

3.12 Tribal Resources

In this document, tribal resources refer to the collective rights and access to traditional areas and times for gathering resources associated with a tribe's sovereignty or formal treaty rights. These resources may include plants or fish used for commercial, subsistence, and ceremonial purposes. Tribal fishing resources include catch in freshwater, Grays Harbor, and ocean fisheries.

This section describes tribal resources in the study area, including resources important to the Quinault Indian Nation (Quinault) and the Confederated Tribes of the Chehalis Reservation (Chehalis) as identified by the tribes and agencies. It then describes impacts on tribal resources that could result under the no-action alternative or as a result of the construction and routine operation¹ of the proposed action. Finally, this section presents any measures identified to mitigate impacts of the proposed action and any remaining unavoidable and significant adverse impacts.

3.12.1 What is the study area?

The study area for tribal resources consists of tribal resources on and near the project site that could be affected by construction and routine operation at the project site. The study area also includes tribal resources that could be affected during routine rail transport along the Puget Sound & Pacific Railroad (PS&P)² rail line and vessel transport through Grays Harbor out to 3 nautical miles from the mouth of the harbor.

3.12.2 What laws, regulations, and treaty rights apply to tribal resources?

Laws and regulations for determining potential impacts on tribal resources are summarized in Table 3.12-1. More information about these laws and regulations is provided in Appendix B, *Laws and Regulations*.

¹ Chapter 4, *Environmental Health and Safety*, addresses the potential impacts from increased risk of accidents (e.g., storage tank failure, train derailments, vessel collisions) and related consequences (e.g., release of crude oil).

² The PS&P rail line refers to the rail line between Centralia and the project site.

Table 3.12-1. Laws, Regulations, and Treaty Rights for Tribal Resources

Laws, Regulations, Court Cases, and Treaties	Description
Federal	
Treaty of Olympia of 1856	Set aside reservation land and reserve fishing, gathering and hunting rights for the Quinault Indian Nation throughout their usual and accustomed grounds.
Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (16 U.S.C. 1801 <i>et seq.</i>)	Granted the States of California, Oregon, and Washington the interim authority to manage Dungeness crab in federal coastal waters (3 to 200 nautical miles offshore). Includes provisions for treaty-reserved rights in Washington State and comanagement of crab.
Pacific Coast Treaty Indian Fisheries, Wildlife and Fisheries (50 CFR 660.50)	Describes the regulatory process to accommodate treaty-reserved rights for the harvest of groundfish.
United States v. Winans, 198 U.S. 371 (1905)	U.S. Supreme Court held that the Treaty with the Yakima of 1855, and similar treaties, protects tribal access rights to fishing, hunting, and other privileges on off-reservation lands.
United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974) "Boldt Decision"	Federal district court interpreted the rights of treaty tribes to take fish in their "usual and accustomed places in common with all citizens" to mean that treaty tribes have a treaty-reserved right to harvest 50% of the harvestable portion of fish.
Washington v. Washington State Commercial Passenger Fishing Vessel Association, 443 U.S. 658 (1979)	U.S. Supreme Court upheld the 1974 Boldt Decision.
United States v. Washington, 873 F. Supp. 1442 (1994) "Rafeedie Decision"	Federal district court concluded that treaty rights include shellfish and that tribes are entitled to 50% of the harvestable shellfish on most Washington State beaches.
State	
Washington Department of Fish and Wildlife Grays Harbor Basin Salmon Management (Policy C-3621)	Advances the conservation and restoration of Grays Harbor wild salmon and maintains or enhances economic well-being and stability of fishing industry. Quinault Indian Nation fisheries are not subject to this policy, but this policy influences negotiations between the Quinault Indian Nation and State on number of fish available for harvest.
Washington Department of Fish and Wildlife Hatchery and Fishery Reform (Policy C-3619)	Advances the conservation and recovery of wild salmon and steelhead by promoting and guiding the implementation of hatchery reform. Quinault Indian Nation fisheries are not subject to this policy, but this policy influences negotiations between the Quinault Indian Nation and State on number of fish produced from hatcheries in Grays Harbor, number of fish available for harvest, and fishing gear types.
Washington Department of Fish and Wildlife North of Falcon Policy (Policy C-3608)	Guides conservation, allocation, in-season management, and monitoring associated with the annual salmon fishery planning process.
Local	
No local laws, regulations, or treaties apply to tribal resources.	

3.12.3 How were impacts on tribal resources evaluated?

This section describes the sources of information and methods used to evaluate impacts on tribal resources.

3.12.3.1 Information Sources

Information used to evaluate existing tribal resources was obtained from the following sources.

- | **Communication between the Chehalis Tribe and Washington State Department of Ecology** (Connelly pers. comm.)
- | **Quinault Indian Nation response to treaty fisheries in the Grays Harbor** (Quinault Indian Nation 2015)
- | **Information about Chehalis Tribe and fisheries** (Chehalis Tribe 2015)
- | **Information about Quinault Indian Nation and fisheries** (Quinault Indian Nation 2014a)
- | **Treaty of Olympia** (Northwest Indian Fisheries Commission 2015)
- | **Testimony of James E. Jorgenson to the Shorelines Hearing Board** (Jorgenson pers. comm.)
- | **Communication from Quinault Ocean Fishers Committee responses to the 2014–15 seasonal regulation about the Grays Harbor commercial crabbing season** (Quinault Indian Nation 2014b)
- | **Communication from Quinault Ocean Fishers Committee regarding the 2014–15 Seasonal Regulation about the Grays Harbor ceremonial and subsistence crabbing season** (Quinault Indian Nation 2014c)
- | **Imperium Renewables, Inc. and Westway Terminals LLC Vessel Traffic Impact Analysis for Imperium and Westway** (WorleyParsons 2014)
- | **Letter from EarthJustice on the Westway Expansion** (EarthJustice 2013)
- | **Information about treaty rights in the Pacific Northwest** (Columbia Inter-Tribal Fish Commission et al. 2013)
- | *Grays Harbor and Native Americans* (James and Martino 1986)
- | **Summary of tribal (treaty and nontreaty) and nontribal commercial and recreational fisheries in Grays Harbor and the Chehalis River** (Scharpf pers. comm. March 24, 2015)
- | **Economic Impacts of Crude Oil Transport on the Quinault Indian Nation and Local Economy** (Resource Dimensions 2015)

3.12.3.2 Impact Analysis

Impacts on tribal resources were assessed by evaluating how the proposed action could disrupt access to tribal resources in the study area. The impact analysis considered fishing and gathering information provided by the tribes and agencies, including practices and areas used by Quinault and Chehalis tribal members, typical methods to access these areas, gear used in these fisheries, timing of fisheries, and catch by fisheries. The impact analysis evaluated how construction and routine operation of the proposed action could reduce the amount of time available to fish, change the time when fishers could deploy gear, or exclude members from fishing areas typically fished by Quinault or Chehalis tribal members.

3.12.4 What tribal resources are in the study area?

This section describes the tribes and tribal resources in the study area that could be affected by construction and routine operation of the proposed action. This section provides the general context for tribal resources in the study area and describes tribal resources on the project site, along the PS&P rail line, and in and along the shoreline of Grays Harbor.

3.12.4.1 Tribes

The vicinity of the study area was traditionally inhabited by the Hoquiam and Wishkah people and their ancestors, who spoke the Lower Chehalis dialects of the Salish language. Both groups lived along the banks of the Hoquiam and Wishkah Rivers. The waters near the study area—including the mouth of the Hoquiam River—were also used seasonally by the Quinault people, who spoke the Quinault dialect of the Salish language (Gibbs 1877; Curtis 1913; Hajda 1990). The waters of Grays Harbor, the Chehalis River, and other streams entering Grays Harbor were traditionally, and continue to be, important fishing areas for Native American tribes in the region, while the Grays Harbor shores continue to be productive hunting and plant-gathering areas.

Pacific Coast treaty tribes with a marine fish allocation are the Makah, Quileute, Hoh, and Quinault. Of these, the Quinault is the only treaty tribe with usual and accustomed areas within and adjacent to Grays Harbor. Other treaty tribes may use Grays Harbor as a moorage from which they access usual and accustomed areas but because those areas are not within Grays Harbor, they are not discussed further.

Quinault Indian Nation

The Quinault Indian Nation is a federally recognized Indian tribe that consists of the Quinault and Queets Tribes and descendants of five other coastal tribes: Quileute, Hoh, Chehalis, Chinook, and Cowlitz (Quinault Indian Nation 2014a). The Quinault Indian Reservation is located on the southwestern corner of the Olympic Peninsula. The reservation is more than 208,150 acres of land and includes 23 miles of ocean beach. The reservation was established in 1855, when the tribes and bands that now make up the Quinault Indian Nation ceded land to the United States in the Treaty of Olympia (Quinault Indian Nation 2014a).

The Quinault Indian Nation has treaty-reserved rights to fishing and gathering. The Quinault Indian Nation is a signatory to the Treaty of Olympia (1856). The treaty reserved a right to take fish at its “usual and accustomed fishing grounds and stations” and the privilege of gathering, among other rights, in exchange for ceding lands the tribe historically roamed freely (Northwest Indian Fisheries Commission 2015). Grays Harbor is within the Quinault usual and accustomed fishing and gathering areas.

The Quinault have lived near and depended on Grays Harbor for generations. They were called the canoe people because of the importance of canoes to every aspect of tribal life (Storm and Capoeman 1990: 45). Canoes were used for travel in the ocean, bays, estuaries, and rivers. The Quinault constructed ocean-going canoes to travel between villages along the coast and to hunt and fish. They constructed shovel-nosed, slack-water canoes to navigate rivers entering Grays Harbor and the Quinault River.

Primary villages on the Quinault Indian Reservation are Taholah at the mouth of the Quinault River and Queets at the mouth of the Queets River. These villages are on traditional village sites. Quinault

fishers are dependent on Grays Harbor to access ocean fisheries because both villages lack a harbor. The Quinault have treaty-reserved commercial, subsistence, and ceremonial fisheries (Resource Dimensions 2015: 55-59). Quinault ocean fisheries include salmon (Chinook and coho), halibut, Dungeness crab, lingcod, rockfish sablefish, and sardines. Grays Harbor gillnet fisheries include salmon (Chinook, coho, and chum), steelhead, and white sturgeon. Quinault treaty commercial and subsistence diggers harvest razor clams from beaches from Grays Harbor north. The Chehalis, Humptulips, and several other smaller rivers entering the Grays Harbor estuary provide the freshwater and estuarine habitat that supports Chinook, chum, and coho salmon and steelhead of critical importance to the Quinault. Grays Harbor nourishes other species of fish important to the Quinault fisheries such as white sturgeon and Dungeness crab.

Quinault weavers have gathered materials from the Grays Harbor area for many generations. Sweetgrass, cattail, and other grasses and willow gathered from Bowerman Basin in Grays Harbor are used to weave baskets and mats and for ceremonial purposes. Weaving is as integral to contemporary Quinault culture as it was in the past (Resource Dimensions 2015:57).

As a treaty tribe, the Quinault manage their fisheries and are responsible for regulating its fishers both on and off reservation. The Quinault Indian Nation is a comanager with the Washington Department of Fish and Wildlife for salmon, steelhead, and Dungeness crab. Each year the tribe and state meet to determine how many fish and crab can be caught in fisheries. The tribe and state then negotiate fishery schedules to ensure an equitable share of the catch. The process for comanagement of the ocean and freshwater salmon fisheries has evolved over the years and now incorporates preseason meetings and use of model based predictions of abundance, number of fish available for harvest, and catch. Grays Harbor salmon and steelhead fishery openings and predicted catch by week and season are based on models that consider fish timing, level of effort (number fishers participating in the fishery), expected catch, and previous years' fishery data. Once the tribe and state reach agreement on fisheries, in the spring they release a preseason summary of planned fisheries and predicted catch (the planned fisheries includes weekly schedules of weeks and days open).

The Quinault post tribal fishery regulations on their website reporting days and areas opened by statistical week (Sunday through Saturday) for their fishers. The Washington Department of Fish and Wildlife also posts planned openings of tribal fisheries on their website to inform recreational fishers when nets may be deployed. The tribe is responsible for enforcing Quinault fishing regulations. The tribe actively monitors in-season catch during each opening. Summaries of weekly and annual catch are shared with the Washington Department of Fish and Wildlife as the fishery progresses and annual catch data are shared at the end of the season. An important aspect of fisheries management is the in-season review of catch and updated estimates of number of harvestable fish. The tribe and state can adjust fishery schedules in season if the actual number of fish and harvestable abundance are not as forecast or if bad weather has disrupted fishing schedules (Scharpf pers. comm. May 26, 2015). These updates may result in adjustments to fishery schedules or closures to protect certain species, or they may add a fishing day in the same week (if bad weather affected a fishery), a run, or additional fishery openings if harvestable abundance is more than planned.

The Quinault began to exert their treaty-reserved right for Dungeness crab when treaty-reserved rights were extended to shellfish in a ruling by Judge Rafeedie in 1994 (*United States v. Washington, 873 F. Supp. 1422*). The States of Washington, Oregon and California and treaty tribes comanage the coastal Dungeness crab fishery. The four coastal treaty tribes (Makah, Quileute, Hoh, and Quinault)

have designated usual and accustomed ocean fishing areas for crab. The treaty tribes and state determine the amount of harvestable crab for each area, of which the treaty tribes are entitled to 50%. The tribes manage their fisheries specific to their usual and accustomed area, setting seasons, issuing permits, regulating number of pots that can be deployed, and recording catch.

Management of treaty-reserved marine fish harvest is at the international or federal level. Halibut are managed at the international level with the International Pacific Halibut Commission regulating harvest. Other marine fish such as sablefish, groundfish (rockfish, pacific cod, lingcod, and whiting) are managed through the Pacific Fisheries Management Council. The council and coastal treaty tribes (Makah, Quileute, Hoh, and Quinault) have formal harvest allocations for sablefish and whiting (Pacific Fishery Management Council 2014). Treaty allocation of other groundfish species is made through annual determination by the council (50 Code of Federal Regulations [CFR] 660.50).

Confederated Tribes of the Chehalis Reservation

The Chehalis are a federally recognized Indian tribe in rural southwest Washington State. The Chehalis Reservation is located on the Chehalis River at the mouth of the Black River near Oakville, Washington, southeast of Hoquiam. The 4,849-acre reservation was established in 1864 by secretarial order. The reservation is rural agricultural with low-density residential, farms, open prairies, forest, and wetlands. In the late 1800s, the reservation had a boarding school for tribal children, numerous home sites, and a small tribal center for community meetings and events. The 2014 enrolled population of the Chehalis Tribe was 894. The Bureau of Indian Affairs Labor Force Report for 2010 shows a service population (enrolled and nonenrolled Indians living on and near the reservation) of 3,625 individuals. Tribal government has grown considerably in the last 20 years to provide services to the many Native Americans living on or adjacent to the reservation (Connelly pers. comm.).

Preservation of tribal land and culture is essential for the perpetuation of the Chehalis people. The importance of the land to the tribe cannot be overstated. It provides the living space, the sacred and cultural sites, and the natural resources that sustain the Chehalis people and culture. It provides spiritual and physical sustenance, and the means for economic self-sufficiency. Many tribal members hunt and fish to supplement their incomes (commercial harvest), to provide sustenance for their families, and for cultural reasons (subsistence and ceremonial harvest). Historically, tribal members were expert fishers and paddlers of shallow shovelnose canoes. Women wove fine baskets, clothing, canoe mats, and even diapers using grasses, bark, and reeds collected from the area. Men carved dugout canoes, beautiful masks, and ceremonial items from red cedar and other trees (Connelly pers. comm.).

The location of the reservation at the confluence of the Chehalis and Black Rivers provides a prime fishing area for the salmon and steelhead returning to the Chehalis River. Salmon and steelhead have been important to their diet for centuries. The present-day Chehalis commercial, subsistence, and ceremonial fishery is limited to the portions of the Chehalis and Black Rivers on the Chehalis Reservation.

3.12.4.2 Project Site

The project site is located on property owned by the Port of Grays Harbor but has been under lease agreement and managed by the applicant for several years. Near the dock, there are tribal fishing areas, discussed below in Section 3.12.4.4, *Grays Harbor*. There are no known tribal resources on the upland portion of the project site.

3.12.4.3 PS&P Rail Line

Quinault Indian Nation

Along the PS&P rail line, the primary area for tribal fishing is the lower Chehalis River. The Quinault fishers harvest salmon, steelhead, and white sturgeon in the lower Chehalis River from the mouth to approximately the confluence with the Wynoochee River (Figure 3.12-1). Species and runs harvested in-river are the same as harvested in Grays Harbor (fall Chinook, spring Chinook, coho, and chum salmon, winter steelhead, and white sturgeon). Fisheries in the Chehalis River are open on the same weeks and days as in Grays Harbor.

Quinault fishers can elect to deploy gillnet fishing gear in the Chehalis River or Grays Harbor. The in-river fishery includes a combination of drifting nets from smaller boats and setting nets secured to the shore (Quinault Indian Nation 2015:11). Drift gillnet fishing entails the fisher deploying the net from the bow or stern of the fishing vessel perpendicular to the channel. Fishers attempt to deploy their gillnets to cover as much of the channel as possible to maximize catch. The net is allowed to drift with the currents, sweeping the channel for fish. Fishers need to actively monitor the net and adjust the net position in the channel to avoid known hazards (logs, shallow areas, docks, and other vessels). Set-net gillnet fishing entails the fisher securing one end of the net to the shore and anchoring the other end in the channel to keep the net perpendicular to the channel. A set net may be deployed for several hours at a time during an opening. The fisher may monitor the net and remove fish periodically. Set-net fishing locations are well established and fishing grounds are allocated to specific fishers. Set-net sites are primarily in the Chehalis River and other rivers entering Grays Harbor. Set nets that may be deployed in Grays Harbor are on the edges of the Grays Harbor Navigation Channel and do not obstruct vessel traffic.

Set-net fishers access their fishing sites from shore when direct vehicle access to their site is available. If shore access is not available, fishers access their sites by small boat from a nearby boat launch or the Quinault Pride dock in Aberdeen. Annual harvest from the Chehalis in-river fishery is included in Grays Harbor catch summarized in Section 3.12.4.4, *Grays Harbor*.

Chehalis Tribe

The Chehalis in-river fishery is entirely on the reservation and managed by the Chehalis (Figure 3.12-1). Because the Chehalis are a nontreaty tribe, their commercial fishery is limited to the portion of the rivers on the reservation. Primary commercial and subsistence fisheries are in the fall and winter. The fall fishery harvests coho and Chinook salmon. The winter fishery harvests steelhead. Depending on abundance of spring Chinook returning to the river, there may be a spring Chinook fishery. The number of harvestable spring Chinook is low and most fish are for subsistence or ceremonial consumption (Connelly pers. comm.).

A recreational fishery also occurs on the reservation with a tribal fishing license. Chehalis tribal members must have a valid Washington State fishing license to fish off-reservation and must follow state regulations.

The nontreaty tribal harvest of salmon and steelhead is based on a sharing formula between the state and the tribe. The allowable catch of salmon and steelhead by Chehalis tribal members is calculated from the nontreaty harvestable share returning to Grays Harbor. The state and tribe have an agreement to share equally the nontreaty harvestable portion of fish returning to spawning areas upstream of the Chehalis Reservation boundary (Hughes pers. comm.). The sharing formula applies

to fall Chinook, spring Chinook, coho, and steelhead. All chum salmon returning to the Chehalis River spawn downstream of the Chehalis Reservation and are not included in the sharing formula.

Access to fishing sites by Chehalis tribal members is by small boats and bank access to set-net fishing locations. The number of fish available for harvest is developed from the preseason run forecast. Annual records of number of fish harvested are not available for the Chehalis fisheries.

3.12.4.4 Grays Harbor

Quinault Indian Nation

As described in Chapter 3.5, *Animals*, Grays Harbor and its tributaries provide habitat for various fish species, including salmonids, sturgeon, lamprey, groundfish, and forage fish. The Chehalis River is the largest tributary that drains directly into Grays Harbor. Six species of salmonids are known to migrate and rear in portions of Grays Harbor and its tributaries. This waterway and its primary tributaries support tribal, commercial, and recreational fishing. Grays Harbor has a history of vessel operations involving large commercial vessels transporting a variety of goods and materials in the area.

As noted above, the Quinault traditionally used the Grays Harbor area for collecting weaving materials, fishing, hunting, and as a gathering place. Quinault fishers fish in Grays Harbor for salmon, steelhead, and sturgeon using drift and set gillnets and for Dungeness crab using pots. Ocean fisheries adjacent to Grays Harbor are for Dungeness crab (pots), halibut (longline), sablefish (longline, pots, and trawl gear), groundfish such as rockfish, pacific cod, whiting (longline and trawl gear) and ocean Chinook and coho salmon (troll gear). Grays Harbor is home port for fishing vessels in ocean fisheries and is where fishers offload catch for these fisheries. The Quinault also manage razor clams for commercial and subsistence harvest on beaches on and off the reservation adjacent to Grays Harbor.

Sweetgrass, cattail, and other grasses that grow in either freshwater or brackish marshes on the flats of the intertidal zone, such as those areas along the shoreline of Bowerman Basin and adjacent saltmarshes in the Grays Harbor National Wildlife Refuge, have been gathered by Quinault weavers for many generations (James and Martino 1986:71–76). These grasses are collected in July and August (James and Martino 1986:71–76). According to Jones (2012 in Resource Dimensions 2015: 59), the gathering of plant materials for basket weaving was an important element of traditional Quinault culture. This tradition remains an important component of tribal culture with extended families and friends gathering material for weaving (Resource Dimensions 2015:59).

Quinault fishers currently harvest salmon, steelhead, white sturgeon, and Dungeness crab in Grays Harbor. In addition, Quinault fishers use Gray Harbor to access ocean fisheries and offload catch from these fisheries.

Quinault Pride Seafood processes and markets Quinault-caught seafood products. It is owned by the Quinault Indian Nation, which requires fishers to sell most of their catch to Quinault Pride Seafood (Quinault Indian Nation 2014a) and authorized buyers; depending on the fishery, regulations may allow a small portion to be sold directly to the consumer. Quinault Pride Seafood operates a processing plant at Taholah and Westport and maintains a dock to moor boats and offload catch in Aberdeen (Figure 3.12-1). Quinault Pride Seafood may operate a fish tender anchored in the Chehalis River and buyers at various boat launches to offload catch during periods of peak salmon abundance. The Westport plant was purchased by the Quinault Indian Nation in 2014 (Resource

Dimensions 2015:5). Westport is the primary moorage for fishing vessels participating in ocean fisheries (Quinault Indian Nation 2015:12).

All commercial catch must be reported to the tribal fish management organization. The Quinault do not maintain records of subsistence or ceremonial catch of salmon, steelhead, and white sturgeon (Resource Dimensions 2015: 78). The Quinault maintain records of subsistence catch for crab, razor clams, and marine fish. Subsistence harvest ranges from 5 to 20% of reported commercial catch of salmon, steelhead, and sturgeon, based on interviews with fishers (Resource Dimensions 2015:78).

The following discussion focuses on the areas, species, and practices for commercial and subsistence harvest of salmon, steelhead, sturgeon, and crab in Grays Harbor. This is followed by a discussion of use of Grays Harbor to access marine fisheries and fish caught in these fisheries.

Salmon, Steelhead, and White Sturgeon—Grays Harbor Gillnet Fisheries

Quinault treaty gillnet fisheries for salmon, steelhead, and sturgeon can occur nearly year-round in Grays Harbor. Grays Harbor fisheries target salmon and steelhead adults returning to the Chehalis River and other streams entering Grays Harbor. White sturgeon caught in Grays Harbor are from river systems outside of Grays Harbor. White sturgeon and green sturgeon use the Grays Harbor estuary for foraging.

The Grays Harbor annual management cycle is divided into three seasons. The most intense fishery (maximum number of participants) and largest catches occur during the fall fishery from September to mid-November (Quinault Indian Nation 2015:2). Species harvested during the fall fishery are coho, chum, and fall Chinook salmon.

The winter fishery begins in late November and extends to mid-April. This fishery is directed at winter steelhead and more fishers participate early in the season to target the more abundant hatchery steelhead. Later in the season (February to May) the majority of fish entering the river are wild steelhead. Depending on abundance, the fishery may be modified to fewer days open per week and include gear restrictions to direct harvest at sturgeon (Quinault Indian Nation 2015:7).

The spring and summer management period is from April to July and directed at sturgeon foraging in Grays Harbor (Quinault Indian Nation 2015:3). This fishery is also less intense than the fall fishery. The spring and summer fishery may include catch of spring or summer Chinook salmon returning to the Chehalis River. However, the abundance of this run of Chinook has been low. Generally, not enough fish are returning to the river to provide for a directed fishery. The spring and summer sturgeon fishery is typically open 5 days per week with gear restrictions on size of gillnet mesh to reduce the incidental catch of Chinook. Quinault fisheries are generally closed August to mid-September to protect federal Endangered Species Act-listed green sturgeon.

Gillnet fishing schedules vary from year to year depending on abundance of different salmon species entering Grays Harbor, their run timing, and number of fish available for harvest (Quinault Indian Nation 2015:4). The Quinault Indian Nation (2015:4-5) provided the planned fall fishery schedule and predicted weekly catch in 2014 and 2015. The gillnet fishery starts mid-September in 2014 and late September in 2015. In both years, the scheduled days open per week varied from zero to 4 days from mid-September to early November. The 2015 planned schedule includes 3 weeks with no fishing (October 18 to November 7) in areas 2A and 2D (Figure 3.12-1; Chehalis River side of Gray Harbor) to reduce harvest on low-abundance wild chum salmon. The 2014 and 2015 fishery schedules are open 5 days per week from mid-November to the end of the year.

To provide a picture of timing of Chinook, coho, and chum catch in the fishery, the Quinault Nation have provided estimates of weekly catch based on a hypothetical 1-day per week fishery.

- I **Fall fishery.** The largest predicted catch of Chinook salmon is from mid-September to the end of September. Chinook catch by week in early September and in October is predicted to be about half the late September weekly catch. Peak weekly catch of coho is from late September to late October. Coho catch in early to mid-September is predicted to be much less. Coho catch declines rapidly from early November to the end of the fall management period. Peak weekly catch of chum salmon is over a shorter period and later than Chinook and coho. Predicted chum catch by week is highest from late October to mid-November.

Scheduled openings in 2014 and 2015 during the peak Chinook catch period (mid- to late September) were 2 to 4 days per week (Quinault Indian Nation 2015:6-7). Scheduled openings in 2014 and 2015 during the peak coho catch period (late September to late of October) were 3 to 4 days per week early in the period. The 2015 fishery is scheduled to be closed the last 2 weeks of October. Scheduled openings in 2014 during the peak chum catch period (late October to mid-November) were 1 to 2 days per week. The fishery is scheduled to be closed through most of the peak chum period in 2015.

- I **Winter fishery.** The 2013–2014 winter fishery scheduled was 5 days per week from mid-November to mid-April (Quinault Indian Nation 2015:8). Predicted catch in most weeks was less than 100 fish. Predicted weekly catch from early January to early February varied from 200 fish to more than 450 fish.
- I **Summer fishery.** The 2015 scheduled spring and summer fishery is 5 days per week from mid-April to the end of July (Quinault Indian Nation 2015:9). The Quinault did not provide predicted weekly catch for this fishery.

Resource Dimensions (2015:68) summarized the number of fishers reported by the Quinault that participate in the various treaty-right fisheries. The Quinault provided additional information on the number of active fishers in the Grays Harbor gillnet fisheries and number of fishers by area. Resource Dimensions (2015:68) reported 123 fishers in the Grays Harbor gillnet fishery. The Quinault (2015:4) reported 70 authorized Quinault gillnet fishers in Grays Harbor. The Quinault limit the number of fishers in the Chehalis River portion of Grays Harbor, fishing areas 2D, 2A, 2A1, and the lower Chehalis River up to Wynoochee River, to 50 fishers (Figure 3.12-1). Another 10 fishers are authorized to fish in the Humptulips River and another 10 authorized to fish in the North Bay area (fishing area 2C).

Drift gillnet fishing effort in Grays Harbor during the fall management period is concentrated in certain locations based on relative abundance of fish (Goodell 2015a and Quinault Indian Nation 2015:10). Of the 50 fishers authorized for the Chehalis River portion of Grays Harbor, up to 25 fishers may operate drift gillnets in preferred areas of the Chehalis River and Grays Harbor from Cosmopolis to the Crossover Channel Reach of the navigation channel (Figure 3.12-1). Another group of fishers may deploy nets in the south channel near Markham. Fishers authorized to fish area 2C may deploy nets in North Bay off the mouth of the Humptulips River. Fishers authorized to fish the Humptulips River fish in the river and immediately off the mouth of the river.

Drift gillnet fishing is done during incoming and outgoing tides and during slack tide (Quinault Indian Nation 2015:11); Quinault fishers prefer the approximately 1-hour slack tide. The time that nets are in the water varies depending on fish abundance, and tidal and river currents. As a frame of reference, nontreaty commercial regulations for Grays Harbor limit soak times (the time that the net

first enters water to the time when the net is completely removed) to less than 45 minutes (Washington Department of Fish and Wildlife 2014). Quinault (2015:11) reports that nets may be deployed for up to 2 hours during slack tide. Quinault fishers take turns fishing desired areas. Fishers deploy gear one boat at a time, releasing their net beginning from the bank and extending across and in some cases into the navigation channel (Quinault Indian Nation 2015:10). The boat and net then drift with the current. During peak periods of the fall fishery, up to nine boats may be actively fishing the navigation channel near and in front of the terminals. At times of high abundance, there may be two to four fishers with their nets deployed drifting the channel at any one time. Each boat is spaced evenly in the navigation channel to share opportunities and maximize harvest. At the end of a drift, the fisher retrieves the net, removing fish at the same time. The Quinault (2015:11) report that the time required to retrieve a net is from 5 minutes at the quickest to 2 hours if the net is loaded with fish. Retrieval may take twice as long if the fisher is retrieving the net by hand. Boats that recently completed a drift may return to the start where they wait for their next turn at fishing or they may offload catch. There may be several boats returning to the start or waiting their turn to fish at any one time. Fishers may make two to six trips to offload catch in a 24-hour period at the peak of the run (Quinault Indian Nation 2015:12). Fishing nets are marked at each end by orange or red marker buoys during daylight hours. When fishing occurs at night, nets are marked at each end with a steady white or flashing white or red light.

Fishers may choose to fish for salmon, steelhead, and white sturgeon using set nets attached to the bank. The relative number of drift and set nets deployed for salmon, steelhead, and sturgeon in Grays Harbor is not reported. Quinault fishing regulations restrict the use of set nets for white sturgeon downstream of the US Route 101 (US 101) bridge (Scharpf pers. comm. May 26, 2015).

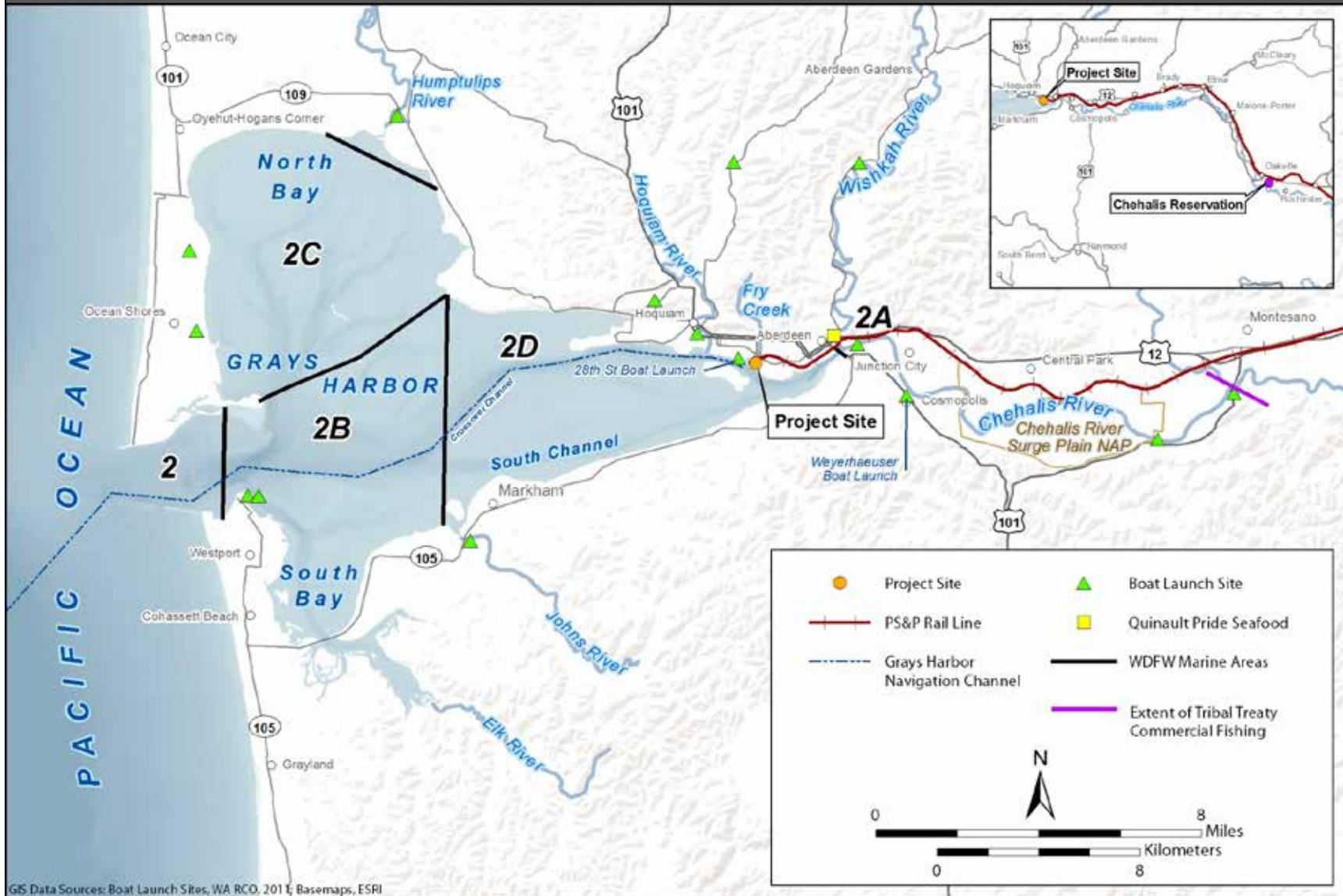
Annual landed catch for 2004 to 2013 for Grays Harbor treaty gillnet fisheries (all areas and gear types combined) is summarized in Table 3.12-2. Fall fisheries for coho, chum, and Chinook harvested an average of 31,340 fish. Chinook catch are not reported separately for fall and spring Chinook. Thus, fall catch is an overestimate as some spring Chinook are included in the total. However, the spring and summer Chinook catch is relatively small compared to the fall Chinook catch (Quinault Indian Nation 2015:8). Coho made up the largest portion of the fall harvest (averaging 20,387 fish). The winter fishery catch of steelhead is much smaller, averaging 3,129 fish. Quinault fishers harvested an average of 1,758 sturgeon.

Table 3.12-2. Quinault Grays Harbor Salmon, Steelhead, and White Sturgeon Fisheries, Annual Catch

Year	Chinook Catch (# fish)	Coho Catch (# fish)	Chum Catch (# fish)	Winter Steelhead Catch (# fish)	White Sturgeon Catch (# fish)
2004	3,546	18,093	9,600	6,742	1,544
2005	2,297	23,428	5,804	4,992	3,374
2006	3,758	8,746	4,070	3,404	2,918
2007	2,483	8,927	598	3,975	1,766
2008	1,880	10,208	2,070	1,467	3,206
2009	2,512	28,487	4,397	697	1,373
2010	3,403	25,347	8,938	1,837	1,125
2011	6,417	27,982	17,207	3,341	947
2012	3,994	30,693	11,670	2,880	598
2013	2,909	21,692	11,976	1,955	726
Average	3,320	20,387	7,633	3,129	1,758

Source: Resource Dimensions 2015:61-62

Figure 3.12-1. Tribal Fishing Resources



Chinook and Coho Salmon—Ocean Troll Fishery

The treaty ocean-troll fishery typically begins May 1 and extends to September 15 (Quinault Indian Nation 2015:14). Troll vessels drag baited hooks or lures at the depth of the target species. Chinook salmon are harvested from May 1 to June 30 or when allowable catch has been attained. The fishery remains open from July 1 to mid-September for coho salmon and Chinook if allowable catch has not been attained. The Chinook and coho ocean fisheries may close early if allowable catch has been attained early.

Areas fished by Quinault fishers are coastal waters from Destruction Island just north of the Quinault Reservation boundary to Grays Harbor (50 CFR 660.50). Quinault fishers access the fishery from Grays Harbor.

Table 3.12-3 summarizes the annual Quinault fisher participation and catch for Chinook and coho in the ocean troll fishery. Across the decade, catch was generally evenly split between Chinook and coho, but varied significantly for each year. Chinook are the more valuable fish because of the higher price per pound for Chinook and their larger size (Resource Dimensions 2015: 63-64).

Table 3.12-3. Quinault Treaty Ocean Troll Fishery, Annual Catch

Year	Quinault Fishers (number of fishers)	Chinook Catch (number of fish)	Coho Catch (number of fish)
2004	1	237	170
2005	0	3,113	578
2006	6	200	165
2007	4	367	1,039
2008	5	437	591
2009	3	432	4,039
2010	16	2,519	1,988
2011	6	1,944	719
2012	5	1,456	1,080
2013	4	616	997
Average	5	1,132	1,137

Source: Resource Dimensions 2015:64-69

The Quinault do not maintain records of subsistence or ceremonial catch from the troll fishery, which is estimated to range from 5 to 20% of reported commercial catch based on interviews with fishers (Resource Dimensions 2015:78).

Dungeness Crab

Quinault fishers operate crab-fishing vessels in Grays Harbor and coastal waters outside of Grays Harbor (Goodell 2015a, 2015b). Although regulations for the Quinault Dungeness crab fishery allow subsistence and commercial harvest from November through September (Quinault Indian Nation 2014a), the majority of the catch occurs between November and February (Quinault Indian Nation 2015:13)—months that are prone to extreme weather events. The ocean vessels use the navigation channel to transport the catch into the harbor; to lessen the danger of hazardous conditions during incoming or outgoing tides, bar crossings are often timed during slack high or low tides. The treaty commercial crab season generally opens 45 days prior to the nontreaty commercial fishery to help

ensure equal catch allocation with nontreaty fishers. Early in the season, prior to the nontreaty fishery opening, Quinault fishers deploy pots along the coast close to Grays Harbor. Quinault fishers have an exclusive fishing area north of Grays Harbor (mouth of Copalis River to mouth of Raft River) within the Quinault usual and accustomed area when the nontreaty fishery is open. This exclusive Quinault area also ensures an equal sharing of the catch with nontreaty fishers. The Quinault have had to implement gear restrictions later in the season to limit treaty harvest for equal sharing with nontreaty fishers.

Table 3.12-4 summarizes the annual Quinault participation and catch in the Dungeness crab fishery (2004 to 2013). Quinault fishers harvest an average of 2.6 million pounds of crab annually, of which an estimated 23,529 pounds are harvested for subsistence (Resource Dimensions 2015:80).

Table 3.12-4. Quinault Dungeness Crab Fishery, Annual Commercial Catch

Year	Quinault Fishers (number of vessels)	Catch (pounds)
2004	15	1,486,853
2005	26	3,188,806
2006	21	1,371,961
2007	22	2,956,441
2008	25	2,061,477
2009	24	3,004,009
2010	21	2,771,881
2011	21	3,254,288
2012	21	2,019,549
2013	21	3,694,925
Average	21.7	2,581,019

Source: Resource Dimensions 2015:64-69

Marine Fisheries—Halibut, Sablefish, Lingcod, Rockfish, and Sardine

Quinault fishers operate long-line ocean fishing vessels in coastal waters outside of Grays Harbor for halibut, sablefish, and other marine species (Goodell 2015b).

Quinault fishers harvest a portion of the treaty allocation for halibut shared among the Quinault, Hoh, Makah, and Northern Puget Sound treaty tribes. The fishery opens in March with a 48-hour opening followed by additional openings with restrictions on number of pounds harvested by vessel per day. The fishery remains open until the treaty allocation has been harvested, usually by May (Quinault Indian Nation 2015:14).

Quinault fishers harvest a portion of the treaty allocation for sablefish shared among the Quinault, Hoh, and Makah Tribes (Quinault Indian Nation 2015:14). The fishery opens in March with a concurrent opening for the four tribes. Additional openings occur through the summer and fall on individual tribal quotas of the treaty allocation. Effort and catch decline as the season progresses and the quota for the Quinault Indian Nation is attained.

Table 3.12-5 summarizes the annual Quinault participation and catch in the marine fisheries (2004 to 2013). Quinault fishers harvest an average of 737,800 pounds marine fish annually.

Table 3.12-5. Quinault Marine Fisheries, Annual Commercial Catch

Year	Quinault Fishers (number of vessels)	Catch, All Species (pounds)
2004	13	437,512
2005	12	351,014
2006	12	406,641
2007	10	264,308
2008	15	346,625
2009	16	424,084
2010	13	300,456
2011	13	260,040
2012	12	3,127,701
2013	9	1,459,616
Average	12.5	737,800

Source: Resource Dimensions 2015:64-69

Confederated Tribes of the Chehalis Reservation

The Chehalis own tidal land in Grays Harbor (County parcel 181226849800) and use it for recreational shellfish harvesting. The tribe plans to make it a commercial operation in the future (Connelly pers. comm.). Chehalis tribal members do not have fishing rights in Grays Harbor or marine waters.

3.12.5 What are the potential impacts on tribal resources?

This section describes impacts on tribal resources that could occur in the study area. Potential impacts of the no-action alternative are described first, followed by potential impacts of the proposed action.

3.12.5.1 No-Action Alternative

Under the no-action alternative, the applicant would continue to operate its existing facility as described in Chapter 2, Section 2.1.2.2, *Existing Operations*. Large commercial vessel³ traffic in Grays Harbor and Terminal 1 berth occupancy would increase slightly under the no-action alternative compared to existing conditions (Section 3.17, *Vessel Traffic*). Impacts related to restricted and interrupted access to the tribal fishery in Grays Harbor would be similar to existing conditions. Although the proposed action would not occur, it is assumed that growth in the region would continue under the no-action alternative, which could lead to development of another industrial use at the project site within the 20-year analysis period (2017 to 2037). Such development could result in impacts similar to those described for the proposed action.

3.12.5.2 Proposed Action

This section describes impacts that could occur in the study area as a result of construction and routine operation of the proposed action. First, this section describes impacts from construction of

³ The term *large commercial vessel* refers collectively to tank and cargo vessels.

the proposed action. It then describes impacts of routine operation at the project site and of routine rail and vessel transport to and from the project site.

Construction

Construction of the proposed action could have an impact on tribal resources if construction activities were to limit access to or degrade the resources used by the tribes, including the plants and fisheries described in Section 3.12.4.3, *PS&P Rail Line* and Section 3.12.4.4, *Grays Harbor*. Because all work would be limited to the project site and no in-water work would occur, construction would not restrict access to tribal resources in the study area.

Construction of the proposed action at the project site could degrade the fishery if construction activities were to impair water quality as a result of increased erosion of soils into Grays Harbor or produce vibration levels from pile driving that would be harmful to fish in Grays Harbor. As described in Section 3.1, *Earth*, the potential for increased erosion on the project site is low, because the site is relatively flat and contains soils that have low erosion potential. As described in Section 3.3, *Water*, Section 3.4, *Plants*, and Section 3.5, *Animals*, the construction activities would be subject to water pollution control laws and are not expected to result in any permanent impacts on water resources, or related impacts on plants, animals, or fish. As described in Section 3.5, *Animals*, noise levels in the waters adjacent to the project site from pile driving at the project site do not have the potential to exceed levels deemed to be potentially harmful to fish. Therefore, construction of the proposed action would have no impact on tribal resources.

Operations

This section describes impacts that would occur as a result of routine operations at the project site, rail transport along the PS&P rail line, and vessel transport through Grays Harbor.

Onsite

Onsite operations of the proposed action could have an impact on tribal resources if operations were to limit access to or degrade the resources used by the tribes, including the plants and fisheries described in Section 3.12.4.3, *PS&P Rail Line*, and Section 3.12.4.4, *Grays Harbor*.

Onsite operations could degrade plants and fisheries as a result of ongoing impacts on water quality resulting from increased stormwater runoff. However, as described in Section 3.3, *Water*, facility operations would be subject to water pollution control laws and the potential for impacts on water quality during routine operations would be slightly greater than under the no-action alternative. The impacts would not be at a level to affect the health of the Grays Harbor's plants or animals, as discussed further in Section 3.4, *Plants* and Section 3.5, *Animals*. The potential impacts associated with oil spills are addressed in Chapter 4, *Environmental Health and Safety*.

Onsite operations could reduce access to tribal fishing areas as result of the increased frequency of vessels docked at the Terminal 1 berth. As noted above, tribal fishers deploy gillnets and drift with the tide, taking turns sweeping through segments of the harbor that typically extend as far as Cosmopolis to the Crossover Channel Reach of the navigation channel. This area includes the portion of the navigation channel in front of the Terminal 1 berth. Depending on its size, a docked vessel

would occupy approximately 20 to 25% of the width of the channel.⁴ While a vessel is at berth, fishing nets cannot be extended as far and cannot access the areas nearest to the dock structure where fish are assumed to be concentrated (Quinault Indian Nation 2015: Exhibit E) (Figure 3.12-1). When a vessel is docked, fishers must either shorten the duration of their drift to stop as they near the vessel or move farther out into the navigation channel to avoid the vessel. Lighting impacts from nighttime transfer operations may also affect fishing operations by affecting fish behavior.

Vessel calls under the proposed action would occupy the Terminal 1 berth up to 119 days per year.⁵ When combined with occupancy by baseline vessels, the Terminal 1 berth would be occupied approximately 177 days per year (Section 3.17, *Vessel Traffic*). Under the no-action alternative, the berth would be occupied approximately 58 days per year.

The most intensive fishing at the dock area is during the fall salmon management period from September to mid-November, when several fishing vessels may deploy drift gillnets near the Terminal 1 berth. Quinault fishers may also fish the area during other times of the year, deploying gillnets for winter steelhead and white sturgeon in spring and summer.

On average, vessels related to the proposed action would occupy the berth approximately 2 days per week compared to an average of 1 day per week under the no-action alternative. During periods of maximum catch for Chinook, coho, or chum salmon, the fall fishery is typically open 2 to 4 days per week and sometimes up to 5 days per week. Assuming a 24-hour maximum berth occupancy and vessel calls evenly dispersed over the week, it is likely a vessel would be at the dock during a portion of the open treaty fishery. However, the potential of these vessels to affect treaty catch is dependent on how fish are distributed across the navigation channel relative to the remaining channel area available to treaty fishers.

Salmon concentrate next to the dock at Terminal 4 (Quinault Indian Nation 2015: Exhibit E); however, the navigation channel is narrower at Terminal 1 and salmon may be distributed differently at this location compared to the wider channel and adjacent shallow areas leading to the south channel at Terminal 4. Migration patterns in estuaries and rivers are complex. Hinch and Rand (2000) found evidence to suggest sockeye salmon were efficient at finding small reverse flow vortices to increase swimming efficiencies during upstream migration. Generally upstream migrating salmon avoid fast water by swimming near the shore and near the bottom (Quinn 2005:80). Large Chinook salmon tend to migrate upstream further from the bank than smaller salmon (i.e., sockeye). Hughes (2004) hypothesized that Chinook salmon migrate further from the bank to avoid wave drag caused by swimming close to the surface in shallow water. However, all species may distribute similarly in the dredged and tidally influenced navigation channel.

Depending on the specific circumstances of each interaction (e.g., chance of a vessel calling during an open fishing window, distribution of the fish, number of fishers on any given day), it is difficult to predict whether increased occupancy at Terminal 1 would significantly affect the tribe's ability to meet the treaty allocation under their current practices. If a vessel is at berth during the fall fishery, Quinault fishers have the option to fish longer (complete more drifts) or may choose to fish other preferred locations in Grays Harbor (such as other portions of the navigation channel, farther away

⁴ The typical 550-class tank barge is approximately 600 feet in length and a maximum of 78 feet wide and is assisted by a tug that is approximately 127 feet long and a maximum of 42 feet wide. A Panamax class tanker has a maximum overall length of 950 feet and a maximum width of approximately 106 feet.

⁵ Assumes all vessels are tank barges with a maximum 24-hour berth occupancy.

from the shoreline or farther upstream). However, opportunities to relocate during intense fishing periods may be limited if the other areas are occupied by fishers. Implementation of the mitigation described in Section 3.12.7.2, *Applicant Mitigation*, would reduce the potential impacts on treaty tribal fishing.

Docked vessels at other times of the year likely would have less of an impact because fewer fishers are out and would have more options to move to other preferred areas in Grays Harbor and the Chehalis River.

Rail

Operation of the proposed action at maximum throughput would add approximately one unit train trip⁶ per day on average (458 per year maximum) along the PS&P rail line to the average three train trips per day (1,235 per year) under the no-action alternative (Section 3.15, *Rail Traffic*). This increase in rail traffic could have an impact on tribal resources if it were to reduce access to tribal fishing fleets, boat launches, and gillnet set net sites as a result of vehicle delay at PS&P rail line crossings or if it were to degrade the fishery through water quality impacts.

The only rail crossing between the Quinault Indian Reservation and its fleet in the Westport Marina is at the US 101 bridge over the lower Chehalis River, which is not an at-grade crossing. There is no rail crossing between the Quinault Indian Reservation and the Quinault Pride Seafood dock in Aberdeen.

Access to Quinault fishing sites on the north side of the Chehalis River around Cosmopolis would be affected by increased rail traffic at the Junction City Road grade crossing and other smaller grade crossings between Cosmopolis and the Wynoochee River. However, as noted in Section 3.16, *Vehicle Traffic and Safety*, increased rail traffic on the PS&P rail line between Centralia and Aberdeen is not anticipated to result in substantial increases in delay at grade crossings. Quinault fishers accessing fishing sites from the south side of the Chehalis River (Cosmopolis and US 101) would not be affected by increased rail traffic. As discussed in Section 3.17, *Vessel Traffic*, access to boat ramps in Grays Harbor would not be affected by the proposed action. The 28th Street Boat Ramp in Hoquiam used by Quinault fishers to launch boats and offload catch would not be affected by increased rail traffic as the access road crosses the PS&P rail line west of the project site.

Access to fishing sites by the Chehalis Tribe would not be affected by the increase in rail traffic because access roads to fishing sites do not cross the PS&P rail line.

As described in Sections 3.3, *Water*, 3.4, *Plants*, and 3.5, *Animals*, leaks and spills of petrochemicals from routine rail operations and associated maintenance could increase under the proposed action because of increased rail trips. The increase would be slightly greater than under the no-action alternative and is not expected to have any measurable impact on water quality, aquatic habitat, or animals.

Vessel

Operation of the proposed action at maximum throughput would result in a maximum additional 238 tank vessel trips⁷ per year through Grays Harbor, compared to 436 large commercial vessel

⁶ A trip represents one-way travel; in other words, an inbound trip and an outbound trip are counted as two trips.

⁷ A trip represents one-way travel.

trips per year projected under the no-action alternative. This increase in vessel trips related to the proposed action could have an impact on tribal resources if it were to degrade water quality or reduce access to tribal resources, including the plants and fisheries described in Section 3.12.4.3, *PS&P Rail Line* and Section 3.12.4.4, *Grays Harbor*.

As described in Sections 3.3, *Water*, 3.4, *Plants*, and 3.5, *Animals*, small spills or leaks of petrochemicals from routine vessel operations and associated maintenance could increase under the proposed action because of increased vessel trips. Spill prevention and contingency planning is discussed in Chapter 4, *Environmental Health and Safety*. However, the potential for these accidents to occur would be reduced by appropriate training and the implementation of prevention and control measures as described in the facility spill prevention, control, and countermeasures plan, vessel spill response plan and facility oil spill prevention plan. For these reasons, impacts related to spills and leaks from routine operations present a low risk to aquatic habitat and animals likely to be present along the shoreline near the project site.

Because vessel traffic under the proposed action would be limited to the navigation channel (Section 3.17, *Vessel Traffic*), impacts on tribal resources in the harbor but outside the channel are not expected. Drift and set-net gillnet fishers operating east of Terminal 1 and the turning basin, in the south channel near Markham, and in Area 2C would not be affected by the increase in vessel traffic under the proposed action. Crab fishing grounds in Grays Harbor are outside of the navigation channel and access to those areas would not be affected by the increase in vessel traffic. This increased vessel traffic would have no impact on the Chehalis, because their protected tribal fishing is within the Chehalis Reservation.

Vessels related to the proposed action would be most likely to affect tribal fishing during the fall salmon management period, when more fishers typically deploy drift gillnets in the navigation channel (from the Crossover Channel Reach of the navigation channel to the turning basin). This is the area with the greatest potential for conflict between tribal fishers and vessels related to the proposed action. During peak periods of the fall fishery, up to nine boats may be actively fishing this area and two to four fishers with nets deployed at one time (Quinalt Indian Nation 2015:10). Increased vessel traffic related to the proposed action means that there would be a greater chance that a vessel could travel through this area and affect tribal fishing. Vessels related to the proposed action would transit this portion of the navigation channel 4.5 times per week on average; for comparison, large commercial vessels would transit this portion of the channel approximately 8 times per week on average under the no-action alternative.

As described in Section 3.17, *Vessel Traffic*, it takes approximately 2 hours for vessels to transit the navigation channel between the entrance buoy and Terminal 1. Favorable transit times for vessels related to the proposed action are close to high tide. Quinalt fishers currently choose the high slack tide period for salmon drift gillnetting. Assuming the vessel is between the Crossover Channel Reach of the navigation channel and Terminal 1 for approximately half of the 2-hour transit time, including docking and undocking maneuvers, a vessel trip could disrupt fishing for a 1-hour period.

Transiting vessels related to the proposed action would affect (limit) the timing, duration, and physical area that could be fished. Depending on the specific circumstances of the interaction, this could affect the volume of a day's catch. Fishers may be able to compensate for lost fishing time by retrieving their net and motoring back to the start of the drift area; however, depending on factors such as the time of day and number of other fishers, it may not be practical to do so and the disruption could equate to lost fishing opportunities.

As noted in Section 3.12.7.2, *Applicant Mitigation*, providing advance notice of incoming vessels related to the proposed action could help reduce potential conflicts. Although it is difficult to predict whether the increased vessel traffic would result in an overall inability to meet the tribe's seasonal quota, increased traffic would limit access to usual and accustomed fishing areas. Implementation of the mitigation described in Section 3.12.7.2, *Applicant Mitigation*, would help address this impact.

Increased vessel transit under the proposed action could also reduce access to the Quinault's ocean crab and marine fisheries by limiting access by tribal fishers to cross the bar leaving the mouth of Grays Harbor. As stated, although loaded tank vessels would be restricted to transit during high tide, inbound vessels in ballast could transit the navigation channel at any time. Inbound and outbound vessels could disrupt access to the Quinault's ocean crab and marine fisheries because ocean fishing vessels prefer to use the navigation channel to transport the catch into the harbor. To lessen the danger of hazardous conditions during incoming or outgoing tides, bar crossings are often timed during slack high or low tides. It is likely this disruption would be minor because smaller Quinault fishing vessels would have the ability to skirt around or adjust their time to avoid the transiting tank vessels.

Quinault fishers participating in the Dungeness crab fishery inside Grays Harbor would not be affected by tank vessels related to the proposed action because they operate outside the navigation channel and monitor marine communications to avoid larger vessels when transiting to fishing grounds.

3.12.6 What required permits and plans apply to tribal resources?

No required permits or plans apply to tribal resources.

3.12.7 What mitigation measures would reduce impacts on tribal resources?

This section describes the applicant mitigation that would reduce impacts on tribal resources from construction and routine operation of the proposed action.

3.12.7.1 Applicant Mitigation

The applicant will implement the following mitigation.

- I To mitigate potential impacts on tribal fishing, the applicant will coordinate with the Quinault Indian Nation and Washington Department of Fish and Wildlife, as requested, to support review and possible adjustments of docking schedules to minimize conflict with fishing schedules negotiated pre-season by the state and tribe. Consultation will account for operations, including anticipated vessel movements related to the proposed action.
- I While tribal fishing boats are required to follow the U.S. Coast Guard navigation rules, to improve awareness of vessel traffic in the navigation channel, the applicant will work with the Grays Harbor Safety Committee, including the US Coast Guard and Port of Grays Harbor, to establish procedures to announce project related vessel traffic arrivals and departures over a designated very high frequency (VHF) marine radio channel.

- I To mitigate impacts on access to tribal treaty fishing areas, the applicant will initiate a process between stakeholders and Quinault Indian Nation tribal officials to discuss and identify additional mitigation measures such as, limiting vessel calls during peak fishing seasons. Initiation of the process between the parties will occur before vessel operations begin.

3.12.8 Would the proposed action have unavoidable and significant adverse impacts on tribal resources?

Implementation of the mitigation measures described above would reduce but may not completely eliminate impacts on tribal resources. More specifically, vessels related to the proposed action would travel through usual and accustomed fishing areas in Grays Harbor. Under current and future conditions, increased vessel traffic could restrict access to tribal fishing areas in the navigation channel and adjacent to Terminal 1. This conflict is most likely to occur for fishing related to harvest of salmon, steelhead, and sturgeon. Because other factors besides vessel operations affect fishing opportunities, such as the number of fishers, fish distribution, timing, and duration of fish windows, the extent to which vessel operations related to the proposed action would affect tribal fishing is difficult to quantify. No mitigation measures would completely eliminate the possibility of impacts to fishing resources because of vessel operations related to the proposed action.