

QUIET SOUND

A program of Washington Maritime Blue

A collaborative, non-regulatory program reducing the impacts to Southern Resident Killer Whales from large commercial vessels



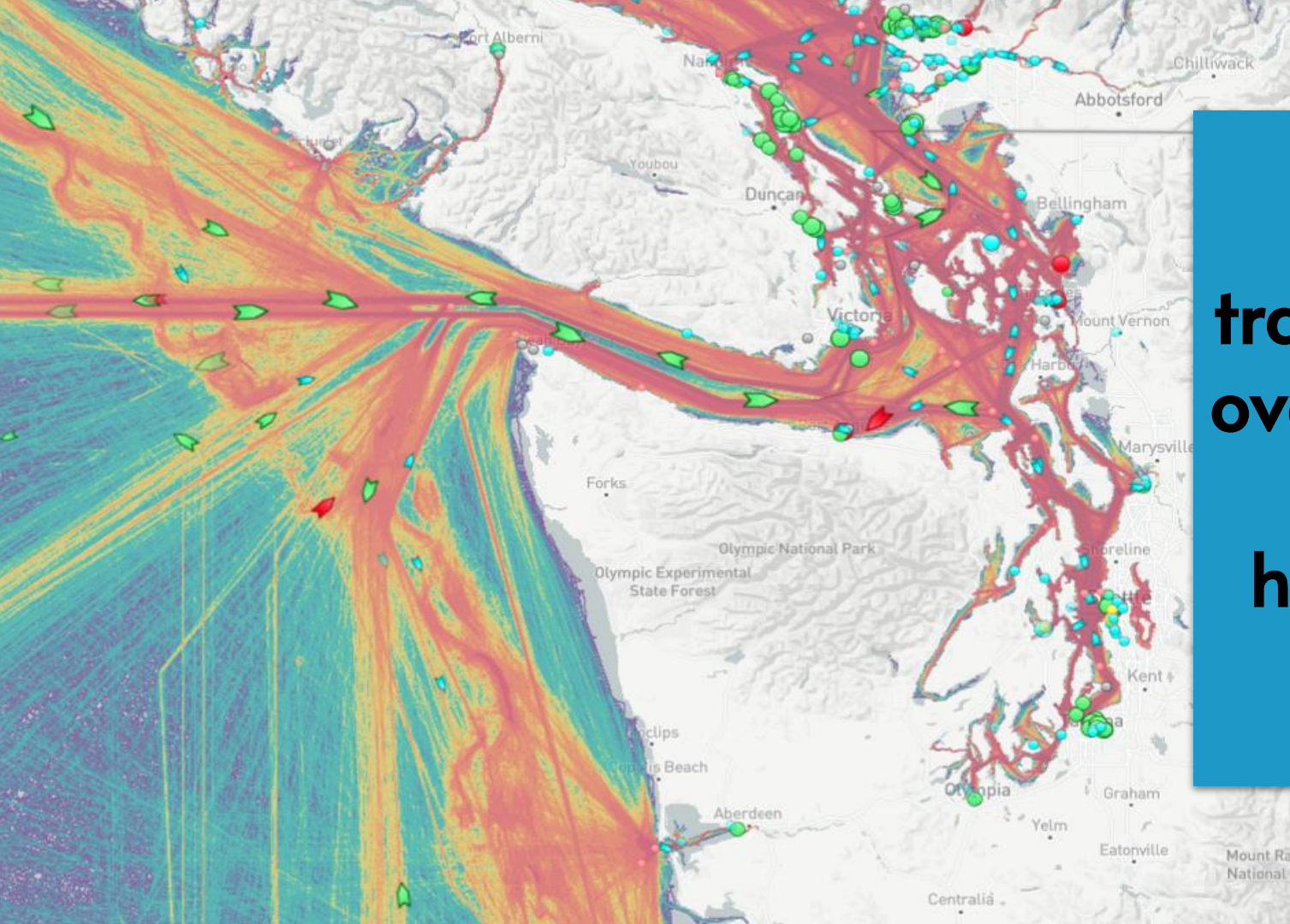
Southern Residents: Endangered orcas

- Listed under ESA in 2005
- 3 main threats:
 - Prey availability
 - Contaminants in the water
 - **Physical and acoustic disturbance from large commercial vessels**



A photograph of a large industrial port facility, likely a pulp mill, with a red container ship docked. In the foreground, a killer whale is breaching the water. The text "73 southern resident killer whales remain" is overlaid on the image.

**73 southern
resident killer
whales remain**



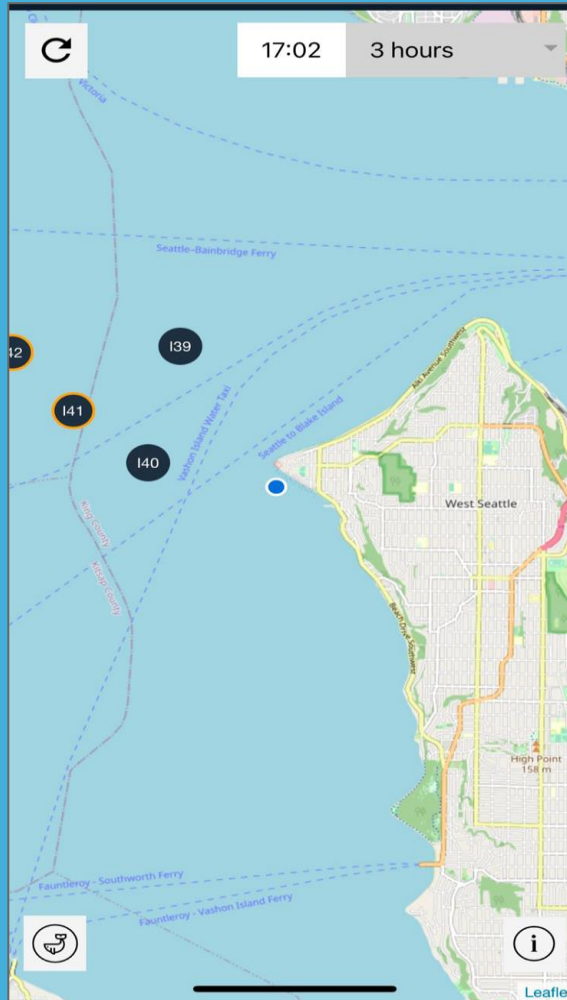
**Vessel
traffic lanes
overlap with
critical
habitat in
WA**

Project I: Further Develop the Whale Report Alert System

Upside: Easy to develop new functionalities of the app

Downside: safety?, user experience, vessels w/o operations centers

Next generation: USCG Whale Desk/AIS messaging, WhaleSmart



View of mobile app for mariners

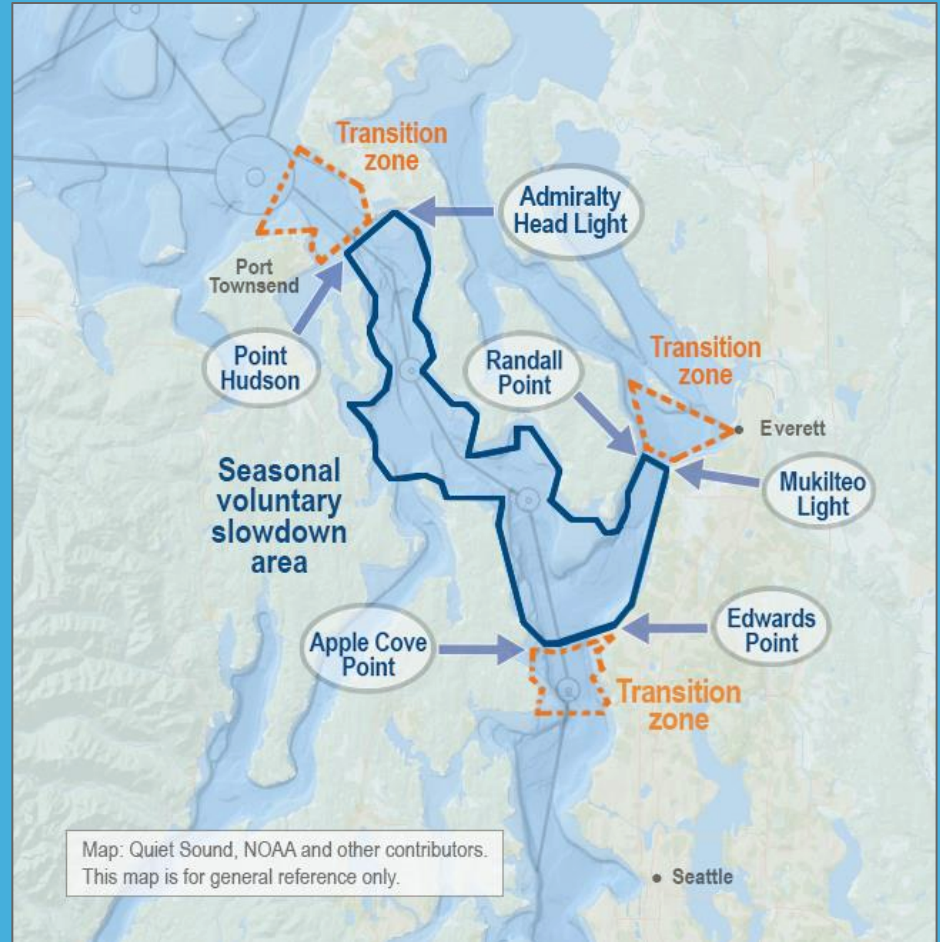


Project 2: Trial Voluntary Vessel Slowdown Area

SPEED TARGETS

• **14.5 knots** – speed through water or less for **vehicle carriers, cruise ships,** and **container vessels**

• **11.0 knots** – speed through water or less for **bulkers** and **tankers**



Voluntary Vessel Slowdown Trial Map

Key slowdown partners

Puget Sound Pilots

The face of the slowdown on most vessels- their participation, expertise and support is key!

Tribal Governments

Reviewed slowdown plans and proposal for hydrophone deployment in Usual and Accustomed Fishing Areas

Pacific Merchant Shipping Association

Engaged early with their members, leading to participation commitments from Maersk, MOL ACE, and Nissan Motor Car Carrier

Marine Exchange of Puget Sound

Provided ship location data from their AIS system



2022 TRIAL SLOWDOWN

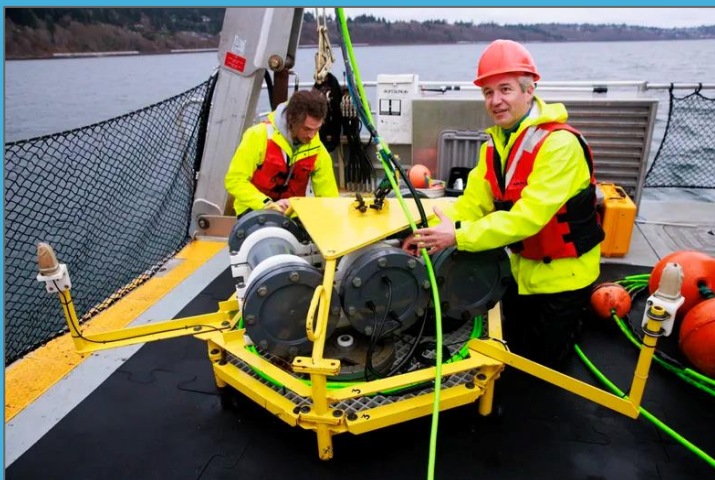
ADMIRALTY INLET AND NORTH PUGET SOUND 2022 TRIAL VOLUNTARY SHIP SLOWDOWN

A COLLABORATIVE EFFORT TO REDUCE UNDERWATER NOISE FOR ENDANGERED WHALES

Admiralty Inlet and Puget Sound are critical habitats for the endangered southern resident killer whales. During the fall and winter, these killer whales swim, rest and forage for salmon in these waters. Underwater noise is identified by Canada and the

Currently in Effect
The voluntary ship slowdown will run from October 24-December 22, 2022

Web site



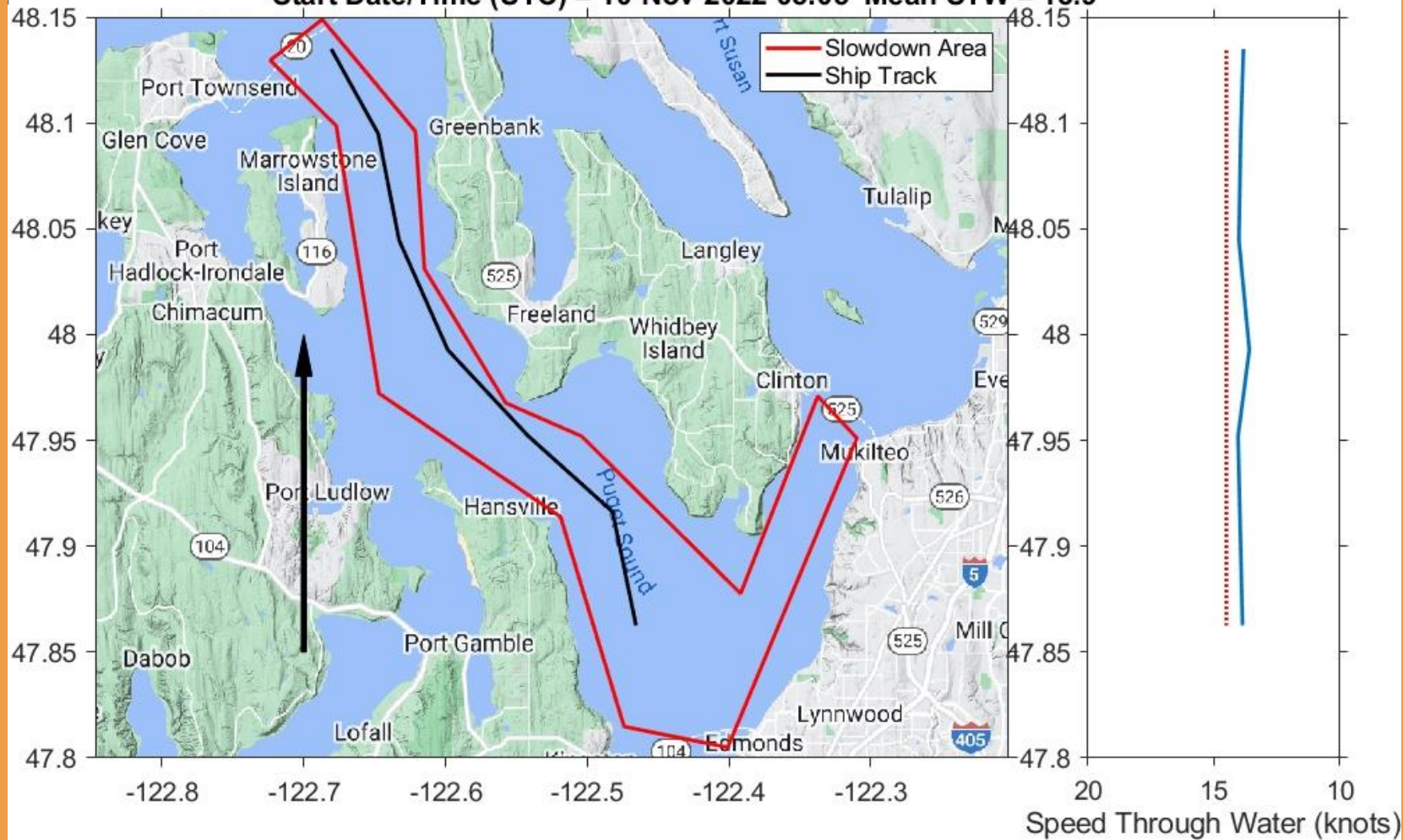
Hydrophone



ENGLISH	<p>DATES: OCTOBER 24 – DECEMBER 22, 2022</p> <p>All vehicle carriers, cruise ships, container vessels, bulkers, and tankers transiting through Admiralty Inlet and north Puget Sound during the slowdown period are asked to voluntarily slow down when it is safe and operationally feasible to do so. This initiative aims to reduce underwater noise for the endangered killer whales.</p> <p>For more information, please visit quietsound.org/trial-slowdown</p>	<p>Recommended slowdown speeds are:</p> <ul style="list-style-type: none"> 14.5 knots or less through the water for vehicle carriers, cruise ships, and container vessels 11.0 knots or less through the water for bulkers and tankers
GREEK	<p>Ημερομηνίες 24 Οκτωβρίου-22 Δεκεμβρίου 2022</p> <p>Ζητείται από όλους τους μεταφορικούς οχημάτινα, τα κρουαζιερόπλοια, τα πλοία μεταφορικών εμπορευματοκιβωτίων, τα πλοία μεταφορικών ελαιολιπών και τα δεξαμενόπλοια που διέρχονται από το Admiralty Inlet και το βόρειο Puget Sound κατά την περίοδο επιβράδυνσης να επιβραδύνουν οικειοθελώς όταν αυτό είναι ασφαλέ και λειτουργικά εφικτό. Η πρωτοβουλία αυτή αποσκοπεί στη μείωση του υποβρυχίου θορύχου για τις απειλούμενες με εξαφάνιση φάλαινες δολοφόρους.</p> <p>Για περισσότερες πληροφορίες, επισκεφθείτε τον ιστότοπο quietsound.org/trial-slowdown</p>	<p>Οι συνιστώμενες ταχύτητες επιβράδυνσης είναι:</p> <ul style="list-style-type: none"> ταχύτητα μέχρι 14,5 κόμβων για πλοία μεταφορικών εμπορευματοκιβωτίων ταχύτητα μέχρι 11,0 κόμβων για φορτηγά και δεξαμενόπλοια
TAGALOG	<p>Mga Petsa: Oktubre 24-Disyembre 22, 2022</p> <p>Ang lahat ng sasakyang pandagat na nagdadala ng sasakyan, barkong panhiwalay, sasakyang pandagat na may dalang container, mga bulker, at tanker na dumadaan sa Admiralty Inlet at hilagang Puget Sound sa panahon ng pagpapabagal ay boluntaryang magpapabagal kung ligtas at posible itong gawin. Layon ng inisyalang ito ang bawasan ang inisyu sa lalim ng tubig para sa mga mangangangailan na orka.</p> <p>For more information, please visit quietsound.org/trial-slowdown</p>	<p>Ang mga inirekomendang pagpapabagal ay:</p> <ul style="list-style-type: none"> 14.5 knots sa tubig o mas mababa pa para sa mga sasakyang pandagat na nagdadala ng sasakyan, barkong panhiwalay, sasakyang pandagat na may dalang container 11.0 knots sa tubig o mas mababa pa para sa mga bulker at tankers/depotokloa
CHINESE (S)	<p>日期：2022年10月24日 - 12月22日</p> <p>要求在減速期間通過阿德默爾蒂蒂灣 (Admiralty Inlet) 和北普吉特海灣 (Puget Sound) 的所有車輛運輸船、遊輪、集裝箱船、散裝貨船和油輪在安全且操作上是可行的情況下自願減速。本倡議旨在為濒危的虎鯨減少水下噪音。</p> <p>欲了解更多信息，請訪問 quietsound.org/trial-slowdown</p>	<p>建議的減慢速度為：</p> <ul style="list-style-type: none"> 對於車輛運輸船、遊輪和集裝箱船而言，在水中的速度為每小時14.5海里或以下 對於散裝貨船和油輪而言，在水中的速度為每小時11海里或以下
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RUSSIAN	<p>Даты: 24 октября — 22 декабря 2022 года</p> <p>Все транспортные средства, круизные суда, контейнеровозы, балкеры и танкеры, проходящие через Адмиралтейский залив и северную часть Пуджет-Саунда в период снижения скорости движения, должны добровольно снизить скорость, если это будет безопасно и целесообразно с эксплуатационной точки зрения. Эта инициатива направлена на снижение подводного шума для находящихся под угрозой исчезновения китов.</p> <p>Для получения дополнительной информации посетите сайт quietsound.org/trial-slowdown</p>	<p>Рекомендуемыми пониженными скоростями являются:</p> <ul style="list-style-type: none"> 14,5 узлов или менее по воде для автоперевозчиков, круизных судов и контейнеровозов 11,0 узлов или менее по воде для балкеров и танкеров

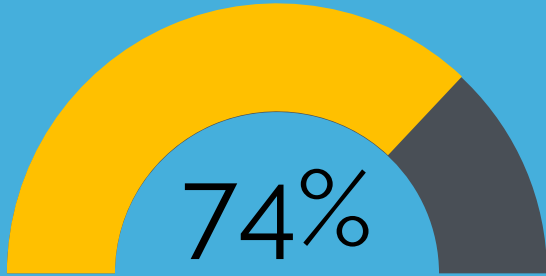
Multilingual Handout

Start Date/Time (UTC) = 10-Nov-2022 05:05 Mean STW = 13.9



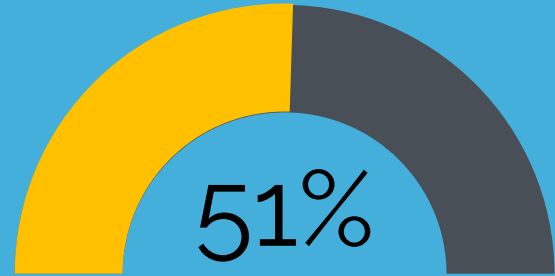
Orca Presence So Far

The slowdown has protected

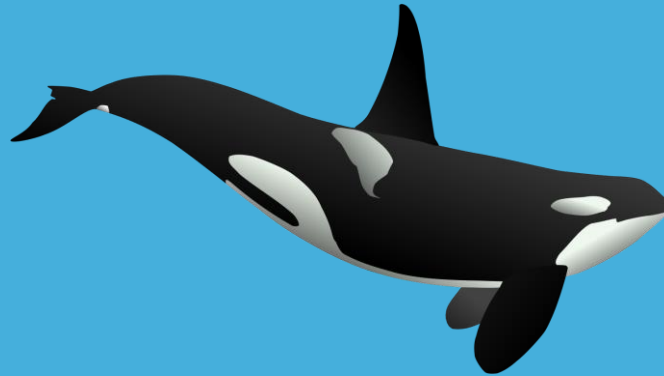


of the days SRKW were in Puget Sound

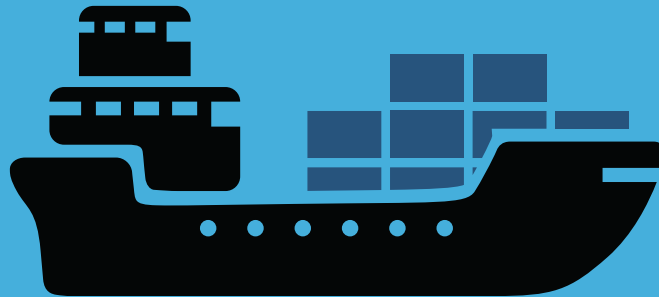
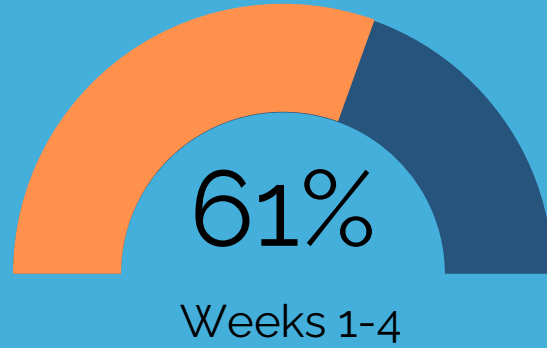
SRKW were in the slowdown area



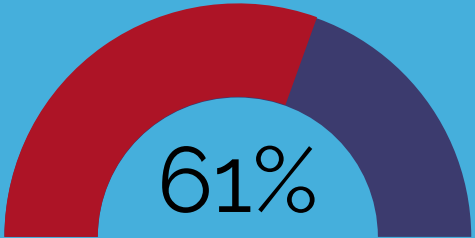
of the slowdown days



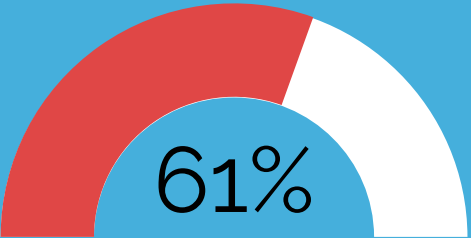
Vessels Slowing to Recommended Speeds



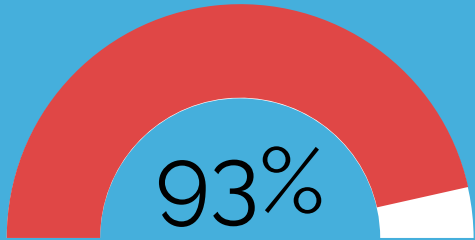
Comparing US to Canadian Slowdown Participation



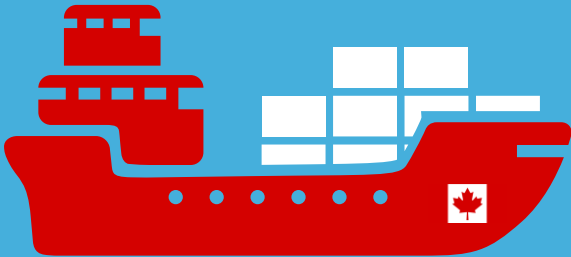
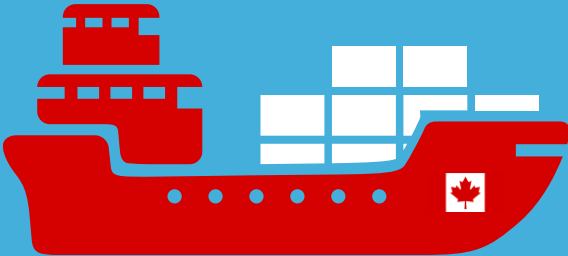
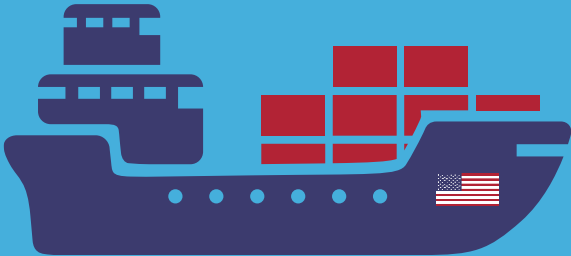
Quiet Sound Year 1, Weeks 1-4



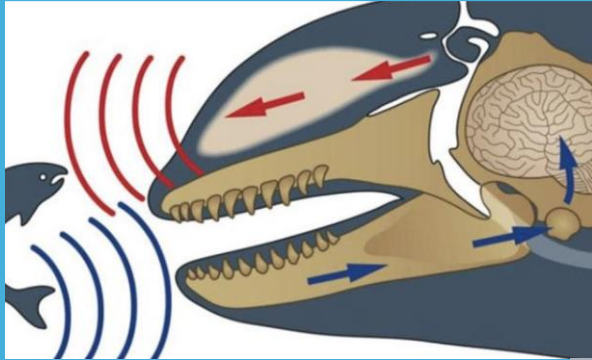
ECHO in Year 1, 2017



ECHO in Year 6, 2022



What's the next wave of technologies for MM protection/detection:



IMO Guidance on Quieter Vessels



Expanding whale detecting capacity through hydrophones and IR cameras



Vessel-mounted whale detection hardware and AI software

Contact Quiet Sound

Rachel Aronson
Quiet Sound Program Director
rachel@maritimeblue.org

Caitlin O'Morchoe
Quiet Sound Project Manager
caitlin@maritimeblue.org

www.QuietSound.org

