



Enhancing Cetacean Habitat and Observation (ECHO) Program: Creating quieter oceans for healthier whales

About the ECHO Program

The Enhancing Cetacean Habitat and Observation (ECHO) Program is an **internationally recognized, first-of-its-kind program** developed and managed by the Vancouver Fraser Port Authority.

Launched by the port authority in 2014, the program seeks to better understand and reduce the cumulative impacts of commercial shipping on at-risk whales, with particular focus on the endangered southern resident killer whales (SRKW).

As a catalyst for regional collaboration, the port authority-led ECHO Program brings together **over 100 Canadian and US partners and advisors** from across government, the marine transportation industry, Indigenous communities, and environmental groups to develop initiatives that quantifiably reduce the impacts of shipping on at-risk whales.

The ECHO Program currently implements seasonal underwater noise reduction initiatives across the transboundary waters of the Salish Sea, encouraging ships to slow down or stay distanced while transiting through key areas of SRKW habitat along British Columbia’s southern coast.

During the ECHO Program’s seasonal underwater noise reduction initiatives, underwater sound intensity has been reduced **by nearly 50%** in key SRKW foraging areas, demonstrating the effectiveness of slowdowns and lateral displacements at reducing acoustic disturbance.

In addition to leading seasonal underwater noise reduction efforts, the ECHO Program spearheads world-leading research and public education efforts.

Reducing underwater noise in at-risk whales’ habitat

Through the ECHO Program’s 2020 underwater noise reduction initiatives, underwater noise was measurably reduced in key southern resident killer whale foraging areas:

| Initiative | Participation rate | Average ambient noise reduction |
|--|--------------------|---------------------------------|
| Slowdown in Haro Strait & Boundary Pass | 91% | ~2.5dB |
| Lateral displacement in Strait of Juan de Fuca | 82% | ~5dB per tug displacement |
| Slowdown at Swiftsure Bank | 82% | ~2dB |

Key accomplishments

- Brings together **over 100 Canadian and US partners and advisors** from across government, the marine transportation industry, Indigenous communities, and environmental groups
- Leads seasonal underwater noise reduction initiatives in key SRKW foraging areas, reducing underwater sound intensity by **nearly 50%**
- Presented **world-leading research** to organizations across the globe, including the International Maritime Organization
- Helped make the Port of Vancouver one of the **first ports in the world** to offer incentives for quieter ships through the EcoAction incentive program
- Inspired the launch of a sister program in Washington state called the **Quiet Sound** program

Encouraging the adoption of noise-quieting technologies and quiet vessels

The world-leading science produced by the port authority-led ECHO Program and its partners is helping the port authority encourage quieter vessels to call the Port of Vancouver and beyond.

In 2017, the ECHO Program's research helped the port authority introduce incentives at the Port of Vancouver for ships with quiet certifications and underwater noise quieting technologies through its EcoAction incentive program, making Canada the first country in the world to offer incentives for quieter vessels.

Through the work completed by the ECHO Program, the port authority has also driven awareness of underwater noise reduction strategies by delivering presentations at various international forums, including to the International Maritime Organization, the United Nations-affiliated agency responsible for global shipping policy.

In partnership with Transport Canada and JASCO Applied Sciences, the ECHO Program management team is currently working with ship classification societies across the globe to align the measurement and analysis of underwater noise emissions in order for quiet ships to be more consistently certified and uniformly incentivized by ports.

Educating mariners on threat reduction

The port authority promotes the use of the **Whale Report Alert System** (WRAS), an app developed by Ocean Wise with support from the ECHO Program, which notifies mariners of the presence of whales so that they can slow down or alter course to reduce the risk of physical and acoustic disturbance to whales.

To further reduce the impacts of commercial shipping on at-risk whales, the port authority distributes educational tools and resources like the **Whales in our Waters tutorial**, an online tutorial developed by the ECHO Program and BC Ferries to educate mariners on how to identify local whale species and take appropriate threat reduction measures while navigating in their presence.

Looking ahead

The port authority is proud of the achievements advanced through the ECHO Program and is committed to maintaining the momentum towards creating quieter oceans for healthier whales.

With a focus on continuous improvement and adaptive management, the port-authority led ECHO Program management team will continue to collaborate with regional partners and advisors to develop and implement initiatives that reduce short-term threats to at-risk whales as a result of commercial shipping activities.

In accordance with the port authority's commitments under the *Conservation Agreement*, the ECHO Program continues to advance research and education efforts to drive change towards the adoption of quieter vessel design and technologies.

Species at Risk Act Conservation Agreement

In 2019, the Vancouver Fraser Port Authority formalized its commitment to support the recovery of the SRKW by entering into a five-year conservation agreement with the Government of Canada and eight other marine transportation industry organizations.

The Vancouver Fraser Port Authority's commitments under the agreement include:

- Providing an ongoing framework for engagement, trust building, collaboration, and information sharing
- Developing and implementing measures to reduce threats to SRKW from large commercial vessels and report on their efficacy
- Working with Transport Canada to develop a strategy to encourage underwater noise reduction incentives in other ports in Canada and internationally
- Maintaining educational outreach efforts to raise awareness of emerging research and threat reduction measures