Board of Pilotage Commissioners – Tug Escort Rulemaking Workshop #10 (Tribal Governments)

November 13, 2024

DEPARTMENT OF ECOLOGY
State of Washington

Zoom Reminders, Meeting Logistics

- Please use the raise hand function.
- Please use the comment function.
- Please mute while not speaking. Please don't interrupt others.
- Transcript of the meeting to support note-taking only
- Closed captions available

Meeting Objectives

- ✓ Share updates on technical analyses for priority elements of the EIS
- ✓ Help stakeholders, Tribes, and OTSC prepare for February Workshop Series

Agenda

1. Ground rules and brief rulemaking overview
2. Preliminary technical findings for priority elements of the EIS
3. Questions and Discussion
4. Review of timeline and upcoming milestones

Ground Rules

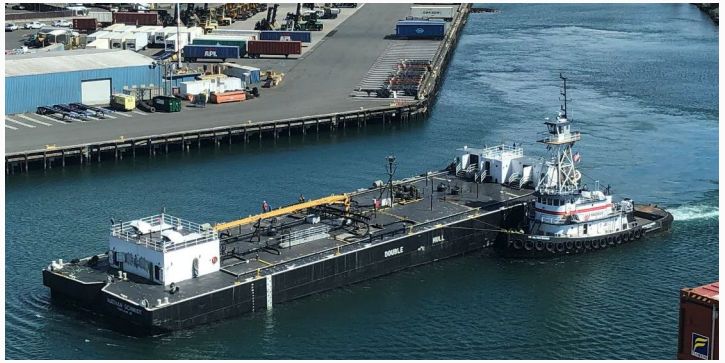
- **Respectful Dialogue:** Speak courteously, focus on ideas, not individuals.
- **One Voice at a Time:** Allow everyone to finish before responding.
- **Share Your Perspective:** Represent your *own* expertise, views, and knowledge.
- **Agree to Disagree:** Acknowledge different opinions respectfully.
- **Focus on Solutions:** Aim for constructive outcomes and actionable steps.
- **Respect Time Limits and Agenda:** Aim to keep comments on topic and concise. Allow space for everyone to contribute.

Rulemaking Overview (ESHB 1578)

- **Vessel Types:** The BPC, in consultation with Ecology, must adopt tug escorts rules for the following vessels:
  - Small (5,000 – 40,000 dwt) oil tankers
  - ATBs, and towed barges greater than 5,000 dwt designed to transport oil in bulk internal to the hull

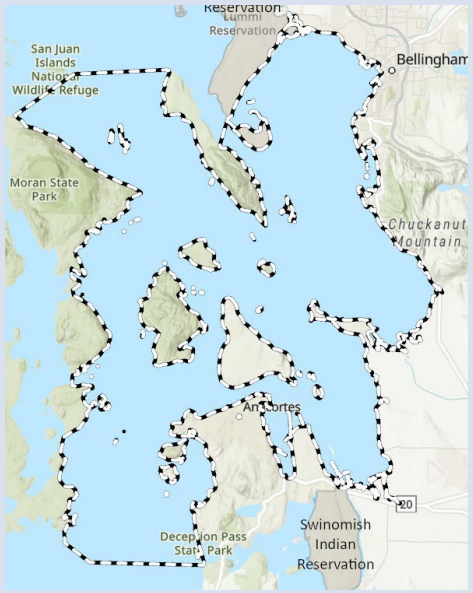
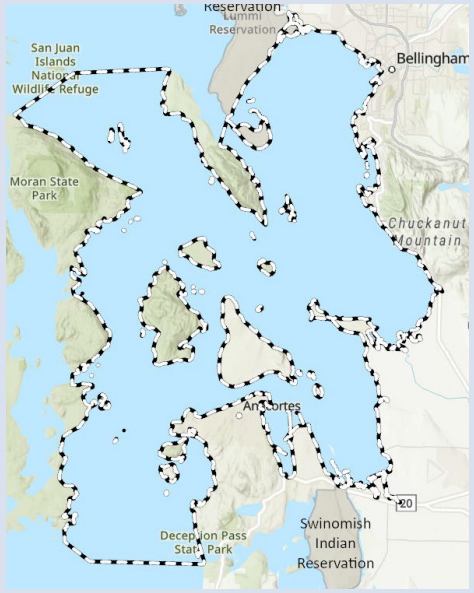
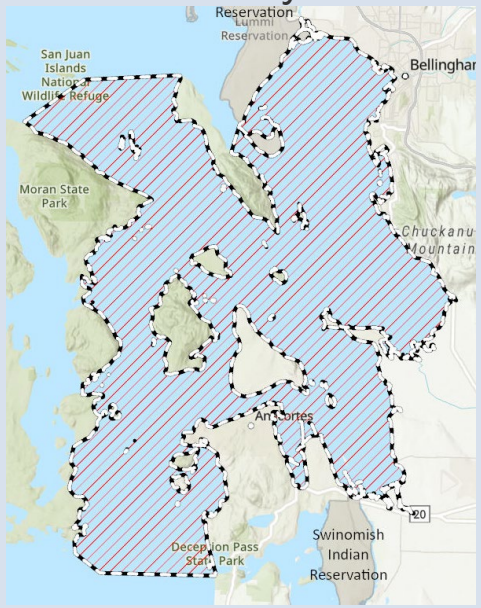
Tanker

ATB

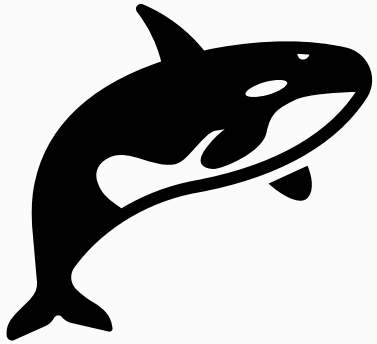


Tank Barge

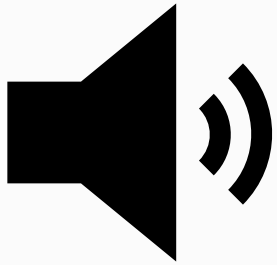
Reminder: Current Proposed Alternatives

	Alt. A: No Action	Alt. B: Addition of FOR Only	Alt. C: Expansion	Alt. D: Removal
Geography	No change from 2020 	No change from 2020 	Keep 2020 + expand to SoG/SoG S. 	Remove reqs. w/in 2020 boundary 
Functional and Operational Requirements (FOR)?	No change from 2020.	ADD pre-escort conference, minimum horsepower, propulsion specifications	ADD pre-escort conference, minimum horsepower, propulsion specifications	No requirements for target vessels

Reminder: Priority Elements

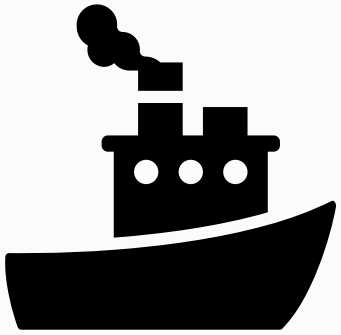


Plants and Animals

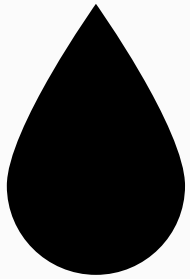


Underwater Noise (Noise)

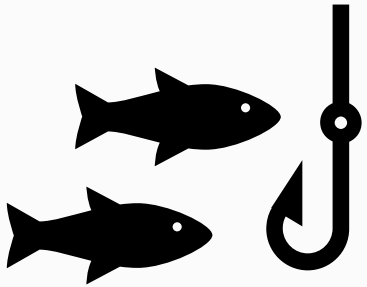
Air Quality



Vessel Traffic



Oil Pollution

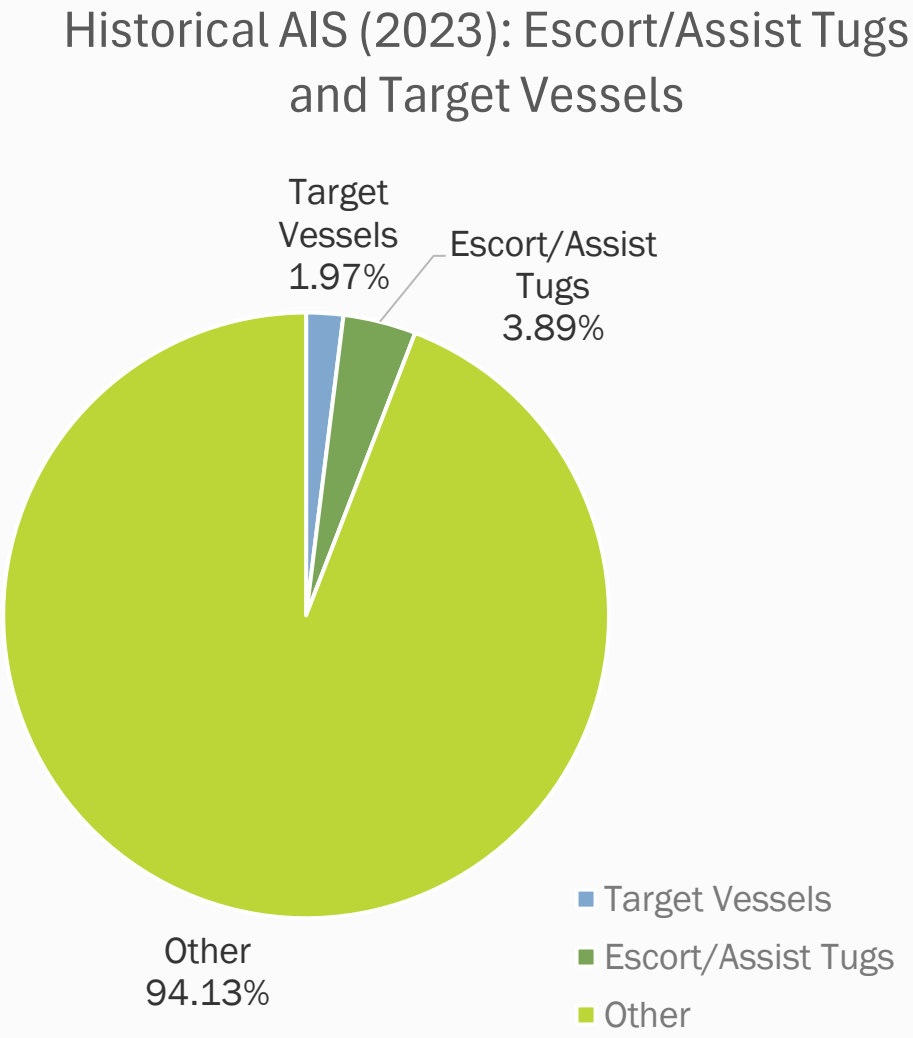


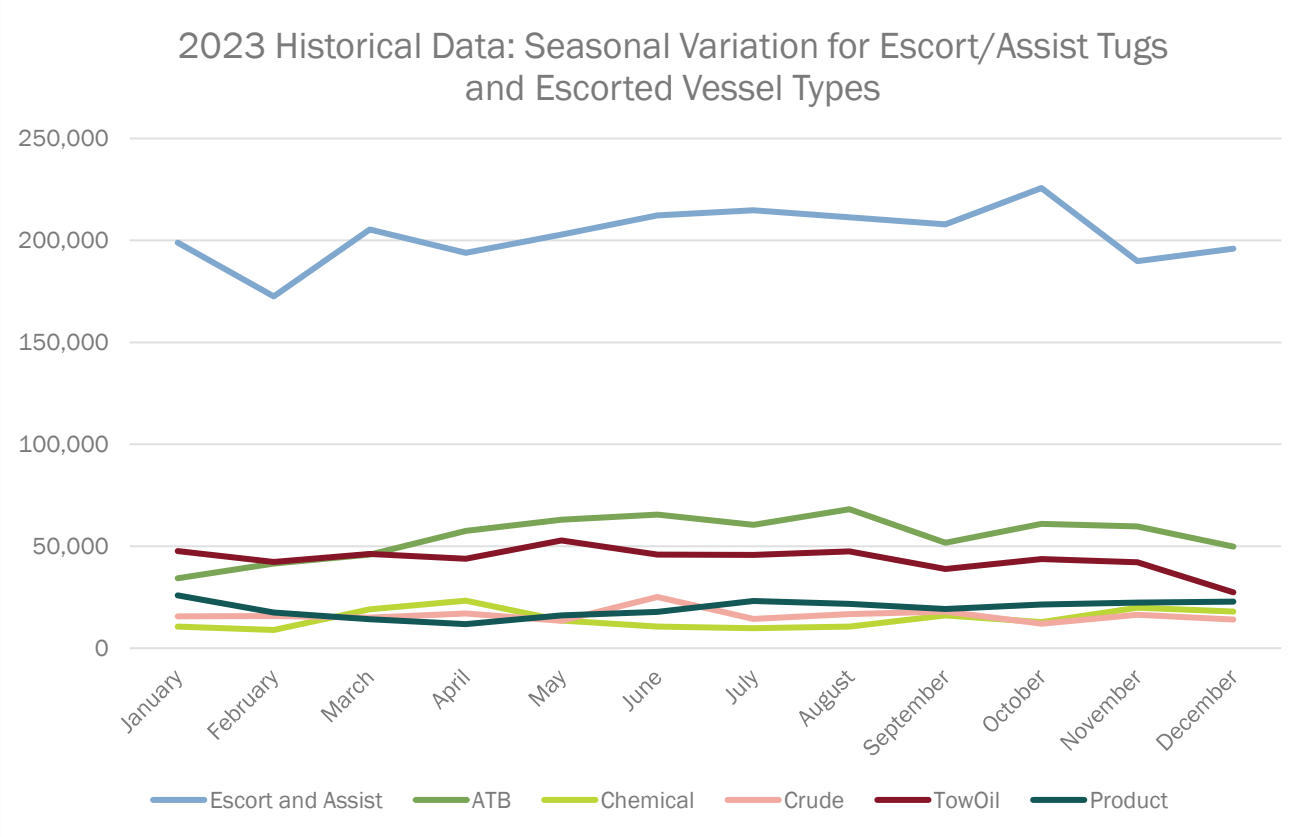
Tribal Resources

Vessel Traffic: Methods Reminder

- Develop a quantitative baseline:
  - Existing traffic for target vessels
  - # of escort jobs/year
  - Underway minutes/year for escort tugs
- Model changes in underway time for each alternative, develop heat maps
- Assess areas of potential impact
- Identify mitigation

Historical AIS – Target Vessels, Escort/Assist Tugs

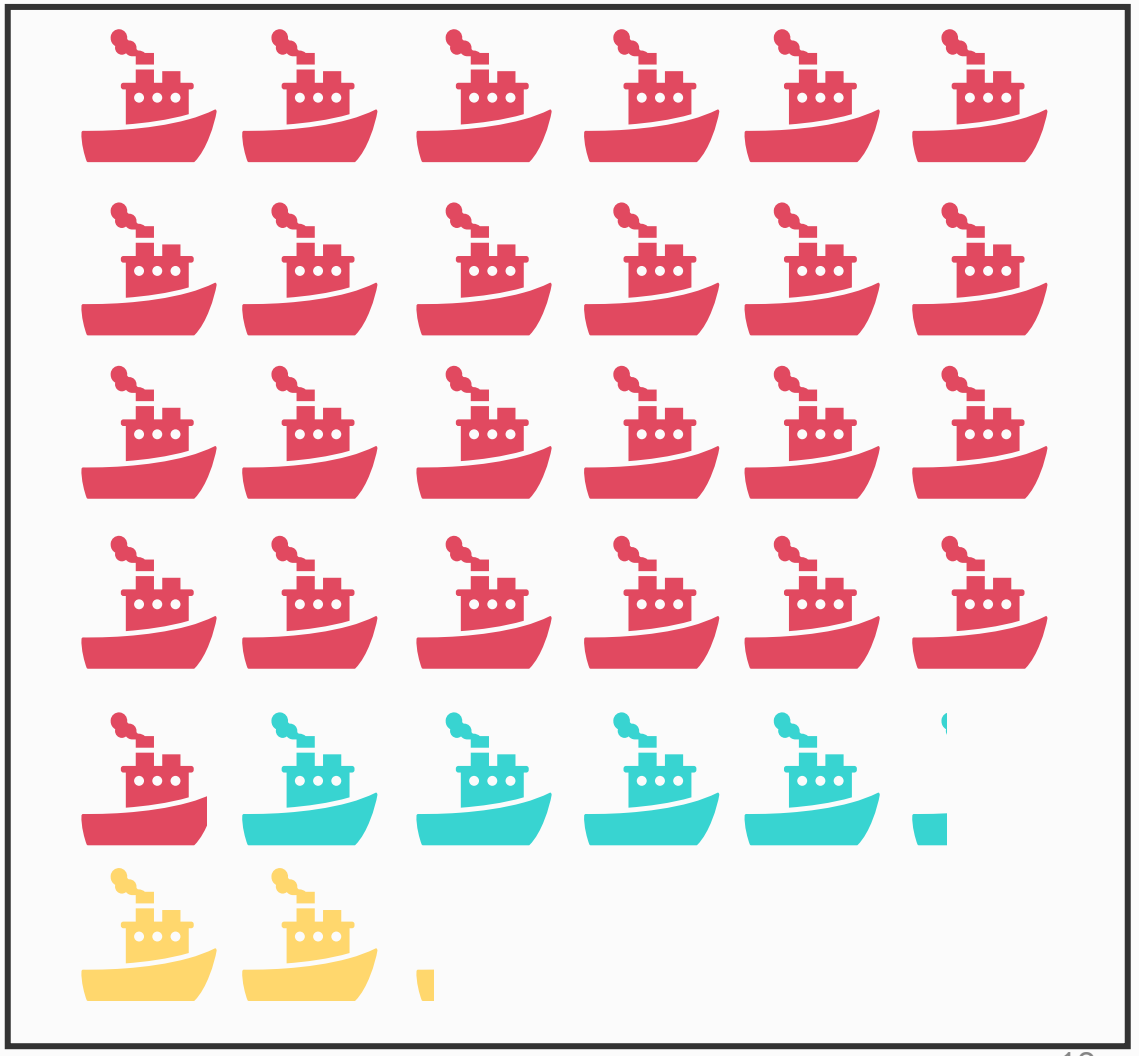




Vessel Traffic: Number of Escort & Assist Jobs

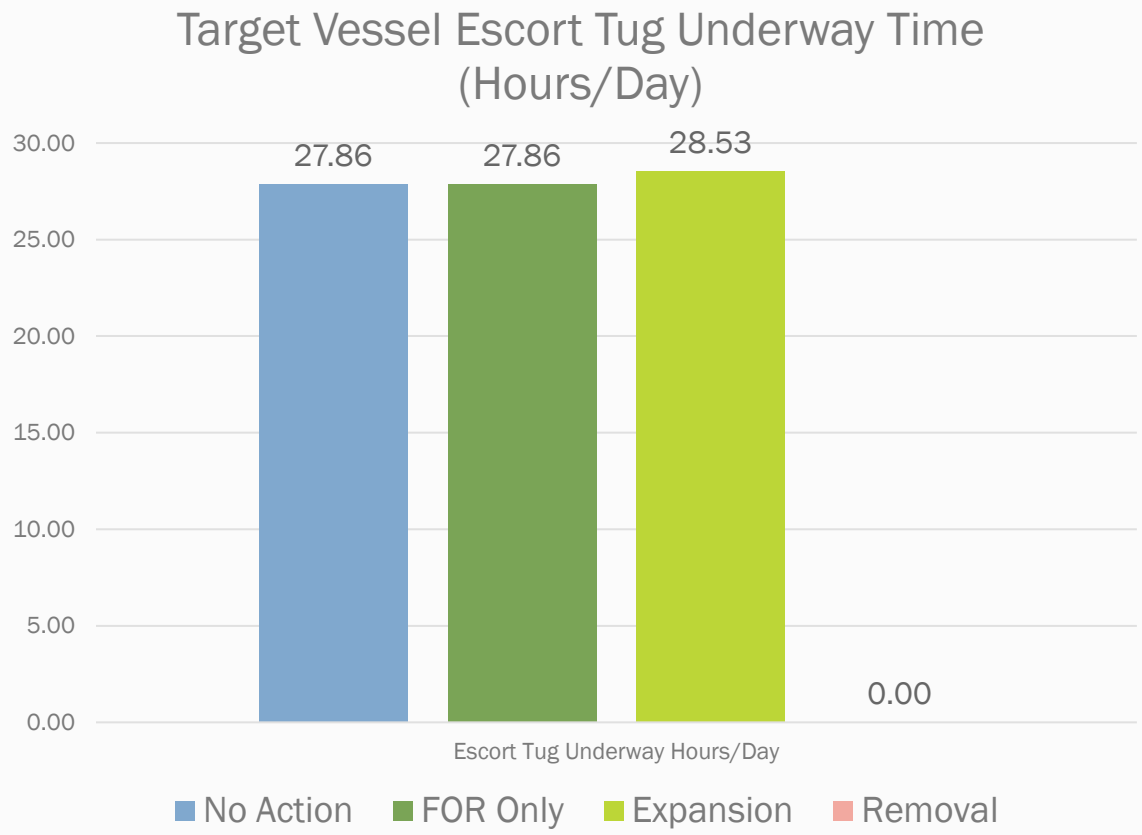
	Number of Escort Jobs (Target Vessels)	Number of Escort Jobs (Non-Target)	Number of Assist Jobs
Per Year	1,537	785	9,099
Per Day	4.21	2.1	24.93

One Day of Escort/Assist Tug "Jobs"



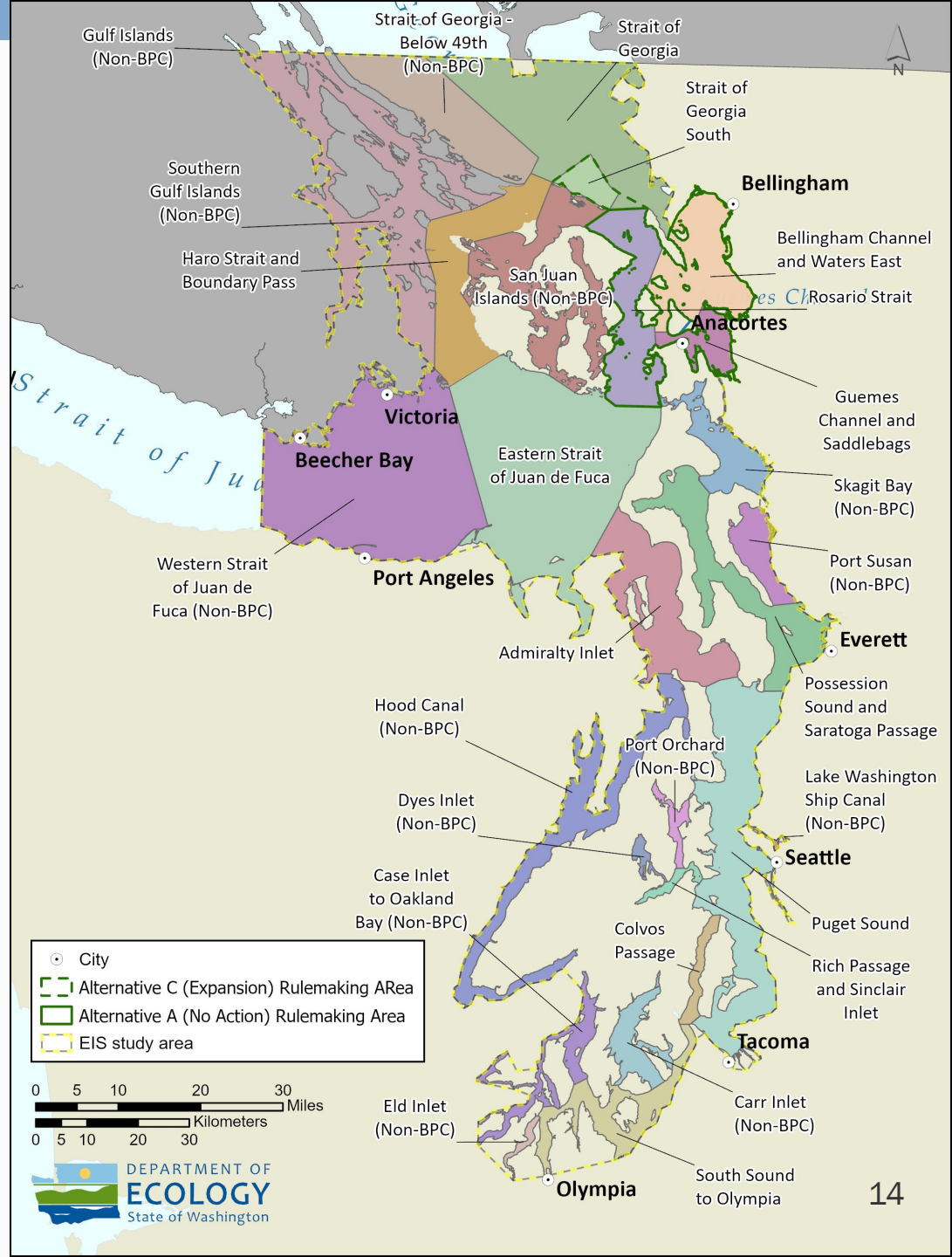
Vessel Traffic: Escort Tug Underway Time

Alternative	Total Annual Underway Minutes	% Actively Escorting	% Commut-ing
No Action	610,107	36.7%	63.2%
Addition of FORs	610,107	36.7%	63.2%
Expansion	624,784	39.3%	60.7%
Removal	0	N/A	N/A



Underway Time by Zone

Zone	No Action: Underway Hours/Day	Expansion: Underway Hours/Day	Removal: Underway Hours/Day
Rosario Strait	9.38	9.13	0
Guemes Channel and Saddlebags	4.81	4.65	0
Bellingham Channel	3.46	3.09	0
Puget Sound	3.08	3.07	0
Eastern Strait of Juan de Fuca	1.94	1.94	0
Strait of Georgia	1.88	2.24	0
San Juan Islands (Non-BPC)	0.02	0.01	0
Strait of Georgia South	0.02	1.11	0
All Zones	**27.86**	**28.53**	**0**

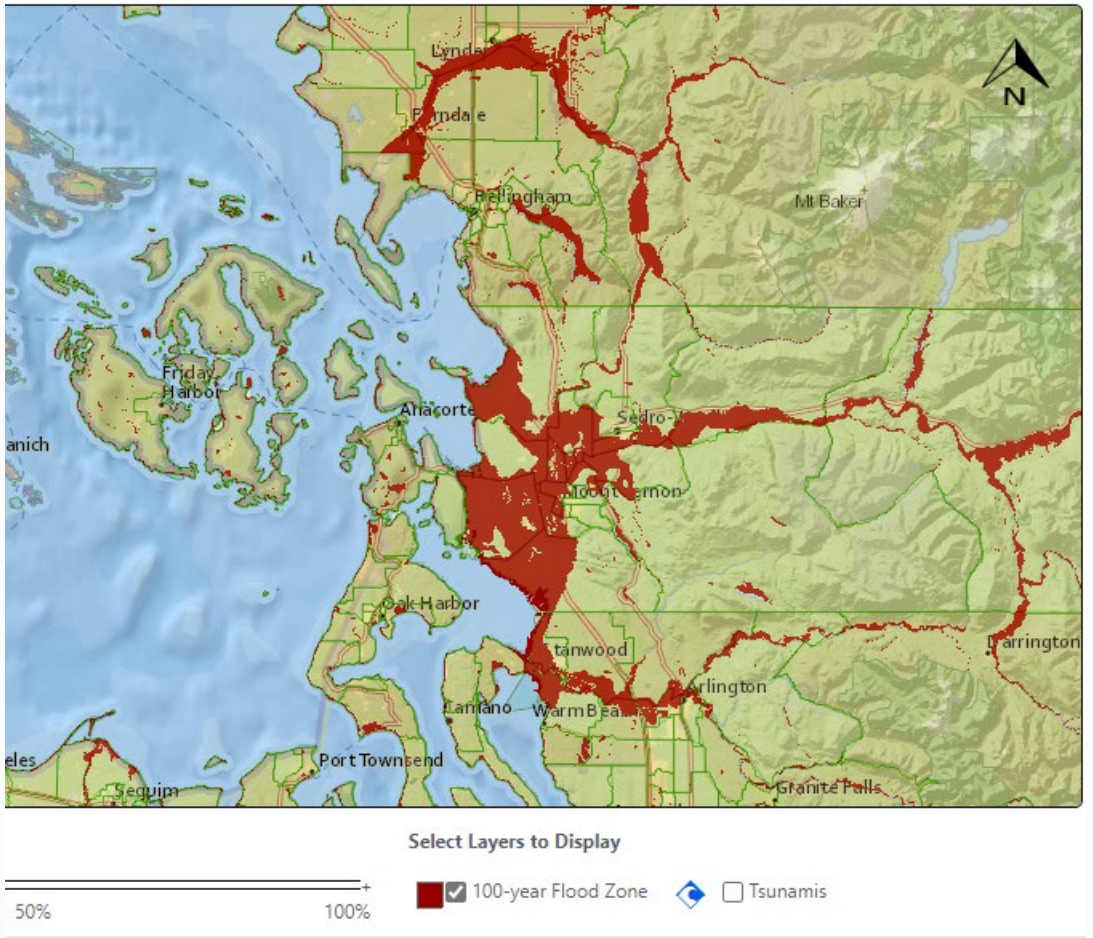


Oil Pollution: Methods Reminder

- Establish baseline
  - Target Vessels: Drift grounding frequency
  - Escort Tugs: Hazard incident frequency
- Assess changes in incident frequency and distribution of impacts for each alternative
- Describe impacts
- Identify mitigation

Recurrence Intervals

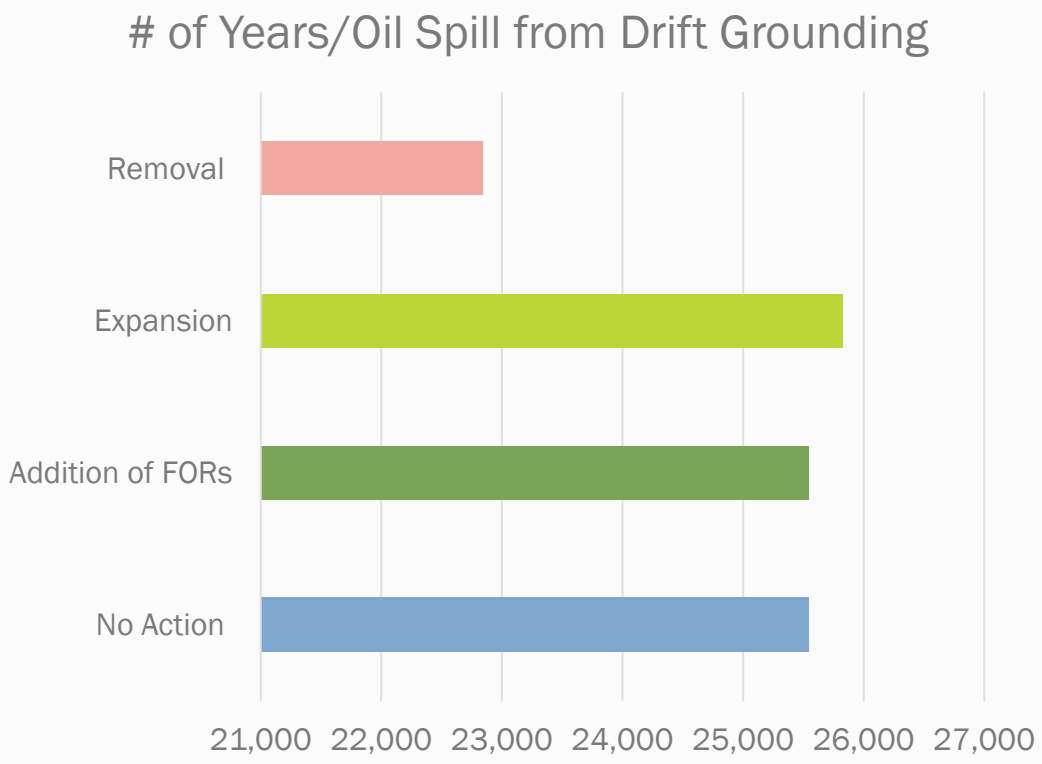
- Example: 100-Year Floods
  - Measure of Probability: A flood of that magnitude has a 1% chance of occurring in any given year.
- Does NOT mean that a 100-year event can't happen in Year 1 and Year 2 or even twice within a single year.
- NOT Predictive



Washington Tracking Network, Washington Department of Health. Web. "Area in 100-year Flood Zone". Data was obtained from the Federal Emergency Management Agency. Published: September 2021.

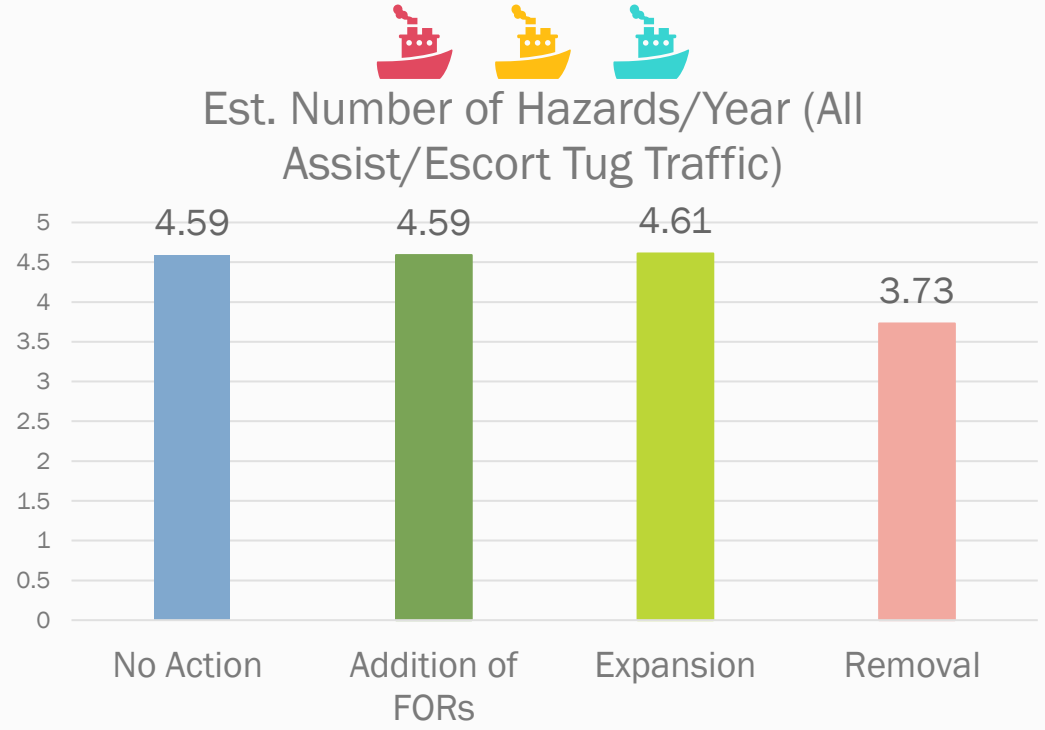
Target Vessels: Drift Grounding Probability in EIS Study Area

	# of Years/ Loss of Propulsion	# of Years/Drift Grounding	# of Years/ Oil Spill from Drift Grounding
No Action	5	186	25,546
Addition of FORs	5	186	25,546
Expansion	5	189	25,830
Removal	5	167	22,841



Escort/Assist Tugs: Hazard Probability in EIS Study Area

Alternative	Est. Number of Hazards/Year (Escort of Target Vessels Only)	Est. Number of Hazards/Year (All Assist/Escort Tug Traffic)
No Action	0.86/year	4.59/year
Addition of FORs	0.86/year	4.59/year
Expansion	0.88/year	4.61/year
Removal	0/year	3.73/year



- Allisions/Collisions are highest single incident category type
- Less than one tug incident/year associated with the rule
- Between 3-4 total assist/escort tug incidents unrelated to the rule

*REVISED: Incident Data (2017-2023) within EIS Study Area

Vessel Type	Number of Incidents (Oil Pollution, Vessel Casualty) Identified	Total Oil that Reached the Water (all incidents)	Incidents that Occurred While Vessel was Underway	Number of Incidents Where an Escort Tug May Have Helped (all incidents)
Tankers	31	1.41 gallons	12	4
Tank Barges	16	19.66 gallons	4	4
ATBs	5	27.01 gallons	1	1
Assist/Escort Tugs	5	5.26 gallons	3	N/A

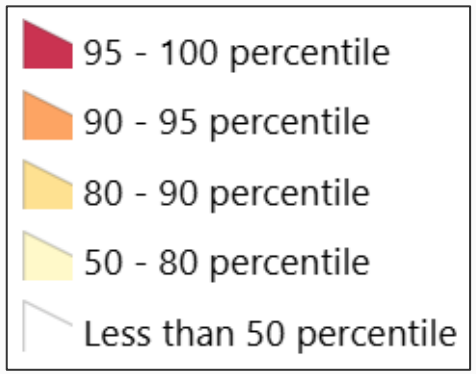
**As requested in the Stakeholder Workshop, we are including information about the number of incidents that occurred while the vessel was underway.*

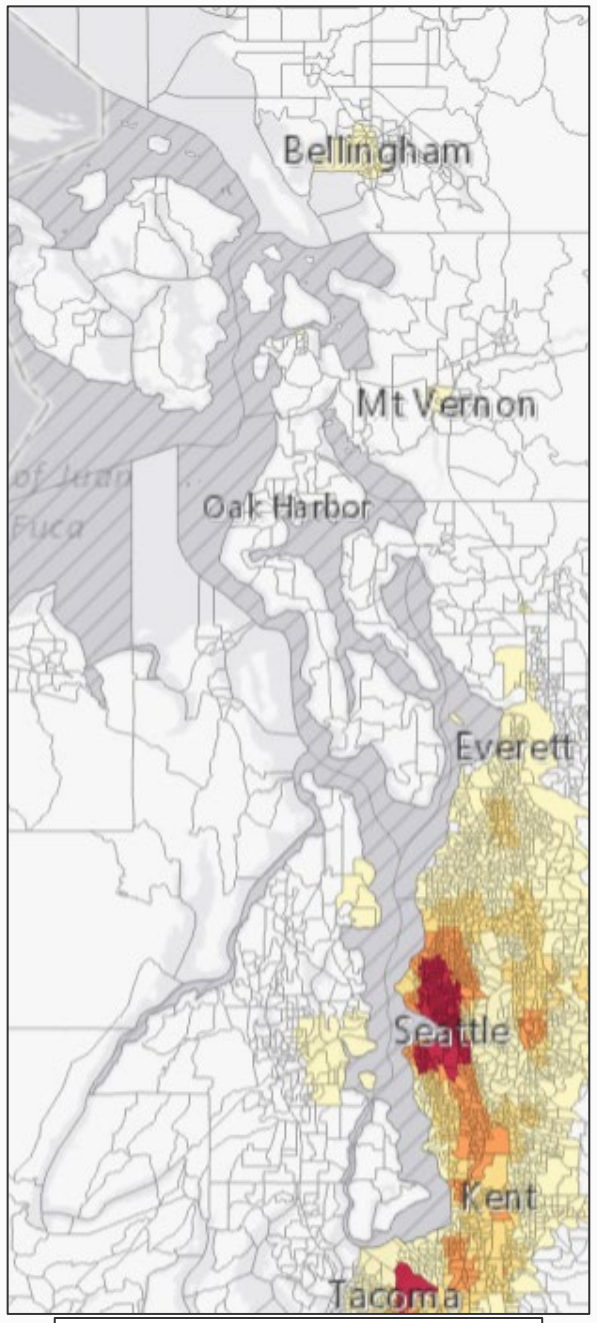
Air Quality Methods: Reminder

- Develop a baseline:
  - Describe existing air quality (AQ) conditions
  - Quantify existing emissions from target vessel tug escorts
  - Use dispersion model to assess whether these emissions contribute to AQ concerns in selected “receptor areas”
- Quantify changes in emissions for each alternative
- Use dispersion model to assess new or avoided AQ concerns in receptor areas
- Identify mitigation

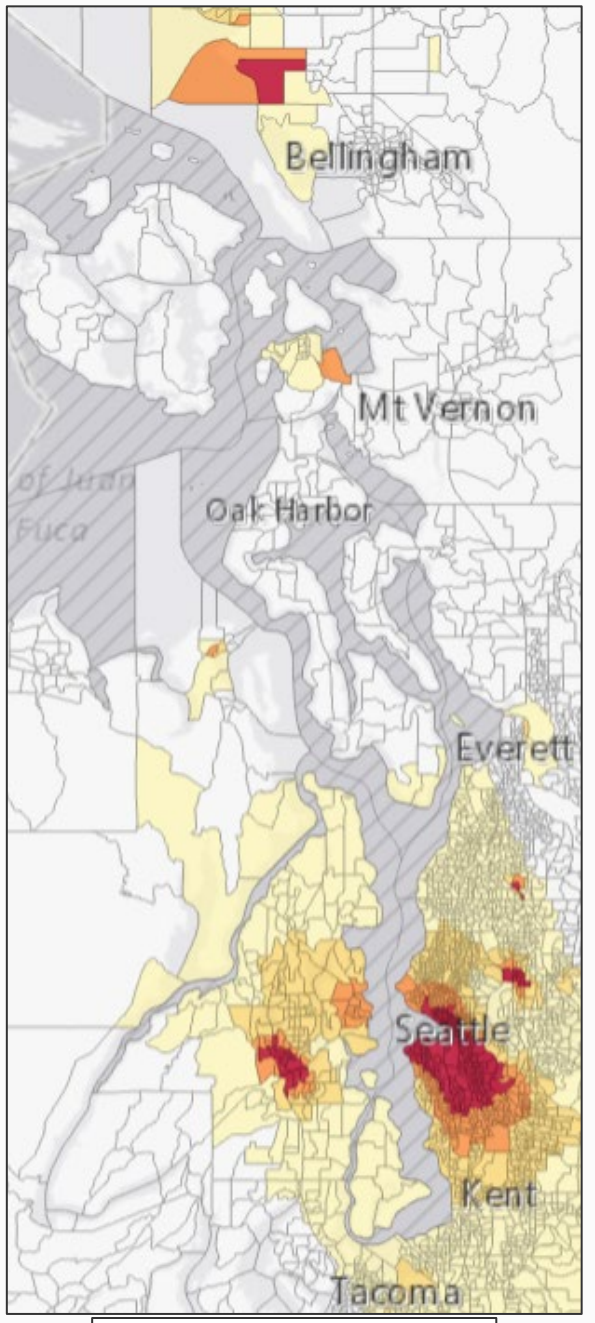
Baseline Air Quality and Escort Tug Emissions

- Entire EIS Study Area is “attainment” status for criteria pollutants
  - Exception: Portion of Whatcom County
- However – certain communities may currently experience disproportionate AQ-related health impacts
  - Urban areas (e.g., Seattle, Tacoma) have relatively high pollution (e.g., diesel particulate matter)
  - Increased risk of respiratory and cardiovascular conditions (e.g., asthma, heart disease)





Diesel Particulate Matter



Toxic Releases to Air

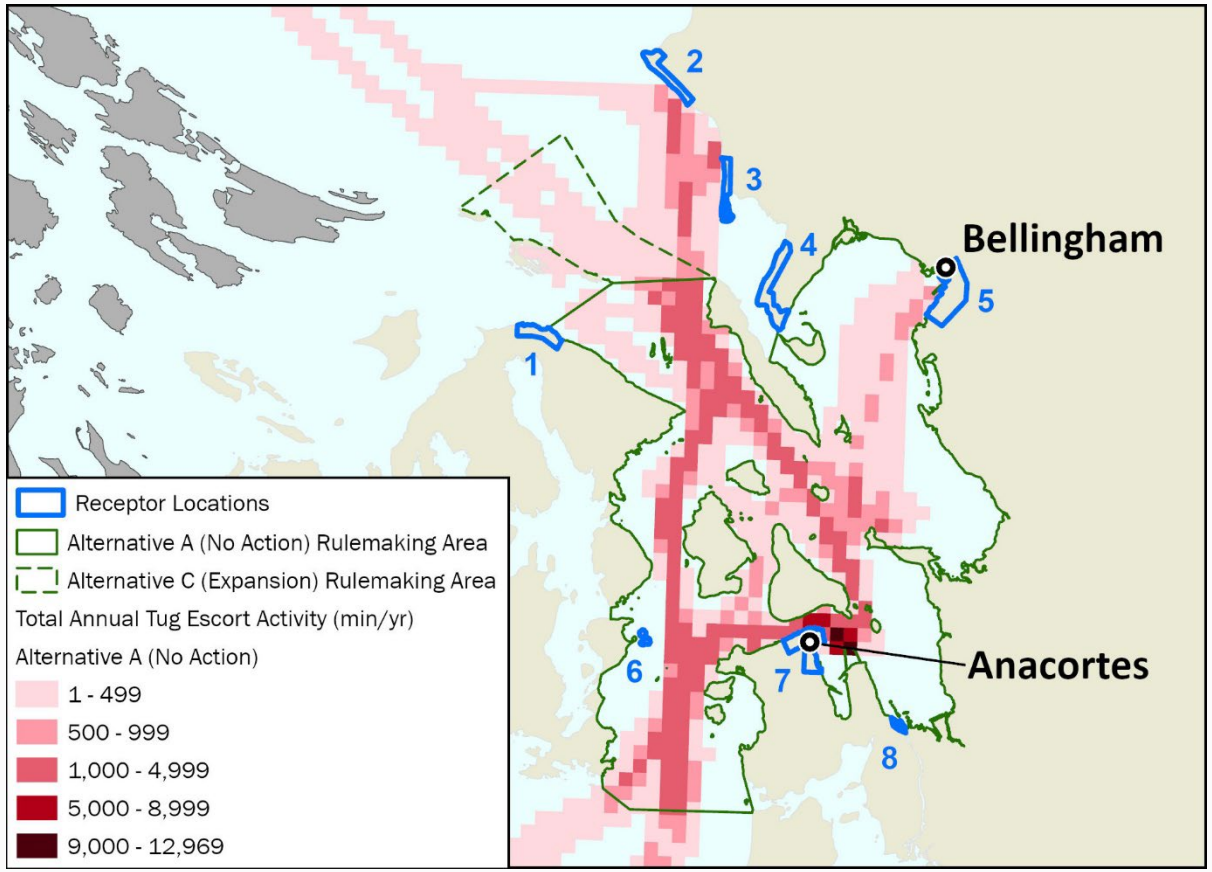
Current Asthma

Baseline Air Quality and Escort Tug Emissions

Existing emissions from escort tugs:

Pollutant	Tons/year
Criteria Pollutants	
Nitrogen Oxides (NOx)	118
Fine Particulate Matter ($PM_{2.5}$)	2.98
Coarse Particulate Matter (PM_{10})	3.08
Sulfur Dioxide (SO_2)	0.07
Other Pollutants	
Volatile Organic Compounds (VOCs)	4.20
Toxics (based on $PM_{2.5}$ and VOC)	0.52
Greenhouse Gases (CO_2e)	ongoing

Receptor locations for dispersion modeling:



Baseline Air Quality and Escort Tug Emissions

- Results of dispersion modeling (emissions only):
  - **Annual average**: Concentrations are below screening thresholds at all receptor areas and for all modeled pollutants
  - **Peak days**: NOx at all 8 receptor areas does occasionally exceed the conservative screening threshold – however:
    - Per monitoring data, actual NOx levels in region are low (below federal air quality standards)
    - "Peak day" contributions from do not cause AQ problems
  - **Air toxics**: Ongoing

Changes Under the Alternatives

- **Alternative A (No Action):** No change in emissions
- **Alternative B (Addition of FORs):** No change in emissions
- **Alternative C (Expansion):**
  - Annual emissions: 3-4% increase, concentrated in and around expanded rulemaking boundary
  - Annual average concentrations: Remain below screening thresholds
    - Slight increase in some receptor areas (Cherry Point, Eastsound/Buckhorn area)
  - Peak day concentrations: Very similar to baseline
- **Alternative D (Removal):** Elimination of emissions

Tribal Resources Methods: Reminder

- Conduct outreach to potentially affected Tribes (e.g., workshops, one-on-one meetings, site visits)
- Identify and review data from available references and source material to analyze existing Tribal resources of interest within EIS Study Area
- Describe impacts and compare across alternatives
  - Focus: impacts to tribal treaty fishing rights, culturally significant species
- Determine significance, identify mitigation

Tribal Resources within the EIS Study Area

- 29 Tribes have potential interest in EIS Study Area
- Reviewed known Traditional Cultural Properties and archeological sites (publicly available)
- Treaty fishing: reviewed known usual and accustomed (U&A) areas
- Compiling lists of culturally and/or economically significant species

Common fish and shellfish species
Chinook salmon
Chum salmon
Coho salmon
Coastal/Puget Sound bull trout
Coastal resident/sea run cutthroat trout
Pink salmon
Rainbow trout/steelhead
Sockeye salmon
Halibut
Sea urchin
Geoduck
Dungeness Crab
Shrimp
Clams
Oyster
Sea Cucumber

Current Threats to Tribal Resources

- Existing levels of vessel traffic in shipping lane and at anchorage take physical space from U&A fishing
- Interference with access to fishing areas
- Fishing gear loss resulting in a large financial burden to Tribal fishers (paired with physical safety concerns)
- Wake impacts to fishing areas
- Oil pollution
- Climate change impacts (i.e., sea level rise, storm surges, ocean acidification, invasives) that affect habitat and water quality

Summary of Impacts

Existing conditions:

Change relative to existing conditions:

Threat	Impact from tug escorts	Alt. A No Action	Alt. B Add'n of FORs	Alt. C Expansion	Alt. D Removal
Vessel Traffic/Congestion	☒☒	–	–	↑	↓↓
Strike Risks to Culturally Sig. Species	☒	–	–	–	↓
Water Quality Impacts from Target Vessel Oil Spill Risks	–	–	–	↓	↑
Water Quality Impacts from Escort Tug Fuel Spill Risks	☒	–	–	↑	↓
Physical Disturbance to Coastal Tribal Resources (from Oil Spill Risk)	–	–	–	↓	↑

Key: (–) = None/beneficial; (☒) = Impact; (☒☒) = Greater impact

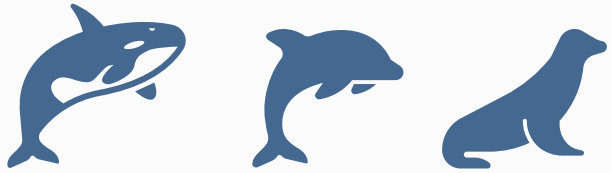
Key: (–) = No meaningful change; (↑ or ↓) = Change; (↑↑ or ↓↓) = Greater change

Plants and Animals Methods: Reminder

- Develop a baseline:
  - Broadly describe existing plant and animal resources
  - Identify existing threats to plant and animal resources
- Estimate contributions of existing escort tug activity to threats
- Estimate changes in threats for each alternative
- Identify significant impacts and mitigation

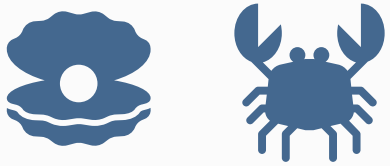
Resources within the EIS Study Area

- Marine Mammals



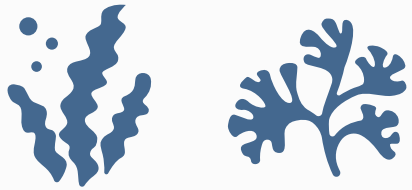
- Finfish

- Aquatic Invertebrates



- Birds

- Intertidal and Aquatic Plants



- Protected Ecological Areas & Special Aquatic Habitats

Current Vessel-Related Threats

Known Threats

- Underwater noise
- Vessel strikes
- Physical disturbance from vessel interaction (esp. SRKW)
- Disturbances to habitat from wakes and anchoring
- Disturbances from artificial lighting
- Oil spill risks and impacts (spill and clean-up)

Potential Threats

- Pollutants in vessel wastewater discharges
- Exposure to vessel exhaust
- Disturbance from anchoring, entanglement

Escort Tugs: Assessing Identified Threats

- **Underwater noise:** Ongoing
- **Strikes:** Strikes at speeds ≥ 10 kts could cause serious injury/mortality to marine mammals; escort tugs *do* frequently exceed this – however:
  - Have not identified information indicating that tugs cause strikes in EIS Study Area
  - WA Code: Unlawful to exceed 7 kts within 0.5 miles of SRKWs

Escort Tug Speed
7.80 kts (avg)
18.2 kts (max)

- **Wakes:** Escort tugs rarely travel under conditions (high speeds close to shore) needed to produce wakes/waves that disturb shoreline habitat
- **Other Vessel Interaction:** Ongoing
- **Spills:** Escort tugs reduce target vessel spills, but have their own spill risk
- **Other:** Negligible to minor contributions to physical disturbances to habitat, water quality concerns, air emissions, and artificial light

Summary of Impacts

Existing conditions:

Threat	Impact from tug escorts
Underwater Noise	ongoing
Strike Risks	☒☒
Physical Vessel Interaction	ongoing
Wastewater	☒
Habitat Disturbance	☒
Air Emissions	☒
Artificial Light	☒
Target Vessel Oil Spill Risks	☒
Escort Tug Fuel Spill Risks	☒

Key: (–) = None/beneficial; (☒) = Impact; (☒☒) = Greater impact

Change relative to existing conditions:

Alt. A No Action	Alt. B Add'n of FORs	Alt. C Expansion	Alt. D Removal
–	–	ongoing	ongoing
–	–	–	↓↓
–	–	ongoing	ongoing
–	–	–	↓
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–	–	↑	↓

Key: (–) = No meaningful change; (↑ or ↓) = Change; (↑↑ or ↓↓) = Greater change

Underwater Noise Methods: Reminder

- Conduct modeling to assess whether underwater noise from vessel activity (with and without tug escorts) exceeds acoustic thresholds of concern for marine mammals
- "Deep Dive" underwater noise workshop on Thursday Nov. 7
  - Slides & recording posted to rulemaking website

Preview of Underwater Noise Results

Alternative	Preliminary Findings
Alt. A: No Action	• Noise levels occasionally exceed threshold in 6 of 7 locations • More frequent near congested ports and shipping lanes • Noisiest location exceeded threshold 4% of the time
Alt. B: Addition of FORs	No Change from Alternative A
Alt. C: Expansion	• Noise levels increase at certain locations and times • No change in time exceeding the 120 dB threshold over Alternative A
Alt. D: Removal	• Noise levels decrease at certain times and locations • Noisiest location exceeded threshold 2.6% of the time

Upcoming Milestone Review

Milestone	TENTATIVE Timeline	Input Opportunity
Technical Analyses	July – Dec. 2024	Submit informal comments, 1-1 meetings
Workshop Series #10 + Technical Deep Dive Workshop: Noise	Nov. 2024	Comments, updates on underwater noise methods and analysis, early review of other technical analyses for priority elements.
Workshop Series #11	Feb. 2025	Comments on proposed rule language, preliminary econ update
Early Review Sections of Completed Technical Analyses	Late spring/early summer 2024	Possible early review for OTSC and Tribes
DEIS Drafting	Nov. 2024 – Summer 2025	Comments, feedback at workshops, 1-1 meetings
Rule Language Development	Ongoing through Summer 2025	Comments, feedback at workshops, 1-1 meetings
Economic Analysis	Ongoing through Summer 2025	Informal update at Feb. Workshop, PRA published with CR-102, 1-1 meetings, comments and feedback
CR-102/DEIS Comment Period	Summer 2025	Formal comments, public hearings

Reminder: Updated Workshop 11 Dates

- **Stakeholder Workshop:** February 5, 2025 (10 AM – Noon)
  - Hybrid Meeting at Ecology Northwest Regional Office
- **Tribal Government Only Workshop:** February 11, 2025 (10 AM –Noon)

Informal Public Comment Form Open Through 3/14/25:
https://sppr.ecology.commentinput.com/?id=x27tZ4iRfs

Final Questions or Discussion?

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