all times to a transiting/maneuvering vessel of at least 140 feet or the vessel's beam, whichever is greater. Net clearance means open water between vessels, gantry cranes (with the exception noted in item 2 below), bunker barges/tugs/spill booms, fishing nets, shoals or any other obstructions.
2. Vessels are not expected to transit under gantry cranes but if there is sufficient vertical clearance (3.1m or 10 feet), the space under a gantry crane may be used for the horizontal clearance calculations. A vessel's maximum, full air draft should be used when performing these calculations.
3. Vessels having a beam of 140 feet or wider should not pass a bunker barge while in operation when alongside a vessel in any of the Seattle/Tacoma waterways.
4. See Horizontal Clearance Table in the Appendices of this document for examples of horizontal clearance calculations for Seattle and Tacoma waterways.

UNDER-KEEL CLEARANCE IN ALL PORTS and WATERWAYS

1. Vessels exceeding 400 feet in length transiting restricted waterways and channels will be dispatched to maintain a minimum under-keel clearance of three (3) feet or 10% of draft, whichever is greater, during the transit, provided that vessels may have less under-keel clearance when berthing, un-berthing and alongside the dock. Vessels shall remain afloat at all times.
2. While the above guideline is general in nature, it is noted that the determination of an appropriate minimum under-keel clearance for a specific vessel transiting a specific waterway or channel must take into account many factors in addition to vessel draft and least depth, including but not limited to: vessel size, configuration, speed, trim, and list; the shape, size and hydrography of the waterway; and variations from predicted tide levels.

TANKERS UNDER ESCORT

1. As per the Puget Sound Harbor Safety Plan, a second escort tug should be dispatched to oil tankers of 40,000 to 50,000 DWT transiting in any of the following areas if the vessel is not in ballast and if the deck fitting to which the escort tug is made fast has a Safe Working Load of less than 100 metric tons:
    a. Rosario Strait between Davidson Rock and Buoy CA.
    b. Transits to or from Vendovi Island anchorages.
    c. Transits to or from Anacortes.
    d. Transits of Haro Strait-Boundary Pass.
2. A second escort tug should be dispatched to oil tankers of greater than 50,000 DWT when transiting in any of the following areas if the vessel is not in ballast and if the deck fitting to which the escort tug is made fast has a Safe Working Load of less than 200 metric tons:
    a. Rosario Strait between Davidson Rock and Buoy CA.
    b. Transits to or from Vendovi Island anchorages.
    c. Transits to or from Anacortes.
    d. Transits of Haro Strait-Boundary Pass.

VESSEL & TERMINAL GANTRY CRANE SAFETY

It is recommended that all terminal operators with gantry cranes adopt the following Best Practices:

1. When vessels are berthing or unberthing at the terminal:
    a. Prior to a vessel's arrival or departure from a berth, gantry cranes at the berth should be boomed up and positioned close together near the midships section of the vessel (avoiding the vessel's bow and stern flair).
    b. Gantry cranes should not be moved when a vessel is berthing or unberthing.
    c. It is recommended no person be allowed aloft on a gantry crane during berthing or unberthing operations.
2. When vessels using the waterway are passing a terminal:
    a. Gantry crane booms should be topped up over empty berths when a vessel is transiting/maneuvering past. If a boom cannot be topped up, advance notice should be given to PSP.

b. Gantry cranes over working berths can remain boomed down provided the net clearance conditions above are met.

INCLEMENT WEATHER and WIND

1. Decisions relating to vessel movements requiring more than 50 tons of force to hold the vessel against a wind from any direction will be made on a case-by- case basis by the pilot depending on direction and force of wind and the type and characteristic of the vessel.
2. Wind on the beam is one of the factors used in evaluating the counter force necessary for tugs and or thrusters on a particular transit. The formula below calculates the approximate static tons of beam wind exerted upon a vessel based on its sail area. Agents and operators ordering pilots are encouraged to provide the specific sail area of a vessel to the dispatcher when ordering a pilot.

$$\text{Static Metric Tons of Wind on the Beam} = \frac{(v^2/18) \text{ x Sail Area}}{1000}$$

- *Sail Area = Square meters determined by Length (m) x Height (m) (Height is freeboard plus highest container row)*
- *V = Wind velocity in meters per second. (Knots of wind ÷ 1.944)*

UNDERWAY TRANSFERS

At the Pilots Discretion**,** vessels intending to perform underway transfers of stores or other materials must meet the following conditions:

1. Underway transfers shall be performed only when there is no other practical means of performing the transfer.
2. Pilot dispatch must be informed of the desire to perform an underway transfer and the geographic location at or prior to the time of the pilot order.
3. At the pilot's and vessel master's discretion, the transfer shall take place off the arrival/departure berth, within an anchorage area or as near to the intended route as possible.
4. The ship's Master is on the bridge of the ship, and it is understood that the Master is coordinating the transfer operation.
5. The time allotted for an underway transfer should not exceed 30 minutes or six lifts.
6. Transfers shall not take place in or near the Port Angeles pilot boarding area and should not interfere with another vessel's transit of the VTS Special Area.

ANACORTES – PORT DOCKS

1. Vessels exceeding 400 feet in length arriving or departing berths port-side-to, should plan to transit during flood current, at slack current, or when the ebb current is 0.5 knot or less.
2. Vessels exceeding 400 feet in length arriving or departing berths starboard-side-to, should plan to transit during ebb current, slack current, or when the flood current is 0.5 knot or less.

BELLINGHAM – SQUALICUM WATERWAY

1. Vessels exceeding 300 feet in length should plan to transit on a rising tide and be dispatched with at least two tugs. If the vessel has a 4% Bow Thruster, one tug may be sufficient depending on vessel size and characteristics.
2. Vessels exceeding 300 feet in length should not pass other vessels with a beam over 50 feet also docked at the BCS facility.
3. Transit of vessels exceeding 500 feet in length shall be discussed with the President of Puget Sound Pilots well in advance of arrival and may have additional Waterway transit or tug requirements. It is expected that vessels greater than 500 feet LOA would, as a minimum, use one tractor and one conventional tug inbound and two tractor tugs outbound.
4. Transits to or from Bellingham Cold Storage should be daylight only unless Squalicum Creek Waterway Buoy #2 is lighted and the lighted ranges are operational.

BELLINGHAM – WHATCOM WATERWAY

1. Vessels 38,000 GT or less should be dispatched with two tugs, one C2 or greater and one T4 or greater. Vessels over 38,000 GT should be dispatched with two tugs, T4 class or greater.
2. Tug requirements for ATBs and other unusual vessels will be considered on a case-by-case basis.

CHERRY POINT

1. Tank vessels should arrive at the BP terminal at slack water or while stemming the current, however vessels of less than 35,000 GT may arrive with a predicted downstream current of 0.5kts or less at NOAA current station # CP 0101.
2. When the oil boom is deployed at the BP Cherry Pt. North berth, vessels greater than 100,000 GT should only land starboard-side-alongside at the South berth.

EVERETT

1. Vessels less than 660 feet in length should be dispatched with two tugs, C2 class or greater. Vessels less than 660 feet in length with a 4% bow thruster may be dispatched with one tug, C2 class or greater.
2. Inbound vessels greater than 660 feet in length should be dispatched with two tugs, C2 class or greater. Vessels greater than 660 feet with a 4% bow thruster outbound from any berth or inbound to the South Terminal may be dispatched with one tug, C2 class or greater.
3. Car ships of any tonnage and all other vessels greater than 38,000 GT should be dispatched with two tugs, T4 class or greater. This requirement is subject to case-by-case review by the president of Puget Sound Pilots considering the particular berth assignment, weather and any other anticipated conditions at the time of the transit.
4. All vessels greater than 60,000 GT should be dispatched with two tugs, T5 class or greater.

FERNDALE – INTALCO / PETROGAS

1. All vessels inbound to the Intalco/Petrogas terminal should dock starboard side alongside and only when the current is 1.0 knot or less at NOAA current station “Cherry Point, 1.8nm Southeast of, 8ft” (PUG1725).
2. When calculating for UKC, NOAA Cherry Point tide station #9449424 shall be used.

FERNDALE – PHILLIPS REFINERY

1. All tankers berthing at the Phillips-66 Refinery outside berth will be starboard side alongside.
2. Docking of all vessels is based on adequate tugs and acceptable weather conditions, and should take place at the following times:
    a. High water or low water slack current, or
    b. During ebb currents, except when the predicted current at the NOAA station “Cherry Point, 1.8 miles Southeast of, 8ft” (PUG1725) is greater than 0.75 kt.
3. Tankers may be dispatched with an additional tug(s) if dictated by the prevailing circumstances.

GUEMES CHANNEL / GREEN POINT

Tankers or ATB's transiting Guemes Channel inbound to Anacortes anchorages or oil terminals and not in ballast should arrive at Green Point when the predicted current at the Green Point current station #9446451 is one knot or less.

HOLMES HARBOR ANCHORAGE

Vessels over 800 feet in length transiting into or out of Holmes Harbor anchorage should have an operational bow thruster.

OLYMPIA

1. Arriving vessels. Vessels with a draft of 25 feet or more should be limited to entering the channel on a rising tide at least 1 hour before high water. All vessels over 300 feet in length should be dispatched with at least two tugs except that a vessel may be dispatched with one tug if it has a 4% Bow Thruster and an unobstructed waterway and turning basin.
2. Departing Vessels. Vessels with a draft of 25 feet or more should depart on a rising tide. All vessels over 300 feet in length should be dispatched with a minimum of two tugs unless: 1) it has one tug and a 4% Bow Thruster and is departing bow out, or; 2) it has one tug and the vessel is departing an unobstructed waterway and turning basin, bow out, 1 to 2 hours before high water.
3. Vessels over 700 feet in length. All transits of vessels with a LOA over 700 feet should be discussed with the President of Puget Sound Pilots well in advance.

PORT ANGELES HARBOR

The following vessels will be dispatched with at least one assist tug when underway in Port Angeles Harbor:

1. Laden petroleum tankers of any size and laden LPG/LNG tank vessels exceeding 40,000 DWT.
2. Vessels exceeding 800 feet in length.
3. Vessels with a draft exceeding 40 feet.
4. Any vessel exceeding 40,000 DWT when required to pass a laden petroleum tanker or laden LPG/LNG tank vessel at anchor, or when inbound and anchoring in an adjacent anchorage to a laden petroleum tanker or LPG/LNG tank vessel.
5. Oversized tank vessels that have been re-measured to less than 125,000 DWT.
6. Vessels other than laden tankers or laden LPG/LNG tank vessels may depart from anchorage positions East of Ediz Hook without an assist tug.

PORT TOWNSEND HARBOR / INDIAN ISLAND

1. Vessels exceeding 600 feet in length or 30 feet in draft should enter and exit Port Townsend Harbor within 1 hour of predicted slack current at “Point Wilson - .8 mile east of” (PCT1496).
2. Vessels 600 feet and longer going to or from a berth should be dispatched with a minimum of two T5 class tugs.
3. Vessels less than 600 feet in length going to or from a berth should be dispatched with a minimum of two tugs unless:
    a. They have a 4% Bow Thruster in which case one tug may be used: or
    b. The vessel has special characteristics and other arrangements have been made with the President of Puget Sound Pilots.
4. Ships exceeding 38 feet in draft going to or from anchor should have a minimum of one T4 class tug for assist.

SEATTLE – SHILSHOLE BAY TO LAKE WASHINGTON

ALL VESSELS

1. Vessels exceeding 500 feet in length or 68 feet in beam are not considered suitable for transit from Shilshole Bay through the Hiram Chittenden Locks and the Lake Washington Ship Canal. Exceptions to the above must be discussed with the President, Puget Sound Pilots well in advance of the intended transit date.
2. Tug assistance, time of transit, and other restrictions may be imposed during times of significant fresh water runoff or fish net congestion.
3. Adequate fenders, as specified by the Lockmaster, are required for transiting locks.

VESSELS EXCEEDING 300 FEET IN LENGTH

1. Transit of the Shilshole Bay Entrance Channel is to be made on a rising tide, height of tide zero (0) feet or greater.
2. All vessels should be dispatched with a minimum of two tugs except that one tug may be dispatched to a vessel with a 4% Bow Thruster.

SEATTLE – ELLIOTT BAY DOCKS

PIER 90 AND PIER 91

1. All cargo vessels should be dispatched with a minimum of two tugs except that one tug may be dispatched to a vessel with a 4% Bow Thruster.
2. East Side of Pier 90. Vessels maneuvering around berthed vessels at Berths 2, 4 and 6 on the East Side of Pier 90 should be dispatched on a 6 feet or greater tide and if the combined beam of both vessels is greater than 140 feet, the transit should be discussed with the President, Puget Sound Pilots well in advance of the intended transit date.

TERMINALS 46 NORTH AND SOUTH

1. Vessels less than 800 feet in length should be dispatched with a minimum of two T4 class tugs except that vessel with a 4% or greater bow thruster may be dispatched with one T4 class tug *if there is no lowered crane or ship at any other berth.*
2. Vessels 800 feet or greater in length should be dispatched with a minimum of one T5 class and one T4 class tug. Outbound vessels with a 4% or greater bow thruster may be dispatched with one T5 class tug if there is no lowered crane or ship at any other berth.
3. Vessels over 115,000 GT should be dispatched with at least two T5 class and one T4 class tugs. Outbound vessels with a 4% or greater bow thruster may be dispatched with one T5 class and one T4 class tug.
4. Transit of vessels greater than 145,000 GT shall be discussed with the President of Puget Sound Pilots well in advance of arrival. PSP will determine the appropriate tug package and any transit conditions/restrictions based on the vessel and anticipated port conditions at the time.

ALL OTHER ELLIOTT BAY DOCKS

All cargo vessels should be dispatched with at least two tugs except vessels with a 4% Bow Thruster may be dispatched with one tug if no adverse conditions, obstructions, wind, current or freshet runoff exist.

SEATTLE – EAST WATERWAY

1. Vessels less than 800 feet in length should be dispatched with a minimum of two T4 class tugs except that one T4 class tug may be dispatched to:
   a. A vessel with a 4% Bow Thruster that has a draft of less than 36.2 feet and will not pass between ships moored on both sides of the waterway (i.e., at T18 and T30).
   b. A vessel with a 4% Bow Thruster departing Terminal 18 berths 1 or 2 if berth 1 and Kinder Morgan are unoccupied.
   c. An ATB.
2. Vessels 800 feet or greater in length, or greater than 55,000 GT should be dispatched with a minimum of two T5 class tugs, except that one T5 class tug may be dispatched to a vessel with a 4% Bow Thruster Departing T-18 berths 1 or 2 if berth 1 and Kinder Morgan are unoccupied and no cranes are down north of the vessel.
3. Vessels greater than 110,000 GT **or** having a beam over 149 feet should be dispatched with a minimum of two T5 class tugs and one T4 class tug. For outbound vessels heading bow out with a 4% Bow Thruster, a minimum of two T5 class tugs may be acceptable provided there are no vessels berthed between the vessel and Elliot Bay.
4. Vessels greater than 120,000 GT should be dispatched with a minimum of three T5 class tugs.
5. Vessels greater than 145,000 GT should be dispatched with a minimum of one T8 class tug and two T5 class tugs.
6. Vessels greater than 160,000 GT should be dispatched with a minimum of two T8 class tugs and one T5 class tug.
7. Vessels greater than 1225 feet LOA or 180,000 GT should be dispatched with a minimum of three T8 class.
8. **Second Pilot:** For vessels over 145 feet beam backing into the East Waterway, when there is a vessel at Pier 46-South (formerly P37) **and** a vessel at Kinder Morgan or Terminal 18-1 a second pilot will be ordered.
9. Transit of vessels greater than 1225 feet LOA or 180,000 GT shall be discussed with the President of Puget Sound Pilots well in advance of arrival. PSP will determine the appropriate tug package and any transit conditions/restrictions based on the vessel and anticipated port conditions at the time.

SEATTLE – WEST WATERWAY

1. Vessels less than 800 feet in length should be dispatched with a minimum of two T4 class tugs except that one T4 class tug may be dispatched to:
    a. A vessel with a 4% Bow Thruster that has a draft of less than 36.2 feet and will not be passing another vessel at Terminal 5.
    b. An ATB.
2. Vessels 800 feet or greater in length, or greater than 55,000 GT should be dispatched with a minimum of two T5 class tugs.
3. Vessels greater than 90,000 GT should be dispatched with a minimum of three T5 class tugs.
4. Vessels greater than 110,000 GT should be dispatched with a minimum of one T8 and two T5 class tugs.
5. Vessels greater than 120,000 GT should be dispatched with a minimum of two T8 and one T5 class tugs.
6. Vessels greater than 160,000 GT should be dispatched with a minimum of two T8 and two T5 class tugs.
7. Vessels greater than 1225 feet LOA or 180,000 GT should be dispatched with a minimum of three T8 class and one T5 class tugs.
8. Transit of vessels greater than 1225 feet LOA or 180,000 GT shall be discussed with the President of Puget Sound Pilots well in advance of arrival. PSP will determine the appropriate tug package and any transit conditions/restrictions based on the vessel and anticipated port conditions at the time.
9. Terminal 5 Current Restriction:
    a. South Berth (0 – 1,450 ft): Vessels greater than 90,000 GT should transit in or out only on a rising tide as per the NOAA Seattle tide station #9447130
    b. North Berth (1,450 – 2,900 ft): Vessels greater than 160,000 GT should transit in or out only on a rising tide as per the NOAA Seattle tide station #9447130.
    c. During times of freshets or high Duwamish River flow rates additional conditions or restrictions may be required for transit.
10. **Second Pilot:** A second pilot will be ordered for vessels over 150 ft in beam backing in or out of the West Waterway.

SEATTLE – DUWAMISH WATERWAY

1. Strong ebb currents caused by freshet conditions and/or extreme low waters may require waterway transits to begin between one and two hours before the predicted high water. At the discretion of the pilot, additional restrictions may be required depending on conditions.
2. Air draft clearance with the fixed West Seattle Freeway bridge span needs to be at least 3.1 meters (10 feet) at the time of transit.

   NOTE: *Air draft clearance may be determined by the following formula:*

   Clearance (in feet) = **150.4 - Ht - Hb + D** *where:*

   150.4 *= 140 clearance + 10.4 mean high water datum*

   Ht *is height of tide at time of transit*

   Hb *is height of ship from base line to mast top or highest point of ship*

   D *is draft of ship in way of highest point on ship*

3. All vessels transiting the Duwamish Waterway should be dispatched with a minimum of two tractor tugs except that a vessel with a 4% Bow Thruster may be dispatched with one tractor tug, depending on vessel size and other prevailing conditions. All assist tugs are at the discretion of the pilot.
4. Waterway transits of vessels exceeding 400 feet in length should be dispatched with two tractor tugs and are to begin 1 to 2 hours before the predicted high water or approximately 1 hour after the predicted low water at NOAA tide station #9447130.
5. Vessels Exceeding 80 Feet in Beam or 650 feet in length will be dispatched with two pilots and the transit may require discussion with the President, Puget Sound Pilots, well in advance of the intended transit date.
6. Vessels Greater Than 95 Feet in Beam are not considered suitable for transit through the Burlington Northern railroad bridge.
7. Fishing Season. All vessels during the fishing season should be dispatched for daylight transit only.

TACOMA – BLAIR WATERWAY NORTH OF 11th STREET

1. Vessels less than 800 feet in length should be dispatched with a minimum of two T4 class tugs except that one tug may be dispatched to a vessel with a 4% Bow Thruster.
2. Vessels 800 feet or greater in length should be dispatched with a minimum of two T5 class tugs, except that one T5 class tug may be dispatched to a vessel with a 4% Bow Thruster departing when there are no other vessels or obstructions in the waterway.
3. Vessels greater than 70,000 GT should be dispatched with a minimum of three T5 class tugs. For outbound vessels heading bow out with a 4% Bow Thruster, a minimum of two T5 class tugs may be acceptable provided there are no vessels berthed between the vessel and Commencement Bay.
4. Vessels greater than 100,000 GT should be dispatched with a minimum of one T8 and two T5 class tugs.
5. Vessels greater than 120,000 GT should be dispatched with a minimum of two T8 class and one T5 class tugs.
6. Vessels greater than 160,000 GT should be dispatched with a minimum of two T8 class and two T5 class tugs.
7. Vessels greater than 1225 feet LOA or 180,000 GT should be dispatched with a minimum of three T8 class and one T5 class tugs.
8. Transit of vessels greater than 1225 feet LOA or 180,000 GT shall be discussed with the President of Puget Sound Pilots well in advance of arrival. PSP will determine the appropriate tug package and any transit conditions/restrictions based on the vessel and anticipated port conditions at the time.

TACOMA – BLAIR WATERWAY SOUTH OF 11th STREET

1. Vessels with a beam of 100 feet or less should be dispatched with a minimum of two T4 class tugs.
2. Vessels exceeding 100 feet in beam should be dispatched with a minimum of two T5 class tugs, except vessels having a 4% Bow Thruster may be dispatched with one T5 class and one T4 class tug.
3. Vessels exceeding 130 feet in beam should be dispatched with a minimum of two T5 and one T4 class tugs except outbound vessels exceeding 130 feet in beam, but less than 970 feet LOA may be dispatched with one T8 and one T5 class tug.
4. Vessels greater than 100,000 GT should be dispatched with a minimum of one T8 and two T5 class tugs.
5. Vessels greater than 120,000 GT should be dispatched with a minimum of two T8 class and one T5 class tugs.
6. Vessels greater than 160,000 GT should be dispatched with a minimum of two T8 class and two T5 class tugs.
7. Vessels greater than 1225 feet LOA or 180,000 GT should be dispatched with a minimum of three T8 class and one T5 class tugs.
8. Laden tankers exceeding 106 feet in beam should be dispatched with three tugs, two T5 class and one T4 class tugs. Vessels with a Bow Thruster and twin screws may be dispatched with two T5 class tugs.
9. **Second Pilot**: Vessels exceeding 130 feet in beam will be dispatched with two pilots. Vessels with a beam of less than 135' inbound to WUT starboard-side-to or outbound from WUT port or starboard-side-to may be dispatched with one pilot.
10. Transit of vessels of unusual configuration, vessels greater than 175 feet in beam or 1225 feet LOA or 180,000 GT, and all tank vessels in excess of 750 feet in length may require daylight transit as well as additional tugs or pilots. The transit of these vessels must be discussed with the President of Puget Sound Pilots well in advance of the intended transit date.

TACOMA – HYLEBOS WATERWAY

1. All vessels should be dispatched with two tractor tugs and must have air draft clearance with overhead power cables of at least 3.1 meters (10.0 feet) at the time of transit.

   NOTE: *Air draft clearance may be determined by the following formula:*

   Clearance (in feet) = **183.9 - Ht - Hb + D** where:

   183.9 *= 173 feet clearance + 10.9 mean high water datum*

   Ht *is height of tide at time of transit*

   Hb *is height of ship from base line to mast top or highest point of ship*

   D *is draft of ship in way of highest point on ship*

2. Vessels may require additional tugs or pilots if the navigable channel is obstructed, provided that all transits should have a minimum unobstructed navigable channel (except for the 11th Street Bridge) of 70 feet plus the beam of the vessel.
3. At Schnitzer Steel port-side-to berthing is not considered suitable.
4. Vessels exceeding 23 feet in draft should plan to start transits between 1 and 1½ hours before predicted high water.
5. Vessels exceeding 106 feet in beam are not considered suitable for transit through the 11th Street Bridge.
6. Vessels using the upper turning basin which are greater than 600 feet in length, both the Weyco (TPT) and Manke docks must be unoccupied.
7. Vessels exceeding 630 feet in length are not considered suitable for the upper turning basin.
8. Vessels of greater than 95 feet in beam and/or greater than 600 feet in length should transit during daylight hours if at all possible.
9. Vessels exceeding 80 feet in beam will be dispatched with two pilots.

TACOMA – SITCUM WATERWAY

1. Unless other more restrictive waterway guidelines apply, vessels less than 800 feet should be dispatched with a minimum of two T4 class tugs except that one T4 class tug may be dispatched to an outbound vessel with a 4% Bow Thruster, heading bow-out, when there is no vessel on either side of the waterway between the vessel and Commencement Bay.
2. Unless other more restrictive waterway guidelines apply, ~~all~~ vessels 800 feet or greater should be dispatched with a minimum of two T5 class tugs, except that one T5 class tug may be dispatched to an outbound vessel heading bow-out with a fully functioning Bow Thruster departing the outer berth at either APM Terminals or Terminal 7 when the berth directly across the waterway is unoccupied.
3. At a minimum, two T4 class tugs should be dispatched to vessels transiting when there is a vessel berthed at Terminal Seven and another vessel berthed directly or almost directly across the waterway at the APM Terminals. In addition, all the following conditions should be met:
    a. The beam of the vessels should be such that there is a net clearance of at least 140 feet available to the maneuvering vessel at all times, meaning a minimum of 70 feet clearance on each side when the vessel is in the center of the available waterway.
    b. **Two pilots** will be dispatched to vessels with a beam of 105 feet or greater making this transit.
4. Be advised that an individual pilot may decide not to move a vessel under certain conditions; when the container booms are lowered and the pilot believes they should be raised, or if the pilot believes the weather conditions are sufficiently adverse, or if the maneuver will require passing a bunker barge alongside another vessel in the waterway.

Horizonal Clearance Reference Table

Seattle

East Waterway			
Waterway width	720'		
T30 Crane Outreach	228'		
T18 Crane Outreach (extreme)	234'		
Configuration		Width	Max Beam
Cranes down at T18 & T30		258'	118'
Cranes down at T18 with cranes up at T30 and 158' beam vessel at T30.		328'	164'
Cranes down at T18 with cranes up at T30 and 106' beam vessel at T30		380'	190'
Cranes up at T18 with 158' beam vessel at T18 and cranes down at T30.		334'	167'
Cranes up on both sides with 158' beam vessel at T30 and 168' vessel at T18.		394'	197'

West Waterway			
Waterway width	740'		
Width of "Gate" at WW entrance. 45.7' depth.	400'		
Face of T5 to 46' depth on East side of WW.	600'		
T5 crane outreach	233'		
Configuration		Width	Max Beam
Transit of shoals at North entrance of waterway.		400'	200'
Cranes down at T5 North		367'	183'
Cranes up at T5 North passing a 168' beam vessel at T5 North.		432'	216'

Footnotes

1) *Horizontal clearance should always be calculated by the assigned pilot on a case by case basis.* The above examples are provided for basic planning and illustrative purposes only.

2) The above calculations are based on current depth surveys as of 7/26/23. Any subsequent changes in depth or updated surveys may affect the actual clearance available.

3) The above calculations account for the depth available, crane outreach and potential ships alongside. It should be noted that as per the PSP General Guidelines, other factors such as bunker barges/tugs, spill booms, fishing nets and any other obstructions that may impede the passage of a vessel will also be included in the horizontal clearance calculations for a specific transit.

These Advisory Guidelines are offered by Puget Sound Pilots as a convenience to the shipping industry in predicting what is likely to be needed for vessel movements in the affected areas. Each transit is unique with regard to the type and class of vessel, the existing weather, waterway conditions, wind, moored vessels, crane position and numerous other variable conditions. These general guidelines do not represent the views or opinions of all individual pilots relative to a situation and are not intended to do so. In all cases, the authority and judgment of the individual pilot(s) dispatched to the vessel are controlling and all decisions on the matters covered by these guidelines will be made by the pilot(s) dispatched to the job.

BLAIR WATERWAY

LEAST DEPTHS OUTSIDE ACOE PROJECT WITH CRANES DOWN

ZPMC 105 & 106 CRANES DOWN - (HT above MLLW: 185.5') (New ZPMC HT above MLLW: 209.9')

MAX SHIP BEAM	LEAST DEPTH	EXTREME CRANE OUTREACH	WATERWAY WIDTH OUTSIDE CRANES	WATERWAY WIDTH FROM WUT
141'	47.4'	238'	282'	520'
151'	47.2'	238'	302'	540'
159'	37.0'	238'	318'	556'
169'	36.2'	238'	338'	576'

PACECO HHI 101-104 CRANES DOWN - (HT above MLLW: 130.5')

MAX SHIP BEAM	LEAST DEPTH	CRANE OUTREACH	WATERWAY WIDTH OUTSIDE CRANES	WATERWAY WIDTH FROM WUT
141'	48.7'*	186.3'	282'	468'
151'	48.7'*	186.3'	302'	488'
159'	48.2'	186.3'	318'	504'
169'	47.3'	186.3'	338'	524'

SHIP (158' beam) ALONGSIDE WUT WITH ALL CRANES UP

MAX SHIP BEAM	LEAST DEPTH	VESSEL AT WUT	WATERWAY WIDTH OUTSIDE MOORED VESSEL	WATERWAY WIDTH FROM WUT
141'	48.7'*	158'	282'	440'
151'	48.7'*	158'	302'	460'
159'	48.7'*	158'	318'	476'
169'	48.7'*	158'	338'	496'

NOTES

- * ACOE Federal project extends 495' from the face of WUT with a least Depth of 48.7'.
- The above calculations are based on the NWSA survey, dated Mar/2025. Any subsequent changes in depth or updated surveys may affect the actual clearance available.
- Horizontal clearance should always be calculated by the assigned pilot on a case-by-case basis. The above examples are provided for basic planning and illustrative purposes only.
- The above calculations account for the depth available, crane outreach and potential ships alongside. It should be noted that as per the PSP General Guidelines, other factors such as bunker barges/tugs, spill booms, and any other obstructions that may impede the passage of a vessel should also be included in the horizontal clearance calculations for a specific transit.
- All transits are at the sole discretion of the assigned pilot.

These Advisory Guidelines are offered by Puget Sound Pilots as a convenience to the shipping industry in predicting what is likely to be needed for vessel movements in the affected areas. Each transit is unique with regard to the type and class of vessel, the existing weather, waterway conditions, wind, moored vessels, crane position and numerous other variable conditions. These general guidelines do not represent the views or opinions of all individual pilots relative to a situation and are not intended to do so. In all cases, the authority and judgment of the individual pilot(s) dispatched to the vessel are controlling and all decisions on the matters covered by these guidelines will be made by the pilot(s) dispatched to the job.

STATE OF WASHINGTON

BOARD OF PILOTAGE COMMISSIONERS

INTERPRETIVE STATEMENT

(Revised 17 September 2020)

1. Oil

It is the interpretation of the Board that, as per RCW 90.56.010 (19)[1], the definition of "oil" or "oils" means oil of any kind that is liquid at twenty-five degrees Celsius and one atmosphere of pressure and any fractionation thereof, including, but not limited to, crude oil, bitumen, synthetic crude oil, natural gas well condensate, petroleum, gasoline, fuel oil, diesel oil, biological oils (see note 2 below) and blends, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR 302 adopted August 14, 1989, under section 102(a) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P.L. 99-499."

Notes: (1) The Board considers diluted bitumen to be a part of this definition;

(2) The Board considers biological oils to include: "fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels" in alignment with Federal Regulations.[2]

[1] Oil and Hazardous Substance Spill Prevention and Response, 90.56, R.C.W. § 010 (2015)

[2] 40 C.F.R § 112.2 (2020)

2. Laden/Unladen (In Ballast)

It is the interpretation of the Board that, as per the Board's existing Statement of Policy,[3] "any tank vessels 40,000 deadweights tons or more whose clingage, residue, or other applicable cargo onboard is greater than 0.5% of the vessel's maximum cargo carrying capacity or 3,000 barrels, whichever figure is less, shall be considered laden and therefore not in ballast. The term "Tank Vessel" in this interpretation refers to oil tankers, articulated tug and barge units and towed barges designed to carry oil in bulk".

It is further the interpretation of the Board that any tank vessels below 40,000 deadweight tons whose clingage, residue, or other applicable cargo onboard is greater than 2% of the vessel's maximum cargo carrying capacity or 3,000 barrels, whichever figure is less, shall be considered laden and therefore not in ballast.
Note: This interpretation was developed to acknowledge most tank vessels are capable of pumping their tanker down to 0.5% of their capacity. However, some 5,000 – 40,000 deadweight ton bunker barges to not have the pumping capacity to reach the 0.5% threshold in order to be considered unladen.

In addition, that "for the purpose of interpreting the above referenced RCW and WAC section, "in ballast" is defined when an LPG carrier is deemed to be in a ballast condition if the vessel has retained on board only the minimum cargo necessary plus a safety factor to arrive at its next load port in a cold condition. This quantity is not to exceed 1.5% of the cargo carrying capacity".[4]

[3] *Statement of Policy Regarding Interpretation of the Term "In Ballast" used in RCW 88.16.190 and WAC 363-116-500.* BOARD OF PILOTAGE COMMISSIONERS, (May 1, 2020) https://pilotage.wa.gov/policystatements.html.
[4] *Statement of Policy Regarding Interpretation of the Term "In Ballast" used in RCW 88.16.190 and WAC 363-116-500.* BOARD OF PILOTAGE COMMISSIONERS, (May 1, 2020) https://pilotage.wa.gov/policystatements.html