



Quiet Sound Leadership Committee Meeting Summary

January 23, 2024

Meeting notes v. 2/1/2024

Action Items & Decisions

Action Items	Who	Status
Quiet Sound to reach out to Ocean Wise for an update on their WRAS efficacy study. LC members to communicate policy and budget priorities that would benefit Quiet Sound to PSP by emailing Ahren Stroming (ahren.stroming@psp.wa.gov). In March, join FY 25 sign-on letters. Consider joining Puget Sound Partnership in DC May 14-17.	Caitlin O'Morchoe Leadership Committee	

Decisions
None

Acronyms

Acronyms: *ECHO* - Enhancing Cetacean Habitat and Observation, *LC* - Leadership Committee, *NFWF* - National Fish and Wildlife Foundation, *NWIFC* - Northwest Indian Fisheries Commission, *PPU* - Portable Pilot Unit, *PSDOTH* - Puget Sound Day on the Hill, *QS* - Quiet Sound, *SRKW* - Southern Resident Killer Whale, *VTS* - Vessel Traffic Service, *WG* - Work Group, *WRAS* - WhaleReport Alert System

Meeting Notes

Welcome/Introductions

- Land and water acknowledgement
- Orca Moment: J60, male calf, first calf of J40. Also, NOAA Fisheries provided its report to Congress and featured Quiet Sound (p.71 of the report at [this link](#))
- Agenda overview and expectations

QUIET SOUND

Project Updates

Caitlin O'Morchoe led updates on the major Quiet Sound projects currently underway.

- **Admiralty Inlet 2023-2024 Slowdown**
 - **Dates:** 0000 October 13, 2023-2359 January 12, 2024. The start date was triggered by SRKW presence (aka a "dynamic start") and the end date was determined by the hydrophone retrieval date and the need to collect baseline data. The total slowdown period was 14 weeks.
 - **Preliminary participation data:** For pilot-reported data, 71% of transits participated (562 out of 795). That's up from 70% from last year (469 out of 670). For AIS-calculated data, 59% of transits participated (484 out of 823). That's up from 53% last year (351 out of 662). This was the first time that the slowdown overlapped with cruise season. Cruises participated at a rate of 85% (AIS-calculated, 32 total cruise transits).
 - **Highlights:** This season was 14 weeks due to a dynamic start (last year 11.5). Initial feedback from participants is that the dynamic start was well-communicated. SRKW were present in the slowdown area 5 days in October, 6 days in November, and 9 days in December (presence data is incomplete, and will be updated when January data and hydrophone detections are added). J Pod stayed in the slowdown area for about a week after the birth of J60. In December, mariners received 585% more whale alerts in real-time relative to 2022-23, due to the connection of Orca Network to Acartia and WRAS.
 - **Next Steps:** Hydrophone will be collected by February 15th from Useless Bay. Quiet Sound will hold debrief conversations to improve for next year. Quiet Sound will be providing participants and advisors with Certificates of Participation or Support. Quiet Sound will engage the Leadership Committee and Work Group members in the 2023-2024 slowdown evaluation and in preparing for next season. Quiet Sound is waiting to hear from NFWF regarding the funding for researching a second slowdown via a desktop study of vessel traffic and orca presence.
 - **Questions and Comments:** Kudos to the Quiet Sound team and all participants!
- **Whale Report Alert System (WRAS):** Owned and operated by Canadian organization called Ocean Wise. It receives whale location information from different sources and sends out location-specific information to approved mariners who are in a specific vicinity of that whale. This helps mariners lessen their impact on cetaceans in the water. Quiet Sound has been working to integrate Washington-based sightings into WRAS.
 - **API connection between Orca Network, Acartia and WRAS is operational.** 80% of November sightings sent to WRAS from WA were from Orca

QUIET SOUND

Network/Acartia. 382 sightings from WA state led to 869 alerts in December 2023, which represents a 585% increase from December 2022. Quiet Sound's contract with Orca Network ends in March. Quiet Sound staff are very happy with the outcomes of this contract

- **Next:** Celebrate connection of Orca Network/Acartia to WRAS. Quiet Sound will meet with Ocean Wise, Orca Network, Acartia in March to discuss the data usage agreement that supports this technical connection, and consider if it needs tweaks for next season.
- **Next:** A subgroup of Puget Sound Pilots and BC Coast Pilots are receiving WRAS alerts on their Portable Pilot Units (PPUs), thanks to development work by Navsim. This trial began in December 2023.
- **Questions and Comments:**
 - Will continuing this Orca Network connection require ongoing funding? A: Yes. The funding to Orca Network is for increased staff capacity to enter sightings in real time. Note that the slowdown period covers three holidays, and paying their staff to cover this time for all daylight hours is part of the expense. The API itself will not require ongoing funding, but new funding may be needed to support additional development work by Acartia or Ocean Wise.
 - Are pilots using the PPU alerts to make real-time changes to their transits? A: That's the motivator for this trial. Ocean Wise is conducting an efficacy study that attempts to look at how vessels respond to an alert from WRAS. Quiet Sound can reach out to Ocean Wise for an update.
 - LC members shared that some mariners may prefer to see alerts on the ship's Electronic Chart Display and Information System (ECDIS). A: PPU's are a fast and feasible way to give pilots another option for viewing whale alerts. ECDIS whale alerts are a great, additional long-term goal.
 - Why are there so many more alerts than sightings? A: One sighting can produce multiple alerts if there is more than one mariner in range.
- **Hydrophone Feasibility Study:**
 - **Goal of the study** is to understand the feasibility of bringing real-time acoustic SRKW detections via existing WA hydrophones into WRAS to increase awareness when sightings are not possible.
 - **Nov-Jan work:** Quiet Sound confirmed the scope of work with Ocean Wise, which is to document JASCO Boundary Pass hydrophone integration process and document API information. Quiet Sound met with Ocean Wise, Jasco Applied Sciences and ECHO. Quiet Sound met with the Raincoast Conservation Foundation NoiseTracker project (online platform with location of active hydrophones that produces soundscape data that anyone can look at in that surrounding area. Their goals do not include real-time marine

QUIET SOUND

mammal detection). Quiet Sound met with a real-time acoustic detection AI algorithm developer. Quiet Sound drafted interview questions and a list of interviewees.

- **Next:** From February to April, Quiet Sound will gather information from hydrophone operators regarding what kind of hydrophones are currently in the Sound, who owns them, and what their capabilities are. From May to July, Quiet Sound will plan for a potential stakeholder workshop to determine needs for current hydrophones to send detections to WRAS. This will include Ocean Wise, JASCO, hydrophone owners (including Orcasound), and the work groups. We might hold a workshop in the spring, depending on what's needed to connect hydrophones to WRAS. The final report is due at the end of September.
- **Questions and Comments:**
 - Would fast ferries be in the scope of this conversation? A: This study is scoped to map the hurdles to connecting existing, stationary WA hydrophones to WRAS. It is not scoped to explore potential locations for new hydrophones nor ship-mounted hydrophones, but the Port of Seattle-led hydrophone study could potentially incorporate fast ferry locations.

Stakeholder Meetings/Engagement in 2024

Rachel shared an overview of project milestones, large meetings, and targeted meetings for 2024.

	Q1 (Jan, Feb, March)	Q2 (Apr, May, June)	Q3 (July, Aug, Sep)	Q4 (Oct, Nov, Dec)
Admiralty Inlet Slowdown		Late May: Share 23-24 results, gather feedback. June: Feedback on 24-25 season		Oct: Slowdown start
Second Slowdown		June: Find out about \$		Oct: Finish contracting Nov: WG meeting 1
WRAS	Jan: Meet with NavSim, BCCP/PSP, OW re: WRAS and PPU's. Mar: Meet with ON, OW, Acartia re: data usage agreement, API, next steps.		Sep: Meet with ON re: orca tracking	
Hydrophone Feasibility	Jan-March: Meet with hydrophone owners 1:1		July: Stakeholder workshop	Sep: Final Report
Other	Jan: LC meeting Feb: Strat Planning Pt 1	April: LC meeting TBD: Strat Plan Pt 2	July: LC meeting	Oct: NGO briefing, Dec: LC mtg, Exec briefing

Blue = project milestone
Green = large meeting
Yellow = targeted meeting



Puget Sound Day on the Hill

Ahren Stroming, Puget Sound Partnership, provided an update on the Puget Sound Day on the Hill (PSDOTH), May 14-17th, 2024.

- PSDOTH is the focal point of Puget Sound Partnership's (PSP) federal engagement work. In partnership with NWIFC, PSP organizes a coalition trip to DC to meet with legislators. The priorities are broad, but informed by the Puget Sound Action Agenda and the recovery community. About 60 people go, and PSP organizes subgroups meetings with each legislator and agency. The group meets with every WA legislator and the relevant federal agencies.
- No requests from 2023 were funded because Congress has not passed a budget.
- Disparities in support exist across whale populations: NOAA was funded \$82 million under the Inflation Reduction Act for North Atlantic Whale Recovery. .
- Congressionally Directed Spending for Quiet Sound- Partnership would like to support it through PSDOTH. Senate bill for FY2024 includes \$300k for Quiet Sound.
- Requests:
 - Now: Let PSP know what your policy priorities are that would benefit Quiet Sound by emailing Ahren (ahren.stroming@psp.wa.gov). Identify budget priorities (e.g. Port grants program through NOAA ("Assistance to ports to reduce impacts on marine mammals"), Puget Sound Cetacean Desk, Quiet Sound, NDAA Sec 11302).
 - March: Join sign-on letters for FY 25
 - May: Join PSP in DC (May 14-17)
- **Questions and Comments:**
 - Does this overlap with state legislative priorities? Don Gourlie at PSP leads the [state-level priorities](#), and hosts a weekly coordinating call during the state legislative session. Members of the QS LC might be interested in how the PSP state priorities overlap with Maritime Day.

Monitoring noise to guide Southern Resident killer whale recovery

Rob Williams and Erin Ashe (Oceans Initiative) provided an update on their research, to which Quiet Sound contributed a small amount of funding in 2022-23.

- Historical perspective: It was originally quite controversial to include noise as a hurdle to SRKW recovery under SARA. The original BC hydrophones were uncalibrated so it wasn't possible to make standardized noise measurements. Over time, scientists deployed calibrated hydrophones, and in 2008-2010 Oceans Initiative developed the first estimates of how much acoustic space SRKWs are losing due to vessel noise.
- Ocean noise from anthropogenic sources poses a threat to the health of Puget Sound, not just mammals. For example, vessel noise elicits a predator response in fish.

QUIET SOUND

- Oceans Initiative approached Puget Sound Partnership to develop a lower-cost, heat-map style mapping of anthropogenic noise. This included:
 - Measuring noise in select areas (quiet, moderate, noisy) in Puget Sound.
 - Calibrating the Orcasound hydrophone network to allow those recordings to be used over time to monitor noise levels.
 - Training community scientists to collect 'spot' recordings to get greater spatial coverage. (Lessons learned: training must be thorough to ensure data is of high enough quality.)
 - Deploying 5 long-term recorders and collecting several spot recordings. Avoided existing hydrophones to complement ongoing efforts.
- **Findings:**
 - Vessel slowdowns work. Hydrophones show the decrease in noise levels. SRKW behavior also shows a positive response to slowdowns (more likely to feed).
 - Noise mitigation will deliver greatest good in key foraging areas (Ashe et al 2010) (see image below). Size of the pie chart shows the number of data OI had to work with. Put mitigation measures in areas where SRKW are doing the most feeding.



- Even if the threats don't get worse, we could see an extinction vortex in one generation (28 years) if we don't see net ecological gain in the reduction of toxins and noise and increase in prey.
 - As you have fewer individuals, it becomes harder to draw statistical conclusions about which management action is most powerful.
- **Questions and Comments:**
 - WA ports are not seeing an increase in oceangoing inbound traffic. PMSA is available to share transit data. OI: True. Canada is seeing an increase due to Roberts Bank T2 and Trans-mountain Expansion Project (TMEP).

QUIET SOUND

- How do you know "how much noise is too much?" ECHO: Just started up a regional noise targets task group to explore that. OI: One thing we can do collectively is remind people that as the population gets smaller, we may have to make decisions knowing that there is uncertainty and use the precautionary principle. It could be beneficial to watch whale behavior in addition to hydrophones, and confirm that the whales are responding in the way the data suggests.
- Does the DNV vessel certification for quiet vessels link back to this work? ECHO: Krista Trounce at ECHO has been working with the classification societies on quiet notation, but it doesn't tie to SRKW yet.
- What are the biggest data gaps?
 - Systematic surveys of whale presence, not just opportunistic sightings.
 - Focal follow behavioral data and how that relates to noise levels.
 - Early warning systems based on whale health before the population goes up or down.
- Webinar on February 6: Puget Sound Institute is holding a [Salish Sea Science Roundtable: Cumulative Effects on Southern Resident Killer Whale and Contaminants of Emerging Concern](#).

Pilot Infrared Camera Network

Patrick Gallagher (Marine Exchange) provided an update on the Marine Exchange's proposal to develop a detection and monitoring system with state funding.

- Proposing a shore-based thermal camera (infrared) that detects a cetacean and sends a detection to Marine Exchange members through AIS. It would be automated and real-time. Uses thermal imaging that was developed by Woods Hole Oceanographic Institute. Each shore-based camera costs \$75,000 + costs for maintenance and development. The camera can see up to 7 miles. ME would overlay it with AIS data, send alerts via SMS or email.
- Marine Exchange would need a special USCG license (and approval by FCC) to transmit via their AIS tower.
- Asking for a \$350,000 two-year pilot program through the state as a proof-of-concept.
- **Questions and Comments:**
 - What are the candidate locations? A: It would be good to fill a gap in WRAS in the Strait of Juan de Fuca.
 - WA Ferries would like to be considered as a location for an infrared camera.
 - Who is the legislative sponsor? A; Rep Lekanoff.
 - Recommend continuing to inform and involve the Leadership Committee.



Quiet Sound Strategic Planning

Kate Snider provided an update on the strategic planning process.

- **Context:** Quiet Sound is required to do a strategic plan by Puget Sound Partnership (draft due by June 30). Quiet Sound began operating just over two years ago. Our original operating procedures were approved in November 2021.
- **Timeline:** In December 2023, Quiet Sound staff, Joshua Berger and Kate Snider met to plan the process. A survey was distributed to the Leadership Committee in January.
 - There are two upcoming meetings that will be dedicated to strategic planning: Wednesday February 21 from 10am-1pm and another that is currently unscheduled. If you're not able to attend, we highly encourage the use of alternates. We will send a more detailed agenda soon.
 - April LC meeting will include dedicated strategic planning time
 - June 30: Draft Strategic Plan due to the Puget Sound Partnership
 - July LC meeting: Review draft strategic plan
 - October meeting: Goal completion date for the strategic plan
- **Deliverables:**
 - Strategic and operating plan to guide the next 3-5 years of work. The plan will define primary objectives for Quiet Sound, anticipated priorities and outcomes, and structure for accomplishing the work. The plan will support:
 - Staffing and resourcing projections
 - Budgeting and fundraising strategy/sources
 - Internal priority setting
 - External communications and collaborations
 - Desired update to LC membership (additions, transitions)
 - Work group expectations
 - We will reach back to the 2021 operating procedures and ensure we're comfortable with those objectives and purpose. We will discuss associated success indicators and metrics, and priority projects and outcomes.
- **Work Group expectations:**
 - The [2021 Operating Procedures](#) assumed much more active roles for the work groups than has occurred in the past two years. The 2021 plan assumed there would be 5 work groups, co-chaired by LC members that would meet quarterly for a half-day or full-day workshops. It was assumed that these work groups would create annual work plans, develop budgets, execute projects, manage consultants. Quiet Sound staff would be coordinating and compiling that work, but not executing.
 - Rather, what's happened over the past two years is that Quiet Sound staff are leading project management and implementation with great input from LC and select work groups. Some work groups have convened and met

QUIET SOUND

periodically; some have not. This is likely due to the limited availability and capacity of LC members outside of their core jobs.

- Strategic planning process will discuss, redefine and document updated expectations for the work groups, staff expectations for project execution. We want to define what is the optimum work group description to support priority projects and outcomes, which might be a framework of staff-led projects with input and advice by LC, and ability of key tasks and initiatives to be executed by partner organizations.
- Strategic planning is meant to inform the 2025-2026 budget and beyond, not the 2024-25 budget.
- **Survey results:** Summarized responses were included in the LC packet.
- **Questions and Comments:**
 - Can we convene Work Groups for involvement in 2024 projects (e.g. the monitoring whales and vessels WG in regards to hydrophone feasibility study). Yes, it's important to discuss priority projects for 2024 and work group involvement in those (while we sort out a work group re-definition)- see meeting schedule above.

Quiet Sound 2023-2024 Budget

Rachel Aronson provided an update on the 2023-2024 budget.

- Maritime Blue has hired a permanent CFO (Daniel Pulse, previously of Discovery Health and Pulse Group Consulting).
- **Takeaway:** Quiet Sound is still waiting to hear about NOAA grant applications. We are renewing our contracts with Port of Seattle, Port of Tacoma and NWSA for 2024 now.

Quiet Sound 2024-2025 Budget

Rachel Aronson provided an update on the 2023-2024 budget.

- **Process:** Currently in the draft budget period. In the past, we finalized the Quiet Sound budget in the April meeting, which then goes to the Maritime Blue Board for inclusion in the Maritime Blue budget, which usually passes in May for the end of our fiscal year in June.
- **Takeaway:** Revenue is likely to remain about the same. We anticipate less contribution from the foundation/philanthropic sector. Leading up to April, the LC will prioritize projects with current funds.

ECHO voluntary programs update

Jen McIntyre (ECHO) provided an update on ECHO's voluntary programs.

- ECHO's work ranges from understanding the relationship between vessel design and underwater noise to large-scale voluntary programs.

QUIET SOUND

- **2023 Voluntary Initiatives:** This was ECHO's 7th year of voluntary on-the-water initiatives:
 - **Haro Strait and Boundary Pass slowdown:** June 1 → November 30 (longest slowdown to date). Piloted-reported 87% participation rate (2,442 out of 2,800 transits). Waiting on analysis to understand the implications for sound intensity. The 2022 slowdown resulted in a 46-48% reduction in underwater sound intensity. ECHO did hear there was pilot fatigue because of the length of this slowdown. Starting this year, ECHO will start reporting the AIS-calculated vessel participation rates as well as the pilot reported vessel participation rates. .
 - **Swiftsure Bank slowdown:** June 1 → October 31. Saw an 86% participation rate (3,636 out of 4,214 transits). ECHO is looking at inbound and outbound participation rates (inbound has a higher participation rate likely due to better predictability in scheduling). 2023 results are being analyzed. In 2022, saw 40-51% reduction in underwater sound intensity.
 - **Strait of Juan de Fuca lateral displacement for tugs:** June 1 → October 31. Asks tugs to shift away from the enhanced management area. 95% participation rate (100 out of 105 transits). Results in a 70% reduction in sound intensity per tug.
- **Whale presence data:** Important to have detections from hydrophone and sightings. SRKW were present in at least 36 out of 182 days (20%) in Haro Strait and/or Boundary Pass. Beyond SRKW, there were many sightings of Bigg's killer whales and humpbacks throughout the slowdown season.
- **Slowdown co-benefits:** ECHO collaborated with Starcrest Consulting (they do the air emissions quantifications for Blue Whales Blue Skies program in California) and Point Blue Consulting (who works with NOAA on analysis of whale strike risk). [Report linked here.](#) ECHO's 2022 slowdowns resulted in a 48% reduction in underwater noise, 25% reduction in localized air emissions, and a 27% reduction in whale strike risk.
- **2024 Parameter discussions:** ECHO is currently discussing what 2024 and 2026 will look like. Considering: duration and start/end approach, geographic location, speed targets (can we go lower without compromising participation?), participation goal, acoustic reduction goal. Looking at how to get real-time alerts on the water, and whether there's a way to turn slowdowns on and off depending on whale presence, or is that too unpredictable for mariners.
- **Questions and comments:**
 - Will more messaging around co-benefits help keep motivation throughout the year? A: Yes, communicating the importance of reducing underwater noise not just for SRKW but for other parts of the underwater ecosystem.
 - Lots of PMSA members looking at co-benefits. Important to consider and disincentivize ships from speeding up in order to slow down (we know that 20% reduction in speed is a 40% reduction in fuel consumption). Also, when the TMEP is operational, those tugs will be going through the lateral

QUIET SOUND

displacement area. PMSA has been communicating to them the benefits of slowing down are reducing their noise profile, emissions, and increasing safety and increasing their presence in areas where people want to see tugs. A: The tugs will be able to participate in the lateral displacement on their return trip.

Leadership Committee Updates

- PMSA: Tracking elements of new ship builds that will quiet vessels (containers and non-containers).
- Maritime Blue: UnCruise entered Maritime Blue's Seattle Incubator, but then decided that they are not moving forwards to scale or commercialize their infrared/hydrophone whale detection system, which won the Quiet Sound/Navy challenge in 2022. But, another company in the Seattle Incubator, Lookout, might be interested in acquiring UnCruise's whale detection technology for vessels underway.

Attendees

- Rachel Aronson, Quiet Sound Program Director, Washington Maritime Blue
- Caitlin O'Morchoe, Quiet Sound Project Manager, Washington Maritime Blue
- Cassidy Fisher, Washington Maritime Blue
- Joshua Berger, Washington Maritime Blue
- Ahren Stroming, Special Assistant for Federal Affairs, Puget Sound Partnership
- Grace Ferrara, Natural Resource Management Specialist, NOAA
- Patrick Gallagher, Executive Director of the Marine Exchange of Puget Sound
- John Veentjer, Former Executive Director, Marine Exchange
- Mike Moore, Pacific Merchant Shipping Association (PMSA)
- Kate Snider, Principal and Founder of Floyd|Snider
- Nora Nickum, Senior Ocean Policy Manager at Seattle Aquarium
- Jennifer McIntyre, ECHO, Port of Vancouver
- Erin Ashe & Rob Williams, Oceans Initiative
- Kathleen Hurley, Senior Environmental Program Manager, Port of Seattle
- Laird Hail, Puget Sound Vessel Traffic Services Director, US Coast Guard