STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS
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Meeting Minutes – Oil Transportation Safety Committee (OTSC)

June 21, 2023, 10:00pm – 11:30pm
Via MS Teams

Attendees:
Jaimie Bever (Chair/BPC), Sheri Tonn (Ex-offico/BPC), Brian Kirk (Ecology Alternate/BPC), JD Ross Leahy (Ecology Alternate/BPC), Sara Thompson (Ecology Alternate/BPC), Blair Bouma (Pilot/PSP), Keith Kridler (Pilot Alternate/PSP), Peter Schrappen (Tug Industry/AWO), Leah Harnish (Tug Industry Alternate/AWO), Brian Porter (Tribal/Swinomish), Clyde Halstead (Tribal/Swinomish), Tim Johnson (Oil Industry Alternate/WSPA), Rein Attemann (Environment Alternate/WEC), Tom Umenhofer (Oil Industry Alternate/WSPA), Jim Peschel (Tug Industry Alternate/Vane Brothers), Kyle Burleson (Tug Industry Alternate/AWO)

1. **Welcome and Updates**
   OTSC Chair Jaimie Bever welcomed everyone to the meeting. She introduced Pilot Alternate and Puget Sound pilot Captain Keith Kridler, who has escorted tank vessels, as a Subject Matter Expert for the meeting's primary topic, tug capabilities. She also announced that BPC member, Commissioner Eleanor Kirtley has left the committee due to her heavy workload. Many thanks to Commissioner Kirtley for her contribution to the OTSC. The BPC will be considering her replacement.

2. **Workshop Topics**
   The main topic for the OTSC workshop was to discuss escort tug capabilities.

3. **Rule Overview**
   Jaimie walked the OTSC through a few slides in the presentation which provided a brief overview of the 2019 legislation (ESHB 1578), the timeline of deliverables, and possible outcomes of the rulemaking.

4. **Workshops and Outreach**

The workshops and outreach timeline slide displayed activities from February 2023 to January 2026. Jaimie gave a brief explanation of the 2023 workshops.

5. **Scope**

The scope for the entire rulemaking announcement was provided in the presentation slides as background, with emphasis on Workshop #2 topics: "Specify operational requirements for tug escorts, where they are required" and "Specify functionality requirements for tug escorts, where they are required".

At this point, Jaimie handed the presentation over to Sara Thompson with the Department of Ecology. Sara explained that the intention for the workshop was to present ideas and then have a discussion about the contents of each slide before moving to the next.

6. **Existing tug capability requirements**

Sara reminded everyone that the existing tug capability requirements are spelled out in RCW 88.16.190 for tugs providing escorts to tankers over 40k DWT to have an aggregate shaft horsepower equivalent to at least five percent of the DWT of the escorted oil tanker. This rulemaking will not edit that requirement.

7. **Capability ideas for consideration**

Sara shared a list of ideas for consideration:

- Horsepower
- Escort Equipment
- Ancillary Equipment
- Bollard Pull
- Screws/Drive
- Certifications

She added that all were important for considering a tug for escort and its ability to rescue a vessel. Sara reminded everyone that the bullets and links on the slides were just to start the conversation and were not direct comparisons or recommendations. The expertise of the OTSC members is critical to this process.

8. **Horsepower ideas**

The horsepower discussion kicked off with a reminder of the current horsepower used by local escort providers, which is 4,700-8,000. Sara presented the ideas and suggestions listed on the slide.

Jim Peschel (Tug Industry Alternate/Vane Brothers) emphasized the importance of the existing horsepower of the tugs currently doing the work. Considering requirements above

the current practice gave him pause, as only the GARTH FOSS and LINDSAY FOSS could do the work, ruling out numerous other tugs.

Captain Blair Bouma (Pilot/Puget Sound Pilots) pointed out that currently, smaller tugs below 4,700 horsepower would be escorting tugs and barges under the new requirements. He addressed the statement at the bottom of slide which said "the true measure of an escort tug is not solely dependent on horsepower, but on design and propulsion type" adding that it was a very important point. He gave an example that pilots have had situations where 10,000 horsepower tugs could barely meet the requirements in practice, while some of the smaller tugs in the 6,250 horsepower category could. He added that while the 5% works well in the upper end of vessel size, it tapers down to an impracticably small number for the smaller vessels. For example, a 5,000DTW barge would yield a 250-horsepower tug. If anything, he suggested keeping the 5% but have a lower limit that could possibly be calculated or proven out in some practical manner.

Sara mentioned that she spoke with pilots about how tug horsepower crosschecking was happening in practice adding that the pilots seem to have a handle on what tugs can provide what service to tankers coming in and their horsepower. She wondered if additional requirements or capabilities were decided, how those could be implemented into the current practice. Blair responded that horsepower is a good reference because it is a discreet number that is known. The other numbers used are bollard pull (focus is more for harbor jobs) which determines how much the tug can pull. But the big indicator for escorting is indirect bollard pull, which is when tug turns sideways at speed, how many tons it pulls. He added that indirect bollard pull isn't defined in a tug specification but is a huge factor and is influenced by the hull and design of the entire tugboat. They components to consider in escorting are horsepower, bollard pull, and tug configuration.

Captain Keith Kridler (Pilot Alternate/Puget Sound Pilots) mentioned that another factor is the speed the tug is traveling. For example, when below 5 knots, the indirect is basically just the weight of the boat nothing more. Blair shared another example of 10,000 horsepower tugs that could not do an indirect pull when a tug that is barely 6,250 horsepower could have a 200-ton indirect pull because of the design of the tug. Pilots and operators profile these things.

Jaimie inquired about the ease of finding indirect bollard pull numbers. Both pilots agreed that it should be easy, but it is not. Blair said it can be determined in practice, like during drills. But because there are a number of factors that go in to determining indirect bollard pull, they are not all specified out. Jaimie clarified with the pilots that the existing group of identified escort tugs would be capable of providing adequate escort service to the smaller vessels.

Blair explained that during the pre-escort communication, the bollard pull and the escort plan are discussed and agreed upon. Sara if the pilots were saying that independent of what

is required in regulations for tug escort capabilities, Puget Sound Pilots may have their own measures and criteria in mind for safety and operations that are overlaid on top of the regulations per individual pilot expertise and safety standards. Blair confirmed yes. He also shared that exercises with larger tankers confirm which tugs can save ships at appropriate distances. And in some cases, it was a marginal which indicated that the ship should be slowed down in certain waters. He acknowledged that the pilots don't have regulatory authority within the boundaries of the relations with industry and non-regulatory guidance, like the Harbor Safety Plan, but they try to make sure there is success within the influence they do have. Sara asked for the pilots to let everyone know if they see something in the resources or future recommendations that could interfere with a current practice that is successful.

Keith recommended a minimum horsepower of 2,000 because some of the boats that he's seen adequately doing the escorting, in his opinion, and are between 2,000-2,600 horsepower for the smaller vessels. Brian Kirk (Alternate/Ecology) reminded everyone that the current regulations for tug escorts specify that the tugs have an aggregate shaft horsepower equivalent to at least five percent of the deadweight tons of the escorted oil tanker.

9. Equipment ideas

Sara clarified that "equipment" referred to what was involved in the activity of escorting. The slide contained several ideas from various sources.

Keith confirmed that it was standard for all tugs to carry radio equipment and at least a 300-ft tow line. Regarding render recovery systems, he added that it was a system that was set up to work in heavy weather. When the Foss tugs were built, that system was not available and that it would be extremely expensive to try to outfit a tug with that system if it wasn't already built in. Rein Attemann (Environment Alternate/WEC) inquired if there was an estimate of how many tugs have this system in the fleet. Keith answered that he could think of 6 or 7. Blair added that there were different levels of that system as well. For instance, one of the Crowley tugs has the highest level, of which there are very few in the world. The other tugs have a limited level of render recover that does the same thing but not to the same degree. There were nuances that would need to be specified. Blair asked Keith if, considering local waters and weather, if he thought that system would be necessary. He responded that he didn't think it was necessary, just a great convenience. Jaimie asked if the pilots ever requested those particular tugs because of those capabilities. Keith replied no. Blair explained that with high-level render recovery, the tug could adjust the length of the line under full load. The tug could be pulling as hard as it could and have the ability to heave the line in and out. In the lower-level systems, the operator might have to reduce the load to some degree to change the line length. Most of the operators anticipate how much line they will need and will already have that set up for the waterway they are in. Keith added that the lower-level systems were limited to 25 tons of pull.

Keith mentioned that in California, tugs are required to do a bollard pull test every five years and that we don't have that requirement here. There's a test if the tugs are new or if there have been major refits in the shipyard. He thought that they should be tested every five years and that it's something to consider. Sara mentioned a volunteer retesting that is currently in the Puget Sound Harbor Safety Plan.

10. Ancillary Equipment ideas

Sara explained that this slide was another "nice-to-have" list that may not be used for active escorting, such has firefighting equipment or containment booms.

Keith responded that all boats have the standard hoses and such, and some have additional equipment. Sara referred to the requirements outlined in the slide. Blair responded that Puget Sound currently has tugs that meet those requirements and some that don't. Jim Peschel expressed concerns that adding 3 different types of boats into one is more like turning a tug into an offshore supply vessel. The GARTH and LINDSAY were FIFI 1 firefighting vessels that have that capability, but those are way more vessel than is needed to escort a small barge. Jim reiterated that you would not be pulling a vessel to safety and fighting a fire with the same equipment at the same time. Blair added that some of the characteristics on the slides would make more sense on a vessel serving in a salvage or sentinel capacity.

11. Bollard Pull Ideas

Sara reviewed information on the slide including what was currently in use and requirements for other locations. Retesting the bollard pull is not a requirement but listed as a best practice in the Harbor Safety Plan Standard of Care.

Blair explained that the Standard of Care was developed with the pilots and industry hosted by the Marine Exchange. The carefully thought-out process took a couple of years to complete. Sara mentioned that the challenge was not knowing the number of participants, since it was best practice and not regulation. Industry participated with the understanding that their numbers were proprietary.

Bollard pull discussion continued with Blair explaining that the static bollard pull when pulling on a fixed point wasn't necessarily an indicator of a successful escort or save. However, the indirect bollard pull wasn't necessarily quantifiable. He added that, in his opinion, horsepower was a reasonable starting point, then perhaps specs of tug design. Jaimie verified with Blair that the bollard pull numbers pulled from the specs of the tugs and reported in the BPC Annual Report were static bollard pull numbers. Blair added that tug design details make a big difference as to whether a tug is an effective escort.

12. Screw/Drive Ideas

Sara reported that according to the BPC Annual Report, local escort providers have voith, Z-drive, or ASD propulsion. She then reviewed the various studies and reports on the slide.

Blair replied that he believed there was a connection between the size of the tank vessel and tug requirements. For the towed barges and smaller ATB's, a twin-screw tug could be effective. But once the vessel gets up to a certain size and from what the pilots have seen in simulations and live drills, a tractor or Z-drive is preferable. Towed barges, for example, are slow moving and tend to stop themselves. Sara acknowledged that Blair's comments were a good reminder that we are not considering vessels over 40,000 DWT in this rulemaking.

13. Certification ideas

Sara mentioned that there were some other avenues to incorporate certification other than specifying capabilities. She read through the suggestions on the slide and asked for input, particularly from operators who already had some of the certifications. There were no suggestions.

14. Tethering Considerations

The presentation moved from capabilities to some considerations regarding operation. Sara put together some general suggestions to consider regarding tethering, adding that some of the smaller vessels considered in the rulemaking were not designed to have tethered escort tugs.

Keith mentioned the escort simulator exercise conducted in 2020, which showed that on towed barges and ATBs, tethering was not necessary, with the exception of certain instances in Guemes Channel and Saddlebags. Blair added that for the most part, the pilots were able to get out of any situation without being tethered. A high-level summary report was published as a result of the simulator exercise. However, the details and outcomes of the exercise are proprietary and the organization that funded it decided not to release it publicly. He added that what they did find was that on ships, there was no substitute to being tethered. The two main components of saving a tank vessel are response time and speed. The pilots can control speed and the biggest factor on response time is whether the vessel is tethered or not. And it's all predicated on how close the vessel is to land. Currently, with the ATBs, the pilots tether in Guemes Channel, Saddlebags, and up around Vendovi Island. But once they are in Rosario Strait, they release the tether because they know the vessel is slow enough and stops itself quick enough allowing time to retether or reconfigure. Sara confirmed with Blair that the simulator exercise used local weather conditions and waterways. Keith and a tug captain from Foss participated, so there was good experience as a part of the simulation.

Keith also mentioned that tethering was dependent on the gear being used. 280-ton bits were good, but he's had experiences where, from time to time, a tanker will only have 100 ton bits. When that happens, the pilots require a second tug. He added that the tonnage of the bit is rated at the top, not at the bottom. So, it was likely it will double when it got to the bottom. Older vessels that have been retrofitted into doing this kind of work sometimes don't have the necessary gear. Sara asked if that insight was written into the Puget Sound

Pilots guidelines. He replied that it was just personal experience. Blair added that some of it was in the guidelines, but most of it was experience as Keith mentioned. There is a guideline in the Puget Sound Harbor Safety Plan that if a vessel does not have over a certain size escort bollard, then a second tug is required. That way one tug can pull up to the limit of the ship's gear and the other can push to spread the load. Two tugs are also required if one does not meet the 5% threshold has required in statute. He did say that he would rather have a line on 60 ton bit and have the tug operator be careful than not have a line at all.

In response to the slide consideration of tethered tugs being delayed helping in other situations, he acknowledged that that is a huge decision to make. What situations would warrant releasing the tug. Suggestions like threats to life, that would be a good reason to do it. But he added that scenarios where the tug might be needed are not reasons to not tether a tug.

The next consideration on the slide was passing the line, which is a dangerous operation yes, but with proper job training and execution, it can be done safely. Tethering delays are common in bad weather.

Blair agreed that the there is risk to the vessel while operating in tether mode, but that is part of the job. If the escorted vessel goes too fast, yes it can be dangerous. But continued communication can reduce the risk. He added that escorting is not easy, but the goal is to protect the environment.

Sara confirmed with Blair that vessel type is a big factor on determining the requirements for tethering.

Jim Peschel added that there are vessels that have what's called a transom link, which is like a big carabiner that offers a quicker hook-up versus just passing the line. Blair responded that it is a great system and allows the crew to not have to be involved in the tethering. He said he could only think of two companies that have it currently.

15. Other ideas?

Keith suggested requiring a minimal manned crewing**.** He believed some of the jobs with the smaller vessels would be ran with day boats and sometimes only 2-3 people.

Blair suggested a drilling requirement with a periodic full hook up and tanker in tow, or some level of requirement to prove safe hookup in a live situation. Prince William Sound has a simulation requirement. Keith added that pilots attend an escort simulation at MITAGS as a part of continuing education. Foss and Crowley have some of their junior captains attend to train.

Keith wondered about requiring minimum specs of the vessels, such as type of line, or line breaks. Crowley and Foss use spectral lines, which are very good but expensive. Sara

mentioned that California has some regulations regarding tow lines. Rein asked in the chat if towlines have lifespans like climbing ropes. Keith answered yes. Foss and Crowley keep a log of every time the line goes up and how many hours it's in use. And also, how many times they use the 100 ft pennant at the head of the line. At least once every six months, the pennant is cut off and new one put on. That greatly extends the life of the line.

16. Next Workshop: Ideas for Escort Options

The next workshop will focus on ideas for escort options. Leave Rosario as is? Or modify it? What about the other areas or zones? There is nothing pre-determined.

In December there will be a listening session with JD Ross Leahy from Ecology to discuss the Risk Model Analysis report, which will be released September 1, 2023. This will close out the year and workshops will resume in January to begin working on application of risk model analysis results.

17. Wrap Up

Sara thanked participants for the helpful information shared in the meeting.

Laird Hail (Advisor/USCG) reminded everyone that any application of rules in Boundary Pass and Haro Strait would need coordination with Transport Canadian and the Canadian Coast Guard.

The meeting was adjourned.