Board of Pilotage Commissioners – Tug Escort Rulemaking Workshop #8 (Stakeholders)

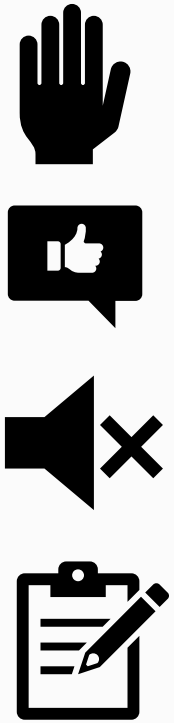
July 10, 2024

BOARD OF PILOTAGE COMMISSIONERS WASHINGTON STATE

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.
- Transcript of the meeting to support note-taking only.
- Please don’t interrupt others. We want to hear from everyone today.
- Closed captions are available



Meeting Agenda

- Rulemaking Overview & Background
- Economic analysis overview
- Update on methods summaries for EIS analysis
- Update on proposed timeline and milestones for Draft EIS development

Roles and Responsibilities

BPC

- Outreach lead
- Government-to-Government consultation
- Final decisions on tug escort requirements

Ecology

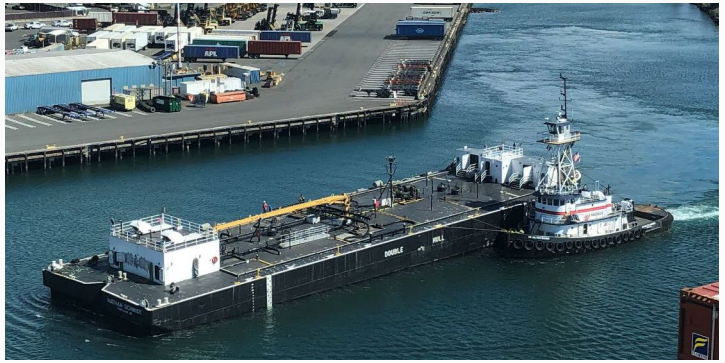
- Rulemaking process
- Technical expertise
- Regulatory Analyses
  - Administrative Procedures Act
  - State Environmental Policy Act
  - Regulatory Fairness Act

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

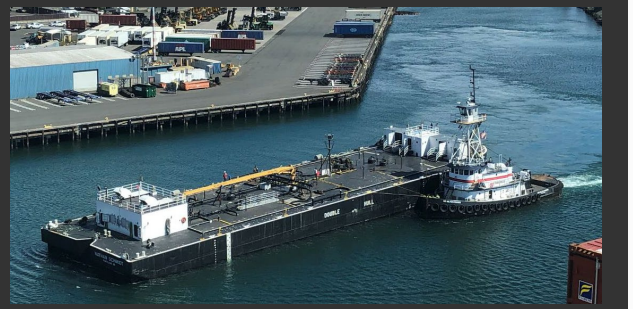
Tanker

ATB

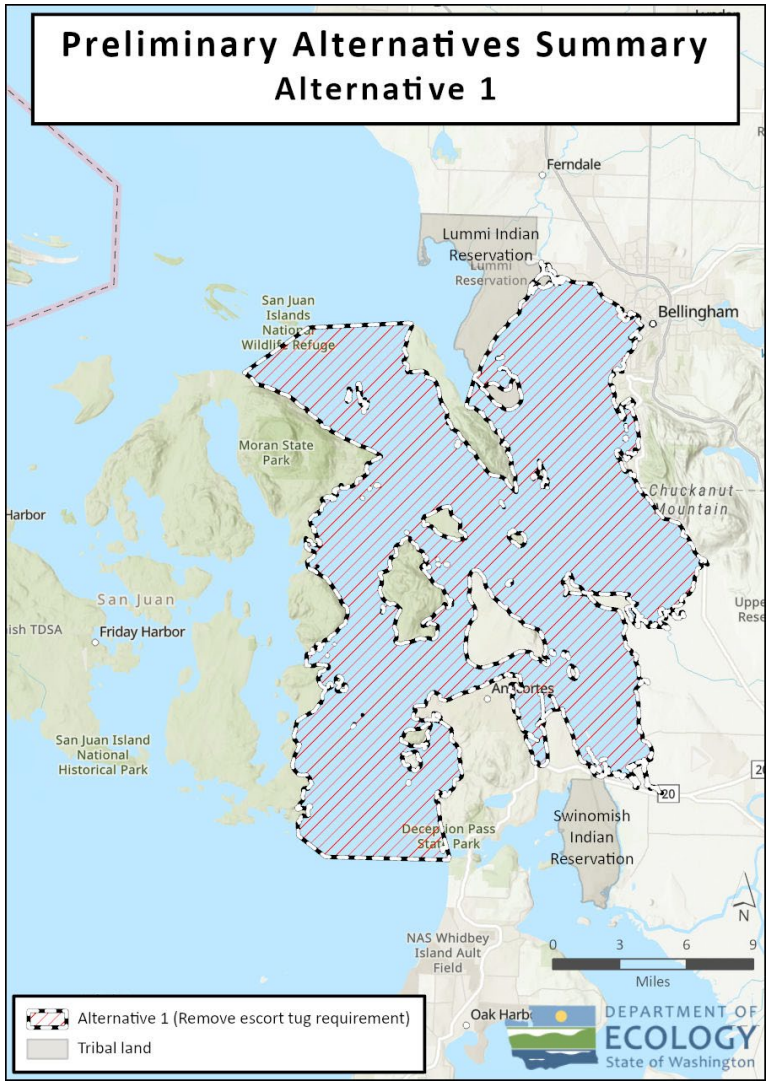


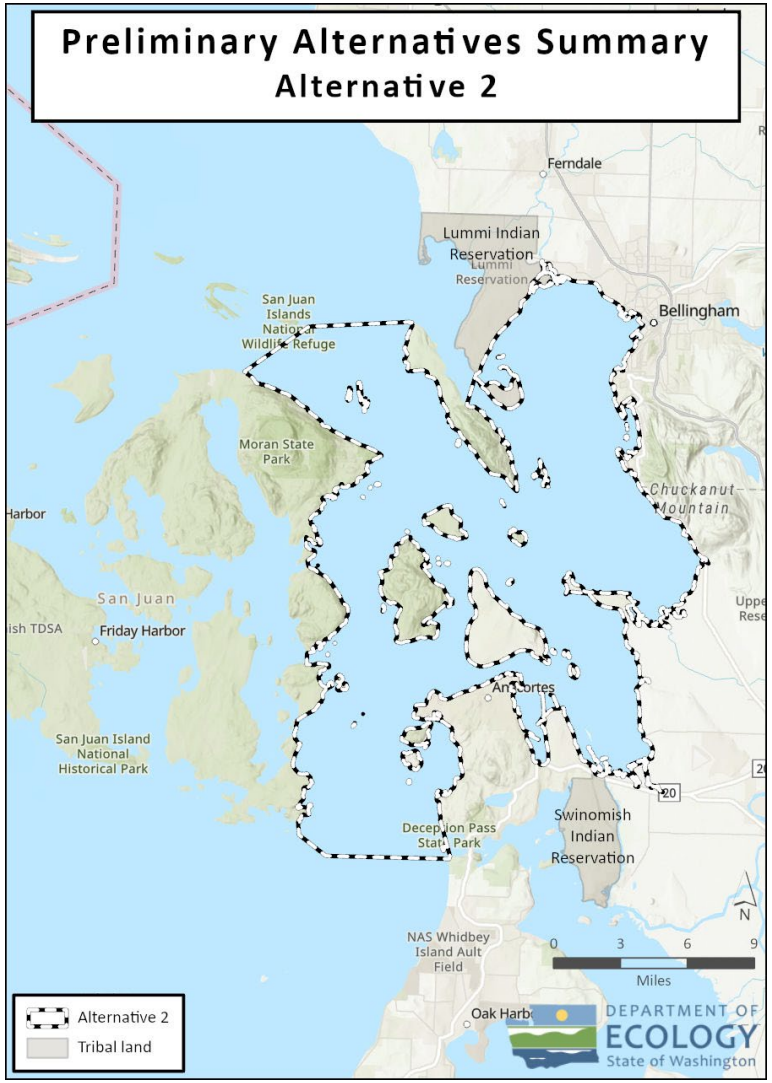
Tank Barge

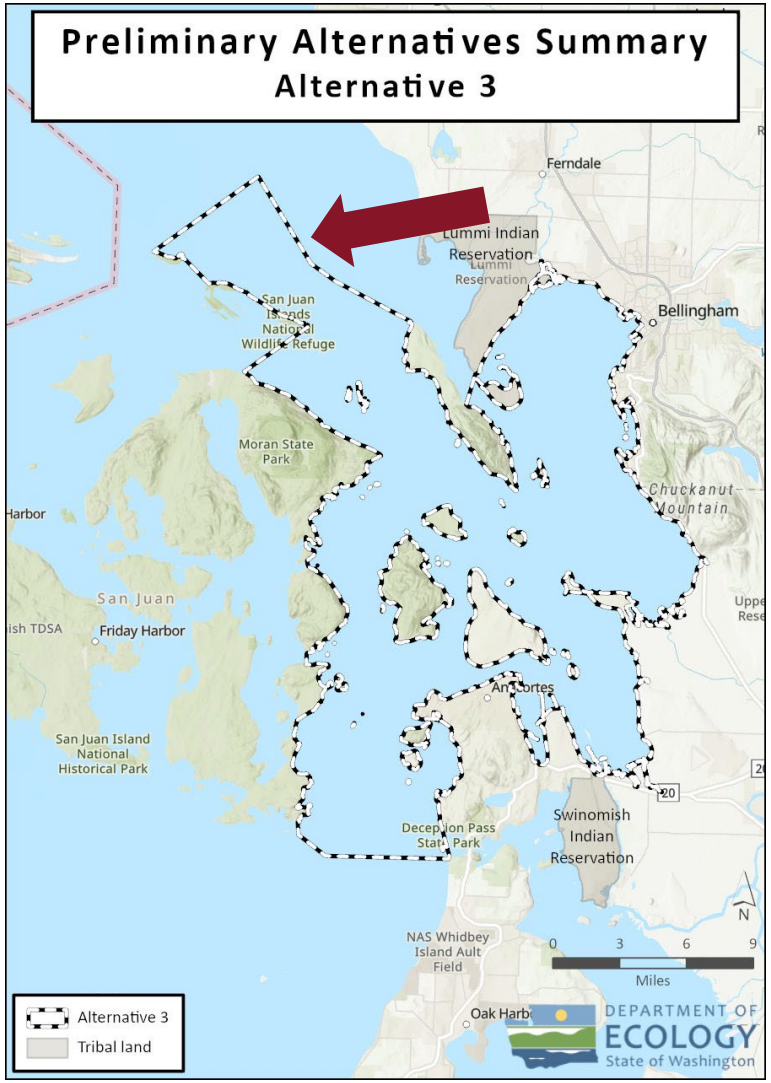
Target Vessels (Examples)

Vessel Type	Tanker	ATB	Towed Barge
			
Smaller Range Example	520 feet / 25,235 DWT	421 feet / 11,500 DWT	241 feet / 5,310 DWT
Larger Range Example	604 feet / 39,309 DWT	690 feet / 27,000 DWT	360 feet / 13,821 DWT

BPC Vote: Preliminary Alternatives Summary







BPC Vote: Elements of the Environment

Element	Include in EIS
*Air Quality and GHG Emissions	Yes
Water Quality	Yes
*Plants and Animals (incl. SRKW, marine mammals)	Yes
Energy and Natural Resources	Yes
*Environmental Health: Releases (oil spills)	Yes
*Environmental Health: Noise (incl. underwater noise, ambient/operational noise)	Yes
Aesthetics, Light, and Glare	Yes
*Tribal Natural and Cultural Resources	Yes
Historic and Cultural Resources (other, non-tribal)	No
*Transportation: Vessel Traffic	Yes

Note: BPC support for focus on environmental justice – to be integrated throughout and its own chapter
** = Priority Element as identified by the BPC*

Economic Analysis Overview

Allen Posewitz, Economic Analyst

Introduction to Economic Analysis at Ecology

Rules and Accountability Section,
Governmental Relations.

Economists in our section work with the 11 programs at Ecology providing economic analysis.

- Our economic analyses support:
  - Rulemakings
  - General permits
  - Legislative reports and requests, Chemical Action Plans, etc.
  - Other projects as needed

- Our economic analyses rely on:
  - Real world quantitative data
  - Qualitative information
  - Regional economic models (REMI)

Typical Economic analysis during rulemaking

Proposal Phase (CR-102)	• **Preliminary Regulatory Analysis(PRA)** document published with Proposed Rule Language
Comment Period	• Comments on Preliminary Regulatory Analyses accepted with comments on rule language
Adoption Phase (CR-103)	• **Final Regulatory Analysis (FRA)** document published with Final Rule Language • Response to economic comments in CES

Key laws governing rulemaking and putting requirements on our analysis.

- ***APA – Administrative Procedures Act (Chapter 34.05 RCW)***

  - "Determine that the probable ***benefits of the rule are greater than its probable costs***, taking into account both the qualitative and quantitative benefits …"

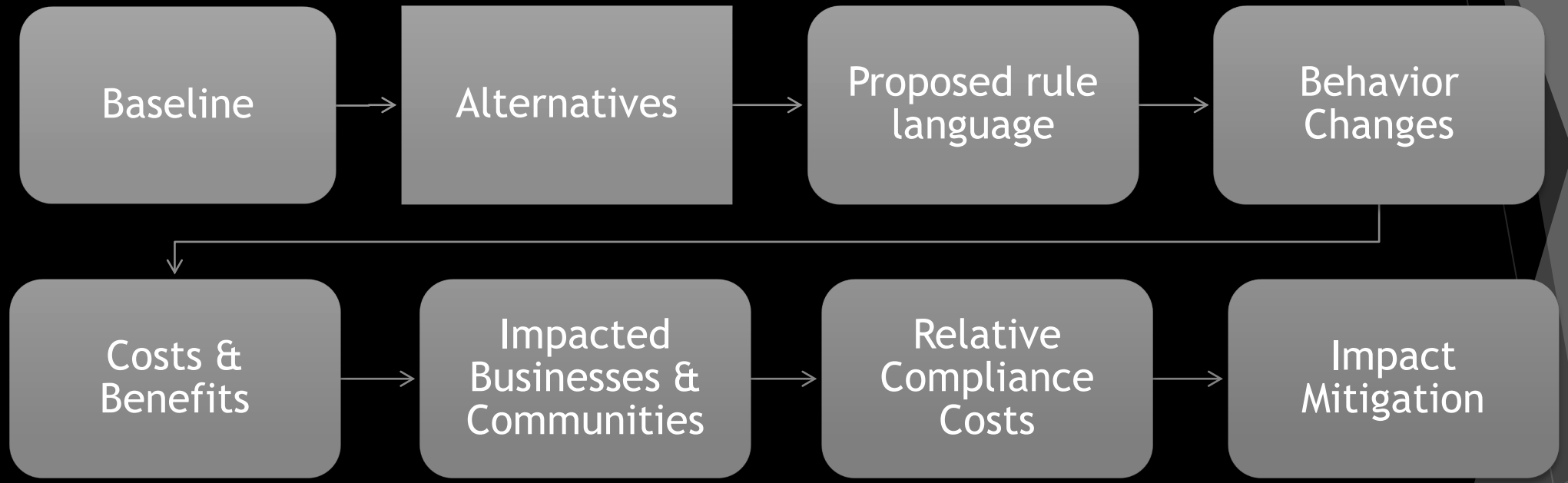
  - "Determine, ***after considering alternative versions*** of the rule and the analysis required … that the rule being adopted is the ***least burdensome alternative*** for those required to comply with it ***that will achieve the general goals and specific objectives stated …"***

Small business impacts must be assessed. **Regulatory Fairness Act (Chapter 19.85 RCW)**

Small business impact statements include descriptions of:

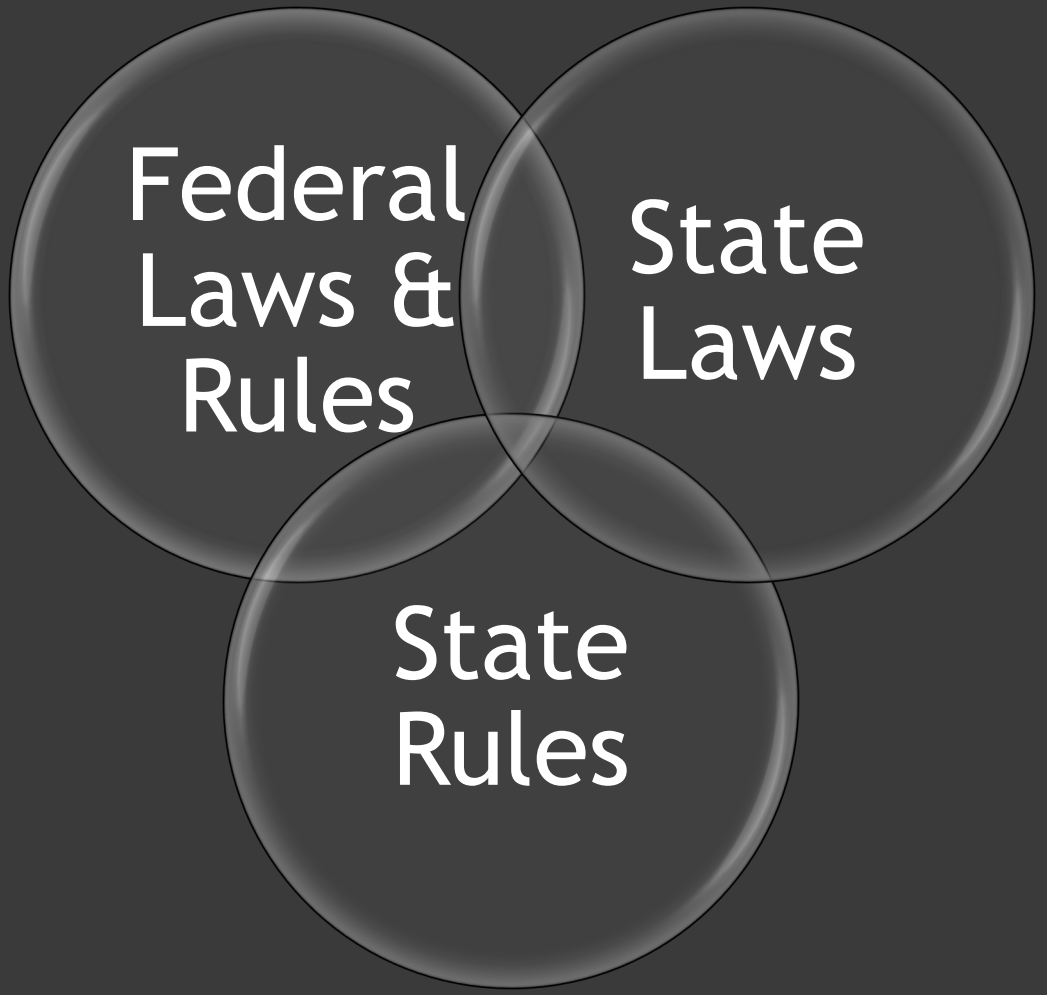
- Compliance requirements and costs
- Comparison of costs between the smallest and largest businesses impacted
- Must seek legal and feasible ways to mitigate those economic impacts.

Analysis



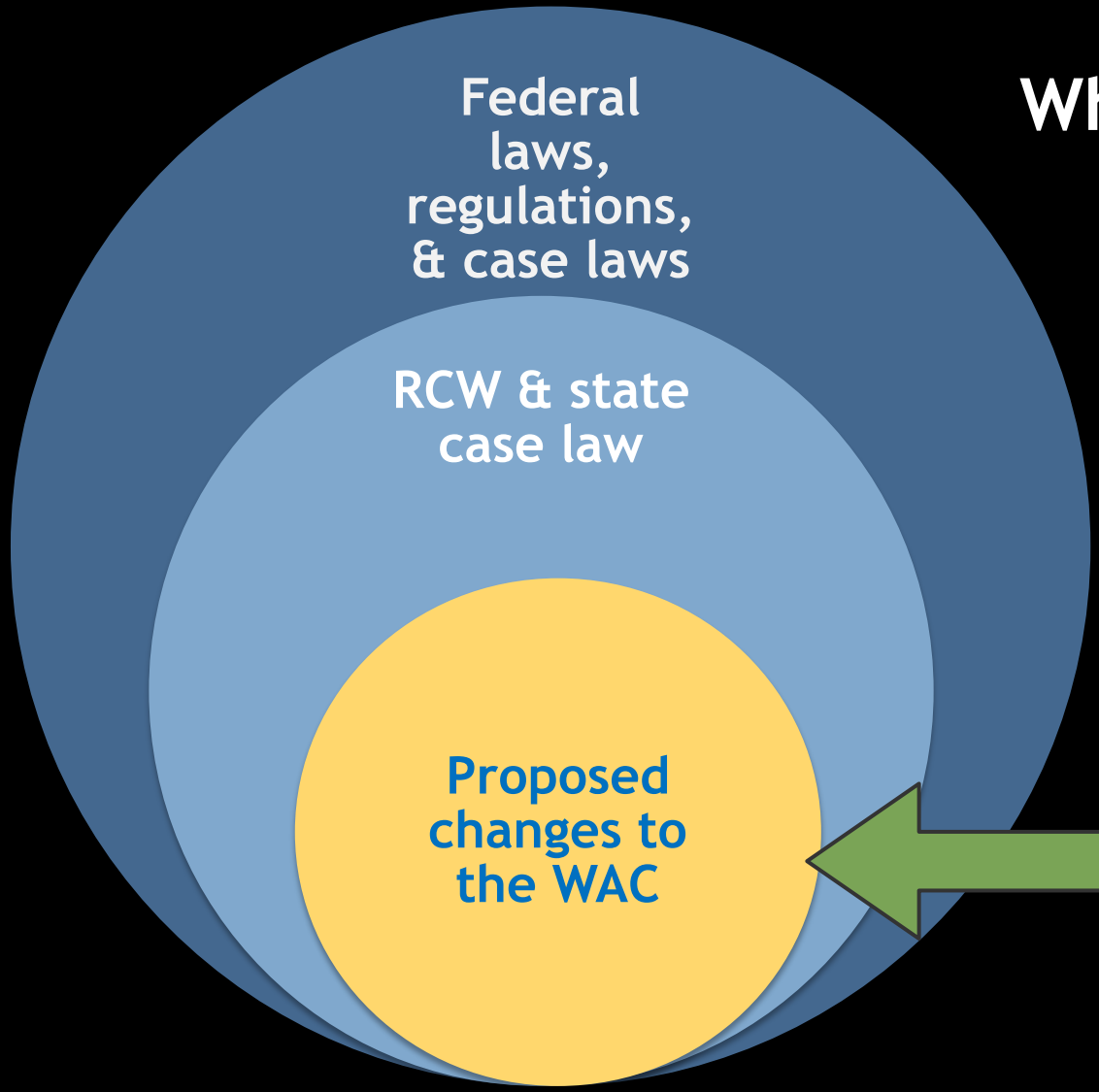
DEPARTMENT OF ECOLOGY
State of Washington

Baseline: Existing laws and rules without the proposed rule.



- Federal laws and rules: Laws made by federal legislation and rules adopted by federal agencies.
- State Laws: Laws passed by the Legislature, which reside in the Revised Code of Washington (RCW).
- Rules: Existing rules created through rulemaking by state agencies, which reside in the Washington Administrative Code (WAC).

Scope



What we analyze

- The current rulemaking's proposed changes to the WAC

Costs & benefits of changes due to the rule

Value of impacts to:

- Cost of doing business
- Environment, wildlife, and habitat
- Human health
- Property
- Risk (oil spills in this case)

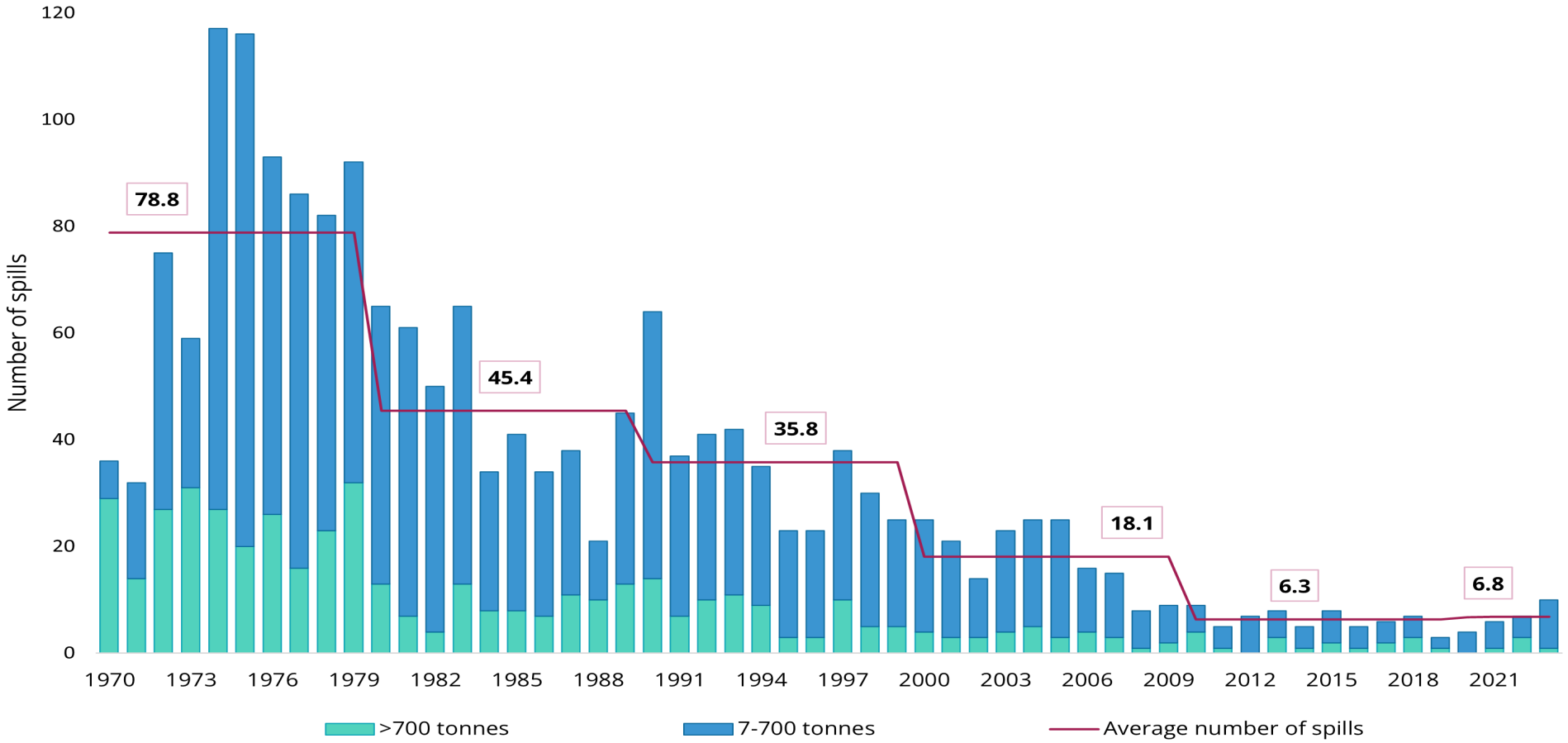
APA: Qualitative AND Quantitative

Costs estimates are usually available in quantitative terms, benefits are more likely to include qualitative descriptions

Benefits of reduced oil spill risk.
--Avoided costs from oil spills

- Cleanup
- Environmental damage* and studies to assess that damage
- Fishery-related
- Tourism and Recreation related
- Other loss of income
- Other damage to property

Declining oil Spills over time (Internationally)



Spills from vessels in U.S. waters have seen a marked reduction.

Comparing the 1990s to the 2010s, the amount of oil spilled relative to the amount transported fell 97 percent.[1]

Time Frame	Average Annual Spillage (Barrels)	Average Oil Transported/Year (Million Barrels)	Average Spillage per Million Barrels Oil Transported
Oil in the Sea III (1990-1999)	27,876	2,261	12.33
Oil in the Sea IV (2010-2019)	1,359	3,589	0.38

1. Oil in Sea IV, National Academies. https://nap.nationalacademies.org/catalog/26410/oil-in-the-sea-iv-inputs-fates-and-effects. Table 3.12, page 87. Metric tons (MT) converted to barrels at a rate of 7.22 barrels/MT.

Estimating the cost of oil spills

- Adding up all relevant cost components (These are often not fully known, e.g. resource damages aren't always assessed.)
- Using modeling approaches based on what costs are known.
- Assuming that the total cost of an oil spill can be approximated by the compensation eventually paid to claimants. The International Oil Pollution Compensation Fund (IOPCF) publishes Annual Reports.

An empirical analysis of IOPCF oil spill cost data

Christos A. Kontovas *, Harilaos N. Psaraftis, Nikolaos P. Ventikos

Marine Pollution Bulletin 60 (2010) 1455–1466

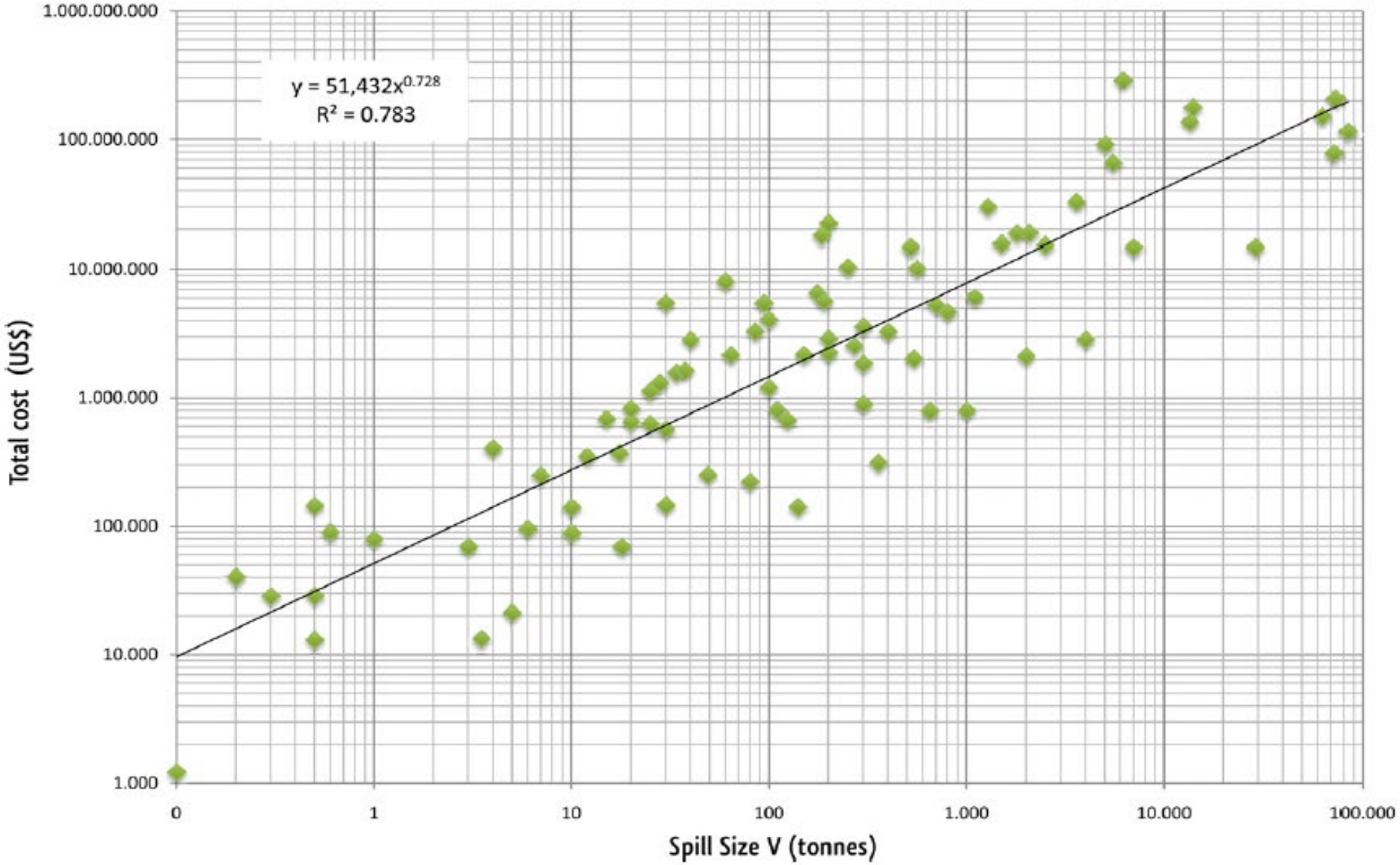


Fig. 4. Linear Regression of Log(Spill Size) and Log(Total Cost).

Qualitative versus Quantitative Benefits

Methods have improved in estimating the quantitative value of benefits previously described qualitatively.

- **Recreation values**: qualitative → expenditures → Travel Cost Studies
- **Ecosystem service values**: qualitative → various valuation methods → $/Acre per year
- Existence values: qualitative → stated preference value estimation (Willingness to Pay)

The Southern Resident Killer Whales were declared endangered nearly 20 years ago.

Willingness to pay to conserve SRKW

Public preferences for endangered species recovery: an examination of geospatial scale and non-market values
-Kristy Wallmo and Daniel K. Lew (Frontiers in Marine Science, 2015)

- Contingent Valuation survey in 2010.
- Valuation was for conservation efforts that would in 50 years move the SRKW from “endangered” to “recovered”.
- Households were willing to pay roughly $1,000 over 10 years.
- This survey was mailed 8 years prior to global headlines.

Photo from Katmai National Park's "Fat Bear Contest"

There is evidence that being able to identify individual animals increases WTP for conservation.

"We were very interested in whether the ability to identify—and identify *with*—individual animals influences willingness to pay for conservation. Not surprisingly, the answer is a resounding yes."

-- Lynn Lewis, co-author of: "Getting to know you: individual animals, wildlife webcams, and willingness to pay for brown bear preservation"

First published: 15 August 2021

The New York Times

Orca That Carried Dead Calf for 17 Days Gives Birth Again

Researchers spotted the killer whale they call J35 alongside her "robust and lively" new calf on Saturday — a ray of hope for the endangered Southern Resident population off the Pacific Northwest.

The new calf, J57, with its mother, J35. Katie Jones, via Center for Whale Research

By Mike Baker

Sept. 6, 2020

Information potentially sought from stakeholders

- Baseline operating costs
- Anticipated costs or benefits to your business or community
- Potential qualitative impacts

- Check assumptions on costs and benefits

- Critique of our economic modeling structure

Thank you

Rules and Accountability Section, Governmental Relations.

Washington State Department of Ecology

Methods for Analysis (DEIS)

EIS Process

Government to Government Consultation with Tribes as Requested by Tribal Governments

Workshops to share information and seek input from Tribes and stakeholders

Determination

- Lead Agency determines project likely to cause significant adverse impacts, requiring EIS

Scoping

- Lead agency uses input from Tribes and the public to decide what to include in the environmental review

Formal public comment period and meetings (Completed April 8, 2023)

Draft EIS

- Lead agency analyzes possible rulemaking impacts and develops a draft EIS

Formal public comment period and meetings

Final EIS

- Lead agency considers input from Tribes and the public to develop a final EIS

EIS is used by agencies in making final rule decisions

Rulemaking and EIS Happen Concurrently

Rulemaking Action	SEPA Action	Proposed Timeline
Rulemaking Announcement (CR-101 filing):	Determination of Significance/ Scoping Comment Period	February 22, 2023
Rule Development Workshops	EIS Development Workshops	March 2023 – December 2024
Rule Proposal and start of comment period (CR-102 Filing)	Issuance of Draft EIS with CR-102 and comment period.	Anticipated Summer 2025
Rule Adoption (CR-103 Filing):	Final EIS issued at least 7 days before the CR-103	Anticipated December 2025
Rule Effective	N/A	Anticipated January 2026 (Typically, 31 days after CR-103 filing)

Rulemaking Objective for Use in SEPA

- Reduce the risk of a major oil spill through potential tug escort requirements for oil tankers 5,000-40,000 DWT and barge and ATBs over 5,000 DWT.
- Design requirements in a way that
  - minimizes underwater noise
  - focuses vessel traffic into the existing traffic lanes
  - and minimizes impact to treaty fishing areas

Goals and Requested Input

Goals for Methods Discussion

- ✓Build confidence in the analysis that will be conducted
- ✓Seek feedback to shape the analysis
- ✓Identify any areas of concern before the analysis is underway

Requested Input

- Robustness of methodology
- Components that are missing
- Priorities for analysis
- References and data sets

**Note: Method summaries are still draft, undergoing SME review*

Contractor Hired

- Eastern Research Group, Inc. (ERG)
  - JASCO (Underwater Noise)
  - Cascadia Research Collective (Plants & Animals)
  - Triangle Associates (Tribal Resources)
  - AS1MET (Air Quality – Dispersion Modeling)

Methods Summaries – Discussion Content

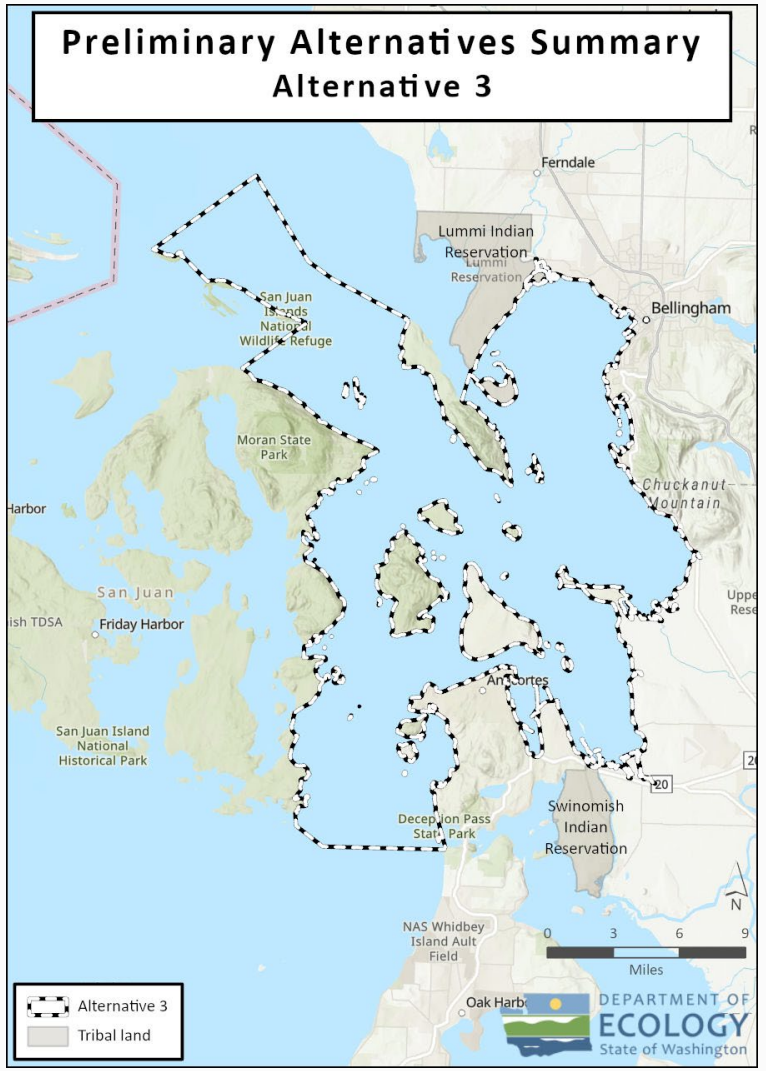
- Study Area
- Research Questions
- Primary References and Source Materials
- Methodology for Analysis
- Impact Indicators
- Related Scoping and Methods Development Comments

Available to You

If this presentation is too technical or not technical enough, OR you have questions that we don't answer, we are happy to meet with you directly 1-1 after the workshop. Just contact Haley (haley.kennard@ecy.wa.gov)

Study Area (in General)

- **EIS Study Area:** Includes commutes
- **Preliminary Alternatives:** where requirements would occur



Vessel Traffic: Research Questions

- What are existing levels of vessel traffic and escort tug traffic in the study area?
- How do the proposed changes in tug escort requirements (each alternative) change escort tug traffic?
- What other types of vessel traffic are potentially affected by changes in escort tug traffic? Where do those potential impacts occur?
  - Can these impacts be reduced or mitigated?

Vessel Traffic (Priority Element)

Component	Summary Description
Methodology Overview	• Develop quantitative baseline: existing traffic for target vessels, # of escort jobs/year, # of commute transits/year, underway time • Model changes to baseline for alternatives, develop heat maps • Assess areas of potential impact from changes in vessel traffic
Primary Data Sources and References	• Ecology Risk Model, associated analyses and reports, 2023 Tug Escort Report • 2021 Synopsis of Changing Vessel Traffic Trends • 2019 Report of Vessel traffic and Vessel Traffic Safety • VEAT Reports • USCG Incident Reports • 2016 PAWSA • 2010, 2015 VTRAS, Columbia River VTRA • AIS Data
Impact Indicators	• Changes in underway time • Interactions with other vessel traffic

Oil Pollution: Research Questions

- What is the existing volume of oil on the water and where is it in relation to traffic? What incidents lead to a spill?
  - Existing risk from target vessels?
  - Existing risk from escort tugs?
- How do the proposed changes in tug escort requirements change spill risk for target vessels and escort tugs? How are those changes in risk distributed geographically?
  - Change in risk for target vessels?
  - Change in risk for escort tugs?
- What are the impacts of a spill on resources of concern?
- Can impacts be reduced or mitigated?

Oil Pollution (Priority Element)

Component	Summary Description

Methodology Overview	• Establish Baseline: Overview of current trends in oil movement incl. types and volumes of oil, spill response options and limitations, existing safety measures to reduce risk.
	  • Target Vessels: Simulated drift grounding frequency, review of 2020-2023 incidents
	  • Escort Tugs: Simulated hazard incident frequency, review of 2020-2023 incidents, information on spill sizes and locations.
	• Assess Alternatives: Model changes from baseline for specified metric, discuss incident data under each alternative.
	• Discuss impacts of a spill on resources of concern

Primary Data Sources and References	• Ecology Risk Model and associated analyses and reports • VEAT Reports • Ecology Resources at Risk data, GRPs, PNW ERMA, other NOAA tools
Impact Indicators	• Target Vessels: frequency of drift groundings • Escort Tugs: hazard frequency (collisions, allisions, loss of propulsion) • Escort Tugs: other spill types

Underwater Noise/Noise: Research Questions

- What is the current underwater baseline noise level from vessel traffic and escort tug traffic in the study area?
  - Do current vessel underwater noise emissions potentially impact sensitive marine wildlife receptors?
- How would the proposed changes in tug escort requirements, including from commutes and idling time, affect the quantity and spatial distribution of these emissions and their impacts to sensitive receptors?
  - Can these impacts be reduced or mitigated?
- Would changes in vessel activities be expected to result in new/worse operational noise impacts near sensitive receptors?

Underwater Noise/Noise (Priority Element)

Component	Summary Description
Methodology Overview	• Identify areas of concern to be focus of underwater noise modeling – e.g., sensitive habitats such as SRKW and grey whale foraging areas • Conduct sound propagation modeling of vessel underwater radiated noise in areas of concern under different regulatory scenarios; compare results against effects criteria for various marine wildlife species • Qualitatively assess potential for changes in operational noise levels (e.g., during idling) to exceed ambient noise criteria in areas with sensitive receptors
Primary Data Sources and References	• Vessel traffic data from Ecology Risk Model • Vessel source levels from JASCO's large database recorded through the ECHO Program in the Strait of Georgia, Haro Strait, and Boundary Pass • SRKW key habitat and foraging areas • Environmental model inputs: i.e., wind, bathymetry, sound speed profiles, geoacoustics
Impact Indicators	• NOAA/NMFS behavioral effects from noise criteria • Killer whale communication/echolocation frequency bands; reduction in listening space

Air Quality: Research Questions

- What are current emissions (criteria, air toxics, and GHGs) from vessel traffic and escort tug traffic in the study area?
- Do current vessel emissions (criteria, air toxics) potentially impact overburdened and sensitive receptors identified in the EJ analysis, including Tribal reservations?
- How would the proposed changes in tug escort requirements, including from commutes and idling time, affect the quantity and spatial distribution of these emissions and their impacts to sensitive receptors?
  - Can these impacts be reduced or mitigated?
- Would the changes in emissions be consistent with State and industry emission reduction goals?

Air Quality (Priority Element)

Component	Summary Description
Methodology Overview	• Identify areas of concern to be focus of dispersion modeling – e.g., areas with elevated vessel activity close to many sensitive receptors • Quantify emission rates (criteria, air toxics, GHGs) for each alternative; compare against state and industry goals; provide emission rate inputs to dispersion modeling • Conduct dispersion modeling (criteria, air toxics) using AERMOD-COARE for areas of concern under each regulatory scenario; compare results against air quality standards
Primary Data Sources and References	• Vessel traffic data from Ecology Risk Model • 2022 National Emission Inventory Modeling Platform • COARE meteorological data • U.S. EPA Guideline on Air Quality Model
Impact Indicators	• U.S. EPA National Ambient Air Quality Standards (NAAQS) • Air toxics thresholds • Federal Air Rules for Reservations (FARR) air quality standards (40 CFR Part 49) • Washington and Northwest Sea Port Alliance emissions reduction goals

Tribal Resources: Research Questions

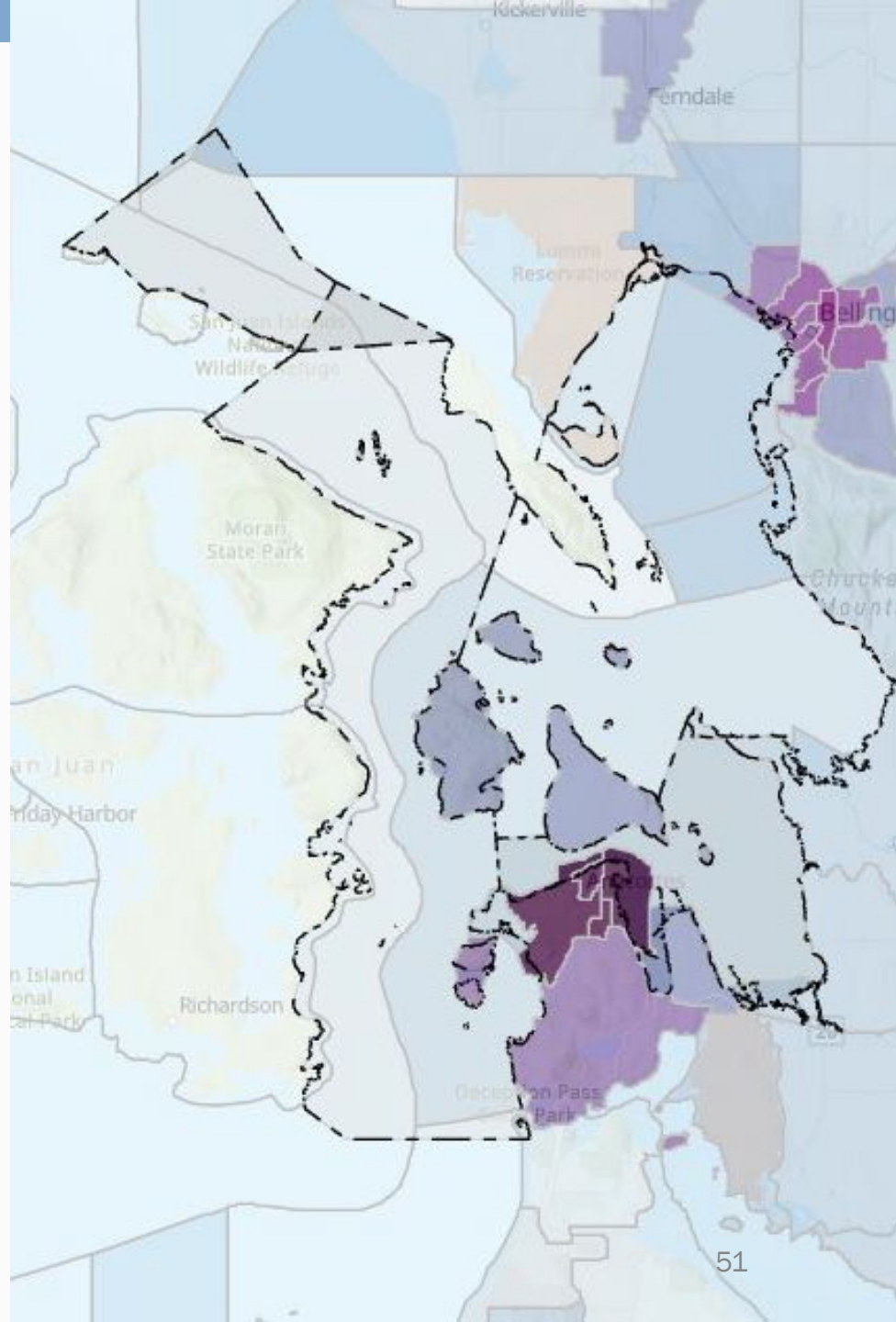
- Hear from Tribes what Tribal resources of interest/concern in the study area?
- How and where does current baseline vessel traffic impact Tribal resources and interests (e.g., restricted access, availability of fishery species, gear loss, physical safety)?
- What aspects of vessel traffic are key causes of these impacts (e.g., congestion, wakes, speed, noise, emissions, discharges)?
- How would the proposed changes in tug escort requirements affect vessel traffic impacts to Tribal resources and interests? Can these impacts be reduced or mitigated?

Tribal Resources (Priority Element)

Component	Summary Description
Methodology Overview	• Identify Tribal resources of interest in the study area in coordination with Tribal staff • Characterize impacts, and causes of impacts from current vessel traffic • Review vessel traffic analysis outputs and identify areas of interest with increased (or decreased) potential for vessel-related impacts • Coordinate with Tribes and/or DAHP to discuss concerns and ways to reduce/mitigate impact if possible and appropriate.
Primary Data Sources and References	• Input from THPOs, Tribal Natural Resources Directors, and Staff from interested Tribes • Previous published statements and reports, including 2016 PAWSA, SRKW Task Force, Shared Waters Forum, Cherry Point EIS, TMX/RBT2 environmental documents, etc. • Washington Information System for Architectural & Archaeological Records Data (WISAARD) • Bureau of Indian Affairs (BIA) Tribal trust land maps
Impact Indicators	• TBD based on impacts identified in methods steps 1 and 2 • Could include: relative frequency of incidents involving escort tugs, disproportionate impacts to Tribes as a result of the proposed rule, impacts to access, changes in spill risk, etc.

Environmental Justice: Research Questions

- What communities of color, low-income populations, and/or overburdened communities are present within the study area?
  - (Compare to reference community and identify “environmental justice population” block groups.)
- What are potentially significant adverse impacts (that can’t be mitigated) of the proposed changes in tug escort requirements?
- How would potentially significant adverse impacts affect environmental justice populations?

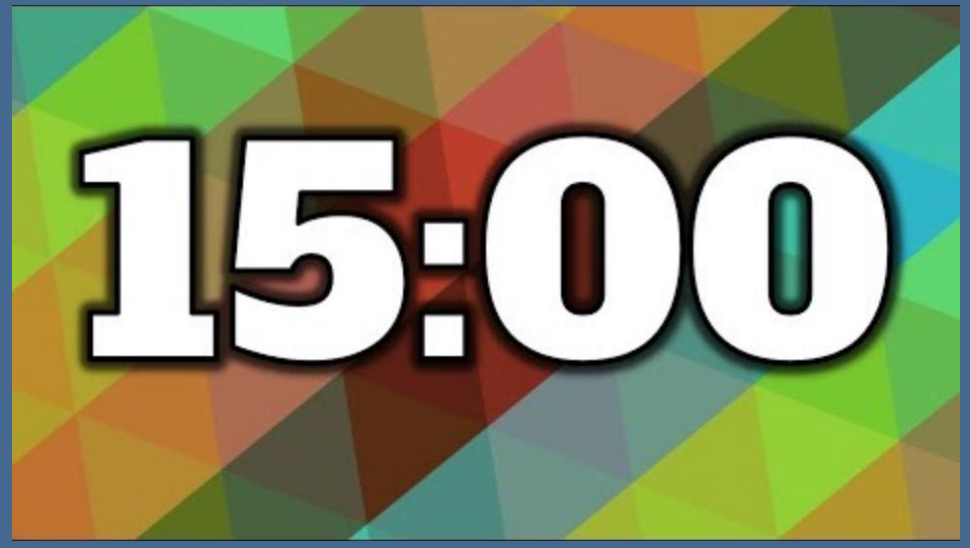


Environmental Justice

Component	Summary Description
Methodology Overview	• Identify communities of color, low-income populations, and overburdened communities within the study area and compare to population characteristics of reference community • Overlay impacts that can't be mitigated with location of EJ communities to determine type and severity of impacts on affected populations.
Primary Data Sources and References	• U.S. Census Bureau 2018-2022 American Community Survey • OSPI Data on language spoken by students • U.S. EJSCREEN Tool • WA Environmental Health Disparities Map (secondary) • OFM/Ecology Dataset on Overburdened Communities of WA • Guidance Documents from CEQ, EPA, ECY, and WA State Agencies
Impact Indicators	• Disproportionate impacts to EJ communities as a result of the proposed rule

Priority Elements Discussion

Q&A



Recreation: Research Questions

- What are current recreational uses in the study area?
- How do the proposed changes in tug escort requirements affect recreational opportunity and access (frequency, duration, spatial conflicts) and quality (safety, enjoyment)?
- How would recreational uses be affected by changes in oil spill risk under the proposed alternatives?
- Can impacts be reduced or mitigated?

Recreation

Component	Summary Description
Methodology Overview	• Compile available data about existing recreation in the study area • Assess each activity for possible impacts from changes in tug escort requirements • Cross-reference with other chapters as relevant
Primary Data Sources and References	• State Data: RCO Outdoor Recreation Inventory, WDFW rec harvest, sports catch, and fishing license data, WSDOT Scenic Byways information, DOL boating licenses • County Data: SMPs, other plans, studies (incl. Tourism studies), ordinances • SJI National Monument plans and information • Geographic Response Plans for the region • Soundwatch whale watching vessel movement info • Data on recreational gear loss in the Puget Sound
Impact Thresholds	• Changes to access to or quality of recreational opportunities

Visual Resources: Research Questions

- What are the existing visual resources and visual character of the study area?
- How do the proposed changes in tug escort requirements affect visual resources?
- Where are visual impacts likely to be concentrated?
- Can impacts be reduced or mitigated?

Visual Resources

Component	Summary Description
Methodology Overview	• Using the FHWA Visual Impact Assessment (VIA) Methodology, assess the level of VIA required (likely a memorandum or abbreviated VIA). • Conduct the appropriate VIA Assessment. This will include identification of existing visual character and resources, a site visit, review of relevant plans, discussions with relevant stakeholders and potentially affected Tribes, and a qualitative assessment of impacts.
Primary Data Sources and References	• Local land use management plans, policies, ordinances • FWHA/WSDOT Guidance on VIA Methods • Puget Sound Harbor Safety Standards of Care • AIS and GIS data
Impact Indicators	• Changes in visual quality as a result of the proposed rule changes

Energy & Natural Resources: Research Questions

- What is the current level of marine fuel use in Washington State? What is the operational fuel use of an escort tug while commuting and while escorting?
- How do the proposed changes in tug escort requirements affect fuel needs?
- How do changes in fuel needs affect availability of fuel sources at the state and regional level?
- Can impacts be reduced or mitigated?

Energy and Natural Resources

Component	Summary Description
Methodology Overview	• Establish estimated baseline of fuel requirements • Based on vessel traffic analysis, estimate changes in fuel use for each alternative • Compare to statewide and regional fuel use and availability
Primary Data Sources and References	• U.S. Energy Information Administration (WA and PADD 5) • Ecology SPIIS Data • AIS Data
Impact Indicators	• Change in fuel use as a result of the proposed rule

Other Elements Discussion

Q&A

Timeline and DEIS Development Process

DEIS Milestones and Next Steps

Milestone	TENTATIVE Timeline	Input Opportunity
Methods Development	June – Aug. 2024	This workshop, 1-1 meetings, submit informal comments
Workshop Series #9	Sept. 2024	Comments, updates on preliminary oil spill risk, vessel traffic analyses
Technical Analyses	July – Dec. 2024	Submit informal comments, 1-1 meetings
Deep Dive Workshop (Noise?)	Oct. 2024	Comments, updates on underwater noise work
Workshop Series #10	Nov. 2024	Comments, early review of technical analyses
Workshop Series #11	Jan. 2025	Comments on proposed rule language, preliminary econ update
DEIS/CR-102 Comment Period	Summer 2025	Formal comments, public hearings

Online comment submission

- Submit online comments here: Public Comment Form
- Informal comment period open until end of rule development phase
- Provides transparency, accessibility, and an online record
- Easier tracking of comments
- Encourages broader participation in rulemaking process

Upcoming Workshops

- **Workshop #9:**
  - **Stakeholders:** September 3, 2024 (1:00-3:00 PM), HYBRID, NWRO
  - **Tribal Governments:** September 10, 2024 (10:00 AM – Noon)
- **Workshop #10:**
  - **Stakeholders:** November 5, 2024 (10:00 AM – Noon), HYBRID, NWRO
  - **Tribal Governments:** November 13, 2024 (1:00 – 3:00 PM)

Final Questions or Comments?

SEPA Point of Contact:
Haley Kennard, Tug Escort Environmental Analysis Coordinator
haley.kennard@ecy.wa.gov or (564) 233-5178

BPC Point of Contact:
Jaimie Bever, Executive Director
BeverJ@wsdot.wa.gov or
(206) 305-2296