

Oil Outflow Module
Webinar
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Attendees

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Faith Knighton, *NOAA ORR/ERD, SSC*

Jaimie Bever, *Board of Pilotage Commissioners*

Jeff Lankford, *NOAA ORR*

Jeff Pelton, *Transport Canada*

Jim Peschel, *Vane Brothers*

John Fu, *US Coast Guard*

Laird Hail, *US Coast Guard*

Mike Doherty, *Local Government (Ret.)*

Nathan Emory, *King County OEM*

Nicole Heshka, *Natural Resources Canada*

Rebecca Paradis, *Clallam County Marine Resources Committee*

Reid Wolcott, *National Weather Service*

Rein Attemann, *WA Environmental Council*

Shayne Cothorn, *WA Dept of Natural Resources*

Tami Pokorny, *Jefferson County*

Todd Hass, *Puget Sound Partnership*

Tony Parkin, *Island's Oil Spill Association*

Natalie Lowell, *Makah Tribe*

Tom Ehrlichman, *Swinomish Indian Tribal Comm.*

The following summary notes are not intended to be a transcript but rather a review of the discussion session. Participant questions and comments are shown in bold text followed by Ecology responses. Ecology responses that have been added after the conclusion of the event are preceded by the text "Supplementary answer."

Q&A Session Notes:

Your slides suggest that statistical modeling for non-tank vessels will be less sensitive to geography. Will you consider bottom type, which is geographically sensitive? (John Fu, USCG)

JD Leahy – When I said that oil outflow probability may be less sensitive to geography, I meant geography on a macro level. As you point out, the accident characteristics (like grounding on a rocky bottom) are likely more important to oil outflow than where in the world the accident happened.

I heard that there is some sensitivity to temporal scope for the statistical approach but that it would not take into account rule changes, do I understand that correctly? (John Fu, USCG)

JD Leahy – The statistical approach means that rules in place for our population of interest are incorporated by default. However, changes or differences in rules are not able to be individually evaluated with this methodology. However, we can consider rule changes when we establish the temporal scope of our population of interest, so that we identify a population that is a strong representation of the vessels and rules that we are trying to model.

I understand that small, incremental changes are very difficult to model. However something like double-hull requirements have a larger impact and should be included. We also hope that modeling can help inform regulatory decisions. We'd hope that you would be able to alter rules in the simulations and see what the impact on risk is that results. (John Fu, USCG)

JD Leahy – Double hulls are one of the parameters in the mechanistic model that we plan to use for tank vessel groundings and collisions. That inclusion means that double hulls can be individually evaluated in the way you describe.

Thank you for the explanation of the preliminary structure of your oil outflow module and your request for comments from tribes on the model assumptions (under Section (4)(1) of ESHB 1578. The bill requires Ecology to develop a model that quantitatively assesses both current and future oil spill risk. The bill does not limit the definition of "risk" to mean only the probability of oil release and the estimated volume of a release. In requiring an estimate of risk, the bill also requires an estimate of the severity of consequences and that in turn requires you to assess the likelihood that the estimated volume of oil will spread to sensitive areas. Do you agree that requires an estimate of the potential spread of a spill based on different scenarios, for example the season in which the spill occurs?

To meet the requirements of the statute, we would suggest that your study needs to make the kind of spill area estimates found in the Kinder Morgan study literature, which we sent to you earlier. In those risk estimates, they picked a spill location, estimated risk based on a limited set of different volumes, and determined how far the oil would spread in various time increments, all represented in a color map. This is an accepted risk assessment method and we believe is required to assess oil spill risk. We note that this is required because SubSection (4)(1) does not limit your model to answering the question in Section (4)(2). But under subsection (4)(1,), if you limit the model's estimate of severity of consequences due to spread of spills at various sizes in different seasons, you do handicap the conclusions you have to make under subsection (2) as to whether a second rescue tug would limit oil spill risk.

Addressing the spread of oil as part of the definition of "risk" will better present decision makers, the public, tribes and industry with a tool to assess real world risk in the geographic areas of concern. This is particularly important to Swinomish and other Tribes with treaty reserved fishing rights in areas of high risk, including but not limited to Rosario, Guemes, Saddlebags, Vendovi, Lummi Island and Cherry Point. Thank you. (Tom Ehrlichman, Swinomish Indian Tribal Community)

JD Leahy –We are limiting our short-term focus to oil spill quantity, location, volume and type. We do recognize that a more comprehensive review of consequence can be important for different types of risk analyses. With that in mind, we are building the model to accommodate future work and expansion.

Brian Kirk – We see questions around consequence as part of the two specific analysis projects. During the analysis outreach process, we will have a complete discussion of how we define risk and determine

the findings for our reports to the legislature. Our intention is that the model produces outputs on spill frequency and size. It is possible that those outputs could be used as inputs for other tools, such as the NOAA GNOME model that can characterize oil transport. A question for the upcoming analysis process is whether that would add meaningful value to the results.

We expect to do a large number of model runs per scenario so the model will generate a distribution of oil spill accidents. These will occur at various points geographically, temporally and from vessels of different types. Running each scenario through an oil transport model would be a daunting task and I would be concerned about interpretation of those results, in particular ways that they may be potentially taken out of context.

Adam Byrd – Another consideration is that we can't accomplish all things. The legislature provided a deadline, in addition to the specific legislative requirements. While the fate and effect of oil after a spill are important, they are not necessarily essential to the prevention questions we've been tasked with.

As you know, we believe the legislature tasked Ecology with developing an oil spill risk model and maintaining it over time, not just developing a model specific to the tug escort question. Model outputs need to include the conditions under which spilled oil could spread and result in widespread harm to the consequence list you've identified. Risk involves so much more than just volume of oil spilled. This study architecture needs reexamination in our view, to ensure it addresses the consequences that tribes, the public and our elected officials are looking at. If you can't do a comprehensive study of consequences, can you at least estimate the geographic spread of oil based on seasonal variations? (Tom Ehrlichman, Swinomish Indian Tribal Community)

JD Leahy – As you point out, we are not just tasked with answering these upcoming two questions, we are tasked with building and maintaining an oil spill risk model over time. As part of our approach to structuring the model, we are balancing potential future model developments, with the initial, time sensitive need to answer the two analysis questions. There is room to expand the model and what it can assess, but that may be at a later phase.

Brian Kirk – I would also add that our interests here are in line with your own. We all want to do high quality, credible, defensible and informative analysis. There is certainly room for ongoing discussion as we get into each analysis project, and not just these first two. We expect many years of analysis work, on a variety of topics. I think there is plenty of room for discussion as to what is included in each analysis.