Board of Pilotage Commissioners Tug Escort Rulemaking (Chapter 363-116 WAC)
State Environmental Policy Act Draft Environmental Impact Statement

---

Tribal Resources Discipline Report

Washington State Board of Pilotage Commissioners

Washington State Department of Ecology

Olympia, WA

June 2025

DEPARTMENT OF
ECOLOGY
State of Washington

BOARD of PILOTAGE COMMISSIONERS
WASHINGTON STATE

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

AIS	automatic identification system
ATB	articulated tug barge
BMP	best management practice
BPC	Board of Pilotage Commissioners
CFR	Code of Federal Regulations
DAHP	Washington State Department of Archaeology and Historic Preservation
dwt	deadweight tons
Ecology	Washington Department of Ecology
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESHB	Engrossed Substitute House Bill
FOR	functional and operational requirement
HAB	harmful algal bloom
hp	horsepower
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
NWIFC	Northwest Indian Fisheries Commission
OTSC	Oil Transportation Safety Committee
PFMC	Pacific Fishery Management Council
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SRKW	Southern Resident Killer Whale
SRSC	Skagit River System Cooperative
SSHIAP	Salmon and Steelhead Habitat Inventory Assessment Program
TCP	Traditional Cultural Properties
U&A	usual and accustomed
USACE	U.S. Army Corps of Engineers
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WSRI	Wild Stock Restoration Initiative

Summary

This Discipline Report is produced by the Washington State Department of Ecology (Ecology) as part of the development of an Environmental Impact Statement (EIS) as required pursuant to the State Environmental Policy Act.

The Board of Pilotage Commissioners (BPC), in consultation with Ecology, is conducting a rulemaking to amend Chapter 363-116 of the Washington Administrative Code (WAC), Pilotage Rules. The rulemaking will consider 2019 legislative changes made to Chapter 88.16 of the Revised Code of Washington (RCW) (Pilotage Act) through the passage of Engrossed Substitute House Bill (ESHB) 1578. The rules will be designed to achieve best achievable protection, as defined in RCW 88.46.010, and will be informed by other considerations in ESHB 1578. The BPC and Ecology determined that the rulemaking may have significant adverse impacts on the environment and are developing an EIS.

This Tribal Resources Discipline Report describes the existing conditions and anticipated impacts to Tribal resources resulting from the four rulemaking alternatives: No Action (Alternative A), Addition of Functional and Operational Requirements (FORs) (Alternative B), Expansion of Tug Escort Requirements (Alternative C), and Removal of Tug Escort Requirements (Alternative D). The study area for the Tribal resource analysis includes the EIS Study Area which encompasses the rulemaking alternative boundaries and potential areas for escort tug commutes to and from the alternative boundaries.

The following Tribal-related topics were analyzed:

- Impacts on Tribal treaty fishing in the EIS Study Area due to tug escort requirements and associated escort tug underway time.
- Impacts on water quality and aquatic species of cultural significance in the EIS Study Area due to escort tug activity.
- Impacts on coastal Tribal resources in the EIS Study Area due to escort tug activity.
- Impacts on water quality and aquatic species of cultural significance in the EIS Study Area due to oil spills.
- Impacts on coastal Tribal resources in the EIS Study Area due to oil spills.

Significant and unavoidable adverse impacts to Tribal resources were identified under Alternatives A, B, C, and D. Table 1 summarizes the changes in escort tug activity under each alternative, the resulting impacts on Tribal resources, mitigation measures identified, and determinations of significance.

Table 1. Tribal resources impact summary.

Change in Activity	Resulting Impacts on Tribal Resources	Comparison to Alternative A	Mitigation	Significant and Unavoidable Adverse Impact?
Alternative A: No Action				
Continued operation of escort tugs throughout EIS Study Area.	Continued contributions from escort tugs to existing general vessel traffic impacts to Tribal treaty fishing (i.e., addition of traffic to shipping lanes and in anchorage areas that hinder access to fishing areas and resources, and contributions to wake-related impacts and fishing gear loss).	N/A	Potential recommended measure for escort tugs to avoid waiting at anchorage for tug escort jobs to begin.	**Yes**
	Continued significant underwater noise impacts and minor potential for strike risks to culturally significant marine mammals.	N/A	None	**Yes**
	No impacts to coastal Tribal resources from current levels of escort tug traffic.	N/A	None	No
	Unchanged risk (0.86 per year) of minor adverse impacts to water quality, and associated disruption of Tribal activities that are dependent on water quality, due to risk of an incident that could result in a diesel fuel spill from escort tugs.	N/A	None	No
Target vessels continue to have tug escorts within rulemaking area.	Continued beneficial impacts to water quality, and associated disruption of Tribal activities that are dependent on water quality, due to unchanged risk (1 in 186 years) of a target vessel drift grounding.	N/A	None	No

Change in Activity	Resulting Impacts on Tribal Resources	Comparison to Alternative A	Mitigation	Significant and Unavoidable Adverse Impact?
Alternative B: Addition of Functional and Operational Requirements				
Continued operation of escort tugs throughout EIS Study Area.	Same as for Alternative A.	Same as for Alternative A.	Same as for Alternative A.	**Yes**
Target vessels continue to have tug escorts within rulemaking area, with added FORs.	Same as for Alternative A.	Same as for Alternative A.	Same as for Alternative A.	No

Change in Activity	Resulting Impacts on Tribal Resources	Comparison to Alternative A	Mitigation	Significant and Unavoidable Adverse Impact?
Alternative C: Expansion of Tug Escort Requirements				
Increase in escort tug underway time (by 2.41%) and shift in commute and escort locations.	Major increase in interactions with Tribal fishing, usual and accustomed (U&A) areas, and co-managed species in and around the Strait of Georgia and the Strait of Georgia South.	Higher risk of impacts to Tribal fishing resources in certain areas.	Same as for Alternative A.	**Yes**
	Continued significant underwater noise impacts (mostly the same as Alternative A) and minor potential for strike risk to culturally significant marine mammals.	Minor increase in strike risk and underwater noise at certain locations		**Yes**
	No impact to coastal Tribal resources from the increased escort tug traffic in other areas.	Same as for Alternative A.		No
	Minor impacts to water quality, and associated disruption of Tribal activities that are dependent on water quality, due to increased risk (0.88 per year) of spills and other hazards from increased tug operation.	Higher water quality impacts.	None	No
Tug escorts for target vessels within expanded rulemaking area, with added FORs.	Minor beneficial impacts to Tribal resources due to decreased risk (1 in 189 years) of oil spills from drift grounding.	Reduction in risk of oil spills.	None	No

Change in Activity	Resulting Impacts on Tribal Resources	Comparison to Alternative A	Mitigation	Significant and Unavoidable Adverse Impact?
Alternative D: Removal of Tug Escort Requirements				
Elimination of escort tug activity throughout EIS Study Area.	Improved access to fishing areas and resources, less potential for gear loss, and less potential for impacts from wakes.	Decreased risk of impacts to Tribal fishing resources.	None	No
	Reduction in minor potential for underwater noise impacts and strike risks to culturally significant marine mammals.	Benefits (less noise impact and less strike risk) to culturally significant species.		No
	Eliminated risk of incidents that could result in a diesel fuel spill from escort tugs.	Lower risk of water quality impacts.		No
Target vessels no longer have tug escorts within rulemaking area.	Increased risk (1 in 167 years) of target vessel drift grounding, which would result in an increased risk of impacts to coastal Tribal resources, fishing areas, U&A areas, water quality and associated disruption of Tribal activities that are dependent on water quality, and Traditional Cultural Properties (TCPs) along the coast of the EIS Study Area.	Greater risk of oil spills and adverse water quality impacts.	None	**Yes**

1.0 Introduction

1.1 Background

The Board of Pilotage Commissioners (BPC), in consultation with the Washington Department of Ecology (Ecology), is conducting a rulemaking to amend Chapter 363-116 of the Washington Administrative Code (WAC), Pilotage Rules. The rulemaking will consider 2019 legislative changes made to Chapter 88.16 of the Revised Code of Washington (RCW) (Pilotage Act) through the passage of Engrossed Substitute House Bill (ESHB) 1578. The rules will be designed to achieve best achievable protection, as defined in RCW 88.46.010, and will be informed by other considerations in ESHB 1578.

The rulemaking will:

- Describe tug escort requirements for the following vessels (referred to as "target vessels" throughout this report) operating in the waters east of the line extending from Discovery Island light south to New Dungeness light and all points in the Puget Sound area:
  - Oil tankers of between 5,000 and 40,000 deadweight tons (dwt).
  - Articulated tug barges (ATB) and towed waterborne vessels or barges greater than 5,000 dwt that are designed to transport oil in bulk internal to the hull.
- Specify operational requirements for tug escorts, where they are required.
- Specify functionality requirements for tug escorts, where they are required.
- Consider the existing tug escort requirements applicable to Rosario Strait and connected waterways to the east, established in RCW 88.16.190(2)(a)(ii), including adjusting or suspending those requirements, as needed.
- Describe exemptions to tug-escort requirements, including whether certain vessel types or geographic zones should be precluded from the escort requirements.
- Make other changes to clarify language and make any corrections needed.

This rulemaking could potentially increase or decrease tug escort activity and the risk of oil spills in Puget Sound. The BPC and Ecology therefore determined that the rulemaking may have significant adverse impacts on the environment. The BPC and Ecology issued a Determination of Significance on February 22, 2023, which initiated development of an Environmental Impact Statement (EIS) as required under RCW 43.21C.030 (2)(c) pursuant to the State Environmental Policy Act (SEPA). At the same time, Ecology also issued a formal scoping notice as required through the SEPA process. Ecology conducted an EIS Scoping Meeting on March 21, 2023 to invite comments

Note: Unless specified otherwise, the following terminology applies throughout this discipline report:

- **"Tug escort"** refers to the act of a tug escorting a target vessel that is specifically affected by this rulemaking.
- **"Escort tug"** refers to the tug that conducts escorts of target vessels. Underway time for an escort tug includes active escort time and time spent commuting to and from an escort job.

on the scope of the EIS and a comment period was open from February 22 through April 8, 2023.

The BPC and Ecology have agreed to act as co-lead agencies under SEPA and share lead agency responsibility for the EIS. The elements of the environment to be included in the EIS were preliminarily identified in the scoping notice. This Discipline Report serves as the detailed analysis of an element identified for inclusion in the EIS and will serve as supporting documentation to the EIS.

The BPC is conducting the rulemaking process concurrently with the EIS development and works closely with Ecology to coordinate the public involvement process. The rulemaking effort includes regular public involvement workshops that are designed to share information with stakeholders, Tribal government representatives, and interested parties. The BPC also appointed the Oil Transportation Safety Committee (OTSC) as an advisory committee of subject matter experts representing different areas like the regulated industry, Tribal governments, and environmental groups. The OTSC meets regularly to develop recommendations for the BPC, and the BPC makes the final decisions related to this rulemaking.

1.2 Rulemaking Alternatives

Through the rulemaking public involvement process, the BPC developed rulemaking alternatives for consideration in the EIS. The BPC has proposed four reasonable[1] rulemaking alternatives to be analyzed in the EIS. This Discipline Report analyzes the impacts associated with the four proposed rulemaking alternatives: No Action (Alternative A), Addition of Functional and Operational Requirements (FORs) (Alternative B), Expansion of Tug Escort Requirements (Alternative C), and Removal of Tug Escort Requirements (Alternative D). The proposed rulemaking alternatives are summarized below and are shown on Figure 1.

Alternative A. No Action. Under Alternative A, the existing tug escort regulations would continue in effect with no changes.

Alternative B. Addition of Functional and Operational Requirements. The existing tug escort regulations would continue with the addition that escort tugs operating under the rule would need to meet the following three functional and operational requirements:

1. Pre-escort conference: Prior to beginning the escort, the escort tug and the target vessel need to coordinate and discuss safety measures and other standard requirements.
2. Minimum horsepower: Escort tugs must meet minimum horsepower (hp) requirements based on the DWT of the escorted vessel:
    - Escort tugs must have 2,000 hp for vessels greater than 5,000 and less than 18,000 DWT
    - Escort tugs must have 3,000 hp for vessels equal to or greater than 18,000 DWT and less than 40,000 DWT.

[1] As defined in Chapter 197-11-786 WAC

3. Propulsion specifications: To ensure sufficient propulsion, escort tugs must have a minimum of twin-screw propulsion.

Alternative C. Expansion of Tug Escort Requirements. This alternative would maintain the geographic scope of the current tug escort regulations and extend them to the northwest (See Figure 1 below). This alternative would add 28.9 square miles (74.9 square kilometers) to the existing geographic extent where tug escort requirements apply. The expansion area would be located at the northern boundary of the existing tug escort requirement. This alternative would include the above-mentioned three functional and operational requirements set forth under Alternative B.

Alternative D. Removal of Tug Escort Requirements. This alternative would remove the current tug escort requirement for the target vessels within the rulemaking boundaries***.***

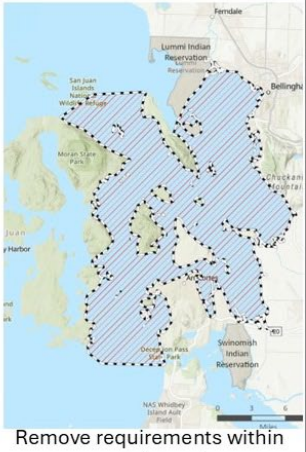
Alternative A (No Action)	Alternative B (Add FORs)	Alternative C (Expansion)	Alternative D (Removal)
			
No change to geographic scope of requirements	No change to geographic scope of requirements	Expand current requirements north to Patos Island	Remove requirements within current boundary
No change to existing functional and operational requirements (FORs)	Add pre-escort conference, minimum horsepower, and propulsion requirements	Add pre-escort conference, minimum horsepower, and propulsion requirements	N/A – tug escort requirements for target vessels are removed

Figure 1. Proposed rulemaking alternatives.

Under ESHB 1578, Ecology developed a model to simulate vessel traffic patterns and oil spill risk, including tug escort activity. The model was based on historical automatic identification system (AIS) data from 2015-2019 and was used to inform the 2023 Analysis of Tug Escorts for Tank Vessels. For the current EIS effort, Ecology used the model to 1) simulate the tracks of escort and assist[2] tug traffic, based on 2015-2019 historical AIS data, and 2) simulate the current volumes of escort and assist tug traffic along these tracks while accounting for tug escort requirements that went into effect in 2020.

[2] Escort tugs are sometimes referred to as "escort/assist tugs" in this analysis because the same vessels typically perform both escorting and assisting work. Ecology used the model to simulate traffic for both escorting and assisting work; however, only escorting work would be affected by the rulemaking alternatives.

The model produced 1,000 annual simulations of escort and assist tug traffic. To represent current conditions and Alternative A, Ecology selected the simulation output with the highest amount of escort tug traffic (i.e., the "worst case scenario") to ensure that the EIS does not undercount potential environmental impacts and to account for other potential near-term growth in vessel traffic (e.g., traffic from the Trans Mountain Expansion). For Alternative C, Ecology modified the Alternative A simulated traffic outputs to account for the proposed changes in tug escort requirements under that alternative.

Ecology used 2023 historical AIS data (i.e., not simulated) to represent all vessel categories other than escort and assist tugs, with some adjustments to account for recreational and fishing vessels that are not equipped with AIS. Traffic for these other vessel categories did not require simulation because it would not change based on the rulemaking alternatives.

The simulation outputs are used here to show the differences in underway time for escort tugs under Alternative A and Alternative C. Figure 2 and Figure 3 show the results of these simulations, compiled to indicate the total minutes per year (min/yr) of target vessel escort tug underway time within each one-square-kilometer grid cell. Figure 4 depicts the change in escort tug underway time between Alternatives A and C. Escort tug activity under Alternative B would not be expected to be meaningfully different than under Alternative A, while Alternative D would result in zero tug escorts. Refer to Appendix B Transportation: Vessel Traffic Discipline Report for details regarding the vessels activity simulation methodology and results.

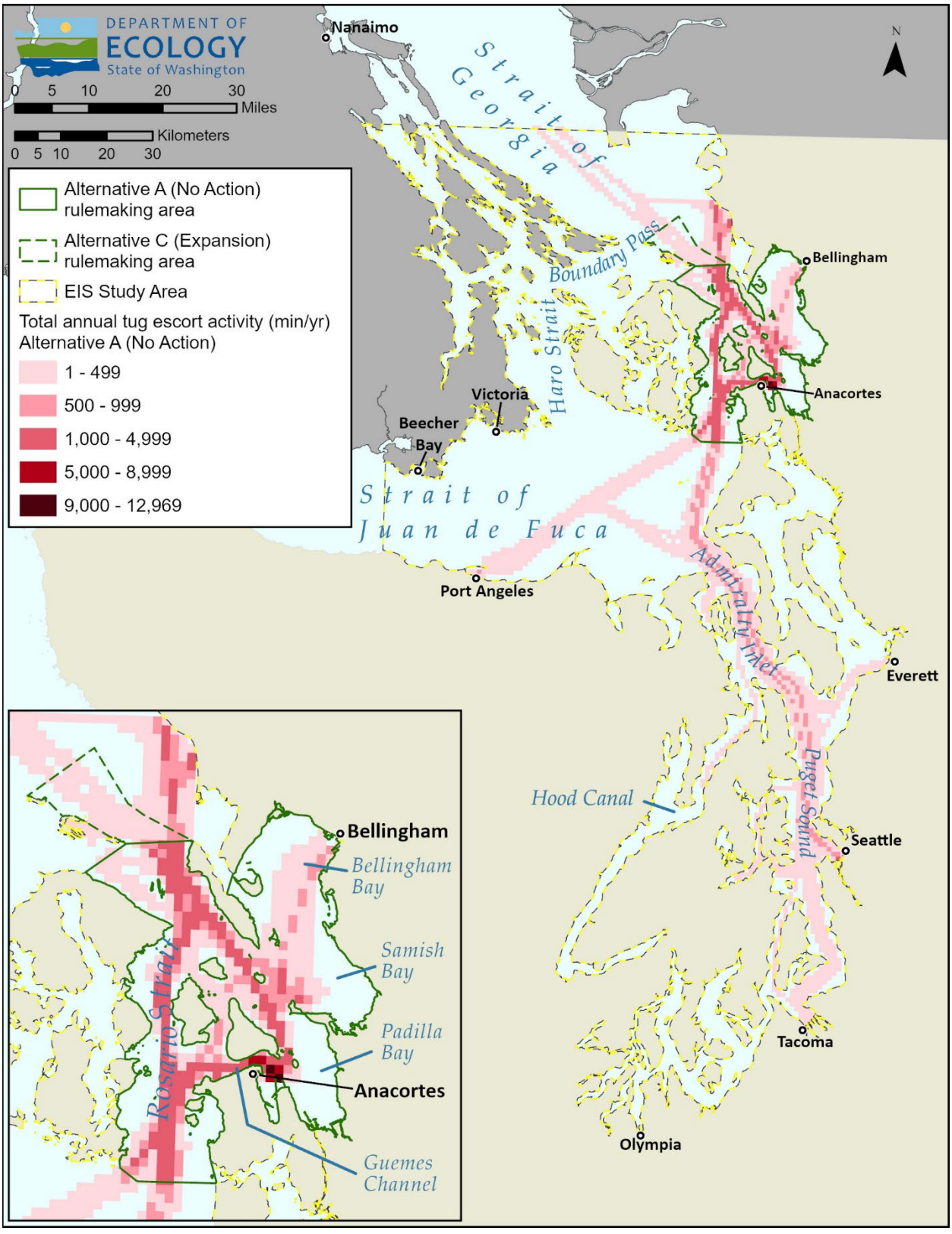


Figure 2. Simulated target vessel escort tug underway time under Alternative A and B.

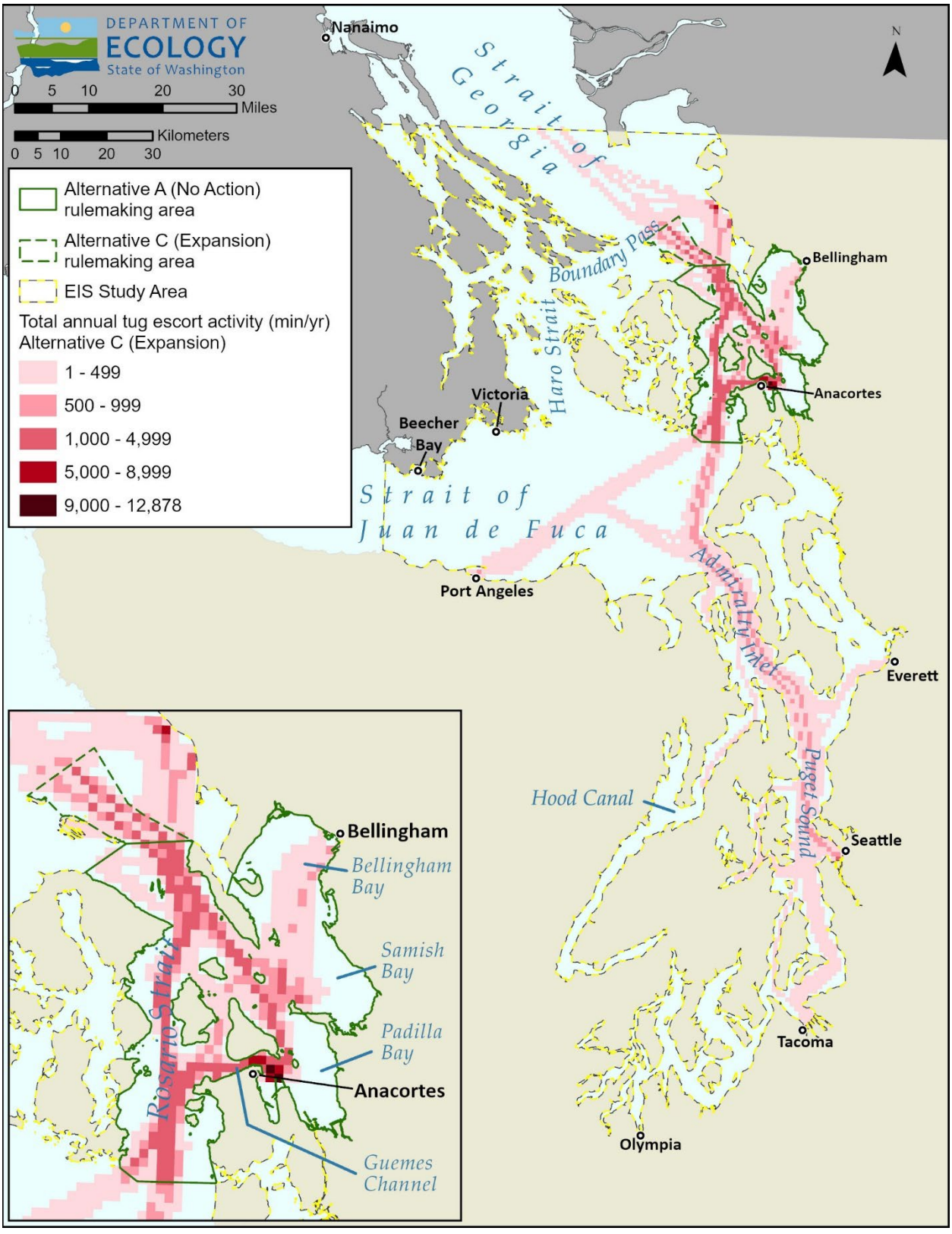


Figure 3. Simulated target vessel escort tug underway time under Alternative C.

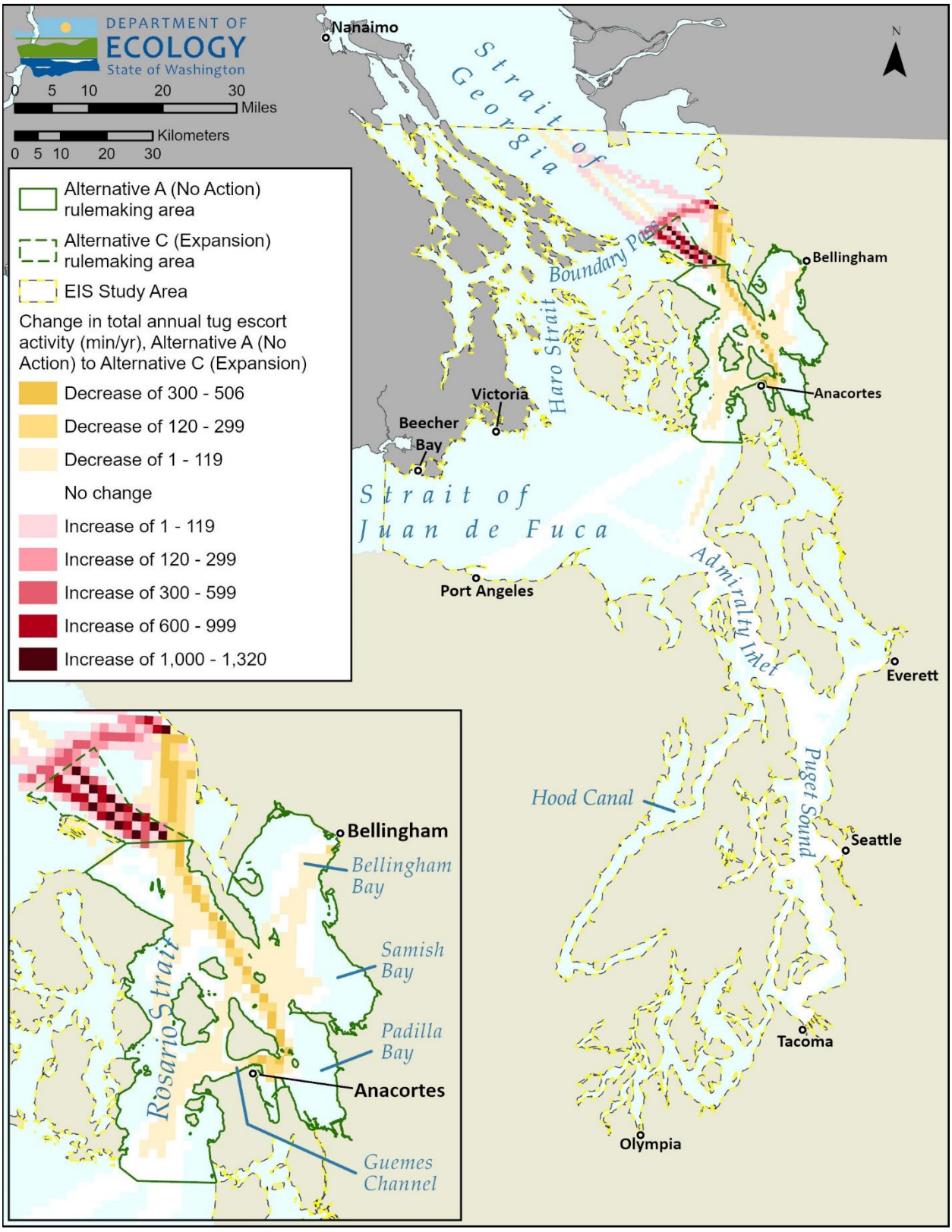


Figure 4. Simulated change in target vessel escort tug underway time between Alternative A and Alternative C. An additional accessible version of this map is available in Appendix M.

1.3 Resource Study Area

The EIS Study Area includes the rulemaking alternative boundaries and potential areas for escort tug commutes to and from the alternative boundaries. Specifically, the EIS Study Area includes all connected marine waters in the Salish Sea[3] network of coastal waterways (including Puget Sound), bounded to the north by the 49th Parallel and bounded to the west by a line extending across the Strait of Juan de Fuca from Pike Point to Tongue Point (see Figure 5).

The Tribal Resources Discipline Report Study Area includes the EIS Study Area plus immediately adjacent terrestrial areas.

[3] The term "Salish Sea" is used here to describe the transboundary waters of the Strait of Juan de Fuca, the Puget Sound, and the Georgia Strait. The name for this waterbody was proposed in 1989 by a marine science professor at Western Washington University to emphasize the region as a single ecosystem. It has since been formally adopted by the Washington State Committee on Geographic Names (Chapter 237-990 WAC) and the British Columbia Geographical Names Office (BC Geographical Names, n.d.). It was named for the Coast Salish Tribes who live on or near the Salish Sea on both sides of the U.S.-Canadian border. However, the defined geographic boundary of the Salish Sea also extends into the lands and waters of Tribes that are not Coast Salish, including the Makah Tribe (Nuu-Chah-Nulth). We use the term "Salish Sea" in this analysis, but recognize the diversity of native peoples that have lived in and used these waters since time immemorial.

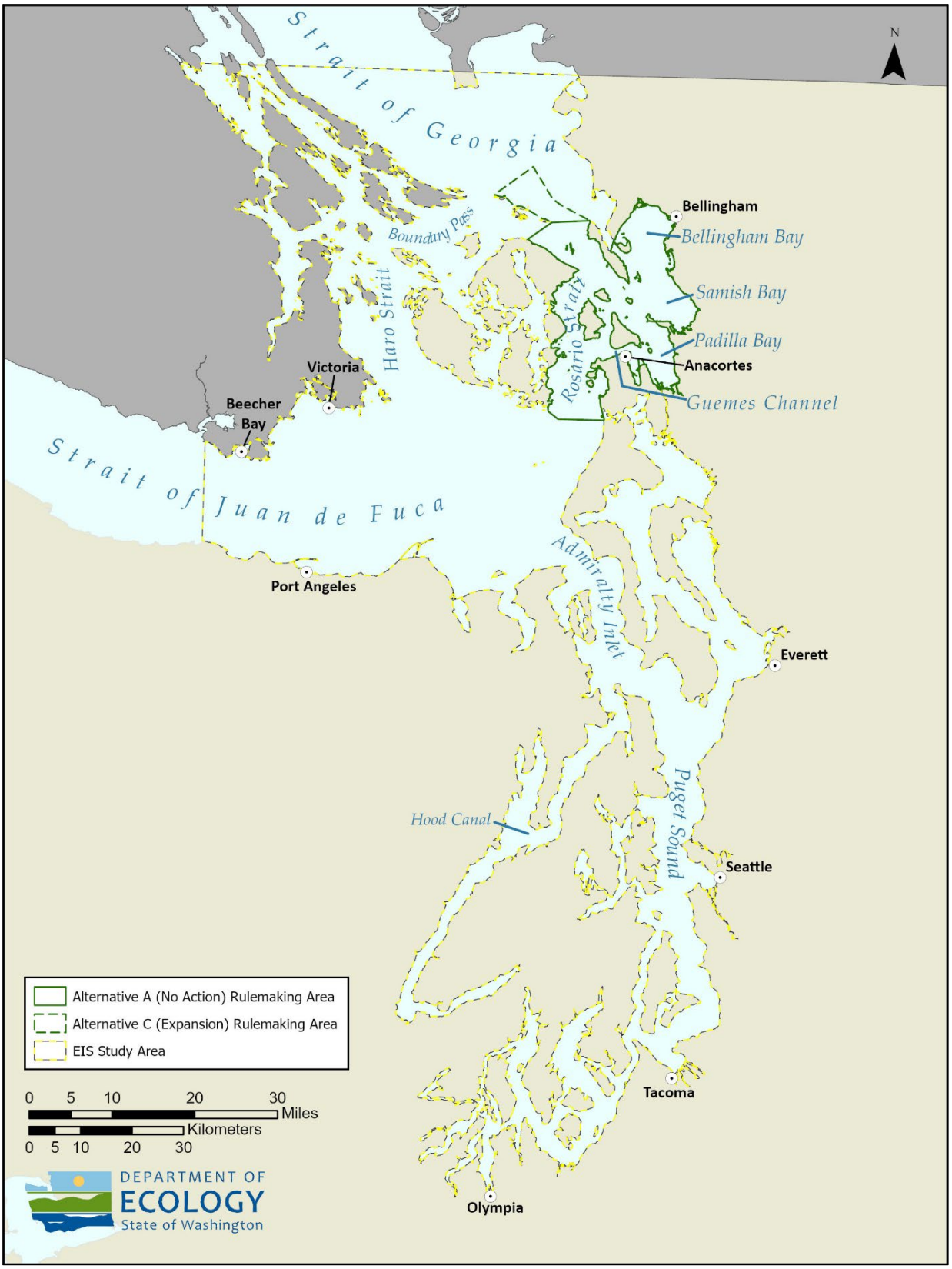


Figure 5. Boundary of the EIS Study Area.

1.4 Resource Description

For purposes of this report, Tribal resources refers to the collective rights and access to traditional areas and times for gathering resources associated with a Tribe's cultural practices, sovereignty, or formal treaty rights associated with usual and accustomed (U&A) ground and stations, or U&A areas. These resources include plants, wildlife, or fish used for commercial, subsistence, and ceremonial purposes and cultural resources. Also included are areas important to Traditional Cultural Practices, archaeological or historic sites, and Traditional Cultural Properties (TCP) associated with Tribal use. The TCPs are defined as "a property which has traditional cultural significance. It is associated with the cultural practices or beliefs of a living community that are rooted in that community's history and are important for maintaining the continuing cultural identity of the community" (WAC 365-196-450(2)(a)(iii)). Information about the location and nature of TCPs is often not made publicly available to ensure the property is not excavated, stolen, or otherwise disturbed. Generally, cultural resources may be historic (e.g., bottles, cans, ceramics, buildings, piers, and shipwrecks) or prehistoric (e.g., lithic debitage, tools, fire-modified rock, bone, petroglyphs, villages, and artifacts) and can also include culturally significant species, spiritual places, cultural landscapes, or religious sites. Tribal cultural resources are abundant throughout the State of Washington, and throughout the Puget Sound region where many Tribes settled and remain today.

This document describes Tribal resources that have been documented by Tribes in the EIS Study Area, including resources identified by Lummi Nation and Swinomish Indian Tribal Community via in-person site visits. This document also describes potential impacts on resources that could result from the Proposed Action or alternatives that could affect Tribal resources. Information about potential impacts to Tribal resources is detailed in Sections 3.1 (Affected Environment) through Section 3.5 (Alternative D: Removal of Tug Escort Requirements).

1.5 Regulatory Framework

Several federal, Tribal, state, and local laws, plans, and policies are applicable to Tribal resources in the EIS Study Area. Discussion of these laws, plans, and policies related to Tribal resources is intended to provide a framework for the overall regulatory context of the action but is not necessarily intended to imply applicability or compliance requirements for the four regulatory alternatives evaluated in the EIS.

Table 2 provides a list of federal, Tribal, state, and local laws, plans, and policies that are potentially applicable to Tribal resources in the EIS Study Area.

Table 2. Relevant laws, plans, and policies related to Tribal resources.

Jurisdiction	Laws, Plans, and Policies

Federal	• Treaties of 1855
	  ○ Treaty of Point No Point, 1855
	  ○ Treaty of Point Elliot, 1855
	  ○ Treaty of Olympia, 1856
	  ○ Treaty of Neah Bay, 1855
	  ○ Medicine Creek Treaty, 1854
	• *United States v. Washington*, 384 F. Supp. 314 (W.D. Wash. 1974), "Boldt Decision"
	• *Washington v. Washington State* Commercial Passenger Fishing Vessel Association, 443 W.S. 658 (1979)
	• *United States v. Washington,* 873f. Supp. 1422, 1441 (W.D. Wash. 1994), "The Rafeedie Decision"
	• Water Quality Standards Regulatory Revisions to Protect Tribal Reserved Rights (40 CFR 131)
	• National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 *et seq.*

Tribal	• Coordinated Tribal Water Quality Program
	• Treaties of 1855
	  ○ Treaty of Point No Point, 1855
	  ○ Treaty of Point Elliot, 1855
	  ○ Treaty of Olympia, 1856
	  ○ Treaty of Neah Bay, 1855
	  ○ Medicine Creek Treaty, 1854

State	• Chapter 27.53 RCW Archaeological Sites and Resources • Chapter 27.44 RCW Indian Graves and Records • Centennial Accord Between the Federally Recognized Indian Tribes in Washington State and the State of Washington (GOIA 1989) and its implementation plan (GOIA 1999)

2.0 Methodology Summary

Ecology identified and reviewed data from available references and source materials to analyze existing Tribal resources of interest within the EIS Study Area. Additionally, Ecology identified resources of concern through coordination with and input from Tribal representatives throughout the outreach process. Ecology developed an outreach list of Tribes with reference to the Governor's Office of Indian Affairs Tribal Directory and the Department of Archaeology and Historic Preservation (DAHP) Tribal Contact Information list. This list was used to communicate about all major rulemaking steps as well as to announce rulemaking and EIS workshop dates and send workshop materials. An additional list was developed with input from Ecology's Director of Tribal Affairs for more targeted outreach to Tribes that are potentially more directly affected by the proposed alternatives. Additional emails and phone calls were made on a quarterly basis to this list of Tribes throughout the EIS development. Ecology characterized the affected environment by focusing on resources such as TCPs and archaeological sites and then discussing Tribal treaty reserved rights. To inform the discussion of the affected environment, Ecology coordinated with DAHP to receive a list of cultural resources (e.g., including both archaeological and TCPs) to inform which Tribal cultural resources are in the study area.

As part of the Transportation: Vessel Traffic Discipline Report (Appendix B), Ecology has characterized vessel activity using simulated data from a vessel traffic model to help analyze impacts across the alternatives. Ecology then reviewed the results of vessel activity simulations, which estimated the existing annual underway minutes for escort tugs and how escort tug underway times are projected to change under the rulemaking alternatives (see Appendix B for details). Ecology also reviewed input provided by Tribal representatives both directly related to this rulemaking and in existing documented sources to improve our understanding of current threats to and interactions with Tribal fishing within the EIS Study Area. To focus on areas of potential impact from escort tug underway time, Ecology reviewed the vessel traffic model results for Alternative A to determine where escort tugs are expected to operate and determined whether those areas were near to Tribal areas of interest. Ecology also characterized the existing oil spill risks to Tribal and cultural resources under Alternative A.

Ecology then narratively described the expected changes that would occur under Alternatives B, C, and D. Further, Ecology determined if changes in tug operations due to the expansion of the tug operation area would cause new impacts to Tribal resources in Tribal areas of interest and/or in the expansion area, as well as how the potential decrease in grounding risk and the associated water quality impacts from spills may positively benefit Tribal resources. Additionally, Tribal representatives provided input on best management practices (BMPs) and mitigation measures that could be incorporated to reduce impacts to Tribal resources.

Last, Ecology assessed whether those impacts would be likely to result in significant adverse environmental impacts, using the significance thresholds outlined below in Table 3. According to WAC 197-11-794, significant "means a reasonable likelihood of more than a moderate adverse impact on environmental quality" and should rely on context (e.g., physical setting) and

intensity (e.g., magnitude and duration of impact). Findings of significance were reported for each alternative, where identified.

Table 3. Significance thresholds for Tribal resources.

Indicator	Significance Thresholds
Aquatic Species and Habitat	Continuation or introduction of adverse impacts to wildlife or habitats of cultural significance to Tribes.
Water Quality	Continuation or introduction of reasonable likelihood of disruption of Tribal activities that are dependent on water quality.
Tribal Treaty Fishing	Continuation of adverse impacts or introduction of new adverse impacts to the quality and operation of Tribal fishing areas including, but not limited to, boat launches, other access points, commercial fishing, safety elements, equipment.
Coastal Cultural Resources	Continuation or introduction of adverse impacts to cultural resources (e.g., coastal sites) due to oil spills and/or wakes.

3.0 Technical Analysis and Results

This section describes the affected environment for Tribal resources within the EIS Study Area. It also describes anticipated, qualitative impacts on Tribal resources from the four alternatives: No Action (Alternative A), Addition of FORs (Alternative B), Expansion of Tug Escort Requirements (Alternative C), and Removal of Tug Escort Requirements (Alternative D). This section also identifies mitigation measures that could avoid, minimize, or reduce the potential impacts and determines if there would be significant and unavoidable adverse environmental impacts.

3.1 Affected Environment

The EIS Study Area includes all connected marine waters in the Salish Sea network of coastal waterways including Puget Sound, bounded to the north by the 49th Parallel and bounded to the west by a line extending across the Strait of Juan de Fuca from Pike Point to Tongue Point. Tribes in this region use the waters in the EIS Study Area to harvest fish and shellfish for commercial, ceremonial, and subsistence uses. Treaties protect the rights of Tribes to harvest, ensuring they have access to the waters and the resources in them. Several of these Tribes have reservations that border the EIS Study Area, while others are located farther inland but travel to the area to fish for culturally and economically significant fish and shellfish species. Other non-fisheries species in the EIS Study Area that could be affected by this rulemaking, such as killer whales, may have cultural significance to Tribes. In addition to aquatic resources, Tribal cultural resources such as archaeological sites and TCPs exist on and off reservation and extend throughout the EIS Study Area. For the purposes of this analysis and consistent with previous analyses, Ecology is considering the escort tug population of this EIS to be 18 escort tugs identified in Appendices P and Q of the 2021 Vessel Traffic Trend Study (BPC & Ecology, 2021). Ecology assumes that, while the fleet conducting tug escort activity may have changed since the 2021 study (and may continue to change), the fleet will remain generally similar in composition and characteristics (e.g., length) to those identified in the 2021 study. Ecology estimates that under current conditions, escort tug underway time associated with this proposed rule represents approximately 0.96 percent of the overall marine vessel activity in the EIS Study Area. See Appendix B Transportation: Vessel Traffic Discipline Report for details.

3.1.1 Tribes with Potential Interest

Ecology has developed a list of 43 Tribes that may potentially be affected by the rulemaking and are therefore included in outreach related to this EIS. Ecology used the agency contact list of Tribal Chairs and Natural Resource Directors to communicate about all major rulemaking steps and to announce rulemaking and EIS workshop dates and send workshop materials. Additional staff were added to the contact list at the request of individual Tribes or from Spills Program contacts, given the oil pollution focus of the rulemaking. An additional list was developed with input from Ecology's Executive Advisor for Tribal Affairs for more targeted outreach to Tribes that are potentially more directly affected by the proposed alternatives. Table 4 presents these 43 Tribes identified by Ecology.

Ecology held site visits with several Tribal nations, including the Lummi Nation and Swinomish Indian Tribal Community, and attended an annual meeting with the Makah Tribe to discuss concerns and issues of importance to those Tribes.

Table 4. List of Tribes in Washington State potentially affected by the rulemaking.

Tribe	Treaty,[a,b] Executive Order, or Federal Designation/Reinstated
Chinook Indian Nation	N/A
Coeur d'Alene Indian Tribe	N/A
Confederated Tribes and Bands of Yakama Nation	Yakama Treaty, 1855
Confederated Tribes of the Colville Reservation	Executive Order
Confederated Tribes of the Chehalis Reservation	Federally Recognized
Confederated Tribes of the Grand Ronde Indian Community of Oregon	N/A
Confederated Tribes of the Umatilla Indian Reservation	N/A
Confederated Tribes of Warm Springs	N/A
Cowlitz Indian Tribe	Federally Recognized
Duwamish Tribe	Treaty of Point Elliot, 1855
Hoh Indian Tribe	Executive Order
Jamestown S'Klallam Tribe	Point No Point Treaty, 1855
Kalispel Tribe of Indians	Executive Order
Kikiallus Indian Nation	Treaty of Point Elliot, 1855
Lower Elwha Klallam	Point No Point Treaty, 1855
Lummi Nation	Treaty of Point Elliot, 1855
Makah Tribe	Treaty of Neah Bay, 1855
Marietta Band of the Nooksack Tribe	N/A
Muckleshoot Indian Tribe	Treaty of Point Elliot, 1855
Nez Perce Tribe	N/A
Nisqually Indian Tribe	Treaty of Medicine Creek, 1854
Nkaka'pamux Nation (Canadian First Nation)	N/A
Nooksack Tribe	Treaty of Point Elliot, 1855
Port Gamble S'Klallam Tribe	Point No Point Treaty, 1855
Puyallup Tribe	Treaty of Medicine Creek, 1854
Quileute Tribe	Treaty of Olympia, 1855
Quinault Indian Nation	Treaty of Olympia, 1855
Samish Indian Nation	Treaty of Point Elliot, 1855
Sauk-Suiattle Indian Tribe	Treaty of Point Elliot, 1855
Shoalwater Bay Indian Tribe	Executive Order
Skokomish Indian Tribe	Point No Point Treaty, 1855

Tribe	Treaty,[a,b] Executive Order, or Federal Designation/Reinstated
Snohomish Tribe	Treaty of Point Elliot, 1855
Snoqualmie Indian Tribe	Federally Recognized
Snoqualmoo Tribe of Indians	Treaty of Point Elliot, 1855
Spokane Tribe of Indians	Executive Order
Squaxin Island Tribe	Treaty of Medicine Creek, 1854
Steilacoom Indian Tribe	Treaty of Medicine Creek, 1854
Stillaguamish Tribe of Indians	Treaty of Point Elliot, 1855
Suquamish Tribe	Treaty of Point Elliot, 1855
Swinomish Indian Tribal Community	Treaty of Point Elliot, 1855
Tulalip Tribes	Treaty of Point Elliot, 1855
Upper Skagit Indian Tribe	Treaty of Point Elliot, 1855
Wanapum Tribe	N/A

a – DAHP 2024

b – Only includes treaties related to fishing rights in the Pacific Northwest and Puget Sound

Currently, escort tug activity occurs near the following reservations:

- Escort tugs travel past the Lummi Nation Reservation in the area between the northern boundary of the current rulemaking area and ports north of Neptune Bay. This area includes Cherry Point, a TCP for the Lummi Nation.
- The area around Anacortes is the area with the highest amount of underway minutes per sq km and is near to the Swinomish Indian Tribal Community Reservation which is located southeast of Anacortes.
- Escort tugs commute past the Suquamish Port Madison Indian Reservation when traveling through Puget Sound to and from Seattle.
- Escort tugs travel past the Tulalip reservation when traveling to the north of Everett.
- Escort tugs travel near the Puyallup reservation when traveling to Tacoma.
- Escort tugs travel near the Jamestown S'Klallam Tribal reservation when traveling between the Strait of Juan de Fuca and the Admiralty Inlet.
- Escort tugs travel near the Port Gamble S'Klallam Tribal reservation when traveling north and south in the Admiralty Inlet.
- Escort tugs travel near the Lower Elwha Klallam Tribe when traveling to and from Port Angeles.

3.1.2 Tribal Cultural Resources

Tribal cultural resources extend throughout the EIS Study Area and can exist on or off reservations. Tribal cultural resources can include objects or sites such as TCPs, as well as recorded and unrecorded archaeological sites. In coordination with DAHP, Ecology identified that the primary risk from this rulemaking to historic and cultural resources is the impact of a spill and associated clean-up efforts on coastal cultural resources. Many natural resources also have cultural significance for Tribes. These resources are discussed in sections 3.1.3 Tribal Treaty Reserved Rights and 3.1.4 Natural Resources Associated with Tribal Use.

3.1.2.1 Traditional Cultural Properties

Information about TCPs is typically not disclosed publicly. However, information on some TCPs and other resources has been made publicly available by the Tribes in the area. The Lummi Nation considers Xwe'chi'eXen, at Cherry Point, to be a TCP. This site is located in the EIS Study Area and dates back approximately 3,500 years. It is located in an area where the Tribe harvests sockeye, coho, chinook, pink, and chum salmon and is an important site for fishing (USACE, 2022). Xwe'chi'eXen is an important village for Lummi Nation ancestors, as it is a site of religious, spiritual, and cultural importance to the Lummi Nation. Currently, there is low to moderate escort tug underway time near Cherry Point. This TCP is approximately 12 miles north of the current rulemaking area and is close enough to be potentially affected by large oil spills from target vessels within the vicinity of the rulemaking areas.

3.1.2.2 Archaeological Sites

Archaeological sites are abundant in the State of Washington, and particularly in the coastal areas of Puget Sound due to the prehistoric and historic uses of the Tribes, including settlements and villages, fishing and hunting areas, and recreational areas such as campsites. Similar to TCPs, the location of individual archaeological sites is typically not made publicly available; however, densities of known archaeological sites in the rulemaking areas are high on San Juan, Lopez, Orca, and Shaw islands and medium throughout the remainder of the rulemaking areas, especially in Bellingham Bay (USACE, 2022). Currently, there is low escort tug underway time in Bellingham Bay and moderate escort tug underway time around the eastern side of the San Juan Islands in Rosario Strait.

Additionally, there are several known cultural sites along the shoreline of the Strait of Juan de Fuca, a few of which are named in the National Register of Historic Places (NRHP). Additionally, Freshwater Bay—located west of Port Angeles, along the south shoreline of the Strait of Juan de Fuca—is known to contain Tribal lands and resources (Ecology, 2024b). There is currently low escort tug underway time near Port Angeles, however there is no escort tug underway time to the west of Port Angeles.

3.1.3 Tribal Treaty Reserved Rights

Treaties play an important role in protecting the Tribal reserved rights to harvest, protect, access, manage, and restore the natural resources that are economically and culturally significant to them. Through these treaties, Indian Tribes ceded land and natural resources to the United States while retaining all rights not expressly granted. These rights include the right to hunt, fish, and gather plants both on and off reservation (NWIFC, 2014).

In 1855, Washington Governor Isaac Stevens established five treaties with western Washington Tribes which included: Treaty of Point No Point, Treaty of Point Elliot, Treaty of Olympia, Treaty of Neah Bay, and Medicine Creek Treaty. These treaties were negotiated with the Tribes of western Washington to obtain the land and accommodate settlers, while the Tribes agreed to live on reservations but reserved their rights to continue to hunt and gather in all their traditional places (NWIFC, 2014). Treaty specific language includes a provision that Tribes reserved the right of taking fish “in common with all citizens” of Washington.

Throughout the decades, the Tribes’ treaty rights were challenged as they were systematically denied their treaty-protected rights by the State of Washington. In 1974, however, the case of *United States v. Washington*, 384 F. Supp. 314 (W.D. Wash. 1974) which is known as the Boldt Decision, reaffirmed the Tribes’ treaty-protected rights and established them as co-managers of fisheries resources, along with the State of Washington (NWIFC, 2014). The Boldt decision interpreted the treaty language to mean that the Tribes are entitled to one half of the harvestable surplus of fish that reside in or pass through their U&A areas (PFMC, 2024). Furthermore, in the case of *Washington v. Washington* State Commercial Passenger Fishing Vessel Association, 443 W.S. 658 (1979), the U.S. Supreme Court held that Tribes had rights not just to access their U&A areas but also to half the share of fish in Washington state. As a result of these lawsuits, Tribes with treaty-protected rights in Washington state and the State of

Washington co-manage Washington's fisheries through a collaborative government-to-government process.

In 1994, following in the footsteps of the Boldt Decision, in the case of *United States v. Washington,* 873f. Supp. 1422, 1441 (W.D. Wash. 1994) which is commonly referred to as the Rafeedie decision, the District Court ruled that Tribes had reserved rights in all U&A places to half of the harvest of all shellfish including in public and private tidelands (NWIFC, 2016c).

3.1.3.1 Tribal Fishing and Co-Managed Fish Species

Tribes are co-managers of the fisheries with the State and Federal governments. Puget Sound is home to eight different anadromous salmonid species: pink, chum, chinook, coho, sockeye, steelhead trout, bull trout, and cutthroat trout. Of these eight species, four (chinook, Hood Canal summer chum, steelhead trout, and bull trout) are listed as threatened species under the ESA (SSHIAP, 2020). Salmon and steelhead population recovery has been a major goal of the treaty Tribes as they work to protect and restore populations, habitats, and water quality (SSHIAP, 2020).

Washington state law requires the State and state agencies to maintain government-to-government relations with Tribes and to "collaborate with Indian Tribes in the development of policies, agreements, and program implementation that directly affect Indian Tribes and develop a consultation process that is used by the agency for issues involving specific Indian Tribes" (RCW 43.376).

Annually, Tribal representatives engage with representatives from the state and federal governments through the North of Falcon process. Through this process, they set annual statewide salmon season summaries and agreed fisheries. The North of Falcon process is a series of meetings meant to achieve a consensus on the overall management of fisheries for the next year. The final management plan includes multiple agreements between the State of Washington and Tribes.

The ESA prohibits the "take" of listed species in order to manage populations of federally listed species. Under the ESA, the National Marine Fisheries Service (NMFS) manages marine mammals and ESA-listed marine and anadromous species, therefore the salmon and steelhead species that are significant to treaty Tribes are under NMFS jurisdiction. While the ESA prohibits "take" of listed species, NMFS has the authority to exempt certain activities from the take prohibition (NWIFC, 2016d). Therefore, to comply with the ESA and still be able to harvest, the treaty Tribes in Puget Sound and WDFW submitted harvest management plans for Puget Sound chinook and Hood Canal summer chum to NMFS and were subsequently authorized. Since then, Tribes have constrained their harvests of salmon in the interest of conservation (NWIFC, 2016d).

Tribal treaty fisheries generally occur year-round and include a diversity of species from shellfish to salmon to groundfish. Tribal fishing fleets can include smaller vessels which don't typically carry AIS (Loomis & Swinomish, 2021). Tribal treaty fisheries provide both income and subsistence which support tribal economies and nutritional security. For example, in the Swinomish Tribe, almost every household depends on a commercial fisher for their livelihood

(Loomis & Swinomish, 2021). Fishing and sharing fish is essential to Tribal culture, spirituality, sharing of inter-generational knowledge, and community events and ceremonies (Loomis & Swinomish, 2021).

3.1.3.2 Usual and Accustomed Fishing Areas

All saltwater, freshwater, tidelands, and stream banks in western Washington north of a line from Olympia to the south shore of Grays Harbor are within the U&A areas of one or more Indian Tribes (Lummi Indian Business Council, 2016). Treaty Tribes are entitled to up to half of the harvestable catch of fish and shellfish that reside in or pass through their U&A areas. In addition to being entitled to half of the harvest, the Tribes also co-manage the fisheries with the State and Federal governments. Some publicly available information is available on Tribal U&A areas. Publicly documented U&A fishing areas include but are not limited to the following examples (some of which are located outside of the EIS Study Area). However, these descriptions may not capture the full extent of current and/or historical U&A areas, some of which have been significantly reduced over time:

- The entirety of the Salish Sea contains U&A fishing areas for at least one Tribe; however, approximately 27 percent of the waters of the Salish Sea are designated shipping lanes and anchorages (Loomis & Swinomish Tribe, 2021). The disruption to Tribal treaty fishing also spreads to a wider area from docking facilities, bunkering sites, and the movement of support vessels, and is particularly concentrated near docks and anchorages (Loomis & Swinomish Tribe, 2021).
- The Swinomish Indian Tribal Community has identified all or some of the Skagit River watershed as U&A area for their Tribe (SSHIAP, 2020). Additionally, the Port Angeles precautionary area, the Haro and Boundary Pass, and the Rosario Strait (USCG, 2017), as well as Cherry Point Area, U.S. Waters in the Strait of Georgia north to the Canadian border, all of the San Juan Islands, and the eastern portions of the Strait of Juan de Fuca (USACE, 2022) have been identified by the Tribe as U&A area. They currently fish from the Canadian border to a few miles south of the tip of Whidby Island and has the second largest tribal fishing fleet in the Salish Sea (Loomis & Swinomish Tribe, 2021). Swinomish also identified that many other Tribes fish in this area including the Jamestown S'Klallam, Lower Elwha, Lummi, Nooksack, Port Gamble S'Klallam, Suquamish, Tulalip Tribes, and Upper Skagit Tribe (Loomis & Swinomish, 2021). Currently, there is no requirement for tug escorts of target vessels in Haro Strait and Boundary Pass; low escort tug activity in the Port Angeles area and in the eastern portions of the Strait of Juan de Fuca; low-to-moderate escort tug activity in the Strait of Georgia, and near Cherry Point; and moderate escort tug activity in Rosario Strait and the eastern side of the San Juan Islands.
- In addition to the Swinomish Indian Tribal Community, the Upper Skagit Indian Tribe and the Sauk-Suiattle Indian Tribe have identified all or some of the Skagit River watershed as U&A areas (SSHIAP, 2020). Currently, there is no escort tug activity in the Skagit River or in Skagit Bay.

- The Nooksack Indian Tribe's U&A areas span from the international border to the north, to Samish Bay to the south, and from the crest of the North Cascades to the east to the San Juan Islands to the west. This includes the Nooksack River watershed, Samish River watershed, coastal Tributaries, and nearby marine waters to and including the San Juan Islands (Nooksack Indian Tribe, 2024). Currently, there is low-to-moderate escort tug activity in Samish Bay and moderate escort tug activity on the eastern side of the San Juan Islands in Rosario Strait.
- The Suquamish Tribe U&A area extends from the northern tip of Vashon Island to the Fraser River. This includes, but is not limited to, Haro and Rosario Straits, the San Juan Islands, streams draining into the western side of Puget Sound, and Hood Canal (SSHIAP, 2020). Currently, there is no escort tug activity in Haro Strait and Hood Canal, and moderate escort tug activity in Puget Sound, Rosario Strait, and the eastern side of the San Juan Islands.
- The Makah Tribe's U&A area extends east into the Strait of Juan de Fuca to Tongue Point and 40 miles west offshore into the Pacific Ocean (SSHIAP, 2020) (International Whaling Commission, 2024). Currently, no escort tug activity occurs near Tongue Point or in waters west of this area.
- The Tulalip Tribes' U&A areas extend 120 miles from the Canadian border south to the north end of Vashon Island and includes the Snohomish River basin and surrounding marine waters (SSHIAP, 2020). Currently, low escort tug activity occurs on the northern and eastern sides of Vashon Island.

Tribes fish in specific geographic areas based on co-management agreements with Washington state and with other Tribes and these agreements are updated annually. Each treaty Tribe has an established fisheries program and monitoring staff and has established monitoring that occurs across the region to help to provide data on aquatic species, habitat, and water quality. The Northwest Indian Fisheries Commission (NWIFC) compiles and displays monitoring information through their Nearshore Data Exchange mapper, which shows Tribal monitoring stations across Puget Sound, as well as fish population distribution (NWIFC, 2024). The mapper includes data on Skagit River System Cooperative (SRSC) research points that provide a summary of fish catch results for the area. These research points are present throughout the rulemaking alternative areas and are an example of monitoring sites that may be affected by vessel traffic impacts. In some cases, Tribes set up monitoring stations on reservations and they manage the stations and the data themselves. In other cases, the Tribes partner with different state or federal agencies, or other organizations with an interest in conservation, preservation, and restoration.

3.1.4 Natural Resources Associated with Tribal Use

Tribes use natural resources found throughout the EIS Study Area for commercial, ceremonial, and subsistence use. Some species and natural resources which are not harvested may also have cultural significance. Ceremonial and subsistence use may include ritual or community use of resources harvested for non-commercial use by treaty Tribes (NOAA, 2022b). Treaty Tribes in Washington use natural resources such as fish, shellfish, and marine mammal species for

traditional, ceremonial, and subsistence uses. Habitat for natural resources used by Tribes is known to occur throughout the EIS Study Area, including habitat for Southern Resident Killer Whales (SRKW), salmon and steelhead species, and shellfish species.

The SRKW are a culturally significant species to many of the treaty Tribes in Puget Sound and are often seen by Tribes as an indicator of the overall health of aquatic ecosystems (Southern Resident Orca Task Force, 2018). This species of orca has seen a drastic decrease in population and is on the verge of extinction. One major threat to the SRKWs is the lack of their predominant food source, the Chinook salmon. Chinook salmon populations have decreased in numbers due to harvesting and habitat degradation, and many runs of Chinook salmon are listed as threatened or endangered under the Endangered Species Act (ESA). Other significant threats to the SRKW population include vessel traffic disturbance and contaminated water (Lacy et al., 2017; Southern Resident Orca Task Force, 2018). Many treaty Tribes have made significant efforts to protect the SRKW populations and work to increase Chinook salmon populations throughout Puget Sound and the EIS Study Area.

In response to the threats to SRKW from salmon loss, Tribes have advocated for the hunting and harvesting of seals and California sea lions in western Washington. The number of seals and California sea lions in western Washington has grown over the last several decades, which has contributed to the decline of species that are important to treaty Tribes, including salmon and steelhead. Seals and California sea lions are protected under the Marine Mammal Protection Act and therefore have experienced successful protection that has led to overpopulation in some regions. Joint efforts, such as the harbor seal population survey between the WDFW and several treaty Tribes, have been made to co-manage seal and sea lion populations (Loomis, 2020).

In addition to SRKW, gray and humpback whales are significant species to Tribes in western Washington, particularly the Makah Tribe. In the Treaty of Neah Bay, the Makah Tribe reserved their right to harvest whale, a tradition that serves ceremonial, cultural, and social practices that have provided the community structure and is integral to spiritual ceremonies, and subsistence purposes, such as providing oil, meat, and materials used for storage containers (Makah Tribe, 2024). Whaling is represented in many facets of Tribal life such as song and dance, artwork, and basketry (International Whaling Commission, 2024).

Treaty Tribes harvest many different species of fish and shellfish that are culturally, nutritionally, and economically significant. Salmon and steelhead species are especially important to many Tribes who harvest in western Washington, therefore Tribes release approximately 40 million salmon from Tribal hatcheries each year in order to help keep stocks healthy (NWIFC, 2016b). Specifically, Lummi Bay Hatchery and Skookum Creek Hatchery are areas of high concern for the Lummi Nation in relation to this rulemaking (Lummi Nation representative to H. Kennard, personal communication September 10, 2024).

The Little Boston Creek Hatchery and the Port Gamble Net Pens are both owned and operated by the Port Gamble S'Klallam Tribe (Ecology, 2024a), the former is a chum salmon hatchery located at the mouth of Little Boston Creek in Port Gamble Bay, and the latter is a coho salmon hatchery located at the northern end of Port Gamble Bay in the Hood Canal (Port Gamble

S'Klallam Tribe, 2024). Additionally, the Makah Tribe salmon hatchery is located on the Hoko River within the Strait of Juan de Fuca (Ecology, 2024b).

Salmon and steelhead species are important to the Tribes' spiritual, communal, and economic wellbeing. For many Tribes, salmon is a pillar of their diet and is a primary or supplementary source of income. In addition to the direct Tribal uses of salmon species for cultural practices, subsistence, and commerce, salmon populations play a significant role for other culturally significant aquatic species such as the SRKW. Recently, however, salmon and steelhead populations have declined due to factors including, but not limited to, habitat degradation, water quality impairment, and climate change (SSHIAP, 2020).

In addition to salmon and steelhead species, other fish species such as forage fish and groundfish including flatfish, roundfish, and rockfish, are harvested by Tribes within the EIS Study Area (NWIFC, 2016a). Common forage fish include herring, smelt, and sandlance, and are found throughout the EIS Study Area in the deep-water column and in habitats such as sandy and rocky shorelines and protected bays in areas such as Port Ludlow, Port Angeles, and Freshwater Bay (Ecology, 2024a, 2024b). Flatfish species commonly found in the EIS Study Area include Pacific Halibut and flounder. Roundfish species commonly harvested by Tribes in the EIS Study Area include Pacific whiting, lingcod, cabezon, and blackcod (sablefish). Rockfish species commonly harvested by Tribes in the EIS Study Area include yellowtail and Pacific Ocean perch. Groundfish tend to live near or on the bottom of the sea floor, and the species listed here are often found coastwide (NOAA, 2024). Many of these species are regulated by the Pacific Fisheries Management Council (PFMC), while Pacific halibut are regulated by the International Pacific Halibut Commission (NWIFC, 2016a).

Shellfish harvesting is an important part of Tribal economies and culture, as it has been since time immemorial. Today, Tribes harvest the following shellfish species throughout the EIS Study Area within their respective U&A areas: geoduck, crab, sea urchin, oysters, clams, shrimp. Examples of shellfish resources of importance to Tribes in the EIS Study Area include:

- Large populations of hardshell clams and geoducks support Tribal fisheries throughout Admiralty Inlet.
- Kiket Island in Skagit Bay contains the Swinomish Indian Tribal Community clam garden (Swinomish Indian Tribal Community, 2024).
- The Strait of Juan de Fuca contains several Tribal shellfish hatcheries throughout the area including hatcheries managed by the Jamestown S'Klallam Tribe, and the Lower Elwha Klallam Tribe (Ecology, 2024b). These hatcheries include geoduck, sea urchin, oysters, manila clams, and shrimp.
- Drayton Harbor, Birch Bay, Semiahmoo Spit, and Bellingham Bay are considered important shellfish gathering areas for the Nooksack Tribe (Nooksack Indian Tribe, 2024).
- The Lummi Nation has the Lummi Bay Shellfish Hatchery located in Lummi Bay. (Lummi Nation representative to H. Kennard, personal communication September 10, 2024).

- The Swinomish Indian Tribal Community harvests Dungeness crab, shrimp, geoduck, clams, and oysters throughout the Strait of Juan de Fuca East, Saddlebags, Guemes Channel, Cherry Point, and the San Juan Islands (Ecology, 2021).

Table 5 contains a list of fish and shellfish species commonly harvested by treaty Tribes.

Table 5: Common fish and shellfish species associated with Tribal use and present in the EIS Study Area.

Common Name	Scientific Name
Chinook salmon	*Oncorhynchus tshawytscha*
Chum salmon	*Oncorhynchus keta*
Sockeye salmon	*Oncorhynchus nerka*
Coho salmon	*Oncorhynchus kisutch*
Pink salmon	*Oncorhynchus gorbuscha*
Coastal/Puget Sound bull trout	*Salvelinus confluentus*
Coastal resident/sea run cutthroat trout	*Oncorhynchus clarkia*
Rainbow trout/steelhead	*Oncorhynchus mykiss*
Forage fish	Multiple
Pacific halibut	*Hippoglossus stenolepis*
Flounder	Multiple
Pacific whiting	*Merluccius productus*
Blackcod (sablefish)	*Anoplopoma fimbria*
Lingcod	*Ophiodon elongatus*
Cabezon	*Scorpaenichthys marmoratus*
Sturgeon	Multiple
Lamprey	Multiple
Dungeness crab	*Metacarcinus magister*
Geoduck	*Panopea generosa*
Sea urchin	Multiple
Shrimp	Multiple
Clams	Multiple
Oysters	Multiple
Sea cucumber	Multiple

3.1.5 Current Threats to and Interactions with Fishing

Currently, tug escorts are required for target vessels in the Rosario Strait and waters east within the rulemaking area. They are also required for all oil tankers over 40,000 DWT east of Port Angeles. Most oil transportation requiring tug escort transits to and from the major refineries in the Anacortes, Bellingham, and Ferndale area. These large vessels also require assist tugs in order to safely dock at ports. Other areas of high escort and assist tug traffic in the EIS Study Area include the major ports of Seattle, Tacoma, and Everett.

Escort and assist tugs and target vessels make up less than 6 percent of total AIS vessel traffic in the EIS Study Area. Other commercial vessel traffic, as well as extensive recreational and fishing vessel traffic (a significant portion of which does not carry AIS), also operate in Puget Sound and make up the majority of existing vessel traffic. Some Tribes have identified vessel traffic as having impacts to Tribal treaty fishing and other Tribal resources. For example, the Swinomish

Tribe has stated “We are at a point where the current amount of vessel traffic interferes with Swinomish treaty fishing in important fishing areas” (Loomis & Swinomish, 2021, p.4). These impacts include, but are not limited to, a loss of physical space for fishing, impairment of access to fishing resources and fishing opportunity, difficulty crossing shipping lanes to access fishing areas, the need to pull gear out of the water or move to avoid large vessels (lost opportunity), gear loss when gear cannot be moved fast enough and is run over by large vessels, and impacts from wakes that negatively affect fisheries and lead to gear loss (Ecology, 2021). On September 23, 2024, Ecology met with Swinomish Indian Tribal Community representatives to discuss the rulemaking. Swinomish stated that out of all Swinomish U&A areas, they experience the most gear loss from tug, tanker, and barge traffic outside of Cap Sante, including Padilla Bay, Bellingham Bay, and Anacortes. Swinomish has also previously reported gear loss due to vessel traffic at Lopez Island, Rosario Strait, Haro Strait, Vendovi Island, Anacortes, Cherry Point, Smith Island, and Boundary Pass (Loomis & Swinomish, 2021). Representatives from the Tribe indicated that they fish throughout the area, including Vendovi Island and Jack Island. Additionally, Tribal representatives stated they experience between $80,000 to $100,000 in gear loss each year (Swinomish Indian Tribal Community representative to H. Kennard, personal communication, September 23, 2024).

Interactions between vessels and fishing equipment, such as gillnets, have been identified as an issue by several Tribes in the EIS Study Area. Gillnets trap fish by catching the fish’s gills in the mesh of the net as they try to swim through and then back out (NOAA, 2021). Many Tribes use gillnets to trap salmon and other culturally significant fish species in the EIS Study Area (NWIFC, 2016b). Vessels can damage or destroy gillnets placed in or near the shipping lanes (Ecology, 2021). In addition to creating an economic loss for Tribes, derelict nets damaged by vessels can trap and kill fish and cover their habitats, preventing the fish from accessing prey or shelter from predators (Northwest Straits Commission, 2013).

Additionally, according to the Swinomish Indian Tribal Community, crab pots near Lopez Island are vulnerable to vessel traffic due to their location. Any locations near shipping lanes and high vessel traffic, barge anchorages, and bunkering areas, as well as areas near facilities such as the Cherry Point refineries and their oil tankers, are particularly susceptible to gear loss (Loomis & Swinomish, 2021). In addition to being located in or near shipping lanes, many crab and shrimp pots are unattended for periods of time, therefore they are unable to be moved or cleared for vessel traffic and are prone to damage or destruction. Fishing gear can also be at risk if they are used in or near shipping lanes or high vessel traffic areas (Ecology, 2021). An account by the Suquamish Tribe indicates that they have been forced to fish overnight in order to avoid vessel traffic, which can put the safety of the fishermen at risk (USCG, 2017).

Along with interference from large vessels in shipping lanes, Tribal fishing is impacted by other small vessels that do not follow designated shipping lanes. These small crafts create additional traffic outside of shipping lanes and can also impact Tribal fishing by running over fishing gear (USCG, 2017).

Climate change is resulting in threats to Tribes and Tribal fishing within the EIS Study Area. Tribes are limited by Treaty to fish within their U&A areas, and because they cannot move to fish in different areas that are less impacted by climate change, they can bear a greater burden

from the impacts of climate change. Climate change impacts include rising sea levels and storm surges, ocean acidification, increased storm intensity and frequency, altered ecosystems, and an increase in invasive species and harmful algal blooms (HABs). Ocean acidification and HABs impact salmon returns, can result in beach closures that impede access to fishing areas, and can close fisheries (SSHIAP, 2020). Changes to the waters in and around Tribal treaty fishing areas have impacted the quality and quantity of fish and shellfish species and their suitable habitat (SSHIAP, 2020). In the Pacific Northwest, a warming climate and increased water temperatures in both freshwater and ocean waters have been shown to affect multiple parts of the salmon and steelhead lifecycle, including growth, migration, and survival (NOAA, 2022a). Additionally, the Pacific Northwest has begun to see the biological effects of a decrease in dissolved oxygen and aragonite saturation in the water, the former resulting in fish dying and the latter resulting in the shells of shellfish species dissolving (Newton & Klinger, 2015). See Appendix D Water Quality Discipline Report for further discussion on HABs and water quality. Tribal resources are already experiencing the impacts of climate change and will continue to experience greater impacts as climate change worsens.

Other risks to marine mammals, which are culturally significant to Tribes, include vessel strikes and underwater noise from recreational and commercial vessels. In Washington State, common marine mammal migration routes or activity overlap with shipping lanes. Ship strikes pose a threat to marine mammals—particularly large whales, but also dolphins, porpoises, seals, and otters—through injury or mortality. If a vessel collision is not lethal, the incident can still have long-term consequences on an individual and population. Long-term strike effects can reduce fitness, such as by impairing locomotion, which in turn reduces foraging efficiencies and can result in starvation. Additional information on strike risk to marine mammals can be found in Appendix F Plants and Animals Discipline Report.

Underwater noise and vessel interaction can cause marine mammals to leave migration routes, breeding areas, and foraging areas (Burnham, 2023). Some marine mammals may alter their call structure to avoid overlap with anthropogenic noises, or communicate via other methods, such as surface activity (e.g., breaching, tail lobbing) (Burnham, 2023). Underwater noise levels in several locations throughout the EIS Study Area periodically reach the NMFS marine mammal behavioral disturbance threshold under existing vessel traffic conditions. Exceedances of this noise threshold are more frequent near congested ports and shipping lanes. Additional information on underwater noise risks to marine mammals can be found in Appendix F.

3.1.5.1 Oil Spill Risk

Escort tugs are best suited to preventing drift groundings, which rarely result in a spill. Based on a review of actual incident data from 2002-2019, Ecology found that there were only four drift groundings in the model study area, none of which resulted in a spill (Ecology, 2023). Severe spills could result from incidents involving target vessels or escort tugs. Oil spills from target vessels, such as those carrying crude oil, would have a greater impact on water quality and thus fishing resources than spills from escort tugs due to the types of oil potentially released as well as the larger quantity that could be released. A spill from escort tugs would release diesel fuel in a smaller quantity than target vessels. Any oil spill from target vessels and/or escort tugs would have a negative impact on Tribal resources. However, many factors must be taken into

account to predict the severity and extent of impacts. Additionally, factors such as the location and timing of a spill highly influence the trajectory of oil after a spill has occurred. Ecology performed oil spill trajectory modeling, which simulates the trajectory of spills in locations where target vessel drift groundings have a relatively high likelihood of occurrence or where there is a high concentration of escort tug underway time.

For the 8 oil spill scenarios modeled, Ecology provided the spill trajectories to the DAHP so they could be overlayed with known archaeological sites in the DAHP inventory to determine which sites would be affected by the physical extents of the modeled oil spill scenarios. The modeled scenarios represent various oil spill risks under the different alternatives and do not all have the same likelihood of occurrence. The spill scenarios are presented in groups in Table 6 based on their locations and existing tug escort requirements.

The DAHP inventory only includes sites in the US; areas in Canada such as the Fraser River and the Gulf Islands would be affected by oil spills and likely have similar types and distributions of archaeological resources and sites. The following table shows the number of sites that would be affected by the modeled oil spill. The DAHP also indicated whether the site recorded in their inventory was determined to be NRHP-eligible. A site is considered eligible for listing in the NRHP if it meets the National Register Criteria for Evaluation, which requires reviewing the age, integrity, and significance of the site. The majority of archaeological sites have not been evaluated for eligibility and are predominantly (greater than 85 percent) pre-contact sites; however, between 9 and 17 sites are NRHP-eligible in each spill scenario. The data show that, regardless of spill location, over 150 recorded archaeological sites would be affected by a spill. This is because archaeological sites are abundant along the coastlines in the EIS study area, as discussed in Section 3.1.2.2 (Archaeological Sites).

Table 6. Archaeological sites intersected by each spill trajectory model scenario

Eligibility Status	Spill Scenario Group 1[a]			Spill Scenario Group 2[b]	Spill Scenario Group 3[c]		Spill Scenario Group 4[d]	
	James Island	Hat Island	North Peapod Island	Expansion Corridor	Ana-cortes	Southern Rendezvous	Matia Island	Clark Island
Eligible	12	9	17	11	13	17	13	13
Not Eligible	5	10	6	4	11	10	8	8
No Determination	215	134	212	210	178	268	275	196
Total	**232**	**153**	**235**	**225**	**202**	**295**	**296**	**217**

a – Target vessels are currently required to have a tug escort at this location, reducing the risk of a target vessel grounding and spill under current conditions.
b – Tug escorts are not currently required in this area, so the risk of a diesel fuel spill from an escort tug is unlikely at this location under current conditions.
c – Tug escorts are currently required in this area, so the risk of a diesel fuel spill from an escort tug is more likely at this location under current conditions.
d – Target vessels are not currently required to have a tug escort at/near this potential drift grounding location, increasing the risk of a target vessel grounding and spill under current conditions.

Oil spills have the potential to affect Tribal resources when they occur and can cause adverse impacts to fisheries and water quality in the EIS Study Area. For example, Swinomish Indian

Tribal Community representatives have identified one area of concern to be Lawson Reef, in the Strait of Juan de Fuca west of Deception Pass. Specifically, this is one of their highest areas of concern for oil pollution, and the risk of oil spills is their main concern with this rulemaking (Swinomish Indian Tribal Community representative to H. Kennard, personal communication, September 23, 2024). Additional information on current oil spill risks and concerns can be found in the Environmental Health: Releases Discipline Report (Appendix C).

3.1.5.2 Tug Rendezvous Points

Currently, escort tugs meet their target vessel at the boundary of the escort requirements. This can mean that escort tugs spend some time waiting at these boundary areas or rendezvous points prior to beginning the escort, as the tug needs to be in place before the target vessel arrives. Rendezvous points where escort tugs await their target vessel occur around the southern and northern ends of Rosario Strait Zone at the following locations:

- Rosario Strait Zone Southern Boundary: A line from Davidson Rock light, Southeast to position Lat. 48° 24.0'N, Long. 122° 47.15'W then East to the shore of Whidbey Island at Lat. 48° 24.0'N, Long. 122° 39.9'W.
- Rosario Strait Zone Northern Boundary: A line from Pt. Thompson on Orcas Island to Puffin Island light and then to Point Migley on Lummi Island.

See Appendix B Transportation: Vessel Traffic Discipline Report for more information on rendezvous points.

Swinomish Indian Tribal Community has indicated that tugs waiting at the southern rendezvous point under current conditions are causing interactions with the Tribal fishing fleet and sometimes gear loss. Several Tribes have treaty-reserved fishing rights near the northern boundary of Rosario Strait Zone, where escort tugs waiting at rendezvous points may also result in negative interactions with Tribal treaty fishing vessels.

3.2 Alternative A: No Action

3.2.1 Impacts from Implementation

Alternative A represents the most likely future conditions if we make no changes to existing tug escort requirements for target vessels. Tug escort requirements for target vessels would remain in place in the current rulemaking area as established by RCW 88.16.190(2)(a)(ii). Ecology estimated that Alternative A would lead to approximately 610,107 minutes of escort tug underway time for target vessels per year. Moderate escort tug activity (between 500 and 999 min/year per sq km) would continue under this alternative in a majority of the rulemaking area and in areas outside the rulemaking area, including between the northern boundary of the rulemaking area and the ports north of Neptune Bay and the southern boundary of the rulemaking area to Seattle. A majority of the escort underway time takes place in the following zones: Rosario Strait, Puget Sound, Strait of Georgia, Guemes Channel and Saddlebags, Eastern Strait of Juan de Fuca, Bellingham Channel and Admiralty Inlet. Several of these zones contain areas near Tribal reservations and Tribal treaty fishing occurs in all of them.

Current impacts to Tribal resources would continue under Alternative A. Section 3.1.5 (Current Threats to and Interactions with Fishing) describes generalized impacts from vessel traffic that would continue to affect Tribal treaty fishing under the current rulemaking; however, not all impacts described above are specific to escort tugs. Under the current rulemaking, escort tugs would continue to add traffic in shipping lane and anchorage areas adding to difficulties in accessing Tribal fishing areas and resources. Escort tugs would continue to contribute to wake-related impacts and fishing gear loss, and potential impacts to wildlife and natural resources from vessel strikes.

Marine mammals are culturally significant to many Tribes. Existing threats to marine mammals from vessel strikes and underwater noise would also continue under Alternative A. However, escort tugs do not contribute substantially to collisions with marine mammals, as discussed in Appendix F Plants and Animals Discipline Report.. As discussed in Appendix F, because marine mammals are known to utilize areas that have underwater noise exceedances, escort tugs could contribute to injury to marine mammals; marine mammal area avoidance; and impairments of marine mammal communication, orientation, and/or foraging. Tug escort requirements under Alternative A would continue to have a fairly substantial contribution to underwater noise at certain biologically important locations for marine mammals.

Additionally, impacts to Tribal U&A and species of Tribal significance under current vessel traffic (including from tug escort requirements under this proposed rulemaking) would continue. Escort tugs in rendezvous point areas would continue to result in negative interactions with treaty fishing vessels as described above under Alternative A. The entrance and exit areas to Rosario Strait Zone have concentrations of escort tug underway time ranging from 13 hours of underway time per year to 166 hours of underway time per year per square kilometer in this area.

Under Alternative A, tug escort requirements would continue to reduce the risk of target vessel drift groundings and oil spill risk. This includes a slight reduction in drift groundings and therefore a slight reduction in the risk of a catastrophic oil spill that could negatively impact Tribal resources and in particular archaeological sites along the coastline. Under Alternative A, escort tugs have an incident rate of 0.86 per year. Potential incident types included in this rate range from equipment malfunctions and small fueling spills to collisions and groundings. These incidents generally have a lower spill potential than a catastrophic target vessel spill because the volume of oil on tugs (fuel) is much less than the volume carried by target vessels (fuel and cargo). Although the risk is low, a large spill from an escort tug could also negatively impact Tribal resources including coastal archaeological sites.

3.2.2 Proposed Mitigation Measures

Implementation of the required and/or recommended mitigation measures described in this subsection would further reduce the potential for impacts to Tribal resources under Alternative A.

Required Mitigation (Rulemaking or Other Existing Regulations)

The Northwest Area Contingency Plan outlines policies and procedures for oil and hazardous materials incident response in Washington and addresses inadvertent discoveries of cultural

resources during oil spill response efforts. The plan includes measures that would be followed in the case of oil spills (refer to sections 4313, 4700, and 9403 of the Contingency Plan for additional information) (USCG, EPA, 2024).

Recommended Mitigation Measures

Ecology has provided avenues for Tribal representatives to provide input into mitigation measures for the proposed rulemaking. Two Tribes, Lummi Nation and Swinomish Indian Tribal Community, have provided input and/or requests for mitigation measures.

During a site visit on September 10th, 2024, Lummi Nation representatives expressed concern about impacts on cultural resources associated with clean-up of any potential oil spills and also provided a written response to the rulemaking on September 4, 2024 via email and included a recommendation that an Inadvertent Discovery Plan be on-site and followed should archaeological resources or human remains be encountered (T. Smart, Personal Communication, September 4, 2024). Lummi Nation also recommended that the Lummi Nation Natural Resources Department be consulted. The recommendation for an Inadvertent Discovery Plan is similar to the mitigation measures already required by the Northwest Area Contingency Plan for oil spill response efforts as described above, which would apply throughout the EIS Study Area in the event of an oil spill.

During a site visit by Ecology on September 23, 2024, representatives from the Swinomish Indian Tribal Community proposed that escort tugs show up to escorting jobs only when needed, rather than waiting for target vessels to arrive at the boundaries of the rulemaking areas to reduce the time spent waiting at rendezvous points. Representatives also advocated for just-in-time shipping, with vessels waiting in the ocean rather than Puget Sound (Swinomish Indian Tribal Community representative to H. Kennard, Personal Communication, September 23, 2024). Swinomish Tribal Community also proposed that escort tugs could consider agreements with Tribes where escort tugs are required to notify the Tribe where they are going and their routes to avoid impacts to treaty fishing similar to the Dunlap towing protocol (Swinomish Indian Tribal Community representative to H. Kennard, Personal Communication, September 23, 2024). Ecology also recommends that the PSHSC consider creating a Standard of Care for escort tugs minimize waiting at rendezvous points, particularly during active Tribal treaty fishing. The Puget Sound Harbor Safety Committee also recently began a subcommittee to address Tribal fishing gear loss as a result of interactions with commercial vessel traffic (Tribal Fisheries Lost Gear Subcommittee).. Ecology recommends that escort tug and target vessel representatives consider participating in the Tribal Fisheries Lost Gear Subcommittee and adopting eventual recommendations and/or Standards of Care.

3.2.3 Significant and Unavoidable Adverse Impacts

Alternative A would result in continued significant impacts to Tribal **treaty fishing and culturally significant species.** As stated in Section 3.1.3.2 (Usual and Accustomed Fishing Areas) approximately 27 percent of the waters of the Salish Sea, the entirety of which contain U&A areas for at least one Tribe, are designated shipping lanes and anchorages(Loomis & Swinomish Tribe, 2021). Escort tugs contribute to overall vessel traffic impacts affecting the quality and operation of Tribal fishing areas including, but not limited to, boat launches, other fishing

access points, negative interactions with commercial vessel traffic in fishing areas, physical and vessel safety elements, and gear loss. These adverse impacts would continue to affect Tribal treaty fishing under the current rulemaking; however, not all impacts from vessel traffic are specific to escort tugs.

Escort tugs currently contribute to overall vessel strike risks to culturally significant species and could potentially create adverse effects to these species if a strike were to occur. Under Alternative A, risk of impacts from vessel strikes and underwater noise impacts would continue to affect wildlife of cultural significance to Tribes, including marine mammals such as SRKW.

Escort tugs would not adversely impact water quality in Tribal treaty fishing areas or coastal Tribal resources such as archaeological sites and TCPs under Alternative A. Therefore, there are no significant or unavoidable adverse impacts to these resources under Alternative A.

3.3 Alternative B: Addition of Functional and Operational Requirements

3.3.1 Impacts from Implementation

Alternative B adds functional and operational requirements intended to increase safety and formalize existing best practices. It makes no change to the geographic boundaries described in Alternative A. These functional and operational requirements include 1) a minimum of either 2,000 or 3,000 hp requirements for the escort tugs based on the DWT of the escorted vessel, 2) minimum of twin-screw propulsion, and 3) a pre-escort conference between the tug and the escorted vessel.

Of the 18 tugs identified in the 2021 Vessel Traffic Trend Study (BPC & Ecology, 2021) as performing target vessel escort work, two are between 2,000 and 3,000 hp. Ecology reviewed the data used in this report and found that the escort tugs between 2,000 and 3,000 hp were only escorting target vessels under 18,000 DWT. The horsepower requirement codifies existing industry practices and ensures that tugs have sufficient power to intervene to prevent a drift grounding (and potential subsequent spill). Additionally, all 18 of the identified tugs meet the minimum twin screw propulsion requirement. These two requirements reflect today's industry practices and are therefore unlikely to result in changes to the distribution of escort tugs and their associated impacts. The FORs are intended to increase safety and formalize existing best practices.

The addition of FORs would not be anticipated to have any meaningful changes in impacts to Tribal resources to Alternative A, since all escort tugs in the existing fleet already meet the proposed horsepower and propulsion requirements.

The addition of FORs could result in a minor but unquantified decrease in the risk of oil spills from target vessels due to drift groundings but would not be expected to change the existing risk of a diesel fuel spill from escort tug incidents.

3.3.2 Mitigation Measures

The mitigation measures stated above in Section 3.2.2 (Mitigation Measures) also apply to Alternative B.

3.3.3 Significant and Unavoidable Adverse Impacts

Alternative B would result in significant adverse impacts to Tribal **treaty fishing and culturally significant species.** Escort tugs would continue to contribute to overall vessel traffic that currently creates adverse impacts to the quality and operation of Tribal fishing areas including, but not limited to, boat launches, other fishing access points, negative interactions with commercial vessel traffic in fishing areas, physical and vessel safety elements, and gear loss. Additionally, escort tugs would continue to contribute to overall vessel strike risks to culturally significant species and could potentially create adverse effects to these species. Under Alternative B, risks of impacts from vessel strikes would continue to affect wildlife of cultural significance to Tribes, including marine mammals such as SRKW.

The addition of FORs would not adversely impact water quality in Tribal treaty fishing areas or coastal Tribal resources such as archaeological sites and TCPs under Alternative B. Therefore, there are no significant or unavoidable adverse impacts to these resources under Alternative B.

3.4 Alternative C: Expansion of Tug Escort Requirements

3.4.1 Impacts from Implementation

Alternative C maintains the tug escort requirements outlined in Alternative A and expands them northwest towards Patos Island. Alternative C would result in a 2.41 percent increase in escort tug underway time. The net increase in escort tug underway time would occur primarily within and near the expansion area (i.e., in the Strait of Georgia and the Strait of Georgia South Zones). Escort tug underway time in the rest of the EIS Study Area would decrease slightly or remain the same (see Figure 4). Alternative C also includes the FORs included in Alternative B.

Alternative C would result in several notable changes in escort tug activity, summarized here by geographic area:

- Alternative C would result in a shift and an overall increase in escort tug activity between the northern boundary of the current rulemaking area and up to ports north of Neptune Bay, including Cherry Point. More specifically:
    - Escort tugs in this area would travel to the west to meet escort jobs at the northern boundary of the expansion area; the increase in traffic in this area would occur in the vicinity of the Lummi Nation Reservation.
    - The increase in escort tug activity in this area is coupled with a shift in traffic away from the eastern shore of the Strait of Georgia where escort tug traffic is actually decreasing. This is due to the fact that it is anticipated that escort tugs would head west out of the Cherry Point area instead of south to meet target vessels at the new northern boundary of the expansion area. This shift moves traffic away from the Lummi Nation reservation.
    - Overall, Alternative C would lead to an increase in underway minutes in the Strait of Georgia and an even larger increase in the Strait of Georgia South where the change would result in an increase from just under one minute of escort tug traffic per day to just over an hour of tug traffic per day. However, in both of

these areas, escort tugs associated with this proposed rule account for only approximately 10 percent of all existing escort/assist tug activity.

- There would be a decrease in tug escort activity within a majority of the existing rulemaking area because fewer commutes are taking place within the rulemaking area. More of them have been displaced to the north and south of the rulemaking area.
- In the commute areas south of Port Townsend, there would be no (or minimal) expected changes in escort tug activity.

Due to the anticipated increase in escort tug underway time in the area surrounding the expansion area, Alternative C would result in moderate impacts to Tribal resources in this area. Current threats and interactions to Tribal fishing from vessel traffic that was detailed in Section 3.1.5 (Current Threats to and Interactions with Fishing) would be exacerbated by the projected increase in escort tug underway time in the expansion area. These impacts would be concentrated in the Strait of Georgia and the Strait of Georgia South and would lead to a potential increase in traffic that would disrupt or hinder access to fishing areas and resources, cause more impacts from wakes, and lead to increased gear loss in these zones. More distributed waiting at rendezvous points may also shift interactions with Tribal treaty fishing (see Appendix B, Transportation: Vessel Traffic for details).

Additionally, Alternative C would result in higher potential risk of vessel strikes to culturally significant aquatic species, such as the SRKW in the expansion area due to the increase in escort tug underway time in the expansion area. Alternative C would also decrease strike risk to culturally significant aquatic species in other areas. For noise impacts to culturally significant species, noise levels would be expected to increase at certain locations and times under Alternative C compared to Alternative A. However, they would not result in additional exceedances of the 120 decibel NMFS marine mammal behavioral threshold as compared to existing conditions. For example, Alternative C would occasionally increase underwater noise levels at the locations near the Strait of Georgia, Boundary Pass, and Lummi Bay due to escort tugs transiting closer to those locations, which are adjacent to the rulemaking expansion area, but these increases would not result in more exceedances than those already occurring under existing conditions (Alternative A).

Alternative C has the potential to increase impacts to Tribal U&A areas and known fishing areas in the rulemaking area. While there may not be publicly available agreed-upon maps or set U&A area boundaries for Tribes with treaties in the Salish Sea (Swinomish Tribe & Jannetta, 2017), some Tribes have identified all or part of the expansion area as significant and/or as part of a U&A. The Swinomish Indian Tribal Community has identified the Cherry Point area and U.S. Waters in the Strait of Georgia north to the Canadian border as U&A areas (USACE, 2022). Additionally, the Nooksack Indian Tribe's U&A areas span from the international border to the north, to Samish Bay to the south, and from the crest of the North Cascades to the east to the San Juan Islands to the west (Nooksack Indian Tribe, 2024), and the Tulalip Tribes' U&A areas extend 120 miles from the Canadian border south to the north end of Vashon Island (SSHIAP, 2020). There may be other Tribes with U&A areas in the expansion area. Each of these U&A areas, as well as others not identified, encompasses the area that would see an increase in escort tug activity and impacts to Tribal fishing and co-managed fish species. In areas south of

the rulemaking area, there would be a minor decrease in escort tug activity and therefore a decrease in impacts to Tribal U&A areas and known fishing spots.

The expansion of tug escort requirements under Alternative C is not anticipated to significantly impact archaeological sites or TCPs in the area beyond the presence of additional vessel traffic described above. Cherry Point has been identified by the Lummi Nation as a TCP and by Swinomish Indian Tribal Community as a U&A area. While there may be an increase in traffic near this area, these changes in traffic patterns would not have a significant impact on archaeological sites or TCPs. Additionally, Alternative C would not result in changes to the types of escort tug discharges potentially affecting water quality relative to Alternative A. Minor changes in the locations and quantities of certain discharges or releases may occur, but Alternative C would not be expected to meaningfully increase the amount of discharges from escort tugs, despite the minor (2.41 percent) modeled increase in underway time. We do not anticipate any changes to water quality that could affect Tribal resources under Alternative C.

Alternative C would reduce the risk of a target vessel drift grounding and associated oil spill risk in the expansion area. This means a lower risk of catastrophic oil spill impacts to coastal Tribal resources, fishing, U&A areas, and TCPs or archaeological sites along the coast of the EIS Study Area. The decreased risk of oil spills would also result in a decreased risk of water quality impacts to wildlife species and habitat of cultural significance to Tribes and Tribal treaty fishing. However, the increased escort tug activity would also result in a slightly increased escort tug incident rate (0.88 per year compared to 0.86 per year in Alternative A).

3.4.2 Mitigation Measures

The mitigation measures stated above in Section 3.2.2 (Mitigation Measures) also apply to Alternative C.

3.4.3 Significant and Unavoidable Adverse Impacts

Alternative C would result in the continuation of impacts discussed under Alternative A, including significant impacts to Tribal treaty fishing and culturally significant species in the current rulemaking area. This Alternative would also result in the introduction of significant and unavoidable adverse impacts to Tribal treaty fishing and culturally significant species such as the SRKW, in the expansion area due to the anticipated increase in escort tug underway time in the expansion area. Escort tugs would continue to contribute to overall existing vessel traffic, as well as increase vessel traffic in the expansion area, which would result in adverse impacts to the quality and operation of Tribal fishing areas including, but not limited to, boat launches, other fishing access points, negative interactions with commercial vessel traffic in fishing areas, physical and vessel safety elements, and gear loss.

Escort tugs would not adversely impact water quality in Tribal treaty fishing areas or coastal Tribal resources such as archaeological sites and TCPs under Alternative C. Therefore, there are no significant or unavoidable adverse impacts to these resources under Alternative C.

3.5 Alternative D: Removal of Tug Escort Requirements

3.5.1 Impacts from Implementation

Alternative D removes the existing tug escort requirements for target vessels, eliminating escort tug underway time associated with this proposed rule. We can reasonably assume that most or all of the 18 identified escort tugs would remain within the EIS Study Area but shift to other assisting and/or escort work for larger vessels. While the individual tugs may continue to have impacts on Tribal resources as a component of vessel traffic, they would be unrelated to this rulemaking and are not considered in this EIS.

The reduction of escort tug vessel traffic would result in less traffic in shipping lanes and anchorage areas, less potential for gear loss, less potential for impacts from wakes, and reduced impacts to wildlife and natural resources from potential vessel strikes. Alternative D would also result in a decrease in minor potential for marine mammal strikes, including strikes to culturally significant species such as SRKW. Additionally, Alternative D would result in less vessel traffic in U&A areas and less wastewater discharges from tug escorts operation. Because Alternative D removes all escort requirements for target vessels, there would be no rendezvous points associated with the target vessels near the rulemaking area.

Under Alternative D, target vessel drift grounding probability increases by 11.84 percent over Alternative A across the EIS Study Area. Just within the rulemaking area, this is an increase of 90.5 percent. Alternative D would result in an increased risk of oil spills which would result in an increased risk of significant impacts to coastal Tribal resources, fishing areas, U&A areas, archaeological sites, and TCPs along the coast of the EIS Study Area. Xwe'chi'eXen, at Cherry Point, is a TCP located approximately 12 miles north of the current rulemaking area and is close enough to be affected by large oil spills from target vessels within the vicinity of the rulemaking areas. The increased risk of oil spills would also result in an increased risk of adverse water quality impacts to wildlife species and habitat of cultural significance to Tribes and Tribal treaty fishing. As demonstrated by the oil spill trajectory modeling and the table showing documented numbers of sites affected by oil spill scenarios in Section 3.1.5.1 (Oil Spill Risk), archaeological resources are abundant along the coastline in the EIS Study Area. Therefore, increased risk of oil spills has the potential to negatively affect a large number of archaeological resources. Oil from an oil spill can inundate an archaeological site if the contaminated water can reach the site from wave or tidal influence and affect the characteristics of the site and potentially require clean up and restoration actions for the site.

Because Alternative D eliminates tug escort requirements for target vessels, it also eliminates oil spill risk to Tribal resources from escort tugs associated with this rulemaking.

3.5.2 Mitigation Measures

The mitigation measures stated above in Section 3.2.2 (Mitigation Measures) related to oil spill and incident response also apply to Alternative D.

3.5.3 Significant and Unavoidable Adverse Impacts

This alternative would result in significant and unavoidable adverse impacts to aquatic species and habitat, water quality, Tribal treaty fishing, and coastal cultural resources in the EIS Study Area due to the increased risk of oil spills. Aquatic wildlife and habitats of cultural significance to Tribes and water quality would be adversely affected by a potential oil spill. Additionally, the quality and operation of Tribal treaty fishing areas including, but not limited to, boat launches, fishing access points, human health, physical safety, safe consumption of harvested seafood, and damage fishing equipment, would be negatively impacted if an oil spill occurred. Oil spills would also cause adverse impacts to coastal archaeological sites and TCPs in the EIS Study Area.

4.0 References

40 CFR Part 131 - Water Quality Standards Regulatory Revisions to Protect Tribal Reserved Rights. (2024). Retrieved March 19, 2025, from https://www.federalregister.gov/documents/2024/05/02/2024-09427/water-quality-standards-regulatory-revisions-to-protect-tribal-reserved-rights

BPC, & Ecology. (2021). Synopsis of Changing Vessel Trends: Reducing Threats to Southern Resident Killer Whales by Improving the Safety of Oil Transportation (No. ESHB 1578). https://nebula.wsimg.com/17056ac82adb868022291ad1d8dae1b9?AccessKeyId=F86D0A1E7A0091C2061F&disposition=0&alloworigin=1

Burnham, R. E. (2023). Acoustic Disturbance Risk Estimates and Mitigation Strategies: An Animal-Centric Approach. In A. N. Popper, J. Sisneros, A. D. Hawkins, & F. Thomsen (Eds.), The Effects of Noise on Aquatic Life: Principles and Practical Considerations (pp. 1–31). Springer International Publishing. https://doi.org/10.1007/978-3-031-10417-6_190-1

Ecology. (2021). Vessel Activity Synopsis. https://apps.ecology.wa.gov/publications/documents/2108008.pdf

Ecology. (2023). Summary of Tug Escort Analysis Results (Nos. 23-08–009). https://apps.ecology.wa.gov/publications/documents/2308009.pdf

Ecology. (2024a). Admiralty Inlet GRP – Oil Spills 101. https://oilspills101.wa.gov/northwest-area-contingency-plan/geographic-response-plans-grps/admiralty-inlet-grp/

Ecology. (2024b). Strait of Juan de Fuca GRP – Oil Spills 101. https://oilspills101.wa.gov/northwest-area-contingency-plan/geographic-response-plans-grps/strait-of-juan-de-fuca-grp/

International Whaling Commission. (2024). Description of the USA Aboriginal Subsistence Hunt: Makah Tribe. https://iwc.int/management-and-conservation/whaling/aboriginal/usa/makah-tribe

Lacy, R. C., Williams, R., Ashe, E., Balcomb III, K. C., Brent, L. J. N., Clark, C. W., Croft, D. P., Giles, D. A., MacDuffee, M., & Paquet, P. C. (2017). Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. Scientific Reports, 7(1), 14119. https://doi.org/10.1038/s41598-017-14471-0

Loomis, L. (2020, September 2). Tribes Team Up with State on Harbor Seal Survey. Northwest Treaty Tribes. https://nwtreatytribes.org/tribes-team-up-with-state-on-harbor-seal-survey/

Loomis, L., & Swinomish Tribe. (2021). Vessel Traffic Impacts Swinomish Treaty Fishing. https://mcusercontent.com/8d7d0ac4383c61f0e886586e7/files/58492b9b-1d68-c077-c411-1d0548fc7dca/Treaty_Fishing.pdf

Lummi Indian Business Council. (2016). Lummi Nation Atlas. https://lummi-nsn.gov/userfiles/63_2016LummiAtlas.pdf

Makah Tribe. (2024). Whaling. Makah Tribe. https://makah.com/makah-tribal-info/whaling/

Newton, J., & Klinger, T. (2015). Ocean Acidification in Pacific Northwest Coastal Waters: What Do We Know? University of Washington. https://environment.uw.edu/wp-content/uploads/2015/05/OA-in-the-Pacific-Northwest-v1.pdf

NOAA. (2021, February 22). Fishing Gear: Gillnets | NOAA Fisheries (National). NOAA. https://www.fisheries.noaa.gov/national/bycatch/fishing-gear-gillnets

NOAA. (2022a, March 23). Climate Impacts to Salmon of the Pacific Northwest | NOAA Fisheries (West Coast). NOAA. https://www.fisheries.noaa.gov/west-coast/climate/climate-impacts-salmon-pacific-northwest

NOAA. (2022b, September 7). Pacific Salmon and Steelhead Fisheries Management Glossary | NOAA Fisheries (West Coast). NOAA. https://www.fisheries.noaa.gov/west-coast/sustainable-fisheries/pacific-salmon-and-steelhead-fisheries-management-glossary

NOAA. (2024, March 19). West Coast Groundfish | NOAA Fisheries (West Coast). NOAA. https://www.fisheries.noaa.gov/species/west-coast-groundfish

Nooksack Indian Tribe. (2024, September 29). Cultural Department. Nooksack Indian Tribe. https://nooksacktribe.org/departments/cultural-resources/

Northwest Straits Commission. (2013). Preventing the Loss of Gillnets in Puget Sound Salmon Fisheries. https://www.fisheries.noaa.gov/s3/dam-migration/puget_sound_derelict_gill_net_prevention_report.pdf

NWIFC. (2014). Understanding Tribal Treaty Rights in Western Washington. https://nwifc.org/w/wp-content/uploads/downloads/2014/10/understanding-treaty-rights-final.pdf

NWIFC. (2016a). Groundfish. Northwest Indian Fisheries Commission. https://nwifc.org/about-us/fisheries-management/groundfish/

NWIFC. (2016b). Questions and Answers on tribal salmon fisheries. Northwest Indian Fisheries Commission. https://nwifc.org/about-us/fisheries-management/questions-and-answers-on-tribal-salmon-fisheries/

NWIFC. (2016c). Rafeedie Decision. Northwest Indian Fisheries Commission. https://nwifc.org/about-us/shellfish/rafeedie-decision/

NWIFC. (2016d). Salmon Fisheries Management Under the ESA. Northwest Indian Fisheries Commission. https://nwifc.org/about-us/fisheries-management/salmon-fisheries-management-under-the-esa/

NWIFC. (2024, October 16). Nearshore Data Exchange (NSX). https://geo.nwifc.org/nearshore/?_gl=1*1jtuuno*_ga*NTA4Njg5MTYuMTcyMTQyMjMyMw..*_ga_XGZ6DS8QV6*MTcyNTU1Mzk5OS4xMC4wLjE3MjU1NTM5OTkuMC4wLjA

PFMC. (2024). Tribes. Pacific Fishery Management Council. https://www.pcouncil.org/fishing-communities/tribes/

Port Gamble S'Klallam Tribe. (2024). Projects and Programs – Port Gamble S'Klallam Tribe Natural Resources Department. https://nr.pgst.nsn.us/fisheries/finfish/projects-and-programs/

Southern Resident Orca Task Force. (2018). Southern Resident Orca Task Force. https://www.orca.wa.gov/wp-content/uploads/TaskForceReport-2018.pdf

SSHIAP. (2020). 2020 State of Our Watersheds: A Report by the Treaty Tribes in Western Washington. https://files.nwifc.org/sow/2020/state-of-our-watersheds-sow-2020-final-web.pdf

Swinomish Indian Tribal Community. (2024). Clam Garden | Swinomish Indian Tribal Community, WA. https://www.swinomish-nsn.gov/fisheries/page/clam-garden

Swinomish Tribe, & Jannetta, J. (2017). Treatise on Treaty Rights. https://mcusercontent.com/8d7d0ac4383c61f0e886586e7/files/79fc0918-57e4-33af-6f83-0b6dfe26681e/TreatiseOnTreatyRights.pdf

USACE. (2022). BP Cherry Point Final Environmental Impact Statement. https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/details?eisId=372941

USCG. (2017). Ports and Waterways Safety Assessment Workshop Report: Puget Sound, Washington. https://www.navcen.uscg.gov/sites/default/files/pdf/pawsa/WorkshopReports/Puget%20Sound%20PAWSA%20Report%20(2017).pdf

USCG, EPA. (2024). Northwest Area Contingency Plan (p. 1479). https://nrt.org/site/download.ashx?counter=17824

Wash. Admin. Code § 197-11-786. (2003), Reasonable alternative Washington Administrative Code. https://app.leg.wa.gov/WAC/default.aspx?cite=197-11-786

Wash. Admin. Code § 197-11-794. (2003), Significant. Washington Administrative Code. https://app.leg.wa.gov/WAC/default.aspx?cite=197-11-794

Wash. Admin. Code § 365-196-450. (2010), Historic preservation. Washington Administrative Code. https://app.leg.wa.gov/wac/default.aspx?cite=365-196-450

Wash. Admin. Code Chapter 237-990. (2017), APPENDIX—DETERMINATION OF GEOGRAPHIC NAMES Washington Administrative Code. https://app.leg.wa.gov/wac/default.aspx?cite=237-990

Wash. Admin. Code Chapter 363-116. (2024), Pilotage Rules. Washington Administrative Code. https://app.leg.wa.gov/wac/default.aspx?cite=363-116

Wash. Rev. Code § 43.21C.030. (2010), Guidelines for state agencies, local governments—Statements—Reports—Advice—Information. Revised Code of Washington. https://app.leg.wa.gov/rcw/default.aspx?cite=43.21C.030

Wash. Rev. Code § 88.16.190. (2019), Oil tankers—Restricted waters—Requirements. Revised Code of Washington. https://app.leg.wa.gov/RCW/default.aspx?cite=88.16.190

Wash. Rev. Code § 88.46.010. (2015), Definitions Revised Code of Washington. https://app.leg.wa.gov/RCW/default.aspx?cite=88.46.010

Wash. Rev. Code Chapter 27.44. (2008), Indian graves and records. Revised Code of Washington. https://app.leg.wa.gov/rcw/default.aspx?cite=27.44

Wash. Rev. Code Chapter 27.53. (2013), Archaeological sites and resources. Revised Code of Washington. https://app.leg.wa.gov/RCW/default.aspx?cite=27.53

Wash. Rev. Code Chapter 43.376. (2012), Government-to-Government Relationship with Indian Tribes Revised Code of Washington. https://app.leg.wa.gov/rcw/default.aspx?cite=43.376&full=true

Wash. Rev. Code Chapter 88.16. (2019), Pilotage Act. Revised Code of Washington. https://app.leg.wa.gov/rcw/default.aspx?cite=88.16