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### **Comments on Scope of Work for Analysis of Tug Escorts Required by sec 3(5) ESHB 1578**

Dear Mr.Hess,

Thank you for the opportunity to provide the following comments on the proposed scope of work Ecology will use in its study to evaluate the potential reduction in oil spill risk resulting from the use of tug escorts by specified tank vessels in waters east of New Dungeness Light/Discovery Island Light called for by ESHB 1587. The undersigned non-profit membership organizations have a long history of efforts to protect the Salish Sea, including particular attention to reducing the risk of oil spills.

We understand that Ecology will consider our input in the development of the scope of work it will be submitting to the Board of Pilotage Commission for its approval to inform the analysis of tug escorts using the model under development by the Department of Ecology. The results of this analysis will be presented in a summary report to the legislature by September 1, 2023 as called for by ESHB 1578 Section 3(1)(d)(iii), passed in 2019, consistent with RCW 43.01.036.

It is our understanding that this analysis is limited to laden tank vessels between 5,000 and 40,000 deadweight tonnage (DWT), including ATBs and tank barges operating within the geographic coverage of the existing tug escort requirement for tankers between 40,000 - 125,000 DWT. It is also our understanding this analysis will not include tank vessels that are engaged in bunkering operations. This excludes from the analysis laden or partially laden barges and ATBs transiting to and from bunkering operations, which still clearly pose a risk of an oil spill.

An important context to these comments is the recognition that a large and diverse group of maritime stakeholders attending the 2016 Salish Sea Oil Spill Risk Mitigation Workshop the Department of Ecology convened found that escorting tank vessels, including oil barges and ATBS in Puget Sound, to be the most effective Risk Mitigation Measure (RMM) of the 225 RMM's considered by the attendees. This work built on a workshop Ecology hosted in 2015 where participants identified the oil spill risk categories reviewed in 2016.

Reducing the oil spill risks associated with the significant number of laden tank vessels transits associated with bunkering operations (the most frequent transits of tank vessels in the study area), without increasing the number of escort tug transits through the waterway, is best addressed through the establishment of a strategically positioned Emergency Response Towing Vessel(s) (ERTV) in the San Juan Islands as called for in RCW 88.46.250 Subsection 2 which will be discussed separately in our comments on the scope of work for that project which are also due September 30, 2020.

We recognize that Section 3(5)(b) of ESHB 1578 calls for Ecology’s model to consider vessel safety measures implemented after July 1, 2019. Despite the legislation allowing for qualitative analysis to be used to answer and provide context for research questions, we find the incorporation of this information to be too subjective to be built into a quantitative model.

While there are data documenting that the frequency and size of oil spills have declined over the years, it is rarely possible to account for how specific regulations have contributed to these results. However, near misses occur far more frequently than oil spills and provide a more accurate characterization of oil spill risk than spills themselves. Unfortunately, the lack of consistently collected, stored, and analyzed near miss data results in a significant under-representation of oil spill risk and further obscures the ability to apportion the amount of oil spill risk reduction associated with any specific measure.

Lessons on how trying to incorporate such subjective evaluations of how specific regulations result in reducing oil spill risk in a quantitative model can be gleaned from the 2015 Vessel Traffic Risk Assessment (VTRA) conducted by George Washington University. VTRA 2015 included the evaluation of a suite of regulatory measures with a purported risk reduction value associated with each. This resulted in the finding that the existence of the current and soon-to-be implemented regulatory regime significantly outranked all other potential new safety measures analyzed quantitatively. This arbitrary finding was then used as the only scenario reported in the 2017 Ports and Waterways Safety Assessment (PAWSA) conducted for these waters by the Coast Guard, thereby suggesting that additional measures are not needed to address the changing oil spill risk profile of the region.

While we do not doubt there have been measures instituted to reduce oil spill risk over the years, as borne out by the data, we believe such specific attributions do not belong in a model that is intended to be rigorous and without bias. Given the small number of large spills in the Salish Sea, it is essential that we look at spills that have occurred in the broader region, which is frequented by many of the same vessels, and to put far more emphasis on calibrating the model on near miss, rather than oil spill data.

It has long been recognized that having the Coast Guard collect, analyze, and make publicly available, near-miss and other pertinent data in a systematic matter is fundamental to the accurate characterization of a waterway’s oil spill risk. In fact, several provisions in the 2020 National Defense Authorization Act (NDAA) (H. R. 6395) calls for Coast Guard districts with VTS to do just that. The following excerpt from pages 1325-1327 of the 2020 NDAA is provided below:

“(b) NATIONAL POLICY.—

“(1) ESTABLISHMENT AND UPDATE OF NATIONAL POLICY.—

“(A) ESTABLISHMENT OF POLICY.—Not later than one year after the date of enactment of this section, the Secretary shall establish a national policy which is inclusive of local variances permitted under subsection (c), to be applied to all vessel traffic service centers and publish such policy in the Federal Register.....

***“(I) Establishment of data collection, storage, management, archiving, and dissemination policies and procedures for vessel incidents and near-miss incidents.***

“(e) **PERFORMANCE EVALUATION.**—

“(1) **IN GENERAL.**—*The Secretary shall develop and implement a standard method for evaluating the performance of vessel traffic service centers.*

“(2) **ELEMENTS.**—*The standard method developed and implemented under paragraph (1) shall include, at a minimum, analysis and collection of data with respect to the following within a vessel traffic service area covered by each vessel traffic service center:*

“(A) *Volume of vessel traffic, categorized by type of vessel.*

“(B) *Total volume of flammable, combustible, or hazardous liquid cargo transported, categorized by vessel type as provided in the Notice of Arrival, if applicable, or as determined by other means.*

“(C) **Data on near-miss incidents.**

“(D) **Data on marine casualties.**

“(E) *Application by vessel traffic operators of traffic management authority during **near-miss incidents and marine casualties.***

“(F) *Other additional methods as the Secretary considers appropriate.*

Particularly pertinent to the Salish Sea, the 2020 NDAA also states on page 1326:

“(d) **COOPERATIVE AGREEMENTS.**—

“(1) **IN GENERAL.**—*The Secretary may enter into cooperative agreements with public or private agencies, authorities, associations, institutions, corporations, organizations, or other persons to carry out the functions under subsection (a)(1).*

“(2) **INTERNATIONAL COORDINATION.**—*With respect to vessel traffic service areas that cross international boundaries, the Secretary may enter into bilateral or cooperative agreements with international partners to jointly carry out the functions under subsection (a)(1) and to **jointly manage such areas to collect, share, assess, and analyze information in the possession or control of the international partner.***

Similarly, the lack of information on whether tugs have tows (no less if they are laden) has also hampered quantitative analysis of oil spill risk in the Salish Sea. This has been most recently demonstrated in the Puget Sound Pilotage Commission’s ongoing effort to document whether there have been changes in vessel traffic associated with the addition of a tug escort requirement for laden tank vessels between 5,000-40,000 DWT in Rosario Strait, called for in ESHB 1578.

The Rosario Strait tug escort study would have also been far more informative if the Coast Guard required AIS on barges and to provide near miss data that was collected in a systematic fashion.

In fact, the 2020 NDAA specifically states that Coast Guard Districts:

“(3) *may require vessels to install and use specified navigation equipment, communications equipment, electronic relative motion analyzer equipment, or any electronic or other device necessary to comply with a vessel traffic service or that is necessary in the interests of vessel safety, except that the Secretary shall not require fishing vessels under 300 gross tons as measured under section 14502, or an alternate tonnage measured under section 14302 as prescribed by the Secretary under section 14104, or recreational vessels 65 feet or less to possess or use the equipment or devices required by this subsection solely under the authority of this chapter;*

Despite the limitations of the data being used by the Pilotage Commission and Ecology to monitor the year-long tug escort pilot study, failure to include those findings in this study further reduces the rigor of the model currently under development. It is perplexing why the Department of Ecology would not incorporate such real-world information to inform this analysis given the frequency with which ATBs and barges change their transit to Haro Strait in order to evade Rosario Strait's escort requirement would inform answers to questions specifically called for in this study which are addressed in these comments below.

A summary of the results from this current tug escort study, and that for the ERTV, are do not due to the Washington legislature until September 2023. Therefore, there is ample time to include the findings of the Rosario Strait tug escort pilot study in this evaluation.

**In response to the research questions posed by Ecology, we offer the following:**

**How is oil spill risk distributed geographically?** - Turn Point, East. Point, Guemas Channel/Saddlebags and the Port Angeles rotary need targeted analysis. (See 2017 PAWSA)

**How does the use of tug escorts change the way that oil spill risk is distributed geographically?** - Impacts from the Rosario Strait Study need to be incorporated in order to evaluate this question. Various interventions regarding tanker incidents have clearly indicated risks to Rosario Strait have been reduced since there is now a requirement for tug escorts on tank vessels greater than 50K DWT.

**How is oil spill risk distributed across covered vessel types?** - The results from the following study by Clear Seas demonstrates the fact that Bulk Carriers are the largest and most frequent covered vessels calling on the study area. They also have the highest incident rates across most of the waterways, which demonstrates the need to address bulk carriers with priority. This will be especially important in the analysis of the ERTV: (Also see 2017 PAWSA).

[https://clearseas.org/en/research\\_project/maritime-commercial-incidents-and-accidents](https://clearseas.org/en/research_project/maritime-commercial-incidents-and-accidents)).

***Dataset Representation of Vessel Types and Sub-Types (2014-2016)***

*There were 5,921 individual vessels in the final dataset, representing three years of vessel traffic in the study area.... There were far more bulk carriers (59% of all vessels) than any other sub-type of vessel in the study. Container ships (11%), other cargo (8%), tugs (7%), vehicle carriers (6%), small tankers (5%), large tankers (3%), cruise ships (1%), and articulated tugs (0.3%) follow in order.*

*The estimated average persistent oil capacity for bulk carriers in 2016 was 2,400 m<sup>3</sup> and the maximum was 6,200 m<sup>3</sup>.*

<i>Bulk carrier</i>	<i>DWT range</i>	<i>6,077 - 266,651</i>	<i>N= 3,472</i>
<i>Tanker</i>	<i>DWT range -</i>	<i>50,083 - 193,049</i>	<i>(&lt;50K 288, &gt;50k 195) = 483</i>

Tug escorts should be considered for bulk carriers considering their numbers, size and frequency of incidents compared to tankers. Alternatively, they should help underwrite the cost of an ERTV as described in our comments on the ERTV as called for in RCW 88.46.250 Subsection 2.

**How does the use of tug escorts change the way that oil spill risk is distributed across covered vessel types?** Without evaluation of the Rosario Strait tug escort pilot study, the only evaluation that can be made empirically is for tankers greater than 50K DWT. However, the waters of Eastern Juan de Fuca Strait, Haro Strait and Boundary Pass and Puget Sound are likely to have higher risks of oil spills from oil barges and ATBs due to the fact that tug escorts are not required for these vessels in these waterways.

**How does the 2020 expansion of tug escorts in Rosario Strait and connected waters to the east change oil spill risks from covered vessels?** – This question illustrates our previously stated point why Ecology needs to incorporate the results of that analysis in this study.

**How does oil spill risk change if the escorts are tethered versus untethered?** - This depends significantly on the characteristics of the tug, training of the crew, and type of vessel to be tethered. In general, teathering increases the speed and capacity for a tug escort to alter the course of a disabled vessel. There are also risks associated with such activities that can be minimized by crew training and the use of an appropriated outfitted tug.

**How do key design characteristics for escort tugs affect spill risk?** - Maneuverability, sea keeping, ability to work in indirect modes, bollard pull, and crew training are all critical. These characteristics need serious consideration if evaluating potential value of tugs of opportunity.

In closing, we believe the geographic expansion of tug escorts for barges and ATBs in combination with a strategically positioned and operated ERTV(s) is likely to contribute to our region's ongoing commitment to improving maritime safety and reducing oil spill risk.

However, unless the aforementioned data from the US Coast Guard (USCG) and Ecology/Pilotage Commission are incorporated in the model, it will remain an under-representation of risk in the Salish Sea. It will also hinder the ability to accurately evaluate the benefits of risk mitigation measures being considered for this and the ERTV studies.

In the mean-time the use of the study conducted by Clear Seas quantifying vessel traffic in Canada, including the Salish Sea should be useful in filling some of the information gaps and helpful to inform various questions in this analysis: *Vessel Traffic in Canada's Pacific Region* December 2020 which can be found at: [https://clearseas.org/en/research\\_project/vessel-traffic-in-canadas-pacific-region/](https://clearseas.org/en/research_project/vessel-traffic-in-canadas-pacific-region/)

We hope you find this feedback on the scope of your study evaluating the potential benefits of expanding the use of tug escorts within the study area. Please contact us if you have any questions.

Thank you,

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