

3.9 Navigable Waterways

Navigable waterways are waters subject to the ebb and flow of the tide and used to transport interstate or foreign commerce. Navigable waterways are crucial to maintaining safe and efficient water-dependent transportation, commerce, and recreation.

What regulations define and manage the use of navigable waterways?

Both the U.S. Coast Guard and the U.S. Army Corps of Engineers are responsible for identifying and maintaining navigation channels in U.S. waters, such as in Grays Harbor and Puget Sound. Both agencies operate programs affecting various aspects of navigation and navigability and must establish the reach of navigability covered by their programs. A number of guiding plans and policies are in place to define and manage use of navigable waters, including U.S. Homeland Security regulations, Grays Harbor Pilotage District Regulations, Washington Administrative Code, Port of Grays Harbor regulations, and U.S. Coast Guard and U.S. Army regulations.

What are the navigable waterways and their use in the study area?

The study area for navigable waterways comprises the waters of Grays Harbor, the numerous major tributaries flowing into the harbor, and portions of Puget Sound near the Blair Waterway that are subject to tidal influence (U.S. Coast Guard 2008; U.S. Army Corps of Engineers 2009). These waters are all within the U.S. Coast Guard 13th District and are listed in Exhibit 3.9-1.

CTC Facility

Commercial and industrial entities use Puget Sound extensively, and maritime commerce has grown fairly steadily for the past 150 years in the study area. The urbanization of western Washington, the decline in the timber and smelting industries, and the general movement of shipbuilding activities to other locations have changed the character of the Tacoma waterways. Container shipping has become a more important part of marine commerce and shipping. While a substantial number of vessels (such as tugboats, barges, or large container ships) move in and out of the area around the existing CTC facility every year, this area has a large shipping capacity.

What is the Navigable Waterways Technical Memorandum?

This section was derived from the Navigable Waterways Technical Memorandum, which includes information about organizations, literature, plans, and policies consulted for the analysis. Please see Appendix K for more information.

EXHIBIT 3.9-1
 Navigable Waterways in the Study Area

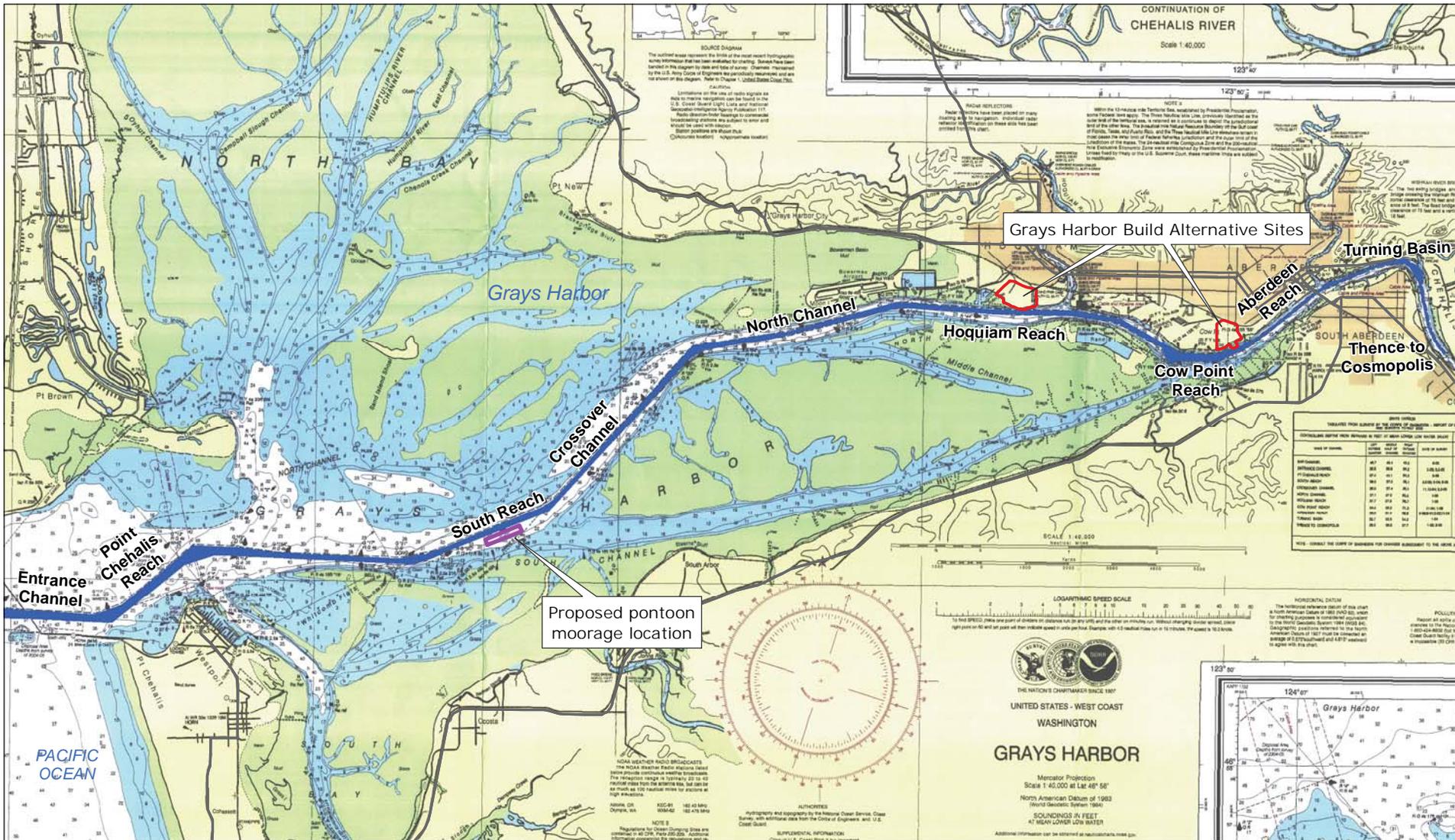
Body of Water	Extent of Designated Navigability	Connection to Other Navigable Waterways
Chehalis River	Navigable from mouth of the river 68 miles up river (referred to as river mile 68)	Flows into Grays Harbor
Grays Harbor	From Aberdeen (tidal) at Union Pacific Railroad Bridge to seaward end of bar channel, including all bays and sloughs to the elevation of mean high water	Pacific Ocean
Hoquiam River	Navigable to river mile 8	Flows into Grays Harbor at Hoquiam (tidal to about river mile 7)
Hoquiam River (East Fork)	Entire water body	Flows into Hoquiam River at Hoquiam (tidal to about river mile 6.5)
Humtulsips River	Entire water body	Flows into Grays Harbor near Hoquiam (tidal at river mile 1)
Johns River	Navigable to river mile 4	Flows into Grays Harbor near Markham (tidal)

The U.S. Coast Guard Vessel Traffic Service regulates vessel traffic in Puget Sound by monitoring and directing vessel movements to maintain safety and to minimize shipping interruptions and delays. The CTC facility was permitted and constructed in order to manufacture concrete structures, such as pontoons, and it complies with the navigable waterways rules, regulations, and standards for that purpose.

Grays Harbor Build Alternatives

The Grays Harbor navigation channel consists of a series of channels leading from the open ocean coastal waters into Grays Harbor (Exhibit 3.9-2). The channels range in width from 200 to 1,000 feet and 32 to 46 feet MLLW in depth. The use of these waterways has changed from transporting logs for export to one that supports less frequent visits by large commercial vessels, recreational fishing, and marina operations.

Commercial and industrial uses of Grays Harbor navigable waterways consist of loading and unloading freight vessels at Port of Grays Harbor facilities, transporting logs by the Weyerhaeuser Corporation, importing vegetable oil to the Imperium Renewable biodiesel refinery, treaty (Quinault Indian Nation) and nontreaty commercial fishing for salmon and Dungeness crab, and fishing in the oyster beds located in shallow subtidal areas of the harbor.



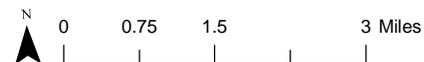
- Build Alternative Site
- Navigation channel
- Proposed pontoon moorage location (identified by field visit led by Port of Grays Harbor officials and experienced tugboat captain)

Note: This exhibit is included to show the locations of the navigable waterways in the vicinity of the proposed project. Because this exhibit was taken directly from the source cited below, it includes some navigational information that is not related to the discussion in this report.

Source: NOAA (2007) Nautical Chart (18502 Grays Harbor WA). Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.

Exhibit 3.9-2 Grays Harbor Navigation Channel

SR 520 Pontoon Construction Project



Sport fishing is the major recreational boating use in the Grays Harbor area, primarily from the Westport Marina. During salmon season, about 30 to 40 additional boats operate out of the Ocean Shores Marina. Because of recent declines in the salmon fisheries, bottom-fishing and whale watching are replacing salmon fishing as the most popular charter trips.

Future development plans for the navigable waterways of Grays Harbor include potential expansion of the navigation channel, dredging the navigational approach to Ocean Shores Marina, and dredging the marina itself. None of the local cities or Grays Harbor County indicated any foreseeable development plans that would depend on navigable waterways of the study area. Weyerhaeuser plans to sell the Cosmopolis Pulp Mill; so potential expansion or development plans for that facility cannot be determined.

How did WSDOT evaluate the project effects on navigable waterways?

WSDOT evaluated potential effects by comparing shipping and moorage requirements for project construction, operation, and pontoon storage with existing and planned shipping trends in the study area (for both Grays Harbor and Puget Sound).

To evaluate potential effects from using the existing CTC facility on navigable waterways, WSDOT considered the following:

- Necessary navigation channel closures to move the CTC-built pontoons to their moorage locations at existing berths in Puget Sound
- Effect on ship frequency or movement patterns caused by increased demands on pilots navigating in Puget Sound while pontoons are being moved

To evaluate potential effects on navigable waterway commercial and recreational uses for the Grays Harbor build alternatives, WSDOT considered the following:

- Launch channel construction and mooring dolphins installation
- Necessary navigation channel closures to move pontoons out of the new casting basin facility into the general Grays Harbor navigation channel
- Effects on ship frequency or movement patterns caused by installing moorage areas and pontoon storage

What is a mooring dolphin?

A mooring dolphin is any buoy, pile, or group of piles not connected to the shoreline that is used for mooring boats.

- Effects on ship frequency or movement patterns caused by increased demands on pilots navigating in Grays Harbor while pontoons are being moved from the casting basins to moorage locations

To characterize the way these identified waterways are used and to incorporate current and future plans for using the waterways, WSDOT consulted organizations involved in local commercial shipping and recreational boating, treaty and nontreaty tribal organizations, relevant municipalities and development bodies, the U.S. Coast Guard (that is, 13th District and Sector Seattle Vessel Transfer Service), and Washington State Board of Pilotage Commissioners Annual Reports.

How would construction of the casting basin directly affect navigable waterways?

Constructing a new casting basin at either Grays Harbor build alternative site could temporarily affect vessel navigation and movement in Grays Harbor if barges are used to transport materials to either site. Using barges would likely require involving one of the two Grays Harbor marine pilots, thereby making them temporarily unavailable to pilot other vessels. The proposed launch channel at both sites would be outside of the navigational channel; therefore, launch channel construction would not likely affect navigation.

How would pontoon-building operations directly affect navigable waterways?

CTC Facility

Constructing pontoons at the existing CTC facility would be unlikely to interrupt or change vessel movement into, within, or out of the Puget Sound. Vessel movements in the Sound are under the control and direction of the U.S. Coast Guard Puget Sound Vessel Traffic Service.

Navigable waterways in Puget Sound could be affected while pontoons are being towed from the CTC facility to their temporary moorage sites. Pontoon towing, however, would not likely require that the navigation channels be temporarily closed because these channels are sized to accommodate substantial vessel traffic.

Grays Harbor Build Alternatives

In general, the level of vessel traffic in Grays Harbor is light enough that any use of navigation channels and of Grays Harbor pilots when towing the pontoons to their moorage locations would have only a minor effect, if any, on navigable waterways. With two to three large

vessel calls each month at the Port of Grays Harbor, scheduling pontoon towing to avoid conflict with arriving or departing vessels should prevent any temporary disruption of navigation in Grays Harbor. Apart from temporary use of the navigation channel for towing pontoons, neither build alternative would have any operational effects on navigable waterways in Grays Harbor because operating either site would not block the adjacent navigation channel.

How would pontoon moorage directly affect navigable waterways?

CTC Facility

Pontoons built at the existing CTC facility could potentially be stored for several years at the moorage sites in Puget Sound; this would not cause long-term or permanent effects on navigable waterways. Pontoons would be stored at U.S. Coast Guard-approved locations outside of navigation channels and vessel traffic lanes. Appropriate lighting and designation of the moored pontoons under U.S. Coast Guard regulations would limit their effect on recreational vessel movement outside of the navigation channel.

Grays Harbor Build Alternatives

While completed pontoons could be stored for many years at the moorage sites in Grays Harbor, this would not cause long-term effects on navigable waterways. Pontoons would be stored at U.S. Coast Guard-approved locations outside of navigation channels and vessel traffic lanes. With appropriate lighting and designating the moored pontoons under U.S. Coast Guard regulations, their effect on recreational vessel movement outside of the navigation channel would be limited.

How would the build alternatives compare in their direct effects on navigable waterways?

Exhibit 3.9-3 summarizes and compares the build alternatives' effects on navigable waterways, which would essentially be the same.

How would navigable waterways be affected if the project were not built?

Under the No Build Alternative, the Grays Harbor build alternatives would not be constructed, no pontoons would be built at either build alternative site or at the CTC facility, and no pontoons would be moored in Puget Sound or Grays Harbor; therefore, navigable waterways would not be affected.

EXHIBIT 3.9-3
 Navigable Waterways Summary of Direct Effects

	Anderson & Middleton Alternative	Aberdeen Log Yard Alternative
Casting basin construction	If barges were used to transport materials to or from these sites, then vessel navigation and movement could be temporarily affected.	Effect would be the same.
Pontoon-building operation	Any use of navigation channels and of Grays Harbor pilots when towing the pontoons to their moorage locations would have only a minor effect, if any.	Effect would be the same.
Pontoon moorage	Any navigation channel closures during pontoon movement and long-term moorage would be negligible.	Effect would be the same.

What indirect effects would the project have on navigation?

CTC Facility

Ship traffic in Commencement Bay and Puget Sound is well managed by the U.S. Coast Guard, so no indirect project effects on navigable waterways at the CTC facility would be expected.

Grays Harbor Build Alternatives

Pontoons movement would not likely affect the availability of navigation channels for other traffic later in time or at a location away from the project site; therefore, WSDOT would not expect any indirect project effects on navigable waterways from either Grays Harbor build alternative site.

What mitigation measures does WSDOT propose to reduce direct effects on navigable waterways?

WSDOT could design mitigation measures to avoid or minimize adverse project construction and operation effects, including measures designed in accordance with appropriate U.S. Coast Guard regulations concerning nonpowered vessel movement (towing) and pontoon moorage for storage. These mitigation measures would include the following:

- Coordinating with the appropriate U.S. Coast Guard authorities when towing construction materials or completed pontoons to avoid conflicts with arriving or departing vessels

- Coordinating with Port and pilotage districts to ensure pilot availability during pontoon movements in and out of these jurisdictions
- Providing appropriate lighting during storage at all moorage locations to limit effects on recreational vessel movement outside of the navigation channel
- Restricting towing activities based on the weather conditions
- Publishing Notices to Mariners concerning the movement and storage of pontoons at all locations

How could WSDOT mitigate indirect effects on navigation?

Because WSDOT has not identified any indirect effects on navigable waterways in the study area, no mitigation measures would be necessary.

What is the cumulative effect on navigation likely to be?

CTC Facility

The navigation channels in the study area could sufficiently accommodate the pontoon movement required for the SR 520 Pontoon Construction Project and should not interrupt vessel movement in combination with other planned projects. Therefore, there would be no contribution to cumulative effects on navigable waterways associated with pontoon-building or towing activities at the CTC facility.

Grays Harbor Build Alternatives

Negligible direct effects could result from the small amount of vessel traffic when pontoons are being moved in Grays Harbor; WSDOT has not identified any indirect effects on navigable waterways. Potential planned projects at the Port of Grays Harbor Terminals 1 through 4 in the project vicinity (Exhibit 3-3) could result in increased shipping in the Grays Harbor navigation channel if they are further developed and the economy improves, although ship volume is low to these port sites now. Grays Harbor contains a large area of navigable waterways, and the number of planned projects that would result in more navigation within the harbor is limited. Therefore, the contribution to cumulative effects on navigable waterways associated with pontoon-building or towing activities at either Grays Harbor build alternative site would be negligible.

How could cumulative effects on navigable waterways be mitigated?

WSDOT does not expect that the project would contribute to cumulative effects on navigable waterways; therefore, no proposals to reduce cumulative effects are discussed.

