



STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS

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Meeting Minutes – Oil Transportation Safety Committee (OTSC)

July 17, 2024, 1:00pm – 3:00pm

Via MS Teams

Attendees:

Jaimie Bever (Chair/BPC), Brian Kirk (Ecology Alternate/BPC), Adam Byrd (Ecology Alternate/BPC), Haley Kennard (Ecology Alternate/BPC), Angela Zeigenfuse (Ecology Alternate/BPC), Megan Hillyard (Ecology Alternate/BPC), JD Ross Leahy (Ecology Alternate/BPC), Blair Bouma, (Pilot/PSP), Jeff Slesinger (Tug Industry/Delphi Maritime), Clyde Halstead (Tribal Government/Swinomish), Antonio Machado (Oil Industry/WSPA), Kyle Burleson (Tug Industry Alternate/AWO), Sheri Tonn (ex officio/BPC), John Robertson (Advisory/USCG), Peter Schrappen (Tug Industry Alternate/AWO), Fred Felleman (Environment/Friends of the Earth), Rein Attemann (Environment Alternate/WEC), Allen Posewitz (Ecology SME)

1. Welcome & Meeting Minutes

Jaimie Bever (OTSC Chair/BPC) welcomed everyone to the meeting. She mentioned that she had sent out the minutes for the June 18 meeting and that those had also been provided to the Board in draft form to help inform the July 18 Board decision regarding escort tug functional and operational requirements. Jaimie then introduced the presentation team including Megan Hillyard, Allen Posewitz, Haley Kennard.

2. Meeting Reminders and Logistics

Jaimie reminded everyone to use the “raise hand” and “comment” function, as well as to mute microphones when not speaking.

3. Meeting Agenda

Jaimie then reviewed the agenda for the meeting:

- Rulemaking Overview & Background
- Economic Analysis Overview
- Update on Methods Summaries for EIS Analysis
- Update on Proposed Timeline and Milestones for Draft EIS Development

4. Roles and Responsibilities

For the rulemaking, the BPC roles and responsibilities include:

- Outreach lead
- Government-to-Government Consultation
- Final Decisions on Tug Escort Requirement

Ecology's roles and responsibilities include:

- Rulemaking process
- Technical Expertise
- Regulatory Analyses
 - Administrative Procedures Act (APA)
 - State Environmental Policy Act (SEPA)
 - Regulatory Fairness Act (RFA)




5. Rulemaking Overview

Jaimie explained that 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

6. Target Vessels (Examples)

After the last workshop, there was a request to provide some more information about the size of the vessels for this rulemaking in more plain language (as DWT may not be intuitive for everyone attending these workshops). The team pulled together some example vessels on the high and low end of the range of vessels that would fall into this "target vessels" category for reference.

| 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 |

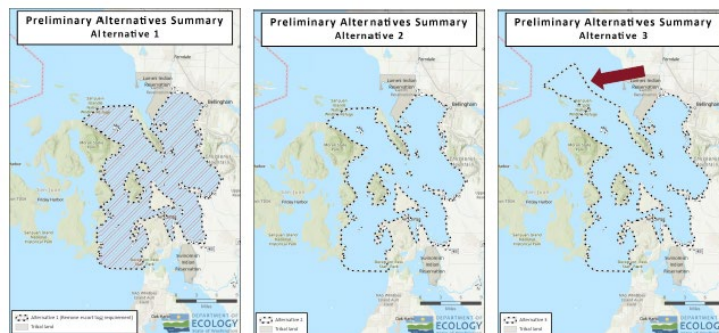
7. BPC Vote: Preliminary Alternatives Summary

The Oil Transportation Safety Committee presented their recommendations to the BPC at the March 21, 2024 Regular Public Meeting. Three alternatives on the slide were approved for the SEPA analysis:

Alternative 1 – Remove Rosario and waters east requirement (Pre-2020)

Alternative 2 – Maintain Rosario and waters east requirement (current – no action)

Alternative 3 – Maintain Rosario and waters east requirement and expand to Strait of Georgia South, and a corner of Strait of Georgia – extending along the northern edge San Juan Islands as emphasized by the arrow.



8. BPC Vote: Elements of the Environment

In addition to the Preliminary Alternatives, the OTSC also recommended Elements of the Environment to be included in the EIS. The Board adopted the recommendation as proposed.

REMINDER: The Board will be voting on the tug escort operation and functionality recommendation at the July 18 meeting which is this Thursday.

| 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

Jaimie then handed the presentation over

to Allen Posewitz, Economic Analyst, for the Economic Analysis Overview.

9. Economic Analysis Overview

Allen introduced himself.

10. Introduction to Economic Analysis at Ecology

He then explained that he would be providing a brief introduction to economic analysis at Ecology, starting with a general description of economists at Ecology do, and then talk about some issues pertaining the economic analysis of this rulemaking on tug escorts.

11. Economic Work in Ecology's 11 Programs

The Spills Prevention, Preparedness and Response program is one of Ecology's 11 programs that this team of economists work with. They use real-world economic data and comprehensive analysis and modeling to examine potential impacts from changes in environmental policies and regulations in Washington.

In addition to reaching out to potentially impacted stakeholders to assist in data collection and fact-checking, they consult published literature and other state, federal, and local agencies during data collection and analysis.

The economic analyses support:

- Rulemakings
- General permits
- Legislative reports and requests, Chemical Action Plans, etc.
- Other projects as needed

The economic analysis relies on:

- Real world quantitative data
- Qualitative information
- Regional economic models (REMI)

12. Typical Economic Analysis During Rulemaking

Two economic publications accompany a rulemaking.

| | |
|------------------------------------|--|
| Proposal Phase (CR-102) | <ul style="list-style-type: none">• Preliminary Regulatory Analysis(PRA) document published with Proposed Rule Language |
| Comment Period | <ul style="list-style-type: none">• Comments on Preliminary Regulatory Analyses accepted with comments on rule language |
| Adoption Phase (CR-103) | <ul style="list-style-type: none">• Final Regulatory Analysis (FRA) document published with Final Rule Language• Response to economic comments in CES |

The PRA accompanies the proposed rule language. They respond to feedback with a set of concise explanatory statements, or possibly by modifying the FRA based upon comments received.

13. Key Laws Governing Rulemaking

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 ...”

14. Small Business Impacts – RFA

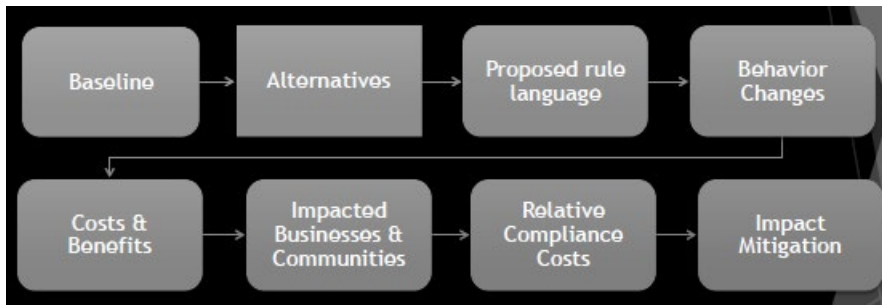
The small business impact statement (SBEIS) is developed for proposed rules that might impose more than minor costs on businesses. The purpose of the SBEIS is to look at how a rule might impact small businesses compared to large businesses. When these impacts are identified, we must try to find legal and feasible ways to mitigate those impacts.

The SBEIS, when required, is included in the regulatory analysis documents (PRA and FRA). SBEISs include a description of the:

- Compliance requirements in the proposed rule and estimated costs of compliance
- Comparison of compliance costs between small businesses and the largest businesses covered under the proposed rule
- Legal and feasible methods for mitigation of economic impacts

15. Analysis

He then shared a flowchart of the economic analysis process:



16. Baseline: Existing Laws and Rules without the Proposed Rule

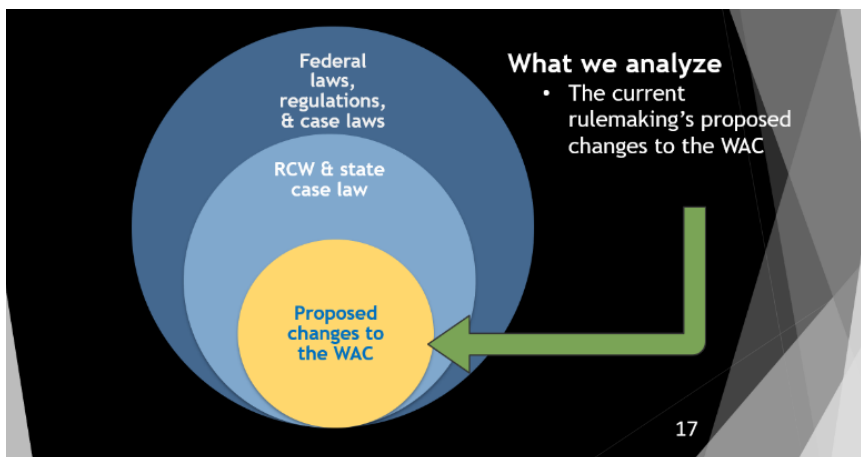
Federal laws and rules: Laws made by federal legislation and rules adopted by federal agencies.

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).

17. Scope

Allen emphasized that in this graphic, the bigger circles are the baseline.



18. Cost & Benefits of Changes Due to the Rule

The analysis will explore the 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.

19. Benefits of Reduced Oil Spill Risk

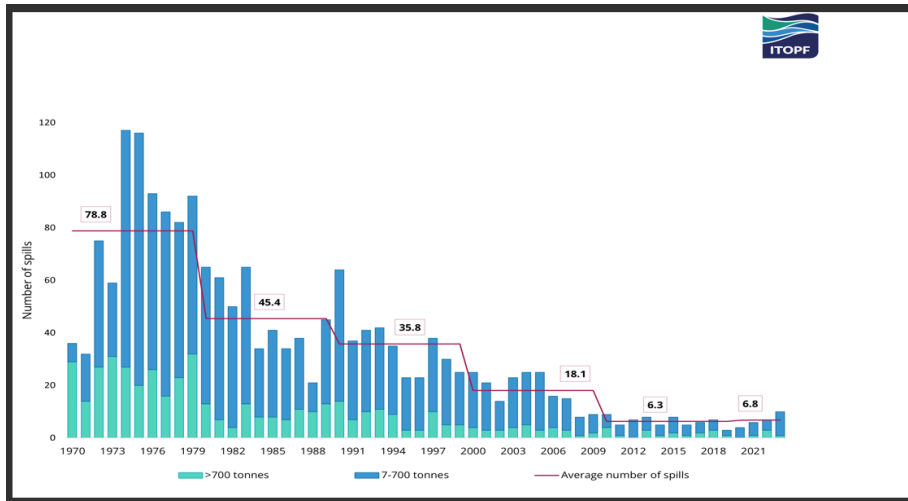
The avoided costs from oil spills include:

- Cleanup
- Environmental damage and studies to assess that damage
- Fishery-related
- Tourism and Recreation related

- Other loss of income
- Other damage to property

20. Declining Oil Spills

Allen then shared one assessment of reduced oil spill incidents over time (internationally).



Source: International Tanker Owners Pollution Federation (ITOPF) Lighter bar (lower) spills of greater than ~5,000 barrels, darker(upper) bar spills 50 to 5,000 barrels.

Average per year: Nearly 80/yr in the 1970's → fewer than 7 /year over the past 20 years.

21. Spills from vessels in US waters

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.

| 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.

22. Estimating the Cost of Oil Spills

When estimating the cost of oil spills, Allen explained that they would:

- Add up all relevant cost components (These are often not fully known, e.g. resource damages aren't always assessed.)
- Use modeling approaches based on what costs are known
- Assume 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.

Source: An empirical analysis of IOPCF oil spill cost data

Christos A. Kontovas, Harilaos N. Psarftis, Nikolaos P. Ventikos
 Marine Pollution Bulletin 60 (2010) 1455–1466

23. Linear Regression of Spill Size and Total Cost

Allen displayed a chart with results based on the claims paid out by the International Oil Pollution Compensation Fund.

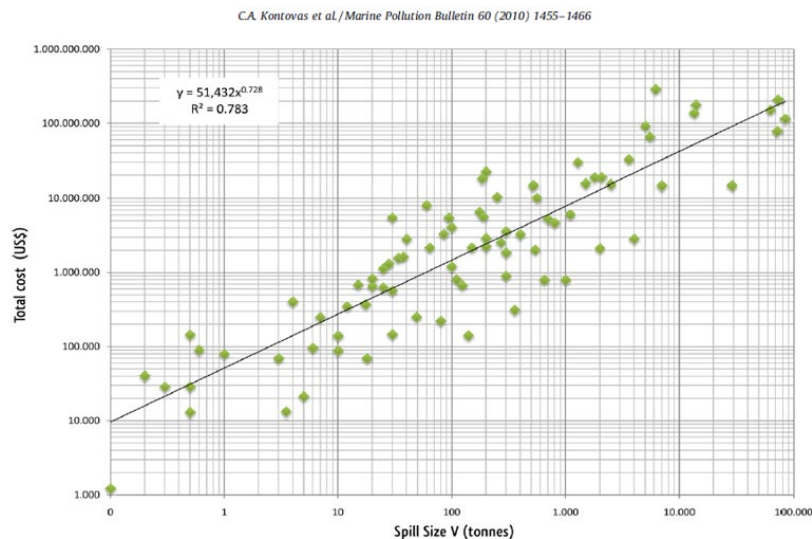


Fig. 4. Linear Regression of Log(Spill Size) and Log(Total Cost).

It shows the amount paid by the fund in relation to size of the spill. Allen added that it would be nice to have such a concise result for the purposes in this rulemaking. Also, it does not include data from the US or China, nor does it include Natural Resource Damage assessments, and in many cases only includes clean-up costs.

24. Qualitative vs 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)
- Existence value is a prominent example of non-use value. It does not require that utility be derived from direct use of the resource: the utility comes from simply knowing the resource exists. The idea was first introduced by John V. Krutilla in his essay "Conservation Reconsidered" in 1967. (wiki)

Following *Ohio v Department of the Interior* (1989), US Govt agencies have been able to sue to recover existence values. The Exxon Valdez case was the first to use estimating quantitative damages for restitution.

25. SRKW

Southern Resident Killer Whales were declared endangered on November 18, 2005, by the National Marine Fisheries Service, NOAA, Commerce. That legal status brought resources for their preservation, including funding for studies.

26. Willingness to Pay to Conserve SRKW

Allen then introduced the concept of Willingness to Pay (WTP) to conserve. Via a contingent valuation survey in 2010, value was established 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. The

study was a “Stated Preference Choice Experiment”. Three scenarios were presented to respondents regarding endangered species and their WTP for actions to protect them, and they were asked to choose a scenario they would vote for. This survey was mailed 8 years prior to global headlines about the endangered SR.

This is an indication of the natural resource value of the SRKW. What is analyzed is the impact from proposed changes to the WAC. The proposed changes are unlikely to move the SRKW from endangered to recovered.

Source: 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)

27. Photo from Katmai National Park’s “Fat Bear Contest”

Further developments in estimating the existence value of natural resources include Katmai National Park’s Annual Fat Bear Contest. A webcam at Brooks Falls allows people to watch bears as they prepare for hibernation exploring the question of whether “getting to know” the animals results in people willing to pay more to protect them.

28. Willingness to Pay for Conservation

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 the 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

This find has clear implications for the value of the SRKW.

29. J35

Back in 2018, J35 carried her dead calf at the surface for 17 days, garnering national and international headlines. When she later gave birth to a healthy calf, that prompted additional national headlines. Individuals in this group of whales are now known and followed by people. Allen suggested that this could mean a greater WTP now compared to 2010 when households were surveyed about them.

He added the whales are also impacted by vessel noise, which increased escort requirements would add to. These was an example of a one highly valued natural resource potentially impacted by the rulemaking.

30. Information Potentially Sought from Stakeholders

Allen reviewed the information potentially sought from Stakeholders and Tribal Governments:

- Baseline operating costs
- Anticipated costs or benefits to your business or community
- Potential qualitative impacts
- Check of assumptions on costs and benefits
- Critique of the economic modeling structure

He concluded by stating that their analyses are only as good as the data that goes into them.

31. Q&A

Allen then paused for any questions.

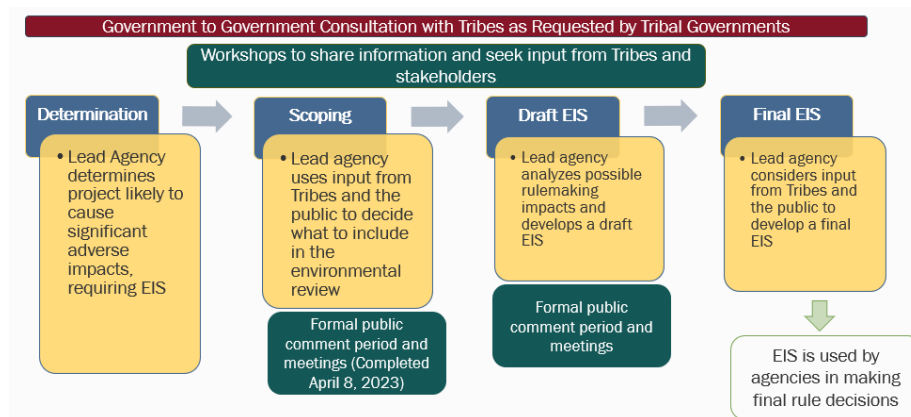
Fred Felleman (*Environment/Friends of the Earth*) inquired whether the use of the term “cultural resources” included treaty protected resources. Per Fred, impacts to the treaties have direct impacts on salmon and shellfish. The cultural impacts are a superset of treaty rights. While difficult to quantify, it is more significant than just the word cultural. He urged acknowledgment that it doesn't take much to have a significant impact from a spill, even if it's not frequent. He wondered how the study would capture the unique nature of the area, not found in other regions. He also urged the focus on all local killer whale populations, not just the SRKWs. Allen thanked Fred and said he would make sure that perspective was incorporated in the way they look at the information for the Economic Analysis.

Jeff Slesinger (*Tug Industry/Delphi Maritime*) was curious about the data sources for determining operating costs. Allen responded that he looked at the published price sheets. Jeff asked about additional equipment requirements, such as vessels. Per Allen, their understanding was that the 2020 expansion of tug escorts was accommodated within the existing pool of equipment. The proposed additional requirements appear to be relatively small compared to that.

32. Methods for Analysis

Haley then introduced the next topic, which was the methods for analysis.

33. EIS Process



34. 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) |

35. Rulemaking Objective for Use in SEPA

As a reminder, Haley explained that the Econ analysis Allen covered was just one input to the rule development. The SEPA process, in this case an EIS, is another one. Now she would move on to a discussion of another rule input, the SEPA process. Some of the language (i.e. mitigating impacts) is the same but these processes are distinct inputs to the rule development process.

The rulemaking objective is to reduce the risk for a major oil spill through potential tug escort requirements for the target vessels. The objective is also to design the rules in a way that minimizes underwater noise, focuses vessel traffic into the existing traffic lanes, and minimizes impacts to treaty fishing areas. This language comes directly from the legislation.

36. Goals and Requested Input

Haley explained that for the methods discussion today, there were three primary goals:

- Build public confidence in the analysis that will be conducted
- Seek feedback to shape that analysis
- And identify any areas of concern before the analysis is underway.

She was hoping for feedback on the DRAFT methods summaries, including things like:

- Thoughts on the robustness of the methodology
- Any components that are missing
- Any priorities for the analysis
- And any references or datasets that should be considered.

She then noted that the methods summaries are all still in draft. They are undergoing SME review. This means that there is still flexibility to incorporate feedback. It also means that some of the information presented here today may change before the technical analyses are conducted. She warned that the following slides were dense, but that copies would be provided as a reference. She also asked that questions be held. There is some time built in throughout the presentation for questions and discussion.

37. Contractor Hired

Haley was pleased to announce that Ecology has hired a contractor to assist with the development of the EIS. The primary contractor is a firm called Eastern Research Group (ERG). She explained that they have extensive experience with environmental impact statement development and that they have put together an impressive team of subcontractors including:

- JASCO Applied Sciences, for underwater noise
- Cascadia Research Collective for marine ecology, specifically cetacean impacts
- Triangle Associates for expertise on the Tribal Resources section and
- AS1MET for air quality dispersion modeling.

She added that they may be at future meetings and have contributed some information for these slides.

38. Methods Summaries – Discussion Content

Haley presented the components of the methods that will be covered today:

- Study area: She explained that she would go over this once at the top since the study is largely the same across the elements.
- For each element, proposed research questions will be covered. Haley noted that one thing that can be seen on all the slides is the question of whether the impacts can be reduced or mitigated, which is a piece of the SEPA process that hasn't been discussed in as much detail yet in the workshops.
- She planned to also cover a summary of the proposed approach, a short list of primary references, and discuss the impact indicators being considered.
- And she'll be sharing some of the relevant comments received during scoping and at the last workshop.

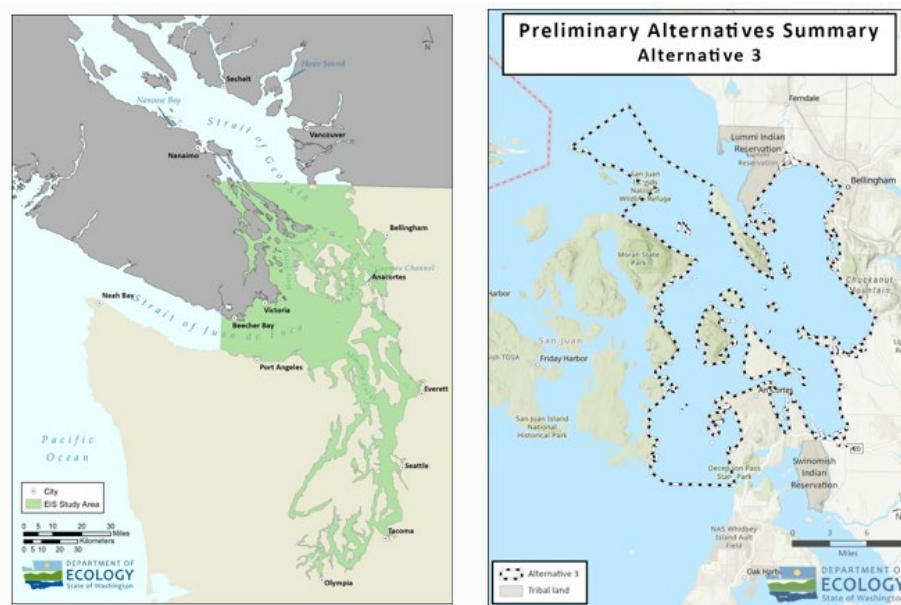
Haley would not be covering all the elements today as some of these summaries are still in development (plants and animals, and water quality). She would focus on the priority elements first.

39. Available to You

Haley reminded the group that if the presentation felt not technical enough or too technical, to please reach out to set up a 1-1 meeting to discuss in more detail.

40. Study Area

Haley presented the primary study areas for the EIS:



The map on the left, which is called the "EIS Study Area" includes the commute routes from tugs traveling to or from an escort job, as well as the area where escort requirements could change. And on the right, the preliminary alternatives, where the rule could change escort requirements. This is a map of Alternative 3, which is the expansion option here.

41. Vessel Traffic: Research Questions

For vessel traffic, the research questions are:

- What are the existing levels of vessel traffic, and specifically escort tug traffic, in the study area?
- How do the proposed changes in requirements (the alternatives) change escort tug traffic?
- And what other types of vessel traffic are potentially affected by the proposed changes? Where do those impacts occur?

The research questions generally follow this structure: what is the baseline? What are the changes under the proposed alternatives? And what is the impact?

42. Vessel Traffic (Priority Element)

Some of the comments received on this element were to consider the impact of additional escort tugs on navigational safety, to understand WHERE the additional traffic will be, and how it potentially interacts with other vessel types. They also heard that the team needs to differentiate between tugs escorting vs. commuting, as well as some comments about the complex nature of tug scheduling.

| Component | Summary Description |
|-------------------------------------|---|
| Methodology Overview | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Changes in underway time Interactions with other vessel traffic |

43. Oil Pollution: Research Questions

For oil pollution, another priority topic, these are the research questions:

- How much oil is transported by vessels and where is it in relation to traffic? What does historical data tell us about incidents that lead to a spill? Existing the risk from target vessels and from escort tugs?
- How do the proposed changes affect the RELATIVE FREQUENCY of spill incidents for target vessels and tug escorts?
- How do the proposed changes affect the LOCATION AND AREA of impact of spill incidents for target vessels and tug escorts?
- Can the impacts be reduced or mitigated?

44. Oil Pollution (Priority Element)

Some of the comments received on this element were to consider both spill risk reduction from having tug escorts as well as risk increases related to increased operations of escort tugs. Also, to consider spill trajectory maps and to include improvements to oil spill prevention made by industry and the agencies.

| Component | Summary Description |
|-------------------------------------|---|
| Methodology Overview | <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Ecology Risk Model and associated analyses and reports VEAT Reports Ecology Resources at Risk data, GRPs, PNW ERMA, other NOAA tools |
| Impact Indicators | <ul style="list-style-type: none"> Target Vessels: frequency of drift groundings Escort Tugs: hazard frequency (collisions, allisions, loss of propulsion) Escort Tugs: other spill types |

45. Priority Elements Discussion 1

Fred Felleman (Environment/Friends of the Earth) wondered if the role of the tug to prevent the spill as well as the impact of putting an additional tug on the water would be included? Haley responded that yes, that is how they are thinking about structuring it now. Fred then suggested the way the model was structured and used, looking at the value of the added tug to the entire waterway, was erroneous to the reason for the added escort. He would suggest the congestion and other downsides should also be looked at. He added that there were some discussions of tug of opportunity value, beyond the target vessels. He wondered whether the modeling would include projections of future traffic and the role the tug would play to address non-target vessels. Haley responded starting with his last question regarding

other projects and the safety measures that are either going into operation now or will in the future. Per Haley, the report will include cumulative effects and impacts chapter looking out at those other projects, like Trans Mountain and other factors like tugs of opportunity. They are still looking at other methods. She said it was a good point and assured that they plan to look at those in the cumulative effects chapter. Fred countered that there are also cumulative benefits of having additional tug availability for the additional traffic. He urged that the cumulative analysis needed to include the cumulative benefit impacts on safety. Haley thanked him for that comment. His other question was regarding NOAA's trajectory analysis. He said the oil spill will not be restricted to the study area. It will go out the strait. He wondered if the analysis was going to be limited to the study area or the full impact of the spill. Haley responded that the area would include Port Angeles as well as the border. Not just the study area.

Blair Bouma (Pilot/Puget Sound Pilot) said that because parts of the bill were implanted at the beginning, there was real time data to utilize. He wondered if there was a way to use the current traffic as opposed to hypotheticals. Haley responded that it was something that the team was considering. One of the benefits of the model is it allows equal analysis of all the alternatives, providing apples to apples comparisons. She added that his question was a good one.

Jeff Slesinger (Tug Industry/Delphi Maritime) clarified that the calculation of the frequency of drift groundings was relying on the model to which Haley agreed. His question was how will the study balance the predicted frequencies that come from the model with the real data available now? Jeff suggested that there was some bias in the model because it included data from other areas. He wondered how the gap would be handled. Haley said that they plan to look at the analysis in the 2019 report that looked at the actual history of incidents in the area and whether tug escorts would have helped in those instances. Adam Byrd (Ecology Alternate/BPC) clarified that the model did use local data for drift grounding, using local info for loss of propulsion events. It did not use outside inputs. Fred added that he supported Blair and Jeff's comments. Blair clarified that he didn't expect the last 4 years of data to impact the risk modeling. More that it could provide data regarding environmental impacts, traffic, etc.

46. Underwater Noise/Noise: Research Questions

For underwater noise these are the 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?

47. Underwaters Noise/Noise (Priority Element)

Some of the comments received on this element were support for robust analysis of this topic, particularly impacts to SRKWs, and to consider above water noise such as sound signals and maintenance as well as challenges of mitigation.

| Component | Summary Description |
|-------------------------------------|--|
| Methodology Overview | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> NOAA/NMFS behavioral effects from noise criteria Killer whale communication/echolocation frequency bands; reduction in listening space |

48. Air Quality: Research Questions

For underwater noise these are the 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?

49. Air Quality (Priority Element)

Some of the comments received were whether this was a significant impact, air quality issues for overburdened communities, and public health concerns. The team also heard comments to consider state and industry targets for air emissions. And, they got some good information about existing air quality monitoring gaps.

| Component | Summary Description |
|-------------------------------------|--|
| Methodology Overview | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |

50. Tribal Resources: Research Questions

For underwater noise these are the 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?

51. Tribal Resources (Priority Element)

Some of the comments received were about treaty fishing and vessel interaction, info about tug activity and wakes affecting tribal fishers, and the need to understand both special and temporal distribution of traffic in order to really understand the impacts. The team will be looking to tribal staff to help shape this analysis as well as reviewing published materials by tribes about impacts of vessel traffic.

| Component | Summary Description |
|-------------------------------------|--|
| Methodology Overview | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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. |

52. Environmental Justice: Research Questions

For Environmental Justice, these are the 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?

53. Environmental Justice

Some of the comments received were in support of a robust assessment, concern that the state’s environmental health disparities map doesn’t include priority for tribes, and comments about environmental justice impacts to tribes and tribal lands. Ecology’s Office of Equity and Environmental Justice has provided a recommended methodology and is advising on this process.

| Component | Summary Description |
|-------------------------------------|---|
| Methodology Overview | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • U.S. Census Bureau 2018-2022 American Community Survey • OSPI Data on language spoken by students • U.S. EJSSCREEN 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 | <ul style="list-style-type: none"> • Disproportionate impacts to EJ communities as a result of the proposed rule |

54. Priority Elements Discussion

Fred Felleman (Environmental/Friends of the Earth) appreciated the information but wondered what it meant for people who were marine dependent have their resources removed, beyond tribes. Fred wanted to know how the data would be sectioned out. Haley responded that SEPA is focused on significant adverse impacts to the environment. The SEPA process will not talk about the about positive impacts. There were other places for that information within the rule development process. For example, SEPA will not be talking about the benefits of tug escorts on tribes during this process. She gave another example that if the analysis showed that there was a reduction in the risk of oil spills, SEPA would conclude that there was no significant adverse impact to that element. It's not going to enumerate the benefits. That is not how the process is structured. Fred asked when that consideration would happen in the rulemaking process. Haley said that all the information that has been presented to the OTSC, the reports, the slides, etc., are being considered outside of the report called the EIS. Sara Thompson (Ecology Alternate/BPC) added that the three alternatives were based on the benefits that they bring to the table. Brian Kirk (Ecology Alternate/BPC) added a comment in the chat that the economic analysis would look at the costs and benefits. Fred argued that it wasn't just financial. Blair Bouma (Pilot/Puget Sound Pilots) responded that SEPA wasn't the whole process, just a part. The economic analysis was another part. Ultimately, the group will use all the parts to consider the benefits. SEPA is supposed to look at consequences. Fred responded that he was perfectly aware of SEPA and MEPA. Jaimie Bever (OTSC Chair/BPC) suggested that for the sake of time they move on and continue the conversation offline.

55. Recreation: Research Questions

For Recreation, these are the 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?

56. Recreation

Some of the comments received were to include recreational fishing throughout the waterway not just the coast lines.

| Component | Summary Description |
|-------------------------------------|---|
| Methodology Overview | <ul style="list-style-type: none">• 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 | <ul style="list-style-type: none">• 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 | <ul style="list-style-type: none">• Changes to access to or quality of recreational opportunities |

57. Visual Resources: Research Questions

For Visual Resources, these are the 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?

58. Visual Resources

Some of the comments received were to look at geographic distribution of light and glare complaints and to look at anchorage areas, in particular. At the last workshop, there was a good discussion regarding scale of tugs and light requirements while moving and anchoring. Most light complaints were from larger vessels and not from escort tugs.

| Component | Summary Description |
|-------------------------------------|--|
| Methodology Overview | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Changes in visual quality as a result of the proposed rule changes |

59. Energy & Natural Resources: Research Questions

For Visual Resources, these are the research questions:

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

60. Energy and Natural Resources

Some of the comments received were that while there was some increase with the 2020 rule, there was not a significant change. There are changing trends in fuel transportation in Puget Sound. Consider transition to alternative fuels or electric tugs. This will likely to be in addressed in a mitigation section which will also consider feasibility and technological readiness.

| Component | Summary Description |
|-------------------------------------|---|
| Methodology Overview | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> U.S. Energy Information Administration (WA and PADD 5) Ecology SPIIS Data AIS Data |
| Impact Indicators | <ul style="list-style-type: none"> Change in fuel use as a result of the proposed rule |

61. Other Elements Discussion

Fred Felleman (Environment/Friends of the Earth) wondered if the team was looking at real estate values. He mentioned that Friends of the San Juans did a report on visual impacts and benefits. Haley responded that they would pass that on to Allen for economic impacts and that visual character would be included.

Jeff Slesinger (Tug Industry/Delphi Maritime) suggested passing on to the economic team a recommendation to expand to include alternative fuel systems and the building of those tugs. The other piece was that while there may be adequate-sized tugs in the area, there were not enough of them. There was a shortage and subsequent delays. Also, look at backend and operational costs. Fred suggested that the last four years could provide some of that data. Jeff then expressed his appreciation for the team acknowledging the complexity of the work involved.

Rein Attemann (Environment Alternate/WEC) wanted to revisit air quality and emissions. He suggested including surface water exhaust fumes that could impact SRKWs as they come up to breath. He will look for some resources to share.

62. Timeline and DEIS Development Process

63. 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 |
| Early Review Sections of Preliminary Draft EIS | Late spring/early summer 2024 | Possible early review for OTSC and Tribes |
| DEIS/CR-102 Comment Period | Summer 2025 | Formal comments, public hearings |

64. Online Comment Submission

Online comments can be submitted at <https://sppr.ecology.commentinput.com/?id=x27tZ4iRfs>. The informal comment period is open until the end of the rule development phase.

The benefits of online comments include:

- Transparency, accessibility, and an online record
- Easier tracking of comments
- Encouraging broader participation in the rulemaking process

65. Upcoming Workshops

Jaimie reviewed the schedule for the next two workshops series:

- Workshop #9 - Proposed
 - Stakeholders: September 3, 2024 (1:00pm-3:00pm)
 - Tribal Governments: September 10, 2024 (10:00am-12:00pm)
 - OTSC: September 12, 2024 (10:00am-12:00pm)
- Workshop #10
 - Stakeholders: November 5, 2024 (10:00am-12:00pm), HYBRID @ NWRO
 - Tribal Governments: November 13, 2024 (1:00pm-3:00pm)
 - OTSC: November 14, 2024 (10:00am-12:00pm)

66. Final Questions or Comments

Fred Felleman (Environment/Friends of the Earth) said the comments made regarding surface impacts on the whales regarding vessel traffic and air emissions were very pertinent to whale watching boats but not to the relevant vessels for this rulemaking. He urged considering exposure and duration. He believes

they are de minimus.