

2018 underwater noise reduction initiatives

In 2018, the Enhancing Cetacean Habitat and Observation (ECHO) Program undertook two key initiatives which focused on reducing underwater noise from large commercial vessels within designated critical habitat for the endangered southern resident killer whale population.

Voluntary vessel slowdown in Haro Strait

Slowing down for the whales

The remaining 74 southern resident killer whales are listed as endangered under both the Species at Risk Act in Canada and the Endangered Species Act in the U.S. Both countries' governments have highlighted the need to develop and implement measures to reduce underwater noise generated by vessels which research indicates can interfere with whales' ability to hunt, navigate and communicate with each other.

In 2017, the voluntary vessel slowdown trial in Haro Strait demonstrated that reducing vessel speeds is an effective way of reducing the underwater noise generated at the vessel source, as well as reducing total underwater noise in nearby habitats which may in turn benefit the behaviour and feeding success of the southern resident killer whale.

The Minister of Fisheries, Oceans, and the Canadian Coast Guard and the Minister of Environment and Climate Change Canada, as the Minister responsible for Parks Canada Agency, recently formed the opinion that the SRKW is [facing imminent threats](#) to its survival and recovery. With this in mind, a refined approach was proposed for voluntary vessel slowdown action in Haro Strait in 2018 which utilized different vessel speeds and a dynamic slowdown start and end date in an effort to both maximize vessel participation and benefit to the whales.

What was new this year?

Speed

Based on analysis of 2017 information, the ECHO Program identified optimum speeds for different vessel types to reduce underwater noise levels and maximize vessel participation. Where it was safe and operationally feasible, vessels were encouraged to transit Haro Strait at the following speeds through the water:

15kn

or less for vehicle carriers,
cruise and container vessels



12.5kn

or less for bulkers, tankers, Washington
State Ferries and government vessels.



Transiting Haro Strait (see figure of slowdown and transition areas below) at these reduced speeds could add between 9 and 15 minutes to the total transit time, depending on the vessel type.

Dynamic trial start and end dates

Between July 1 and October 31, 2018, the shipping industry participated in a voluntary vessel slowdown in Haro Strait. The slowdown began once the southern resident killer whales were confirmed as present within Haro Strait by hydrophone data and trusted observers. The slowdown ended October 31, 2018 and was communicated to mariners through a Notice to Shipping and via the Pacific Pilotage Authority, BC Coast Pilots, shipping associations and agents, and on this webpage and the ECHO [newsletter](#).

Vessel participation

With varied vessel speeds and reduced anticipated delay times, we encouraged all vessels to participate where possible. Participation rates by sector was reported on regularly throughout the slowdown in the ECHO [newsletter](#).

Same as last year



Location

The slowdown area in Haro Strait between Discovery Island and Henry Island was unchanged from 2017. Vessels were encouraged to use the transition zones to slow down to the appropriate speed prior to entering the trial boundary. The trial distance is 16.6nm inbound, 14.9nm outbound. Download the map [here](#).

Monitoring

Similar to 2017, the ECHO Program monitored underwater noise levels before, during and after the trial using the hydrophone located at Lime Kiln. Southern resident killer whale presence was monitored and recorded by hydrophone and human observers. Vessel participation rates was reported by the Pacific Pilotage Authority and was also monitored by AIS data. Following the end of the slowdown on October 31, 2018, an analysis will be conducted by the ECHO Program to evaluate the effectiveness of the initiative.

Resources

[2018 Haro Strait slowdown backgrounder](#)
[Agent decision matrix](#)
[Pilot decision matrix](#)
[Slowdown area map](#)

Questions or feedback

For more information on the slowdown please contact the ECHO Program team at echo@portvancouver.com or Vancouver Fraser Port Authority Operations Center which is available 24/7 at 604.665.9086. Visit the [ECHO program](#) website for more information.
[Subscribe to receive regular updates about the voluntary vessel slowdown](#)

Haro Strait participants

Thank you to the following organizations who supported or participated in the voluntary vessel slowdown this summer:

ACGI Shipping Inc.	Ocean Network Express (Canada) Inc.
BC Coast Pilots	Oceania Cruises
Canadian Coast Guard	Oldendorff Carriers
Canpotex Shipping Services Limited	OOCL
Canship Umland	OOCL Canada
Carnival Cruise Line	Oxbow Sulphur Canada
Celebrity Cruises	Pacific Basin Shipping
Chamber of Shipping	Pacific Merchant Shipping Association
CMA CGM	Pacific Northwest Ship & Cargo Services
CMA CGM Canada	Pacific Pilotage Authority
Council of Marine Carriers	PONANT
Colley West Shipping Ltd	Prestige Cruise Holdings Inc.
Compagnie du Ponant	Princess Cruise Line
COSCO Shipping Line Canada Inc.	Ravensdown Shipping Services Pty Ltd
Cruise Lines International Association – North West & Canada	Regent Seven Seas Cruises
Crystal Cruises	Robert Reford
CSL International Ltd	Royal Canadian Navy
Disney Cruise Line	Royal Caribbean International
Evergreen Line	SAAM SMIT Vancouver Inc.
Fairmont Shipping (Canada) Ltd	Saga Welco AS
Fisheries and Oceans Canada	Seabourn Sojourn
G2 Ocean	Seaspan ULC
Hamburg Sud	Shipping Federation of Canada
Hapag-Lloyd Canada Inc.	Silversea Cruises Ltd.
Hapag-Lloyd	Sinotrans Canada Inc.
Holland America Line	
Hudson Shipping Lines	
Hyundai America Shipping Agency	

Inchcape Shipping Services Inc.
International Ship-owners Alliance of Canada
Intercruises Shoreside & Port Services
"K" Line Canada Ltd.
LBH Shipping Canada Inc.
Maersk line
Mason Agency Ltd.
McLean Kennedy
Mediterranean Shipping Company (MSC)
MOL Chemical Tankers (America)
MOL ACE (Americas)
Montship Inc.
Navitrans Shipping Agency
Neptune Bulk Terminals (Canada) Ltd.
NORDEN Shipping (Canada)
Norton Lilly International Inc.
Norwegian Cruise Line
NYK Line (North America) Inc.

SM Line Corporation
Teekay Shipping
The China Navigation Co. Pte. Ltd
TORMAR Inc.
Trans-Oceanic Shipping
Transport Canada
Valles Steamship (Canada) Ltd.
Washington State Ferries
Westward Shipping Ltd.
Westwood Shipping Lines
Whale Museum
Wheelhouse Shipping Agency
Wilhelmsen Ship Service
Zim Integrated Shipping Services

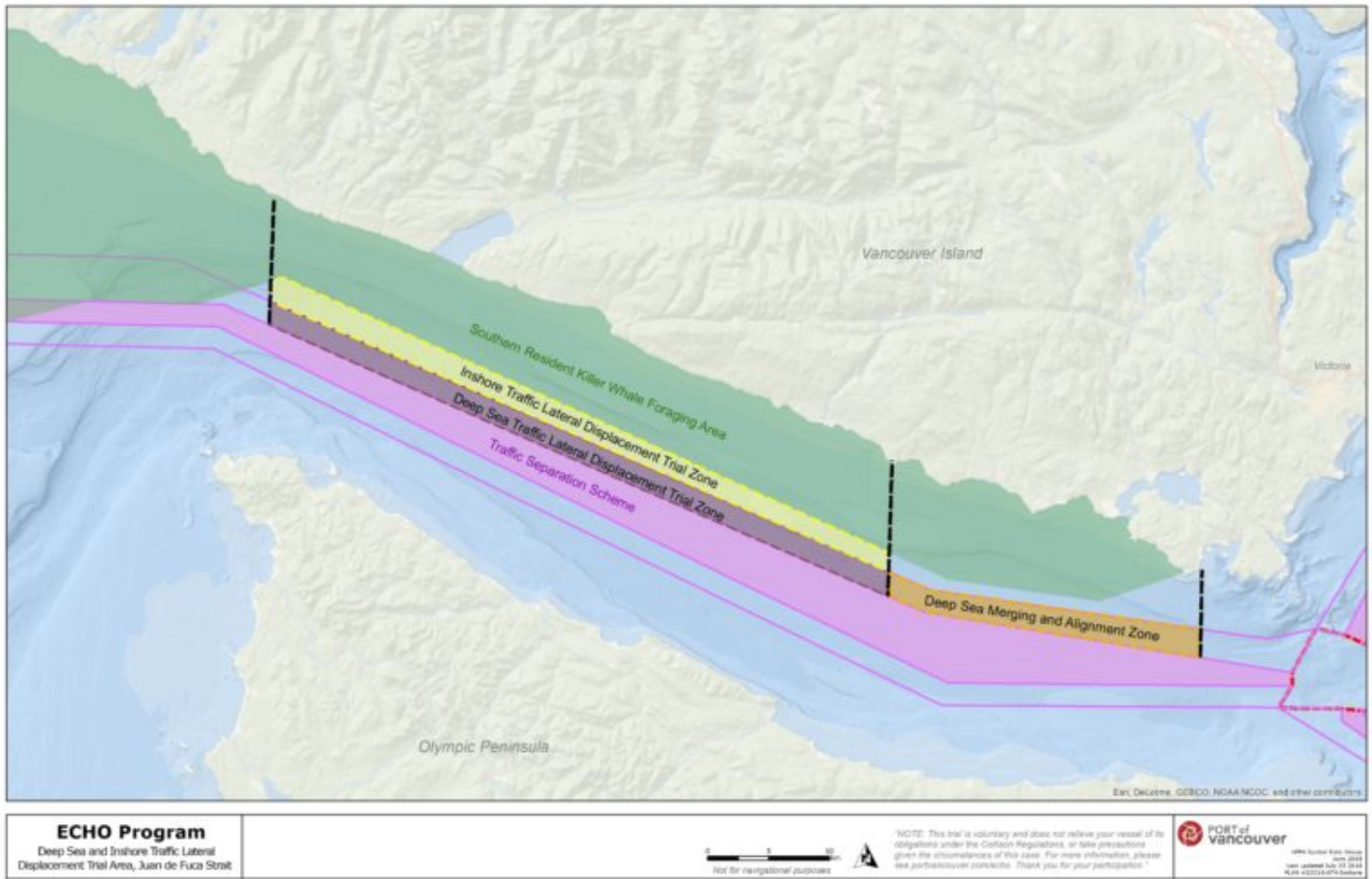
Strait of Juan de Fuca lateral displacement trial

The Enhancing Cetacean Habitat and Observation (ECHO) Program and Transport Canada supported by U.S. Coast Guard, Fisheries and Oceans Canada (DFO), Canadian and U.S. marine transportation industry, Aboriginal individuals and environmental and conservation groups, undertook a voluntary trial in 2018 to study how laterally displacing vessels away from known southern resident killer whale (SRKW) feeding areas would affect the underwater noise levels in those areas.

DFO identified the northern side of the Strait of Juan de Fuca as key SRKW feeding areas. This is the [geographic area](#) in which the ECHO Program asked commercial vessels to participate in the voluntary lateral displacement trial. The overall purpose of the trial was to reduce vessel noise impacts in these key SRKW feeding areas. Participation was not expected to impact vessel transit time or fuel consumption rates.

The voluntary trial began on August 20, 2018 and ended on October 31, 2018.

During the trial, vessel participation rates was monitored using AIS data and regular updates were provided via the ECHO Program newsletter. Underwater noise will be measured before, during and after the trial using a number of DFO hydrophones located in key foraging areas of the Strait of Juan de Fuca. Following the conclusion of the trial, a full analysis is being conducted by the ECHO Program to evaluate results and provide feedback which can inform next steps.



Resources for deep sea traffic

- [Lateral displacement backgrounder](#)
- [Lateral displacement map – deep-sea traffic](#)
- [Lateral displacement cheat sheet – deep-sea traffic](#)
- [Lateral displacement instructional postcard – deep-sea traffic – ENGLISH](#)
- [Lateral displacement instructional postcard – deep sea traffic – CANTONESE](#)
- [Lateral displacement instructional postcard – deep sea traffic – GREEK](#)
- [Lateral displacement instructional postcard – deep sea traffic – JAPANESE](#)
- [Lateral displacement instructional postcard – deep sea traffic – KOREAN](#)
- [Lateral displacement instructional postcard – deep sea traffic – MANDARIN](#)
- [Lateral displacement instructional postcard – deep sea traffic – SPANISH](#)
- [Lateral displacement instructional postcard – deep sea traffic – TAGALOG](#)

Resources for inshore traffic

- [Lateral displacement backgrounder](#)
- [Lateral displacement map – inshore traffic](#)
- [Lateral displacement participation cheat sheet – inshore traffic](#)
- [Lateral displacement postcard – inshore traffic](#)

These resources are available in Spanish, Mandarin, and Tagalog and are available upon request by emailing echo@portvancouver.com.

Strait of Juan de Fuca lateral displacement participants

Thank you to the following organizations who supported or participated in the Strait of Juan de Fuca voluntary lateral displacement trial this summer:

ACGI Shipping Inc.	Ocean Network Express (Canada) Inc
Alaska Tanker Company, LLC.	Oceania Cruises
American Waterways Operators	Oldendorff Carriers
BC Coast Pilots	OOCL
Canadian Coast Guard Western – Marine Communications & Traffic Services	Pacific Basin Shipping
Carnival Cruise Line	Pacific Merchant Shipping Association
Celebrity Cruises	Pacific Northwest Ship & Cargo Services
Chamber of Shipping	Pacific Pilotage Authority
CMA CGM Canada	PONANT
Colley West Shipping Ltd	Princess Cruise Line
Cruise Lines International Association – North West & Canada	Puget Sound Partnership
Disney Cruise Line	Puget Sound Pilots
Evergreen Line	Puget Sound Vessel Traffic Services
G2 Ocean	Regent Seven Seas Cruises
Hamburg Sud	Robert Reford
Hapag-Lloyd	Royal Canadian Navy
Holland America Line	Royal Caribbean International
Hudson Shipping Lines, Inc.	Seabourn Sojourn
Maersk Line	Seaspan ULC
Marine Exchange of Puget Sound	Shipping Federation of Canada
Mason Agency Ltd.	SilverSea Cruises
Mediterranean Shipping Company SA	Sinotrans Canada Inc.
MOL Chemical Tankers America Inc	The China Navigation Co. Pte. Ltd
Montship Inc.	Trans-Oceanic Shipping
Norton Lilly International Inc.	United States Coast Guard
Norwegian Cruise Line	Valles Steamship (Canada) Ltd.
	Westward Shipping Ltd
	Westwood Shipping Lines
	Wilhelmsen Ships Service
	Zim Integrated Shipping Services

Resources

[ECHO Program](#)

Newsletters

- [Newsletter #14](#) – November 15, 2018
- [Newsletter #13](#) – November 1, 2018
- [Newsletter #12](#) – October 18, 2018
- [Newsletter #11](#) – October 4, 2018
- [Newsletter #10](#) – September 21, 2018
- [Newsletter #9](#) – September 5, 2018
- [Newsletter #8](#) – August 22, 2018
- [Newsletter #7](#) – August 15, 2018
- [Newsletter #6](#) – August 7, 2018
- [Newsletter #5](#) – July 31, 2018
- [Newsletter #4](#) – July 24, 2018
- [Newsletter #3](#) – July 12, 2018
- [Newsletter #2](#) – June 28, 2018
- [Newsletter #1](#) – June 20, 2018

Please check this page for up-to-date information about our underwater noise reduction initiatives including resources, announcements and changes. Or [subscribe to receive regular updates](#).