



STATE OF WASHINGTON  
**BOARD OF PILOTAGE COMMISSIONERS**

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**Meeting Minutes – Oil Transportation Safety Committee (OTSC)**

November 14, 2024, 10:00am – 12:00pm

Via MS Teams

**Attendees:**

Jaimie Bever (Chair/BPC), Adam Byrd (Ecology SME), Haley Kennard (Ecology SME), Angela Zeigenfuse (Ecology Alternate/BPC) Megan Hillyard (Ecology Alternate/BPC), JD Ross Leahy (Ecology SME), Jason Hamilton (Commissioner/BPC), Blair Bouma, (Pilot/PSP), Jeff Slesinger (Tug Industry/Delphi Maritime), Clyde Halstead (Tribal Government Alternate/Swinomish), Antonio Machado (Oil Industry/WSPA), Genaro Villegas (Advisory/USCG), Peter Schrappen (Tug Industry Alternate/AWO), Lillie Wightman (Tug Industry Alternate/AWO), Joel Morton (Tug Industry Alternate/Crowley), Jim Peschel (Tug Industry Alternate/Vane Brothers), 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. The group reviewed and finalized the minutes from the July 17 meeting.

**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 Objectives**

Jaimie presented the goals for today’s meeting:

- Share updates on the technical analyses for the priority elements of the EIS, and
- Help the OTSC prepare for the February Workshop Series, which will focus on draft rule language in more detail.

**4. Meeting Agenda**

For today’s agenda, the team will:

- Cover ground rules and give a very brief rulemaking overview;
- Go through the preliminary technical findings for each of the priority elements of the EIS;
- Have some time for questions and discussion, with time built in for questions and discussion throughout the presentation;
- Provide a brief update for the OTSC on the economic analysis; and
- Review the timeline and upcoming milestones.

## 5. Ground Rules

To support the large amount of info to cover at the meeting, the team proposed a few ground rules for the workshop:

- **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; and
- **Respect Time Limits and Agenda:** Aim to keep comments on topic and concise. Allow space for everyone to contribute.
  - Because of the short amount of time, the team plans to “parking lot” recurring or unresolved issues to be addressed 1-1 outside the meeting. Jaimie will be identifying those to keep the conversation moving.

Jaimie then asked if there were any questions, additions, or modifications to the ground rules. There were none. She also asked if anyone anticipated having trouble sticking to the ground rules. Again, there were none.





## 6. Rulemaking Overview

The 2019 Legislature passed The Reducing Threats to Southern Resident Killer Whales by Improving the Safety of Oil Transportation Act, or Engrossed Substitute House Bill (ESHB) 1578. The Act aims to prevent a catastrophic oil spill in the Puget Sound by closing safety gaps related to vessels carrying oil in bulk. Among other requirements, it directs the Department of Ecology’s Spills Program to assist the Board of Pilotage Commissioners (BPC) in developing rules for tug escorts in the Puget Sound. Specifically, the agencies are to adopt tug escort rules for oil tankers (between 5,000 and 40,000 dwt), and ATBs and tank barges over 5,000 dwt. For simplicity in this presentation, this group of vessels will be referred to as the target vessels for the rulemaking.

## 7. Current Proposed Alternatives

This is a summary slide of the four proposed alternatives that the EIS will consider. The first row in the table specifies WHERE the tug escort requirements would apply to target vessels. The second row specifies whether functional and operational requirements (FORs) would be applied. As a reminder, the BPC voted to include 3 FORs:

- A pre-escort conference;
- Tugs escorting target vessels must have a minimum of 3,000 horsepower; and
- Tugs escorting target vessels must have twin screw propulsion system or better.

	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

### Alternative A is the No Action

**Alternative A**. It maintains both the geographic scope of tug escort requirements for target vessels, and the functional and operational requirements included in ESHB 1578.

**Alternative B is the Addition of Functional and Operational Requirements Only**. It maintains the geographic scope of tug escort requirements for target vessels and ADDS the new proposed FORs.

**Alternative C is the Expansion Option**. It maintains the 2020 requirements for target vessels and

expands the area they are required north along the San Juan Islands to Patos Island. The expansion area is noted by the red arrow. It also adds the new proposed FORs.

**Alternative D is the Removal Option.** It removes all tug escort requirements for the target vessels. Tug escort requirements for tankers over 40,000 DWT remain unchanged.

## 8. Priority Elements

A formal scoping process occurred in Spring of 2023 as well as a longer, informal scoping process that wrapped up in March of this year. Through that process, the BPC identified the elements of the environment to be included in the EIS. They also further identified six priority elements for more in-depth analysis and focus. These six elements are:

- Plants and animals (including but not limited to SRKW);
- Underwater and operational noise;
- Air quality and Greenhouse Gas emissions;
- Vessel traffic;
- Oil Pollution; and
- Tribal Resources.

These six elements are the focus of the workshop today. Information on the other elements will be shared at future workshops and in the EIS document itself.

## 9. Transition.

Jaimie paused to ask if there were any questions before she handed the presentation over to Haley Kennard. There were no questions or comments.

Haley Kennard (Ecology SME) explained that for the next part of the workshop, she will cover each element individually. She will pause for a few minutes after each one for any questions or discussion. There will be more time for discussion after we get through the initial summaries. She reminded everyone that the analyses are still ongoing. Today's presentation does not include everything that will be in the Draft EIS.

The presentation today includes some of the initial technical analyses. Although the team doesn't anticipate it, this information is subject to change.

The presentation will not include talking about significance determinations or about how the team is interpreting these preliminary results, although if there are comments about that, they are happy to hear them or the OTSC could submit them to the comment page. As Jaimie said at the beginning of the workshop, the goal is to keep the OTSC informed on what will help the committee feel prepared for the upcoming workshops.

## 10. Vessel Traffic: Methods Reminder

As a reminder, the proposed methods for the Vessel Traffic Element were:

- Develop a quantitative baseline to understand: Existing traffic for target vessels, the number of escort jobs/year, and the number of underway minutes/year for escort tugs;
  - The team is using a combination of simulated and historical AIS for this step, which is something they heard during the last workshop.
- Model changes in underway time for each alternative and develop heat maps; and
- Assess areas of potential impact and identify mitigation.
  - These last two steps are outside of the scope of what is being talked about today.

One important reminder about the vessel traffic and oil pollution slides: these are going to inform the analyses for many of the other elements.

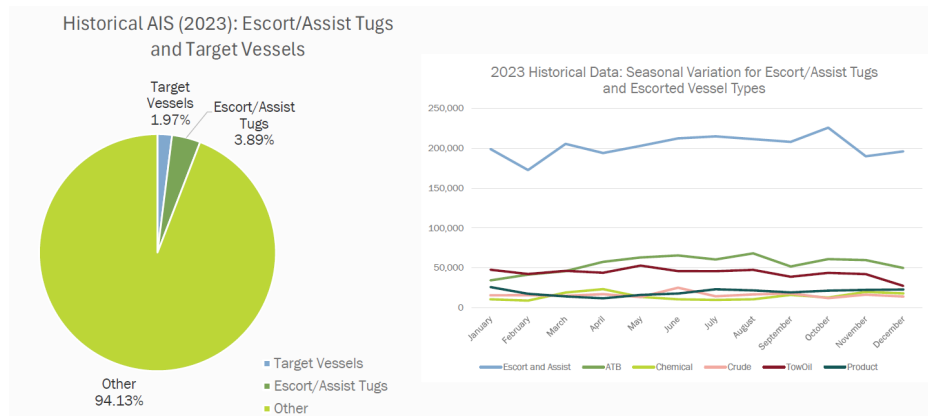
## 11. Historical AIS

The first step in establishing the baseline was to look at the most recent year of historical AIS data. As a reminder, most large vessels carry AIS, but some smaller vessels, in particular recreational and fishing vessels do not.

Using the historical AIS data, the team found that:

- Just under 2% of all underway time in the EIS Study Area was target vessels; and
- Just under 4% of all underway time in the EIS Study Area was a category of vessels called escort and assist tugs (tugs engaged in escort and/or assist work).

There is also very little seasonal variation in vessel traffic for target vessels and escort tugs.



## 12. Vessel Traffic: Number of Escort and Assist Jobs

The team then used simulated data to dig into the escort and assist category in more detail in order to compare across alternatives. This slide shows the number of modeled assist and escort jobs in a year and in a single day under current conditions (No Action Alternative).

The goal of this slide is to establish the landscape of escort and assist tug traffic. If a casual viewer was sitting on their porch somewhere in the study area or maybe watching traffic on their AIS app, they could expect to see:

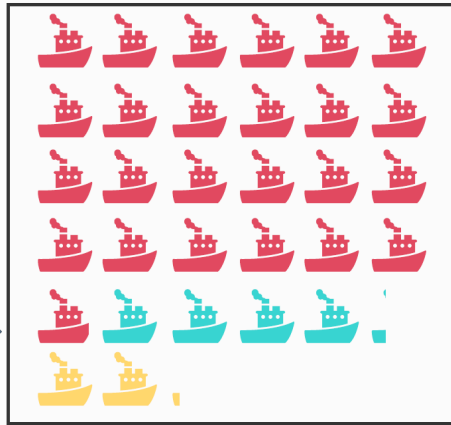
- Between 4 and 5 escort "jobs" of target vessels for the rulemaking
- Between 2 and 3 escort jobs of non-target vessels (tankers over 40,000 DWT that were already required to have an escort prior to this rule)
- And between 24 and 25 "assist jobs" per day.

Haley will be using the blue vessel icon to signify tugs escorting target vessels throughout the presentation. When we're talking about escort/assist tugs, there will also be a red and a yellow vessel icon.

Tugs escorting target vessels are not the only type of tug work on the water.

	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" →



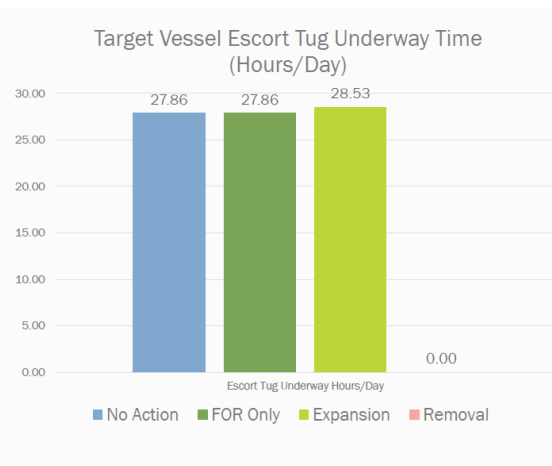
### 13. Vessel Traffic: Escort Underway Time

This slide shows information about just the tugs escorting target vessels (the blue tugs in the previous slide). Specifically, it shows total underway time both in annual underway minutes in the table, as well as hours/day of underway time in the graph. It also shows how much of that time is spent actively escorting vs. commuting to or from an escort "job." This information will be important for other elements as well. For example, the visual resources section will consider the impact of a tug on its own vs. a tug actively escorting. It is also something that we heard that stakeholders were interested in seeing. As shown, actively escorting makes up only about a third of the total underway time, with the rest being commuting. For the Expansion Alternative, there is both an increase in total underway time, as well as an increase in the proportion of time spent actively escorting.

### 14. Underway Time by Zone

This slide is a different way of looking at the underway time for tugs escorting target vessels. Instead of breaking it down by commutes vs. active escorts, it's broken down by the amount of time spent in each Zone. Many of the zones see little to no change. Many of the zones actually see a slight drop-in underway time under the Expansion Alternative with two exceptions:

Alternative	Total Annual Underway Minutes	% Actively Escorting	% Commuting
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



The modeling of the different scenarios suggests that the Strait of Georgia and Strait of Georgia South Zones would experience most of the increase in underway time under the Expansion Alternative. The team believes that this could occur because the Expansion Alternative may redistribute traffic northwards. It may be more efficient for tugs to commute from areas like Ferndale/Cherry point instead of Bellingham and refineries near Anacortes. This is what the model selects for and what these results show.

In the Strait of Georgia South Zone, this would be a jump from less than a minute of underway time/day to just over an hour of underway time/day. In the Strait of Georgia Zone, this is a jump from around an hour and 40 minutes of underway time/day to about two and a half hours of underway time/day.

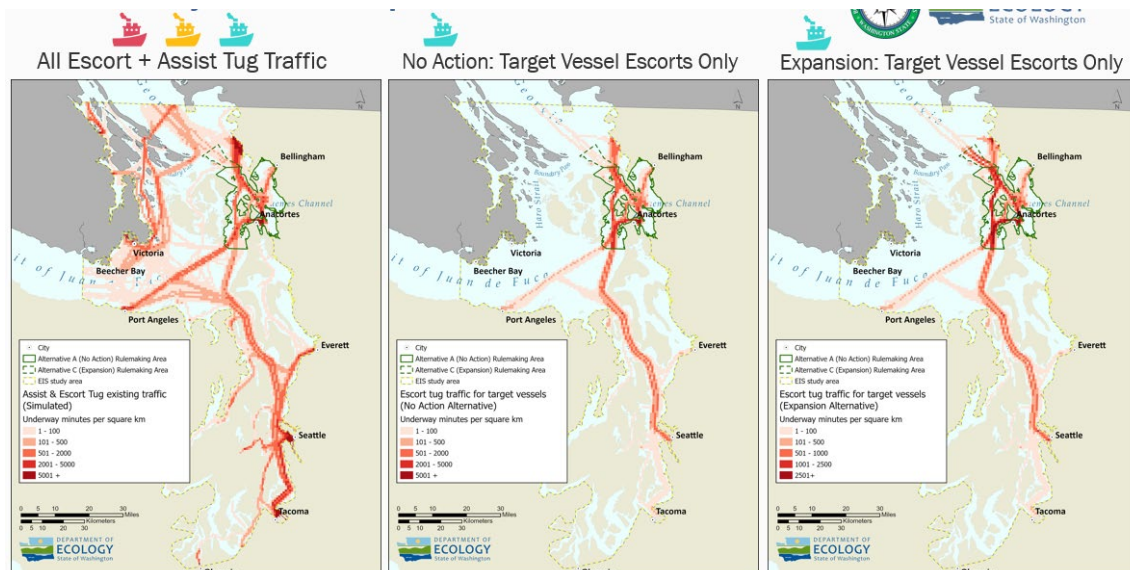
Zone	No Action: Underway Hours/Day	Expansion: Underway Hours/Day	Removal: Underway Hours/Day
Rosario Strait	9.38	9.13	0
Guemes Channel and Saddlebags	4.81	4.65	0
Bellingham Channel	3.46	3.09	0
Puget Sound	3.08	3.07	0
Eastern Strait of Juan de Fuca	1.94	1.94	0
Strait of Georgia	1.88	2.24	0
San Juan Islands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



### 15. Heat Maps.

From left to right:

- All escort and assist tug traffic under current conditions
- Movement of tugs escorting target vessels only under current conditions
- Movement of tugs escorting target vessels only under the EXPANSION alternative.



Haley also showed a closeup of the rulemaking area under the expansion option for a bit more detail.

## 16. OTSC Questions

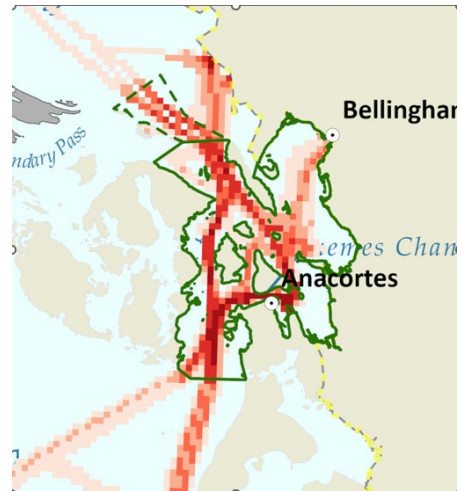
Haley then posed a few specific questions to the OTSC for discussion before opening it up for general questions and discussion. She was hoping the committee could react to the changes in underway time, the distribution of underway time, and the heat maps.

She asked the group if any of this affected:

- Congestion?
- Navigational Safety?
- Tug availability?
- Interaction of the tugs and target vessels at rendezvous or pickup/drop off points?
- Waiting at the pickup/drop off points?

She added that these themes all come from previous comments received on this topic.

Haley then turned it over to Jaimie to facilitate any questions and comments on this and for general Q&A.



## 17. Questions/Discussion

*Regarding the heat maps, Fred Felleman (Environment/Friends of the Earth) didn't understand why the Canadian traffic appeared in the first map and not in the others. Haley responded that the map on the left was showing ALL escort and assist tug traffic while the one on the right was showing escort of TARGET vessels for the rulemaking only. That is the difference between the maps, not US vs. Canadian traffic. Fred pointed out that most of the traffic on the Vancouver Island and Georgia Strait side was Canadian traffic and that that would persist through all scenarios. He understood the focus was on the differences between the alternatives. He was looking for clarification on the data being presented. Haley responded that the slide was showing totally underway minutes in the first column. The second column was the percentage of that time spent actively commuting or escorting. Fred then asked how much the current no action added to the removal scenario and what was the additional traffic generated in the current scenario to the overall escorting traffic. Haley pointed to the previous slide, for a comparison of total historical AIS. Escort and assist tug groups were making 25 + 2 + 4 trips per day, then removing it would be 4 or 5 per day. Fred then asked about the likelihood of the increased impacts of tugs on fishing vessels and SRKWs. Haley answered that they were still working to answer that question and were hoping for feedback from the OTSC to assist with that work (note: See Plants and Animals and Tribal Resources summary slides as well).*

## 18. Oil Pollution – Methods Reminder

Oil Pollution was the next priority element being covered. As a reminder, the methods for this element focused on:

- Looking at drift grounding frequency for target vessels
- Looking at hazard incident frequency for escort tugs
- Then assessing the change in incident PROBABILITY or FREQUENCY for each alternative.
- The team will look at the change in DISTRIBUTION of impacts using NOAA's trajectory modeling tools. However, Haley explained that that is still underway, and the results were not available today.

- And then, like all of the other elements, they would then describe impacts and identify any potential mitigation – although they are not covering this today.

## 19. Recurrence Intervals

Next, was the incident probability rates for target vessels and escort tugs. Members of the OTSC that have been with the group since the model development started, know there are a few ways that the team can present these very, very small probabilities. One is with a probability rate of X number of incidents per year. Because drift groundings are so infrequent and drift groundings that result in a spill are so infrequent, these numbers are very, very tiny. Which can be hard to understand and communicate about and compare.



For discussing the probabilities of these incidents for TARGET VESSELS, the team has decided to use a different way of presenting probability called Recurrence Intervals, which Haley will talk bit before diving into the numbers.

She suggested that the OTSC has probably heard of recurrence intervals in relation to floods. Something can be a 50-year flood, or a 100-year flood. A 100-year flood means that a flood of a certain magnitude has a 1% chance of occurring in any given year. It does NOT mean that a 100-year flood event can't happen in Year 1 and then again in Year 2. Or that it couldn't happen twice in a single year. It's just that the probability of the event occurring is low. It is not predictive. It does not mean that if a 100-year event happens in one year, that it will be another 100 years until it happens again. The map here is the 100-year flood zone for the counties around the rulemaking area. She then asked the group, if they live in this area, to think about whether they've ever seen flooding where this map highlights. And if yes, have they seen it more than once.

## 20. Target Vessels: Drift Grounding in EIS Study Area

For the target vessels, the metrics are:

- Probability of loss of propulsion
- Probability of a loss of propulsion resulting in a drift grounding
- And probability of that drift grounding resulting in an oil spill.

For the No Action Alternative, there is a:

- 1 in 5 chance of an LOP in any given year
- There is a 1 in 186 chance of that LOP resulting in a drift grounding in any given year.
- And there is a 1 in 25,000 chance that that drift grounding results in a spill in any given year.
- A reminder, this is not predicting out into the future.

For the Expansion Alternative, the numbers change only slightly.

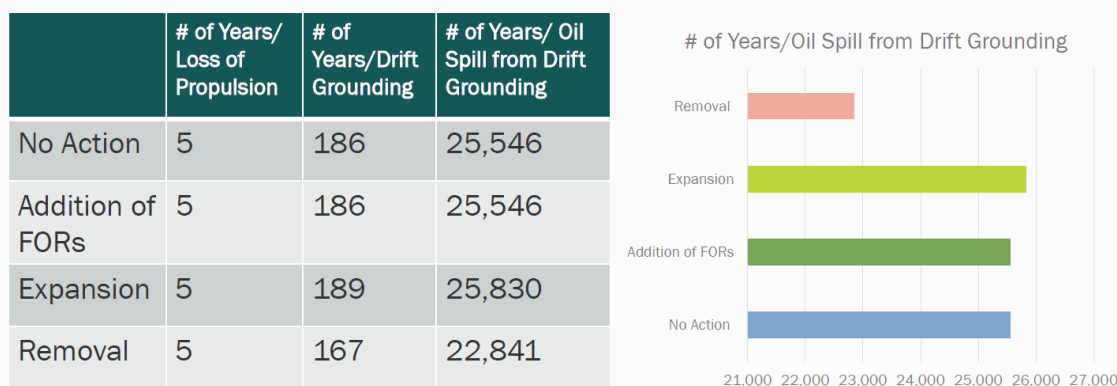
- Drift groundings are slightly less likely to occur (1 in 189 chance)



- Oil spills from drift groundings are also slightly less likely to occur.

For the Removal Alternative, the numbers decrease. This is because the incidents are MORE likely to occur under the Removal Alternative conditions. Using the flood example – a 5-year flood has a higher probability of occurring than a 100-year flood. This is expected since the intent of the legislation was to improve safety and prevent spills by expanding escort requirements.

- There is a 1 in 167 chance that a drift grounding would occur in any given year.
- There is a 1 in 22,841 chance that an oil spill would result from that drift grounding in any given year.

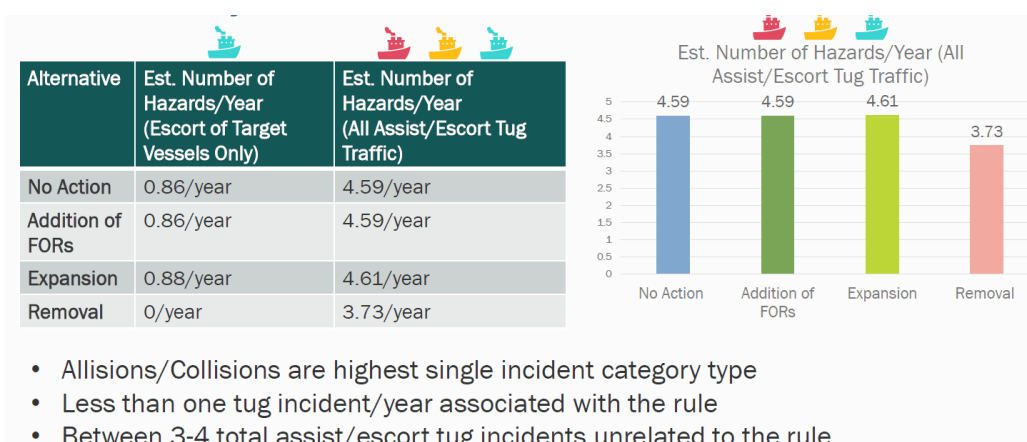


## 21. Escort Tugs: Hazard Frequency in EIS Study Area

Haley then introduced hazard frequency for the tugs themselves with a reminder about the little colorful boat icons. Blue indicates just those tugs escorting target vessels. Yellow and red are the other escort jobs and assist jobs. As expected, as the total tug underway time goes up, the likelihood of a hazard from a tug also goes up, although the changes are quite small, with the removal option having the largest impact, because it represents the largest reduction in tug underway time.

- In general, there are between 3-4 total assist/escort tug incidents unrelated to the rule. With less than one hazard incident/year associated with the escort of target vessels.

The graph also compares across alternatives for all escort/assist tug hazards. These numbers reflect the combination of all hazard types, where the target vessel numbers were a specific type of hazard only. The EIS breaks this all-hazard number down further by individual hazard type. Allisions/collisions are the highest single incident category type when looking at this in more detail.



## 22. Incident Data Within EIS Study Area

Haley explained that during the scoping process, the team was also asked to look at incident records from the implementation of the rule. There is a similar analysis in the 2019 Report of Vessel Traffic

and Vessel Traffic Safety, which they used as a guide, as well as Ecology incident data from 2017-2023 to understand the number of incidents that occurred just before and just after the rule was implemented.

At the Stakeholder workshop last week, the team got a request to clarify how many of the incidents occurred while the vessels in question were underway, which was included (third column) in this slide. In general, these incidents are rare and there weren't enough of any type or a clear enough pattern to draw any conclusions about the impact of the rule, but it was included because the team wanted to be responsive to the scoping comments.

For Tankers, they identified 31 individual oil pollution and vessel casualty incidents.

- The 31 incidents resulted in 1.41 total gallons of oil reaching the water.
- 12 of the total incidents occurred while the tanker was underway.
- Ecology identified that an escort tug could have helped in 4 of the 31 these incidents, all of which occurred while the vessel was underway.

For Tank Barges, they identified 16 incidents.

- The 16 incidents resulted in a total of 19.66 gallons of oil reaching the water.
- 4 of the 16 incidents occurred while the barge was underway.
- Ecology identified that an escort tug could have helped in 4 of the 16 incidents, all of which occurred while the vessel was underway.

For ATBs, they identified 5 total incidents.

- The 5 incidents resulted in just over 27 gallons of oil reaching the water.
- One of the incidents occurred while the tug was underway, and Ecology identified that an escort tug could have helped in that incident.

For Assist/Escort tugs, they identified 5 incidents.

- The 5 incidents resulted in a total of 5.26 gallons of oil spilled to the water.
- Three of the incidents occurred while the tug was underway.

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.*

### 23. Questions and Discussion

*Blair Bouma (Pilot/Puget Sound Pilots) asked if the tanker category was only the study group of the 5-40k or all tankers. Haley answered that it was all, but in the written analysis the team specifies which were under 40k. Blair then asked if the gallons spilled were from all incidents or only while underway. Haley responded that the ones on the slide were all incidents. However, she had the info for just underway incidents: for tankers .004 gallons, tank barges just over 1 gallon, for ATBs zero from an*

*underway incident, and for the escort and assist tugs it goes from 5.26 to 5.01. Blair responded that he still thinks the results could be nuanced for just underway incidents but appreciated that she had the info on hand. Haley said there was more room in the written report where that information that could be added.*

*Jeff Slesinger (Tug Industry/Delphi Maritime) was hoping there would be an easy way to connect the dots for anyone reviewing this information on the number of incidents that resulted in oil reaching the water from a drift grounding. There was a lot of good data, but in looking at it, multiple conclusions could be reached. He wished there was a way to find the data that could illustrate it more clearly and the corollary with would be about the criteria used to determine that an escort tug could have helped in the particular situations. He would guess that none were drift groundings, which was what an escort tug would help to prevent. Haley responded that the way the team determined whether an escort tug could help was looking at any loss of propulsion incident, any drift grounding incident, and then any incident where a tug providing an extra set of eyes or equipment could have been helpful. Most identified were loss of propulsion incidents. Haley appreciated Jeff's comment about the nuance in the data and said they would continue to adjust how it's broken up. The team is working to provide more information in the written portion and will make a note to include a straight line to what the rulemaking is actually doing.*

*Jim Peschel (Tug Industry Alternate/Vane Brothers) asked for clarification about Slide 20 using the Number of Years metric. Haley responded that the data was not saying that it would be 25,000 years before an oil spill from a drift grounding. It was a probability of 1 in about 25,000 in any given year. Jim agreed with and supported Jeff's comments. JD Ross Leahy (Ecology Alternate/BPC) agreed that the numbers were showing that the likelihood of an oil spill from a drift grounding were very small.*

*Jason Hamilton (BPC Commissioner) echoed Blair's comment about focusing on underway incidents. Separately, when talking about incidents where a set of eyes could have been helpful, he urged caution in choosing categories as there was a lot of gray area there.*

*Blair said it was very valid to include a loss of propulsion category along with drift grounding. Although they didn't necessarily result in an oil spill, they could have.*

*Fred Felleman (Environment/Friends of the Earth) stated that the more the team extrapolated, the less confident he was in the results. Grounding was a bad thing and whether it was a pointy rock or stormy weather, one can't accurately predict an oil spill. The number that should be of focus was whether an escort can reduce the risk of a vessel touching land. Volumes of oil released, and frequency were beyond the calculation's capabilities. To him, the importance was stopping the grounding and whether this safety measure did that. He believed real-world data was useful in predicting the future but that it was inappropriate to hang a hat on oil volumes.*

*Clyde Halstead (Tribal Government Alternate/Swinomish) had no questions or comments on this section.*

## **24. Air Quality Methods Reminder**

Air Quality is another priority element. The team worked closely with Ecology's Air Quality program to design these methods. As a reminder, the methods for Air Quality are:

- Develop a baseline. This includes:
  - Describing existing air quality conditions
  - Quantifying existing emissions for target vessel escort tugs
  - Using a dispersion model to assess whether escort tug emissions contribute to air quality concerns in selected receptor locations.

- Dispersion modeling is a way of simulating how air pollutants move through the atmosphere.
- Haley will talk more about the receptor locations in a minute, but they are specific identified locations where the team is looking at changes in air quality.

They then quantified changes in emissions for each alternative and used dispersion modeling to assess changes in air quality concerns at the receptor locations. Finally, assess impacts and identify mitigation – again not covered today.

## 25. Baseline Air Quality and Escort Tug Emissions

Establishing the baseline, they found that the entire EIS Study Area has “attainment status” for criteria pollutants, with the exception of a portion of Whatcom County.

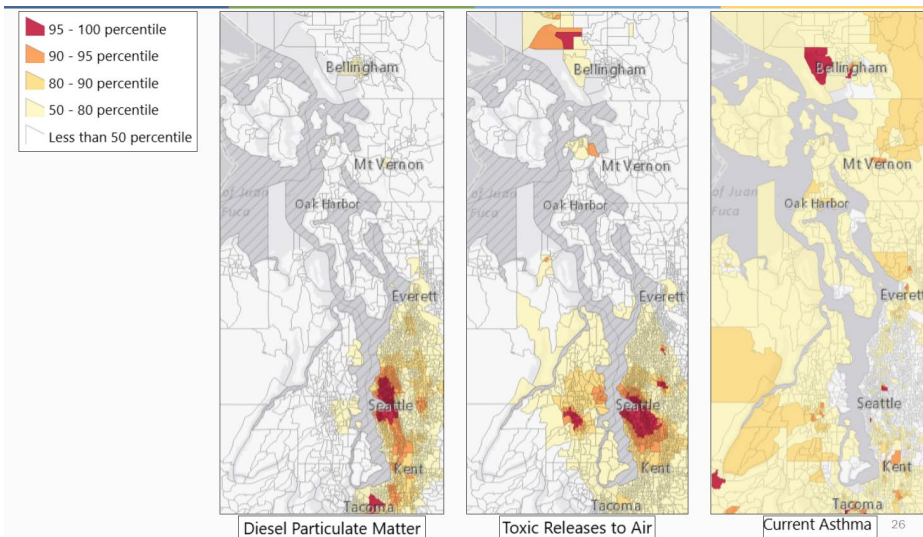
- Attainment status means that the region meets federal air quality targets known as National Ambient Air Quality Standards (NAAQS)
- A small portion of Whatcom County between Cherry Point and Neptune Beach is considered non-attainment because concentrations of sulfur dioxide have historically been above air quality targets, largely due to the Intalco smelter, which recently shut down.
- At the Stakeholder Workshop, Antonio mentioned that EPA may be changing the status of this area (thanks Antonio!). The team dug into this and found that EPA has an open federal register notice proposing to update the status of this area to “attainment status.” It appears that the site has already been sold to a Canadian company for redevelopment, so it’s likely that something could be operating there in the future. The team will track this notice and update the narrative if the status of the area changes.
- But bottom line, most of the study area currently has “attainment status” and soon the entire study area may have attainment status.

However, despite the fact that most of the study area currently meets “attainment status”, there is some variation, with some areas experiencing disproportionately higher air quality related impacts, relative to other parts of the EIS Study Area:

- Urban areas (Seattle, Tacoma) have relative higher pollution levels
- And some areas have relatively higher risks of respiratory and cardiovascular conditions associated with air pollution (asthma, heart disease)

## 26. EJ Screen Map

Just to illustrate this, these maps are from the federal EJ Screen tool. The two images on the left: Diesel particulate matter and toxic releases to air are the percentiles for Washington State. Urban industrial areas near Seattle are in the higher percentiles, as are areas around Bellingham. The image on the right, Asthma rates, is the national percentile. Bellingham is in the highest percentile. Just a side note, we are not covering our EJ chapter today because it will be one of the last ones written as it compiles information from all the other chapters. However, this information will be included in that chapter.



## 27. Baseline Air Quality and Tug Escort Emissions

The next step in establishing the baseline was to quantify existing emissions from escort tugs and model how much air pollution there would be at receptor locations. The table on the left shows estimated emissions from target vessel escort tugs.

- As you can see, nitrogen oxides were easily the highest – this pollutant can have respiratory effects as well as environmental effects.
- The team will also estimate greenhouse gas emissions, which is part of the agency guidance for SEPA analysis, but that is not finished yet.

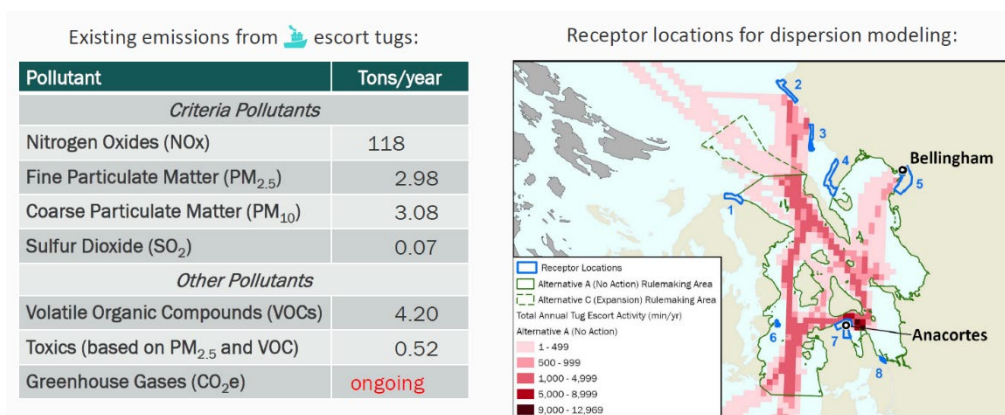
The team then conducted dispersion modeling to estimate the CONCENTRATIONS of air pollution at certain “receptor locations” – which are outlined in blue in the figure on your right.

- Receptor simply means a point where a person could theoretically be exposed to that pollutant
- The receptor locations were chosen based on: Environmental justice considerations, Proximity to target vessel tug escort activity under existing conditions and/or changes under the Expansion alternative, and capturing concerns from Tribes, stakeholders, and communities.

## 28. Baseline Air Quality and Escort Tug Emissions

Haley emphasized that the dispersion modeling approach is conservative. It likely overestimates pollutant concentrations at the receptor locations. She said she would also be talking about two ways of comparing air quality here.

- One is the National Ambient Air Quality Standards that we’ve already discussed. These are federal air quality standards, which most of the EIS Study Area already meets (attainment



status). We call these “federal

standards”.

- The other is referred to as a screening threshold. When we say screening threshold here, we mean “significant impact levels” (SILs), which is a very low threshold defined by the EPA that is used in permitting sometimes. A concentration below the screening threshold (SIL) has no potential to cause or contribute to an air quality problem (won’t cause you to exceed the standard).

For the annual average, they found that pollutant concentrations from the target vessel escort tugs - are below the screening threshold at all receptor locations - for all modeled pollutants. So, this means that on average, under current conditions and tug escort requirements, the escort tugs are not contributing to air quality issues. However, annual average only tells you so much. The team also looked at peak days. To do this, they did two versions of the model run. One to estimate annual average concentrations:

- and one that used the “worst day” of pollutant inputs to see what the highest short-term “peak” of pollution concentrations might be.
- Our modeling found that NOX concentrations at all 8 receptor locations occasionally exceed the conservative screening threshold (the SIL).
- They cross referenced this with years of air quality data from the region, which show that NOX levels in the atmosphere are consistently below federal air quality standards
  - even on the worst days in areas
  - and even with lots of marine vessel traffic and highway traffic.
- Therefore, it can be said with some confidence that these “peak day” NOx emissions from tug escorts are not causing or contributing to any problematic NOx levels. At the baseline of current conditions.

The team is still working on a basic health risk assessment using the modeled concentrations of air toxics. That will be included in the EIS.

## 29. Changes Under the Alternatives

The next step is comparing changes under each alternative.

- Alternative A: No Action: This is the baseline just discussed. No change in emissions.
- Alternative B: Addition of FORS: This doesn’t change anything that affects emissions, so there’s also no change.
- Alternative C: Expansion.
  - For annual emissions, there was a 3-4% increase, which is concentrated around the expanded rulemaking boundary. This makes sense and is consistent with what was seen in the vessel traffic section.
  - Annual Average: Emissions remain below the screening thresholds for all pollutants at all receptor locations, although there are slight increases in some receptor locations.
  - Peak Day concentrations: very similar to current conditions, so no meaningful change.
- Alternative D: Removal
  - This would of course result in the removal of the air pollution associated with the target vessel escort jobs.

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

## 30. Questions and Discussions

*Jeff Slesinger (Tug Industry/Delphi Maritime) commended the team for coming up with the recurrence interval for the incidents, which was helpful for non-data experts with understanding. He hoped that the team could also find a similar type of analogy for all the other components so that the big picture could be painted, allowing people to clearly draw conclusions in*

*amortizing the risk and consequences.*

*Jim Peschel (Tug Industry Alternate/Vane Brothers) asked what the term "vessel casualty" on slide 22 included. Adam Byrd (Ecology Alternate/BPC) responded that it was a long list consistent with the Coast Guard's definition of "vessel casualty" including collisions, allisions, loss of propulsion, pollution, sinking, etc. Jim reiterated that most of the incidents were while moored or anchored, not underway. Update: this has been revised to just list the type of vessel causalities that are actually being observed in this data.*

*Tim Johnson (Oil Industry/WSPA) had no comments or questions on this section.*

*Fred Felleman (Environment/Friends of the Earth) observed that congress was in the process of marking up the reauthorization of the USCG Act. One provision deals with reducing crew size on ATBs. The calculation of the likelihood of an incident would likely go up with fewer people on board. Added vigilance is of known value and should be considered for future projections.*

### **31. Tribal Resources Methods Reminder**

Tribal Resources is the next priority element. As a reminder, the methods for this element include:

- Conducting outreach to potentially affected Tribes
- Reviewing data from publicly available references to analyze existing tribal resources within the EIS Study Area
- Describing impacts and compare across alternatives.
  - So far, our focus has been on impacts to treaty fishing rights and culturally/economically significant species – based on the information we have identified.

And finally, (not covered today), determining significance and identifying any relevant mitigation.

### **32. Tribal Resources Within the EIS Study Area**

So far, the team has identified 29 Tribes with potential interest in the EIS Study Area. All the Study Area is within the U&A of one or more Tribes. The team has reviewed available information for known traditional cultural properties and archeological sites, and are also in coordination with DAHP regarding a more in-depth assessment of potential cultural and historic resources at risk around oil spill and associated clean-up. The team has reviewed publicly available information on Usual and Accustomed Fishing Areas:

- Many of these resources also emphasize the economic, cultural, spiritual and nutritional security importance of treaty fishing to Tribes and tribal members.
- They also emphasize the widespread and year-round nature of treaty fishing throughout the EIS Study Area.

Begun compiling a list of culturally and or economically significant species

- A list of common fish and shellfish species is included here, but this is of course non-exhaustive.

### **33. Current Threats to Tribal Resources**

The team has also been working to characterize current threats to tribal resources that might be relevant to this EIS. Those include:

- Vessel traffic in general: existing levels of vessel traffic in the shipping lanes and at anchorages have been described as taking physical space from U&A fishing, including at important fishing locations.
- Interference with access to fishing areas.
- Fishing gear loss resulting in large financial burden to tribal fishers. If this occurs with certain gear types, it can also be a physical safety concern for tribal fishers.

- Potential wake impacts have also come up
- The team recognizes that the threat of a major oil pollution incident is a concern for Tribes, some of whom have also experienced recent oil pollution events from other sources.
- Climate change is also a threat to tribal resources that is described in many publicly available documents. It will be covered where relevant in the EIS as well.

### 34. Summary of Impacts

Haley walked through the setup of the slide. The table on the left describes existing conditions and the impact that the current tug escort requirements have on the various identified threats:

- One box means that the team has identified some impact
- Two red boxes means that it has been identified as a greater/priority impact

The table on the left looks at the changes across alternatives relative to current conditions:

- The green and red arrows indicate increases or decreases.
- Two arrows indicates a change of higher magnitude.

For existing conditions:

- The team's research has shown that existing levels of vessel traffic and congestion are a priority impact. Escort tugs contribute to this, and in turn contribute to interfering with access to fishing areas, wake impacts, and loss of fishing gear.
- Strike risks and water quality impacts are also being considered as impacts
- They are also looking at oil spill risk and impacts from oil spills in relation to the current conditions for each alternative.

One can also look at change relative to existing conditions, or the No Action Alternative. Because FORs don't meaningfully change these factors, the focus will be on Alternative C (Expansion) and Alternative D (Removal):

- For the Expansion Alternative:
  - An increase in vessel traffic, specifically in the expansion zones, as discussed in the vessel traffic section.
  - A slight reduction is seen in the risk of a catastrophic oil spill from target vessels, but a slight increase in the risk of spills from tugs, as discussed in the oil pollution section. This would result in a reduction in potential physical disturbance to tribal resources from oil spills.
  - And tug activity would of course increase.
- For the Removal Alternative:
  - A small decrease in overall vessel traffic, concentrated in the rulemaking area, as a result of removing the target vessel escorts. This is consistent with what was discussed in the Vessel traffic section.
  - Because there are fewer overall vessels, strike risk would also decrease (Haley will talk more about this in the Plants and Animals section next – it's very rare overall).
  - An increase in the risk of catastrophic oil spill from target vessels with the removal of current requirements, although a slight decrease in risk of spills from tugs as there would be less tug traffic overall. This would result in an increase in physical disturbance to tribal resources from oil spills.
- And tug activity would of course decrease.



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 <sup>34</sup>

**35. Questions and Discussion**

*Fred Felleman (Environment/Friends of the Earth) asked about the likelihood of increased interactions between vessels and Tribes for each of the alternatives. He acknowledged there would be impacts but wanted to know how much. Haley responded that the team was relying heavily on the change in time by zone for this section. Much of it was qualitative. The team is working with Tribes on impacts and documenting received information, relying on expert opinion from Tribal Government staff themselves, who are able to participate. Fred suggested that it could be a simple equation looking at how much gear was in the water and the increase in escorts using the frequency of fishing openings.*

*Fred then asked if the team is looking at the returning tug. Haley responded that the escort job included the starting point to the pickup of the vessel, the escort of the vessel, and the return of the tug to an end point, which could vary. Fred stated that his concern was that they could doubling the number of transits. JD Ross Leahy (Ecology SME) responded that the return trip could be anywhere. It was not always returning to where it came from. Fred said that that was his point, the deadhead trip of the tug could potentially double the transit.*

*Rein Attemann (Environment Alternate/WEC) asked if the SRKW's were included in the "significant cultural species" category. Haley confirmed that yes, they were. Rein also observed that under the Alternative C Expansion, it would seem that less strikes could happen by adding tug escorts putting more eyes on the water. He didn't understand why it wasn't presented as a benefit. Haley suspected it was because it increased the vessel count. She thanked Rein for flagging that and said they would look into it further.*

*Fred asked again about how the team was estimating deadheading. Adam Byrd (Ecology SME) acknowledged that Fred has brought up this topic several time adding that it was a hard question to answer. The team has made multiple attempts to answer the question in the research reports currently in progress. He acknowledged this was an important question to Fred, but as someone who has and is spending a lot of time in the modeling, it's not as important overall. The value of estimates was setting guardrails and getting ranges. They have tried to set an upper limit and with that are trying to capture deadheading. Fred urged that every impact could be doubled if deadheading doubled. Jaimie put this question in the "parking lot".*

*Clyde Halstead (Tribal Government Alternate/Swinomish) asked if the information on increased vessel traffic and fishery interactions in the final EIS impacts on were going to be geographically sensitive so*

*that those increases happen in different areas as opposed to the whole study area. Haley responded yes. They would be using the heat map section as well as the by zone information, and also looking to Tribes for input on other areas.*

### **36. Plants and Animals: Methods Reminder**

The next priority element is Plants and Animals. A reminder about the methods for this section:

- First, the team developed a baseline. This includes describing the existing plant and animal resources and identifying existing threats to those resources.
- Then, they estimated the contributions of existing escort tug activity to those threats.
- Next, they estimated changes in those threats for each alternative.
- The next step will be to identify significant impacts and mitigation.

### **37. Resources within the EIS Study Area**

The first step in establishing our baseline was to research and catalogue existing resources within the EIS Study Area. They are categorized these resources into six groups:

- Marine mammals (whales, porpoises, dolphins, seals, and otters)
- Finfish (salmonids, forage fish, groundfish)
- Aquatic invertebrates (clams, oysters, crabs, shrimp, and echinoderms – sea stars, etc.)
- Birds (migratory birds, waterfowl, shorebirds, seabirds, raptors, scavengers)
- Intertidal and aquatic plants (kelp, eelgrass, etc.)
- And protected ecological areas and special habitats (both federal and state designations)

### **38. Current Vessel-Related Threats**

The next step was to identify current threats. Based on literature review, the team identified the following known threats:

- Underwater noise
- Vessel strikes
- Physical disturbance from vessel interaction. For example, SRKW have been shown to reduce foraging behavior after a close vessel approach.
- Disturbances to habitat from wakes and anchoring
- Disturbances from artificial lighting
- Oil spill impacts (both from the spill and associated clean up)

The team also identified a few potential threats:

- Pollutants in vessel wastewater discharge and
- Exposure to vessel exhaust
- Physical disturbance from anchoring and/or entanglement issues

### **39. Baseline Escort Tug Risks**

Here's what was found related to the escort tugs and the identified threats. Cross-referencing the underwater noise results with this chapter is still ongoing, and other vessel interaction assessment is ongoing, so Haley won't be getting into those in detail today.

Strikes: Marine mammals could be hurt or killed if struck by a vessel.

- The risk is higher for vessels traveling above 10 knots.
- Under current conditions, a high level of tug escorting activity occurs in areas where cetaceans, specifically SRKWs, are known to congregate. There is POTENTIAL for strikes between escort tugs and marine mammals.
- Escort tugs regularly exceed 10kts. HOWEVER, Ecology has not identified ANY evidence of tugs causing ANY marine mammal strikes in the EIS Study Area.
- Also, a recent law requires vessels to slow to no more than 7kts within 0.5 miles of SRKW.

Wakes: Escort tugs rarely travel under conditions that would produce wakes that disturb shoreline habitat. They would have to be traveling at high speeds and close to shore.

Spills: As discussed in the oil pollution section, while escort tugs reduce the risk of target vessel spills, increased escort tug traffic increases the probability of an incident from a tug itself. So, both the reduction in target vessel spill impacts as well as the increase in escort tug spill impacts are being considered.

Other threats: The assessment of physical disturbances to habitat, water quality impacts, air emissions, and artificial light impacts found that those threats are negligible to minor under current conditions, so the team won't discuss in more detail here in the interest of time.

#### **40. Summary of Impacts**

This slide is organized in the same way that the Tribal Resources slide was organized. Threats under existing conditions in the table on the left and change relative to existing conditions for each alternative in the table on the right

For threats:

- All of the known threats are listed.
- Note that strike risk is flagged as a priority/greater impact due to the RISK of marine mammal strikes based on the speeds and the geographic distribution of marine mammals. It is not because ACTUAL strike impacts are elevated.

For change relative to existing conditions, the focus will again be on Alternative C (Expansion) and Alternative D (Removal).

- For the Expansion Alternative, there is a decrease in the risk of a catastrophic oil spill from target vessels, but an increase in risk of spills from escort tugs. This is consistent with the findings we discussed in the Oil Pollution Chapter.
- For the Removal Alternative:
  - A reduction in strike risk (fewer vessels traveling at over 10kts)
  - A reduction in wastewater impacts, habitat disturbance, air emissions, and artificial light impacts.
  - An increase in the risk of a catastrophic oil spill from target vessels, and a decrease in risk of spills from escort tugs. This again is consistent with the findings discussed in the Oil Pollution Chapter.

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
Underwater Noise	ongoing	–	–	ongoing	ongoing
Strike Risks	☒☒	–	–	–	↓↓
Physical Vessel Interaction	ongoing	–	–	ongoing	ongoing
Wastewater	☒	–	–	–	↓
Habitat Disturbance	☒	–	–	–	↓
Air Emissions	☒	–	–	–	↓
Artificial Light	☒	–	–	–	↓
Target Vessel Oil Spill Risks	☒	–	–	↓	↑
Escort Tug Fuel Spill Risks	☒	–	–	↑	↓

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

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

#### 41. Questions and Discussion

To save time, Haley went straight to the next section and planned to answer questions for both at the next Q&A break.

#### 42. Underwater Noise Methods Reminder

Haley said that she would now briefly cover underwater noise, which is the final priority element. As a reminder, for underwater noise, the team is conducting modeling to assess whether underwater noise from vessel activity exceeds acoustic thresholds of concern for marine mammals. There was a Deep Dive on underwater noise on November 7th with the subcontractor, JASCO Applied Sciences, who is an expert in this field. That was recorded and slides and the recording will be posted to the website. Haley will be providing a summary of the results here and would refer individuals to those workshop materials for more details.

#### 43. Preview of JASCO Results

For this element, JASCO modeled noise impacts at 7 locations where marine mammals are known to congregate. They did this for both summer and winter conditions. The results were compared to a behavioral disturbance threshold of 120 decibels, which is the current published guidance from NMFS. Comments were received regarding alternative thresholds at the stakeholder and underwater noise workshops from Todd Hass and others. The team is coordinating with the consultants about this now and Haley didn't have any new information on this topic to report.

For the No Action Alternative, in 6 of the 7 locations, noise levels did occasionally exceed the behavioral disturbance threshold. This happened more frequently in congested port areas and shipping lanes. For the noisiest location (in Rosario Strait) the 120 decibel threshold was exceeded around 4% of the time.

Alternative B: No change as none of the conditions meaningfully affect underwater noise.

Alternative C – Expansion: JASCO did find increases at some modeled locations and some times. However, there was no change in the time where noise exceeded 120db threshold compared to current conditions.

Alternative D – Removal: JASCO found that noise levels decreased at certain times and in certain locations.

At the noisiest location, the total amount of time that the 120 decibel threshold was exceeded decreased slightly to around 2.6% of the time.

Alternative	Preliminary Findings
Alt. A: No Action	<ul style="list-style-type: none"> <li>Noise levels occasionally exceed threshold in 6 of 7 locations</li> <li>More frequent near congested ports and shipping lanes</li> <li>Noisiest location exceeded threshold 4% of the time</li> </ul>
Alt. B: Addition of FORs	No Change from Alternative A
Alt. C: Expansion	<ul style="list-style-type: none"> <li>Noise levels increase at certain locations and times</li> <li>No change in time exceeding the 120 dB threshold over Alternative A</li> </ul>
Alt. D: Removal	<ul style="list-style-type: none"> <li>Noise levels decrease at certain times and locations</li> <li>Noisiest location exceeded threshold 2.6% of the time</li> </ul>

#### 44. Questions and Discussion (All Topics)

*Blair Bouma (Pilot/Puget Sound Pilots) wondered if the noise results were theoretical or based on observations. Haley responded that Jasco used a model and real-world sound profiles developed by the Echo Program, as well as other real-world info, and hydrophone data.*

*Jeff Slesinger (Tug Industry/Delphi Maritime) had no questions or comments on this section.*

*Jim Peschel (Tug Industry Alternate/Vane Brothers) also had no questions or comments on this section.*

*Tim Johnson (Oil Industry Alternate/WSPA) asked when the group would have a chance to weigh in on mitigation options. Haley said that Megan Hillyard (Ecology Alternate/BPC) would have more info coming up and that likely the February meeting would be the place.*

*Clyde Halstead (Tribal Government Alternate/Swinomish) had no questions or comments for this section.*

*Fred Felleman (Environment/Friends of the Earth) brought up the SRKW's decreased presence in Rosario Strait and the area in general and inquired about that presence of that data in the EIS. Haley acknowledged this point was also in a letter submitted by Fred and shared that it had been sent to the consultants for consideration in the Plants and Animals section. Haley added that they were trying to be conservative as the point of the EIS was to estimate impacts to the environment. She wanted to make sure they were not undercounting. She thanked him for bringing it up. Regarding potential mitigation, Fred assumed that tugs could return slower which would be impactful, and it would be a relatively easy-to-implement mitigation. Blair Bouma (Pilot/Puget Sound Pilots) responded that return speed was already aligned with industry. The tugs don't go faster than they must. He didn't think that would be a good thing to try to regulate. More times than not, deadheading tugs run at an economical speed, which is less fuel, noise, pollution.*

#### 45. OTSC Updates and Discussion

Sara Thompson (Ecology Alternate/BPC) provided an update on the Economic Analysis. In July 2024, the Board voted to consider a rule alternative that includes a functional requirement of a minimum of

3000 horsepower for all vessels covered under this rulemaking. In addition to the environmental impact analysis, which will result in an EIS, the preliminary analysis on all four rule alternatives to understand the potential economic impacts of the current proposed rule alternatives has begun.

A piece of this economic analysis includes a least-burdensome analysis, which requires us to evaluate whether the potential rule requirements are the least burdensome that achieve the goals and objectives of the authorizing statute.

Early findings reveal that a 3000-horsepower requirement could potentially impose costs on current companies.

In order to properly complete the least-burdensome analysis, the costs must be balanced with the statutory goals, which in this case, require looking at the 3000-horsepower requirement through a best achievable protection lens. The authorizing statute for this rulemaking, RCW 88.16.260(3)(d), requires that rules must be adopted that are designed to achieve best achievable protection, as informed by consideration of: accident records in BC and WA waters; existing propulsion and design standards for covered tank vessels; and the characteristic of the waterways.

Best achievable protection (BAP) is defined in RCW 88.46.010(1) and is a determination that Ecology is responsible for with support from subject matter experts, data, and research. Ecology's determination of best achievable protection shall be guided by the critical need to protect the state's natural resources and waters, while considering:

- The additional protection provided by the measures;
- The technological achievability of the measures; and
- The cost of the measures.

Meeting notes from the workshops in June to develop functional and operational requirements included a brief discussion about the need for 3000 hp escort tugs, particularly for escorted vessels over 30,000 DWT.

In proceeding with an economic analysis, the team will determine whether the 3,000-horsepower requirement meets the least-burdensome alternative standard and the best achievable protection standard. The findings may lead to a modified version of this requirement to reduce cost burdens, potentially applying the 3,000-horsepower standard only to certain vessels covered under this rulemaking.

The team is interested in hearing OTSC thoughts and perspectives about the additional protective measures that a 3,000-horsepower tug could provide.

Sara suggested OTSC members email her or Jaimie if they were available and willing to help with this analysis.

*Fred Felleman (Environment/Friends of the Earth) responded that if indeed it was determined that lesser horsepower tugs were still safe, then the team would need to determine the lesser emissions they would produce both under water and above water.*

#### **46. Upcoming Milestone Review**

Megan Hillyard (Ecology Alternate/BPC) provided an updated summary of milestones and next steps.

Between now and December, the teams is working on the technical analyses for each of the EIS elements. She encouraged OTSC members to use the rulemaking site to submit comments and/or

request a 1:1 meeting if there is anything they want to discuss.

Workshop series #10 is ongoing. Megan thanked those who attended this meeting. Workshop #11 will be held in February and those dates are on the rulemaking website. That workshop will focus on proposed rulemaking language and a preliminary economic analysis update. The team anticipates having sections of the EIS done in late spring/early summer and are hoping to provide early review of selected sections for the OTSC and Tribes at that time.

They will be drafting the DEIS between now and Summer 2025 and encouraged OTSC members to submit comments, provide feedback at workshops, and/or request 1:1 meetings.

Rule language development is ongoing between now and Summer 2025 and she encouraged the committee to share their thoughts.

The economic analysis is also ongoing through Summer 2025. As Megan had mentioned, the team plans to share an informal update at the February Workshop. The Preliminary Regulatory Analysis (PRA) will be published with the draft rule, but she encouraged OTSC input prior to that as well.

And then the draft rule and draft EIS will be published together in Summer 2025, at which point a formal comment period will open and several public hearings will be held.

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

#### 47. Reminder: Updated Workshop 11 Dates

Just a reminder that the workshop dates for Workshop Series 11 have been changed. The stakeholder workshop is February 5th from 12:30 – 2:30 PM, after the PSHSC meeting. It will be a hybrid meeting at Ecology’s Northwest Office if the team gets five people registering for the in-person option.

Tribal Governments are welcome to attend this workshop if this works better for schedules. The Tribal Government Workshop will be February 11th from 10-Noon.

The OTSC Meeting will be February 13th from 10-Noon.

#### 48. OTSC and BPC Meeting Timeline

Megan stated that the team wants to ensure the OTSC understands the timeline of the rule development process and reinforced that there will be opportunities for feedback and adjustments

before the rule language is finalized.

Over the next two months, the team will focus on drafting rule language based on ongoing analyses and research.

There will be an OTSC in early January to share updates before Workshop 11 in February. The BPC will also get an update in February after Workshop 11. If OTSC feedback during Workshop 11 leads to potential changes in the rule language, there will be another meeting in March to reach a consensus on the recommendation. The BPC is set to vote on the proposed rule on March 20, with a briefing before filing the CR-102 in early June.

#### **49. Final Questions or Discussion**

Jaimie thanked Megan and asked for questions or comments regarding the info Megan shared.

*Fred Felleman (Environment/Friends of the Earth) asked when the last OTSC meeting was. Megan said potentially March 6 if a consensus on the draft rule language wasn't reached during the February workshop series.*

*Blair Bouma (Pilot/Puget Sound Pilots) asked for clarification about why the horsepower requirement was being reevaluated. Allen Posewitz (Ecology SME) responded that when he was working on the Economic Analysis and looking back at previous Ecology vessel traffic reports, he noted that 1/3 of the new escort work was being done by tugs under 3000 hp, which he had confirmed by an industry rep. Blair wanted to make sure that tug industry expertise was involved in the reevaluation and determination adding that while that size was adequate for some vessels, it may not be for others.*

Jaimie thanked everyone and adjourned the meeting.