

## **ECHO Program voluntary vessel slowdown trial**

### **Haro Strait: August 7th – October 6th, 2017**

#### **Overview**

As part of its objective to better understand and manage the impact of shipping activities on at-risk whales throughout the southern coast of British Columbia, the Vancouver Fraser Port Authority-led Enhancing Cetacean Habitat and Observation (ECHO) Program is launching a voluntary trial to study the relationship between commercial vessel speed and underwater noise.

#### **About the voluntary vessel slowdown trial**

Between August 7th and October 6th, 2017, all piloted commercial vessels transiting Haro Strait are requested to reduce their speed to 11 knots (speed through the water) between Discovery Island at the southern end, and Henry Island at the northern end. Average vessel speeds through this area range from 18 knots for containers to 13 knots for bulkers.

The voluntary trial is being planned and coordinated by the ECHO Program with the assistance of a vessel operators committee representing B.C. Coast Pilots, BC Ferries, the Chamber of Shipping of British Columbia, Cruise Line International Association North West and Canada, the Shipping Federation of Canada, the Pacific Pilotage Authority, Vancouver Fraser Port Authority, Washington State Ferries and Transport Canada.

Haro Strait is an important feeding area for the Southern Resident Killer Whale (SRKW) population, which is listed as endangered under the *Species at Risk Act (SARA)*. While the majority of SRKW sightings in this region occur between May and November, August and September is typically when the whale population peaks in Haro Strait. Research indicates that underwater vessel noise can mask the whales' echolocation clicks, interfering with their ability to hunt, navigate and communicate with each other.

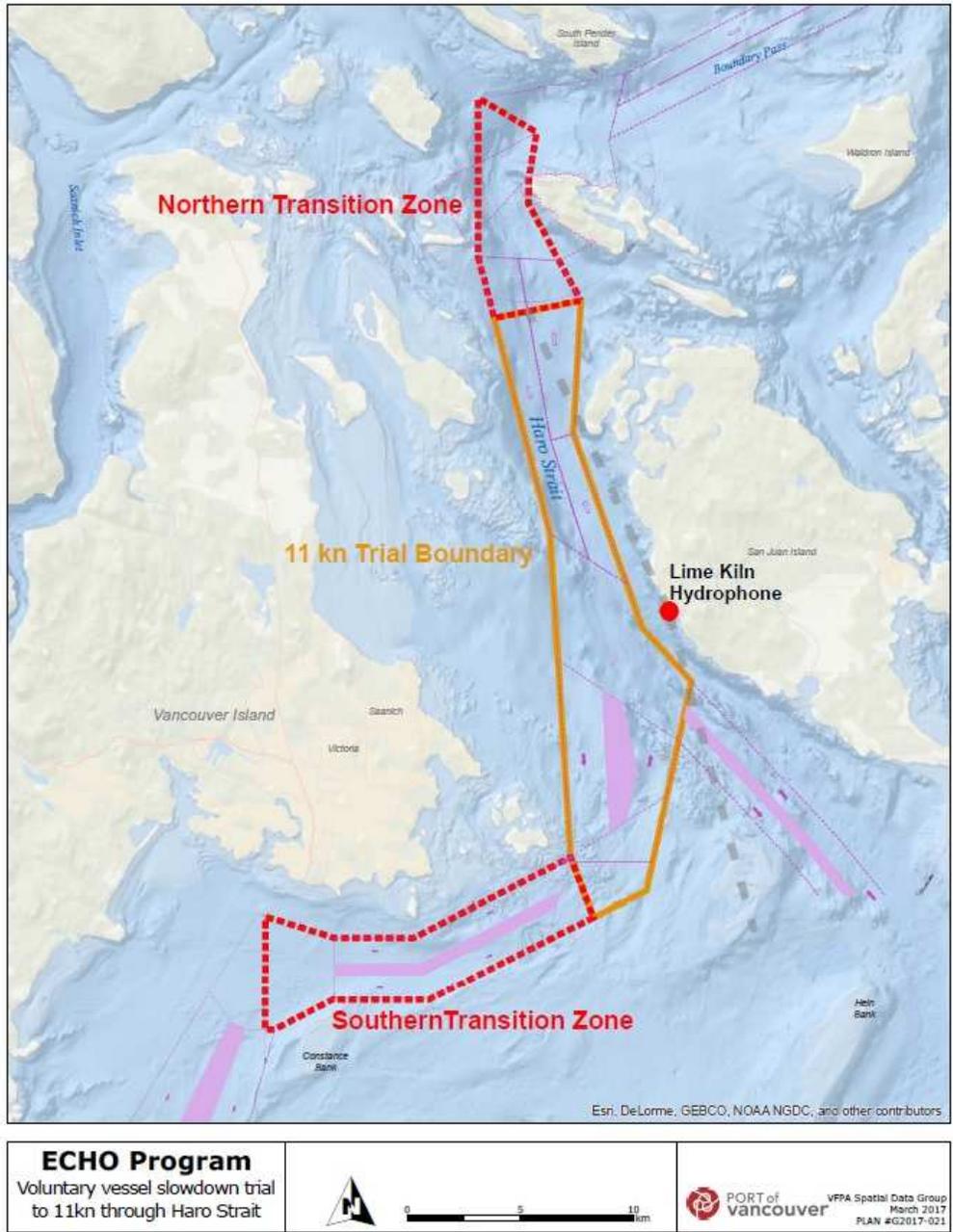
The purpose of the trial is to better understand and measure the level of noise reduction which is achieved through reduced vessel speed. During the trial period, the [ECHO program](#) team will use AIS to monitor and measure commercial vessel participation rates, and hydrophones to assess the impact of reducing vessel speed on underwater noise. Potential financial and operational impacts to the shipping industry will also be evaluated.

High vessel participation rates will greatly enhance the strength and value of the information collected, in turn supporting rigorous analysis and sound, scientific conclusions on the effectiveness of the trial. It will also demonstrate the shipping industry's commitment to proactively explore sustainable options to minimize its environmental impact on endangered whales.

At the conclusion of the trial, a full analysis of the effectiveness of slowing vessels down to reduce acoustic disturbance will be conducted by the ECHO program team. In consultation with our vessel operators committee regarding industry impacts, this analysis will be used to inform decision making and determine next steps.

The slowdown to 11 knots through Haro Strait could introduce delays of between 30 minutes to an hour to the total transit time between Boundary Pass and Brotchie Point, depending on vessel type and tidal currents. Inbound vessels should adjust their planned arrival time at Brotchie Point to minimize potential impacts to their scheduled berth or anchorage arrival times.

### Voluntary trial boundary



The trial distance is 16.6nm inbound, 14.9nm outbound.

## Context for the voluntary trial

The endangered Southern Resident Killer Whale has a current population of just 78 individuals (February 2017) and the species has shown little sign of recovery since the 1980s.

This species is of great cultural significance to coastal First Nations and is highly valued by the general public. As such, Canadian and US federal regulators have designated SRKW critical habitat across most of the southern Salish Sea, offering the species legal protection to feed, socialize and rest.

Recent studies indicate that underwater noise from existing vessel traffic in the Salish Sea is disruptive to the SRKW population's ability to hunt, navigate and communicate with each other. Projected increases in human population and future development projects with marine components are expected to further increase vessel traffic and related underwater noise.

Many vessel types contribute to underwater noise, including recreational craft, but large commercial vessels are typically the loudest. Even short exposure to these noise levels at close range could cause temporary hearing loss in killer whales. Although there is variability in noise generation within a given vessel type, speed range and frequency, multiple studies report that a one knot reduction in vessel speed typically results in a >1dB reduction in underwater radiated noise levels.

Because sound levels are reported on a logarithmic scale, a 3 dB reduction can result in a 50 per cent decrease in sound intensity and a 6dB reduction can result in a 75 per cent decrease in sound intensity.

Acoustic disturbance from vessel noise is identified by the federal government as a key threat to the recovery of the southern resident killer whale (SRKW). SRKW critical habitat directly overlaps with international shipping routes, ferry routes and other marine traffic routes in the Salish Sea. Under SARA, the federal government has highlighted the need to develop and implement measures to reduce or eliminate acoustic disturbance, including that generated by vessels.

## About the ECHO Program

The Enhancing Cetacean Habitat and Observation (ECHO) Program is a Vancouver Fraser Port Authority-led initiative aimed at better understanding and managing the impact of shipping activities on at-risk whales throughout the southern coast of British Columbia.

Some of the key threats to whales in this region include:

- acoustic disturbance (underwater noise)
- physical disturbance (ship collisions)
- environmental contaminants
- availability of prey

The long-term goal of the ECHO Program is to develop voluntary mitigation measures that will lead to a quantifiable reduction in potential threats to whales as a result of shipping activities.

For more information on the slowdown trial please see [www.portvancouver.com/slowdowntrial](http://www.portvancouver.com/slowdowntrial) or contact VFPA's Operations Centre at 604.665.9086.

For more information on the ECHO program please see [www.portvancouver.com/echo](http://www.portvancouver.com/echo) or email [echo@portvancouver.com](mailto:echo@portvancouver.com)