A Program of Maritime Blue

Quiet Sound Leadership Committee Meeting Summary

April 28, 2026

Meeting notes v. 5.4.2026

Action Items & Decisions

Action Items	Who	Status
Quiet Sound and SMRU to explore the level of effort required for comparing the acoustic benefit of prior slowdowns to 2019.	Sara	(Done). Comparing past slowdown seasons to 2019 is not feasible because it would entail comparing estimated values (2019) to empirical data (2022-2025). Quiet Sound and SMRU are considering including an analysis and visualization of vessel speeds each year compared to 2019, from which inferences about noise reduction can be drawn.
Quiet Sound to look into vessel class-specific explanations for the participation drop off at the end of the slowdown.	Sara	
Quiet Sound to crosswalk candidate thermal camera locations against the Leadership Committee's criteria and develop a ranked list.	Gonzalo	
Quiet Sound to complete an analysis of the first year of thermal camera data in May.	Gonzalo	

Quiet Sound to review the desktop study's findings regarding Area B.	Sara	(Done). While vessel types that encompass the 10 and 11-knot groups (bulkers, tankers, general cargo, and tugs) are more present in Area B, there is still significant presence of cruise vessels particularly in the months where SRKW are present.
Quiet Sound to develop a decision guide for the 2026-27 slowdown parameters ahead of the July meeting.	Sara	
Tara to share the link to the U.S. Navy's Northwest Training and Testing area EIS comments.	Tara	(Done). https://www.nepa.navy.mil/Current-Projects/At-Sea-Ranges/Northwest-Training-and-Testing-Supplemental-EIS-OEIS/Project-Materials/
Once the tug Standard of Care is adopted, initiate a conversation with Canadian counterparts to explore applying a similar standard to towing operations in Canadian waters.	Sara/ Rachel	

Meeting Notes

Welcome/Introductions

Rachel provided a land and water acknowledgement. Marla Holt (NOAA Fisheries) provided the orca moment on K pod that was sighted recently off the coast of Fort Bragg in California with the new calf. Rachel provided an overview of the agenda. The group welcomed Candice Emmons and Marla Holt to the Leadership Committee as NOAA representatives.

Admiralty Inlet Slowdown

Sara reminded everyone of the upcoming special/optional June 22 Leadership Committee meeting where SMRU will present final results. 2026-27 slowdown parameters will be finalized at the regular July meeting. Sara shared SRKW presence during the 2025-26 slowdown, reminding the group that this season's data is based on visual sightings from Orca Network and other detections in WRAS where ecotype was noted, as we did not deploy a hydrophone. As context for what we may be missing in this year's data, last season there were three whale days where there were acoustic detections but no visual sightings. This year, SRKW were still present in the area on the final day of the slowdown.

Sara provided an overview of the noise reduction estimation approach, explaining that we will be comparing noise reduction of the slowdown to a baseline period within the same year, in addition to a pre-Quiet Sound period in 2019. Analyses of pre-slowdown and post-slowdown transits

validated the use of the 4-week post-slowdown period as the within-year baseline period and also confirmed that vessel speed after the slowdown was comparable to before the slowdown. The estimation tool infers noise reduction during the slowdown based on Quiet Sound's past hydrophone data. SMRU is looking into incorporating ECHO data from the Lime Kiln hydrophone to fill data gaps and improve the tool, if differences in the hydrophone depths can be accounted for. The ECHO and Quiet Sound acoustic datasets share over 280 unique vessels.

The estimation tool is not yet giving us the same results as the measured hydrophone results when we run it on empirical data from past slowdown seasons. This could be due to the differences in the soundscape during each year of the slowdown or differing patterns of vessel presence around the hydrophone. The tool might work best when vessel intensity is similar in the sampling pool and the test dataset. SMRU plans to explore this further, with results in June.

Quiet Sound provided participation reports to 13 fleets which account for about 33% of the unique vessels and about 40% of transits. Regular communications during the slowdown with operations managers is helping raise participation amongst those fleets. Quiet Sound debriefed the slowdown with Puget Sound Pilots and PMSA, and some vessel operations managers. Pilots find value in the bi-weekly validated AIS data. Industry participants expressed a preference for receiving results closer to real-time, and shared feedback about extending the slowdown period when whales are still present. The mid-season dip in participation was likely due to weather, whereas the reason for participation drop-off at the end of the slowdown is unknown. Quiet Sound nominated Carnival Corporation for a Port of Seattle Sustainable Century Award as a cruise sector leading participant (and they won).

Quiet Sound facilitated a discussion around information the Leadership Committee would need to decide if we should extend the slowdown end in January 2027- either as a dynamic extension (if SRKW are present) or a static extension (fixed date). Quiet Sound suggested gathering the following data: SRKW presence trends in January, further input from industry regarding feasibility, and offering a sample protocol for implementation (monitoring presence and communication) packaged in a decision guide.

Comments/Questions:

- Comment: LC members emphasized the importance of communicating any change in parameters in advance of the slowdown, as well as ensuring clear protocols for communicating an extension while the slowdown is in place.
- Comment: Suggestion to look to ECHO for lessons learned and leverage research done on realistic protocols.
- Comment: A dynamic end or longer end might impact participation.
- Comment: Importance of staying within existing organizational capacity.
- Q: Can Quiet Sound and SMRU summarize the noise reduction difference from 2019 for every year of the slowdown?
    - A: We were planning to analyze 2019 vs 2025-26, but QS and SMRU can explore what level of effort it takes to analyze 2019 vs 22-23, 23-24, and 24-25.
- Q: Can we look further into why participation rates dropped at the end?
    - A: Yes, we can disaggregate by vessel type and explore sector-specific explanations.

Next Steps for other SRKW-vessel hot spots

Sara reminded the Leadership Committee of the findings from the 2025 Quiet Sound Vessel Traffic Comparison Study, aka "Desktop study", which focused on identifying areas of likely whale-vessel

interaction in the east end of the Strait of Juan de Fuca. The study narrowed down three locations: Area A - Rosario Strait, Area B - Southern Haro to Admiralty and Area C - Port Angeles to Admiralty. Port Angeles to Admiralty was deprioritized due to less interaction potential. ECHO has also proposed the Pt. Roberts waters as a high orca use area. Sara led the group through a discussion around potential interventions to reduce impact of vessels on SRKW, possibly through increased whale detection via thermal cameras or voluntary slowdowns depending on the target vessel type.

Comments/Questions:

- Comment: Tugs repositioning can take Rosario Strait or the "back channel" from Anacortes. Which route they take can be informed by SRKW presence to better avoid interaction.
- Q: Is the report takeaway for the vessels in Area B different from how it's described here in these slides? Clarity is needed on the vessel traffic make-up of Area B.
    - A: Quiet Sound can revisit the traffic analysis more closely to better explain why only cruise was highlighted for Area B.
- Comment: Reminder that our investment in a tug Standard of Care is an alternative approach for managing tug traffic in some of these areas.
- Decision: Quiet Sound will keep exploring data and potential recommendations for Rosario, Salmon Bank and Pt Roberts as the LC agrees that considerations of these recommendations is core to their purpose.

Thermal camera: Discussion on potential next locations

The first year of the thermal camera (affectionately called Whal-e) has been a success! It has operated smoothly with only minor downtime due to the power outages at the tower. Gonzalo noted that we are likely to add 1-2 systems next year. There are many candidate sites, including the other USCG VTS towers. WhaleSpotter is working on a software module that would estimate pod directionality. Gonzalo led the group through a discussion regarding criteria for selecting a location for a second thermal camera.

- Comment: Whale presence, foraging areas (and other typical behavior in that area). Foraging areas tend to have sustained presence vs passing through. The Possession Triangle is a known foraging area especially in the fall.
- Comment: Vessel traffic, Ship-whale overlap
- Comment: Feasibility, cost, location, height above water, access to property
- Comment: Remoteness, otherwise hard to detect (gap in visual observers or hydrophones). Ability to pair with hydrophone to detect SRKW entry and exist.
- Comment: Proximity to the users of nighttime detections (e.g. state ferries or fast ferries) would be an initial benefit.

Selection criteria that were generated at the March ORCAs meeting were ranked by Leadership Committee members as follows:

1. Coverage of SRKW routes
2. Vessel traffic overlap
3. Geographic detection gaps
4. Detection range
5. Foraging areas
6. Reliable power supply

7. Existing structure available (Note: Several LC members assumed this factor would be a given, as otherwise it would be cost prohibitive).
8. Strong cellular signal
9. Hydrophone pairing
10. Clear land ownership

Quiet Sound will use this ranking to weight criteria to compare potential locations for the camera.

Long-term hydrophone capabilities

Gonzalo provided an update on the design and permitting of the long-term hydrophone at Point No Point. The goal of the system is to measure underwater noise impact of slowdown, detect whales, and opportunistically measure vessel noise.

Leila Hatch's questions prompted Quiet Sound to explore ISO compliance requirements. We have learned that the hydrophone will not be able to provide ISO-compliant measurements, but it will be able to do opportunistic measurements with a calibrated system. Measurements cannot be used for classification but still have relevance for other programs, could provide 'report cards' and measure how it changes over time (i.e. retrofits). Lime Kiln also does not meet the ISO standard (or ANSI) but still has enormous benefit in measuring ambient noise, impact of slowdown, and whale detections.

Questions and Comments:

- Q: Is anywhere in Puget Sound deep enough to meet the ISO depth requirement for underwater noise (50 m) or is the barrier cable cost and site choice?
    - A: New ISO standard for shallow water requires greater than 50 m depth and controlled passes. It would be much more expensive to build a hydrophone at that depth because it could not be installed by divers.
- Comment: ECHO's fully ISO compliant station is Boundary Pass.
- Comment: ECHO has found that many companies do not use their report cards, or are unsure about how to act on the information in them. Technical and commercial pathways from 'measurement' to 'retrofit' are still immature.
- Comment: Report cards could be paired with the URN/EE technologies sheet that ABS and Maritime Blue developed.

IMO Workshop on Energy Efficiency and Underwater Radiated Noise report back

Sara shared key takeaways from the IMO workshop on Energy Efficiency and Underwater Radiated Noise and noted collaboration with Leila Hatch on the content. Case studies highlighted included vessel owners who were optimizing for URN and efficiency (BC Ferries) as opposed to those who were optimizing for efficiency but also saw URN benefits (Crowley). Both modern and conventional propeller and hull forms can achieve reductions in URN but require engagement at the design stage. Challenges inherent in building and retaining technical expertise in ship design can be addressed through multi-vessel projects and intentional collation of lessons learned. Measuring underwater noise needs to be realistic and feasible. Vessel owners and operators can increasingly

tap into incentive programs, especially as the ESI underwater noise module comes online. The IMO is considering extending the Experience Building Phase through 2028.

Budget update

Rachel provided a budget update and led the Leadership Committee through a prioritization exercise.

LC member updates

- GSRO shared an update on the U.S. Navy's Northwest Training and Testing area, and highlighted how they funded research that led to the thermal cameras.
- GSRO: Noted that it will likely be a tough budget session next year: WA's bond rating is at risk and lawmakers have only themselves to blame | The Seattle Times
- NWSA: Still developing vessel recognition program, hoping for stakeholder engagement this summer.
- PSP: Looking to establish a voluntary Standard of Care for tugs through Puget Sound Harbor Safety Committee, with supporting work from Quiet Sound to gather industry input, facilitate a SOC meeting, and incorporate edits to create a final draft.

Attendees:

1. Rachel Aronson, Washington Maritime Blue
2. Sara Adams, Washington Maritime Blue
3. Gonzalo Banda-Cruz, Washington Maritime Blue
4. Adrienne Stutes, Washington State Ferries
5. Kathleen Hurley, Port of Seattle
6. Nika Hoffman, Makah Tribe
7. Natalie Lowell, Makah Tribe
8. Miguela Marzolf, Seattle Aquarium
9. Mike Moore, Pacific Merchant Shipping Association
10. Melanie Knight, Enhancing Cetacean Habitat and Observation Program
11. Tara Galuska, Governor's Salmon Recovery Office
12. Meghan Reckmeyer, Northwest Seaport Alliance
13. Marla Holt, NOAA Fisheries
14. Maddie Matei, SMRU Consulting
15. Todd Hass, Puget Sound Partnership
16. Cassidy Fisher, Maritime Blue