



Apr 27th, 1:30 PM - 3:00 PM

Transboundary Programs to Quiet the Seas: Successes, Challenges, and the Road Ahead

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Speaker

Krista Trounce, Rachel Aronson, Dr. Julie Watson, Sonja Henneman, Grace Ferrara, Alanna Frayne, Isabel Deutsch, and Donna Sandstrom



PORT of
vancouver

Vancouver Fraser
Port Authority

The ECHO Program

Transboundary programs to quiet the seas:
successes, challenges, and the road ahead

Krista Trounce

Research Manager, The ECHO Program

Presentation to Salish Sea Ecosystem Conference

April 27, 2022

What is the ECHO Program?

A **collaborative** regional initiative launched in 2014 by the Vancouver Fraser Port Authority to better understand and reduce the cumulative effects of shipping on at-risk whales.

Key ECHO Program focus areas:

- Convening regular program meetings
- Supporting national and international initiatives
- Trialing and implementing threat reduction measures
- Advancing research projects

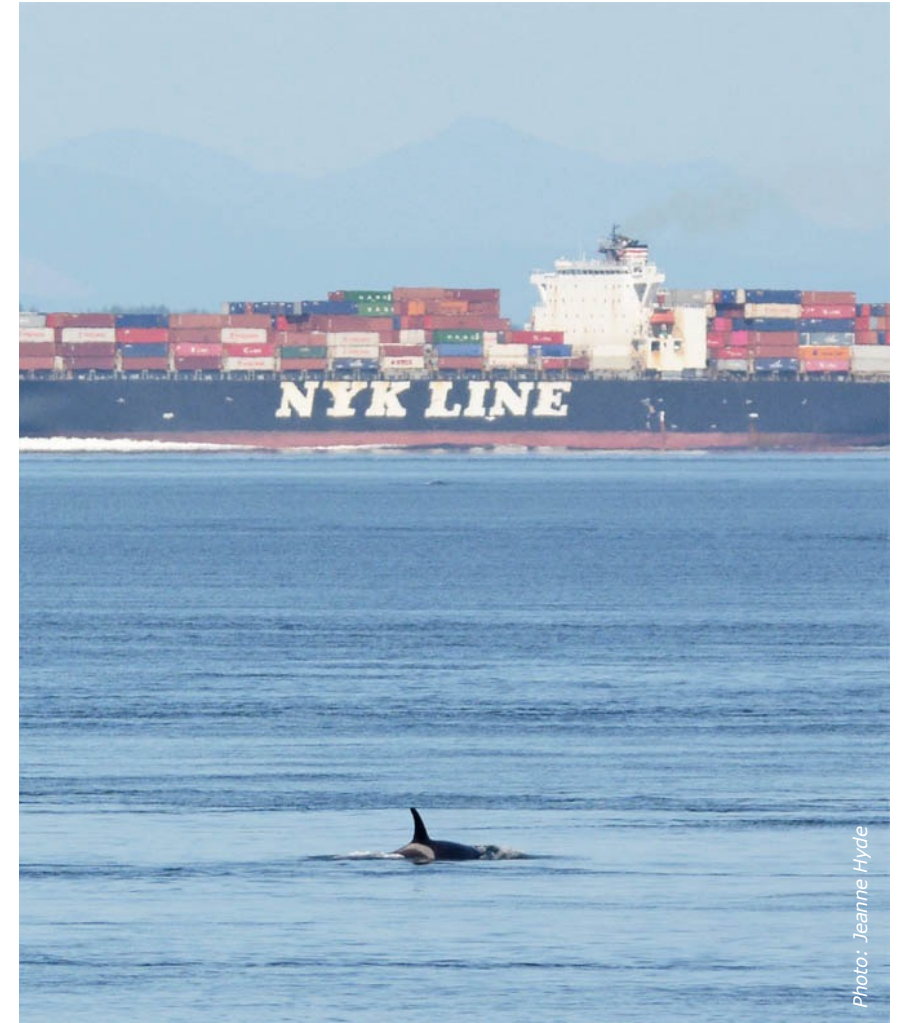


Photo: Jeanne Hyde

ECHO Program structure



Advisory Working Group

Provides guidance and advice to shape the program

- Marine transportation industry
- Canadian and US government
- Indigenous representatives
- Environmental organizations

Vessel Operators Committee

Supports the planning, implementation and communication of on-water noise reduction initiatives

- Marine transportation industry
- Canadian and US Coast Guards

Acoustic Technical Committee

Provides technical and scientific advice on research projects and measurement and evaluation of URN

- Acousticians and bio acousticians
- Naval architects and engineers

Ingredients for success

Funding

- *Seed funding and longer-term commitments*

Relationships

- *Having the right people in the room*
- *Trust and shared responsibility*

Resources

- *Opportunities to collaborate*

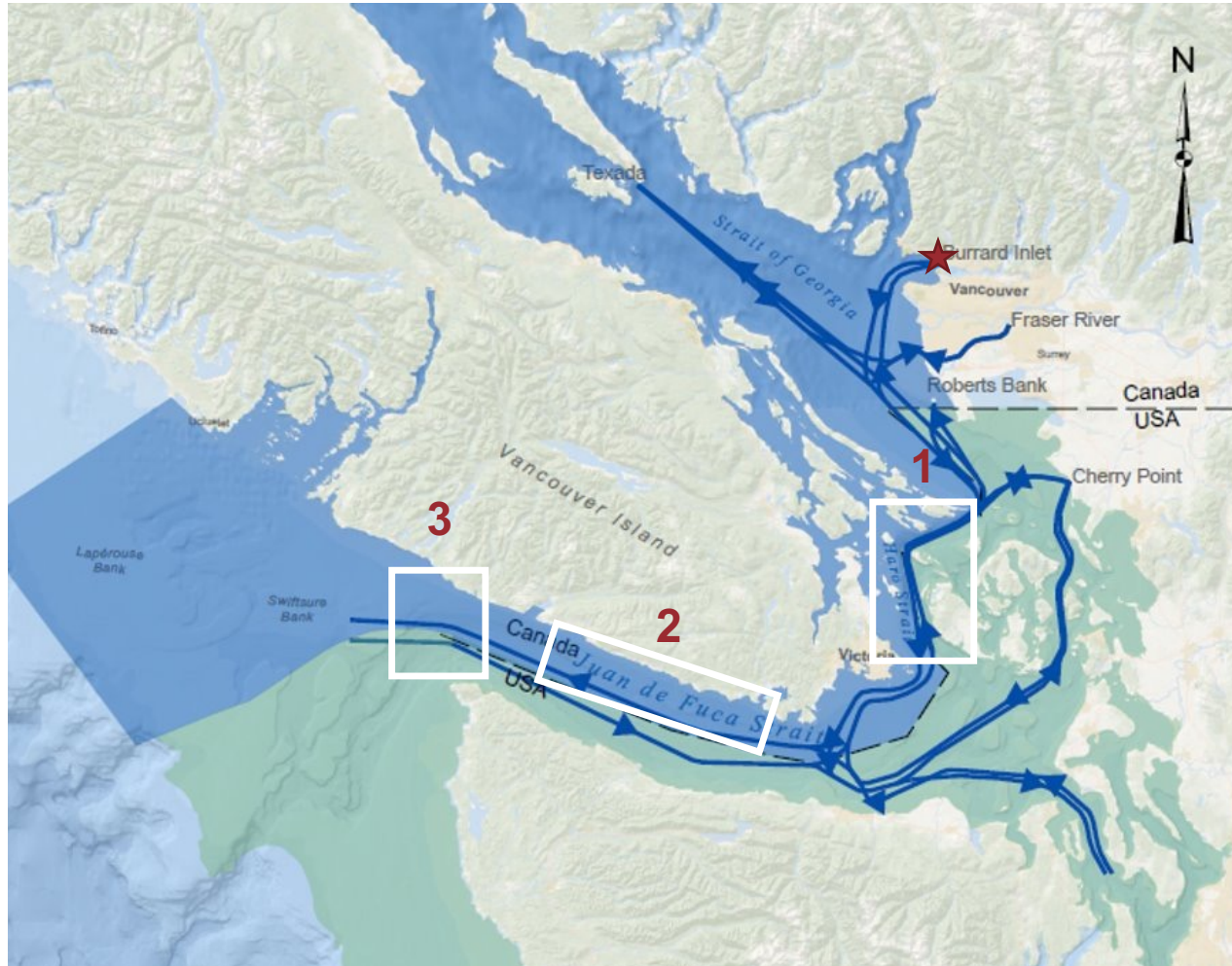
Science

- *Science-based decision making*
- *Clear communication of complex ideas*



Photo: Vancouver Fraser Port Authority

Voluntary measures for large commercial vessels – measuring success



1. Haro Strait and Boundary Pass slowdown
(2017 – 2021)

2021 participation = 90%

2. Lateral displacement of inshore tug traffic
in Strait of Juan de Fuca (2018 – 2021)

2021 participation = 88%

3a. Swiftsure Bank outbound slowdown
(2020 - 2021)

2021 participation = 80%

3b. Swiftsure Bank inbound slowdown
**trial for 2022*

Reductions in broadband underwater sound
intensity of up to 55% (>3 dB) in key killer
whale habitat

Voluntary measures for large commercial vessels – challenges

Communication

- Getting the message to the ships
- Multilingual vessel operators

International waters

- Transboundary infrastructure
- Voluntary versus regulatory

Competing priorities

- Funding for infrastructure and analysis
- Other pressures on vessel owner/operators

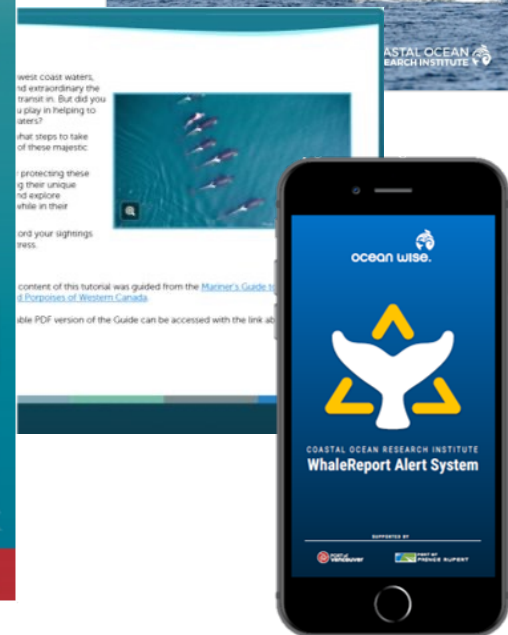
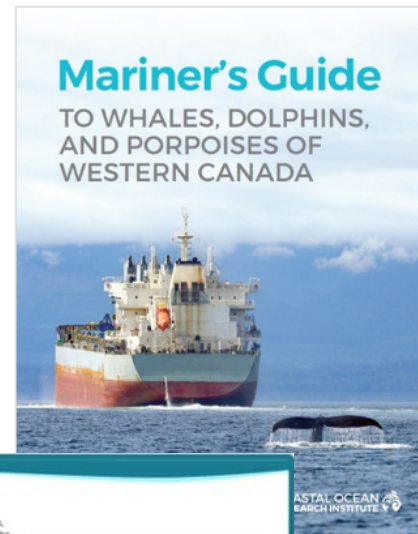
THE EFFECTS OF VESSEL UNDERWATER NOISE ON WHALES AND WHAT MARINERS CAN DO ABOUT IT

SOURCES OF NOISE
 While there are plenty of naturally occurring sounds in the ocean, an increase in commercial vessel traffic in the past few decades has increased these man-made sounds.

WHERE VESSEL NOISE COMES FROM
 ENGINE AND UNSHIELDED MAINTENANCE
 DEAD WEIGHT POOR HULL MAINTENANCE
 HULL-TO-HULL CONTACTS
 PROPELLERS
 CATERPILLERS
 Most underwater noise from large vessels is caused by propeller cavitation.

IMPACTS
 Underwater noise can have both the ability of making animals hear sounds and receive vibrations.
 VESSEL NOISE CAN AFFECT THE ABILITY OF MARINE ANIMALS TO...
 FIND PREY
 REST
 MATE AND REPRODUCE
 NAVIGATE
 AVOID DANGERS
 COMMUNICATE
 LISTEN NOW!
 In some areas, vessel noise has been shown to reduce the ability of whales to communicate by 90%.

WHAT YOU CAN DO
 In 2018, the International Maritime Organization (IMO) recognized that undersea noise associated with shipping is something that can be mitigated.
 Options to reduce ship noise underwater (already exist):
 SLOW DOWN
 MAINTAIN
 OPTIMIZE
 DESIGN
 ROUTES



Key gaps and opportunities – transboundary collaboration

How much noise is too much?



- Bring the science together
- Transboundary working group

How to measure transboundary efforts?



- Sharing infrastructure
- Sharing data

How to connect with the ship?



- Transboundary whale alert platforms
- US and CAD traffic communications




Thank you

QUIET SOUND

The background of the slide is a photograph of a pod of Southern Resident Killer Whales swimming in the ocean. The whales are seen from above, with their dark dorsal fins and white patches on their backs visible. The water is a deep blue color. The text 'QUIET SOUND' is overlaid on the top part of the image. The word 'QUIET' is in dark blue and 'SOUND' is in orange. A blue wavy line passes through the text.

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

A photograph of an industrial port scene. In the background, a large red container ship is docked at a pier, with several white gantry cranes positioned over it. To the left, there is a large green industrial structure with a conveyor belt system. The sky is overcast with grey clouds. In the foreground, the dark blue water of the sea is visible, and a black whale is breaching, with its dorsal fin and part of its back above the water surface.

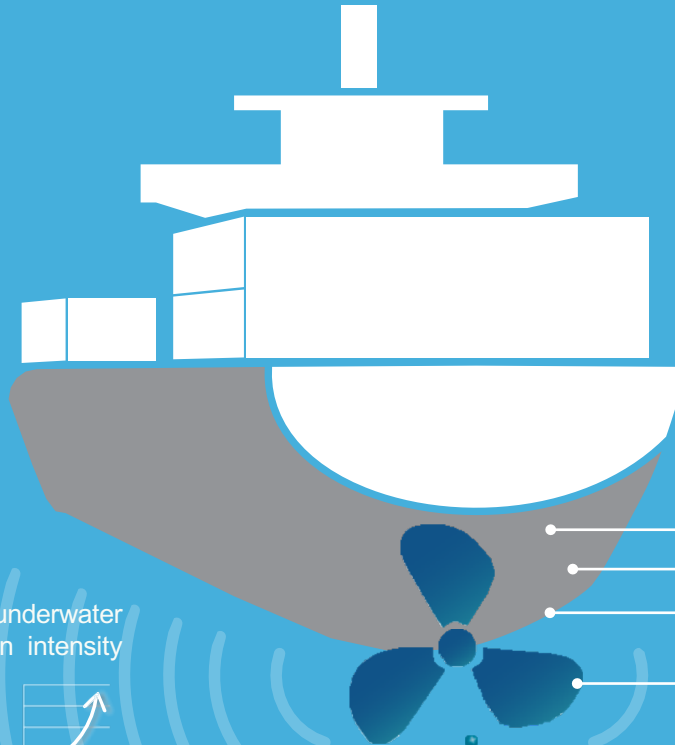
Disturbance from vessel presence and noise is a major threat to SRKW's

SOURCES OF NOISE

While there are plenty of naturally occurring sounds in the ocean, an increase in commercial vessel traffic is the main reason for increased underwater noise¹.

In the North Pacific Ocean, underwater noise has been **DOUBLING** in intensity **EVERY DECADE** for the past

60 YEARS²



Sound travels

4.5 TIMES

FASTER in water than in air.

WHERE VESSEL NOISE COMES FROM

ENGINE AND ONBOARD MACHINERY

DRAG FROM POOR HULL MAINTENANCE

BOW/STERN THRUSTERS

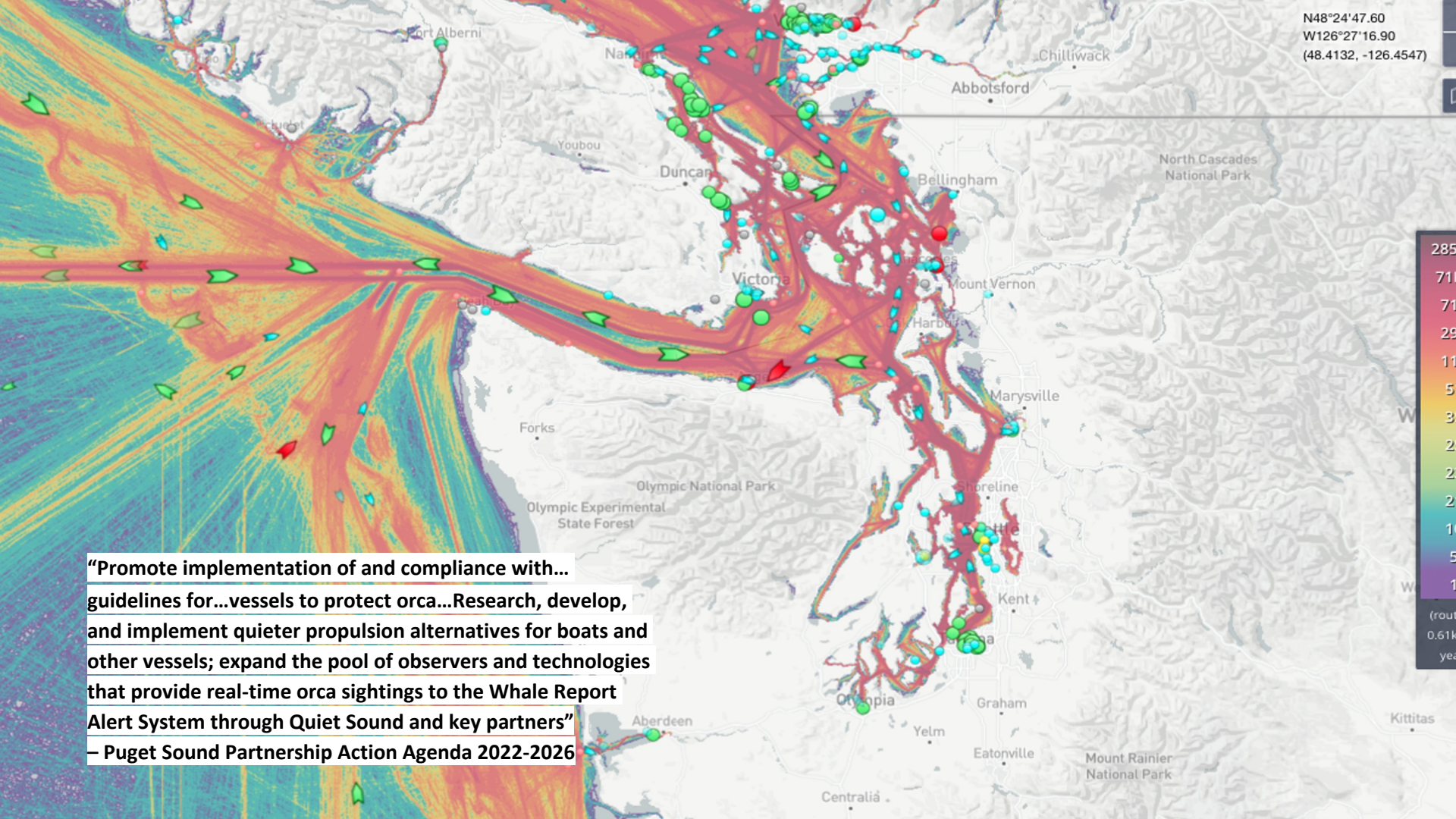
PROPELLER

CAVITATION

NOISE INCREASES WITH SPEED⁴

Most underwater noise from large vessels is caused by propeller cavitation³.

N48°24'47.60
W126°27'16.90
(48.4132, -126.4547)



**“Promote implementation of and compliance with...
guidelines for...vessels to protect orca...Research, develop,
and implement quieter propulsion alternatives for boats and
other vessels; expand the pool of observers and technologies
that provide real-time orca sightings to the Whale Report
Alert System through Quiet Sound and key partners”
– Puget Sound Partnership Action Agenda 2022-2026**

We can make changes in the maritime industry to protect whales from noise pollution and ship strikes.



The development of Quiet Sound

2018: Gov. Inslee signs Executive Order 18-02 to establish the Southern Resident Orca Task Force

1

2019: Orca Task Force Recommendation #22: Implement shipping noise-reduction initiatives and monitoring programs, coordinating with Canadian and U.S. authorities

3

2020: Quiet Sound Planning Team formed and develops proposal for implementation

5

Orca Task Force learns about threats and identifies solutions

2

2019: Workshop to address how to move #22 forward

4

2021: The Quiet Sound program is funded

6

The **goal** of the Quiet Sound program

To better understand and reduce the cumulative effects of acoustic and physical disturbances from large commercial vessels on Southern Resident Killer Whales throughout their range in Washington State



Quiet Sound Leadership Committee Members



2022 Projects

Our work in 2022 includes

- Putting real-time whale alerts in the hands of commercial mariners
- A trial of a voluntary vessel slowdown
- Underwater research on noise pollution
- Supporting new technologies for whale sensing
- Come to tomorrow's talk to learn more!



How are we working across the border?

A transboundary approach is key to success

- Close partnership with ECHO and Ocean Wise
- Use WRAS as a transboundary tool for mariners
- Assist ECHO with Swiftsure Bank inbound slowdown



We can make changes in the maritime industry to protect whales from noise pollution and ship strikes.



Contact Quiet Sound

Rachel Aronson - Quiet Sound Program Director

rachel@maritimeblue.org

www.QuietSound.org



QUIET SOUND

Commercial Whale Watching Licensing Program (CWWLP)

Julie Watson
Killer Whale Policy Lead
Washington Department of Fish and Wildlife





April 2022



Washington
Department of
FISH and
WILDLIFE

2019 Legislation Created the CWWL and directed WDFW to make rules (via 2SSB 5577)

“A commercial whale watching license is required for commercial whale watching operators.”

-  **Defined fees** per operator and per vessel (including kayak operations)
-  Required WDFW to **adopt rules** for license-holders by 1/1/21, and specified minimum considerations for the rulemaking
-  Required WDFW to convene an **independent panel of scientists** to review disturbance and noise impacts on SRKW from small vessels and commercial whale watching
-  Requires WDFW to **report on the effectiveness** and recommended changes to the rules November 2022, 2024, and 2026.





Successes and Challenges

- Rulemaking in 2020
 - Completed before 1/1/21
- CWWL initiated in 2021
 - DocuSign license applications
 - Calves & vulnerable whales
 - Communication & dialogue
 - AIS cost-share grants
- Reorienting to a 2021 bill: ESB 5330
 - Modified the license structure
 - Waived the license fees in 2021 and 2022
 - Modified requirements for Canadian businesses and individuals

Science-Policy Interface

Adaptive Management

of the general vessel approach distance & of the CWWLP including rules

- Studies to assess effectiveness
- License fee structure
- Monitoring science, policy, and regulatory changes
- Input from industry & the broader community



Support for Southern Resident killer whale monitoring efforts 



Soundwatch and Be Whale Wise (The Whale Museum)

Soundwatch is an on-the-water education and research program that contacts boaters and kayakers to provide education on best practices, guidelines and regulations. Soundwatch also maintains a long-term dataset on vessel compliance and whale behavior.

Be Whale Wise is a transboundary effort to promote regulations and guidelines for best practices when operating vessels around marine mammals, notably orcas.

Objectives:

- Monitor vessel activity around SRKW and other whales, collect long-term data to describe trends in vessel activity.
- Systematically record instances of vessel non-compliance with state laws.
- Maintain/increase capacity at Lime Kiln State Park hydrophone to monitor killer whale presence and ambient noise levels.
- Increased presence in fall and winter in central and south Puget Sound.
- Coordinate sightings network and facilitate data partnerships.

Funding: multiple partners, including National Oceanic and Atmospheric Administration (NOAA) funds at \$300,000 for three years and state funds for \$100,000 in 2021.

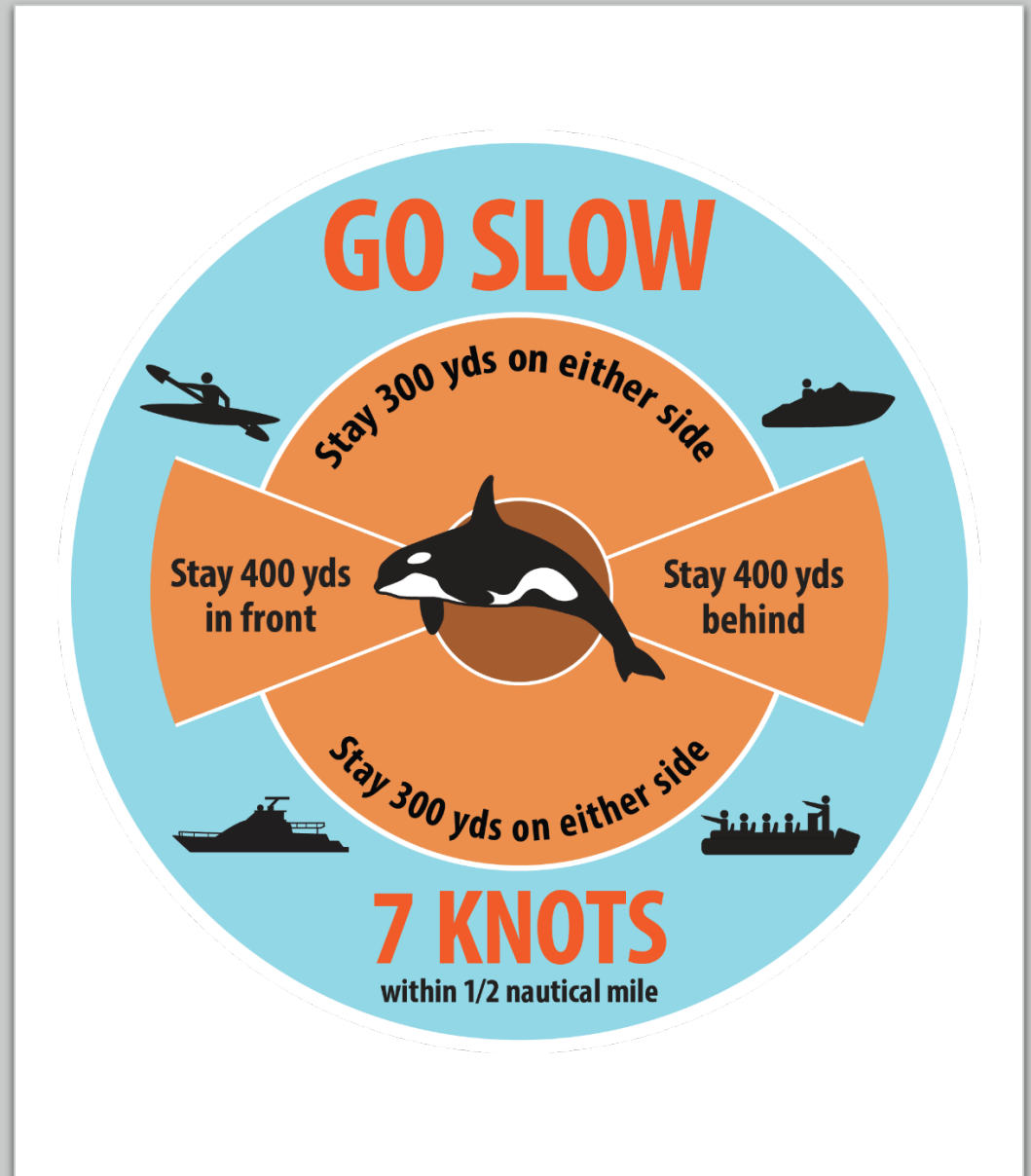
Contact
Jessica Stocking
WDFW Marine Species Lead
Wildlife Diversity Division
360.764.0335
jessica.stocking@dfw.wa.gov
wdfw.wa.gov/SRKW

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For more information, see wdfw.wa.gov/accessibility/requests-accommodation.

Oct. 2021

Gaps & Needs

Improving transboundary alignment will increase our ability to take a holistic approach and improve the collective effectiveness of our Southern Resident Killer Whale recovery effort.





Interim Order Management Measures Reducing Underwater Noise & Physical Disturbance on Southern Resident Killer Whales

SSEC Panel April 2022

Transboundary Programs to Quiet the Seas: Successes, Challenges & the Road Ahead



Overview

- History, context & approach
- Vessel management measures
- Measuring effectiveness
- Transboundary collaboration & alignment
- Challenges & achievements
- Lessons learned



History, Context & Approach



Photo Credit: Graeme Ellis

History

Mar 2017	Apr 2017	Feb 2018	May 2018	Oct 2018	Dec 2018	2019 – current
SARA Resident Killer Whale Action Plan	Science-Based Review of Effectiveness of Recovery Measures for Southern Residents	Budget 2018: Whales Initiative Announced	Imminent Threat Assessment	Minister announces additional measures	SARA Resident Killer Whale Recovery Strategy amended, new critical habitat identified & protected	Suite of seasonal management measures to address threats (ongoing)

Context

STATUS

- Southern Residents listed as **Endangered** in Canada & US
- Population facing **imminent threats to survival & recovery** – enhanced measures necessary

GOAL

- Ensure the **long-term viability** of Southern Resident populations

KEY THREATS

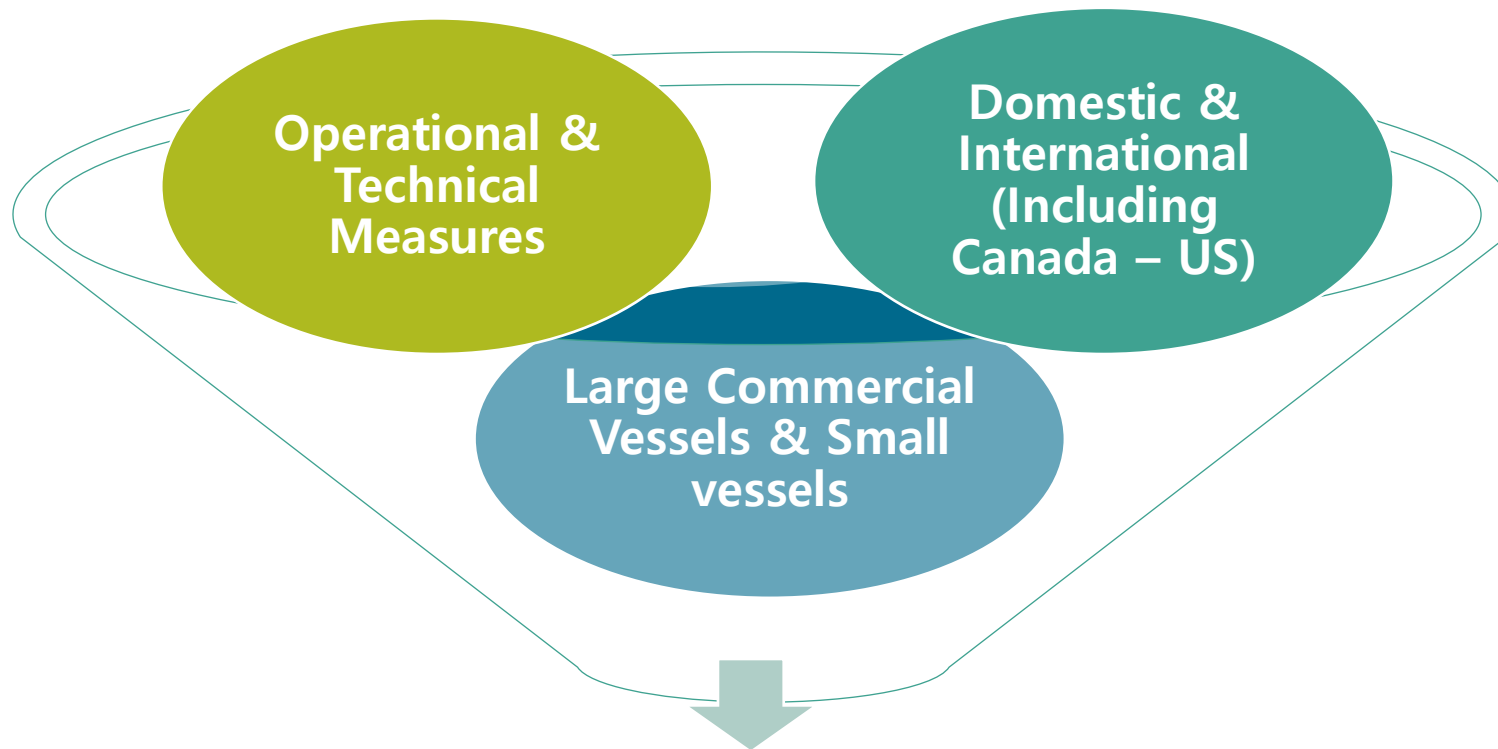
- Prey availability (abundance & accessibility) led by DFO
- Environmental contaminants led by ECCC
- **Physical & acoustic disturbance** (includes underwater noise & physical presence) led by TC

Vessel Disturbance

- Critical habitat overlaps with shipping lanes, ferry routes & recreational vessel traffic
- Expected increases in vessel traffic in BC coastal waters, including ferries, commercial shipping, pleasure craft & whale watching
- Reduction of physical & acoustic disturbance from different vessel sources requires a multi-faceted approach
- TC a partner in the Enhancing Cetacean Habitat & Observation (ECHO) Program
- Interim Order measures address sources of vessel disturbance not covered by the ECHO Program



Canada's Approach



Reductions in underwater noise & physical disturbance from vessels

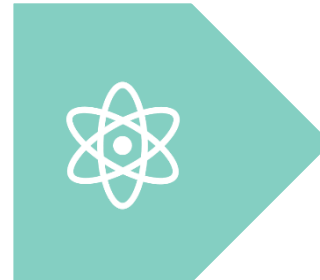
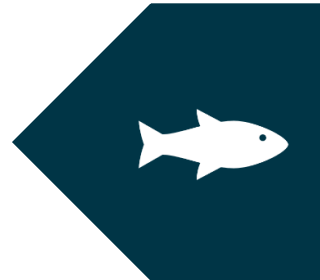
Adaptive Management

- 2018 amendments to the *Canada Shipping Act, 2001* allow Minister of Transport to make an interim order if he or she believes that immediate action is required to respond to a direct or indirect risk to marine safety or the marine environment
- Finding of imminent threat catalyzed interim order measures commencing in 2019
- Allows management measures to be informed by new science & research as it becomes available
- Continuously looking at results of modelling work, studies & trials, & incorporating input from discussions with stakeholders & Indigenous partners
- Provides opportunity to regularly take-into-account efforts of other jurisdictions
- Evaluation of measures is assessed utilizing several criteria including indigenous rights, scientific justification, economic, cultural, risk to navigation, environmental, & ease of implementation

Evaluation Criteria

BENEFIT TO SOUTHERN RESIDENTS

Presence, prey availability, behaviour & disturbance



SCIENTIFIC JUSTIFICATION

Supported by peer-reviewed science &/or Indigenous knowledge

INDIGENOUS RIGHTS

Reduce potential impacts to Indigenous rights



SOCIOECONOMIC IMPACTS

Reduce potential impacts to industry & coastal communities

EASE OF IMPLEMENTATION

Feasibility of measure design & implementation, as well as safety considerations



MONITORING & ENFORCEMENT

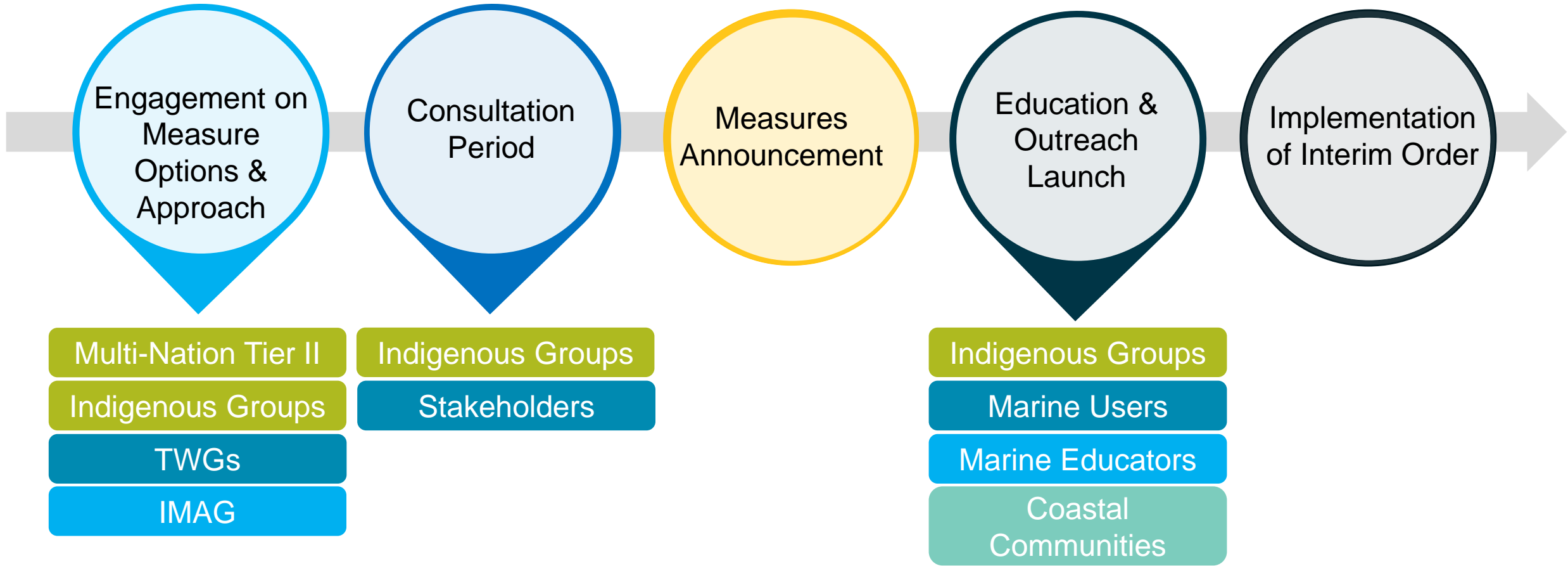
Ability to communicate, monitor & enforce clearly defined measure

*Adapted from “consideration criteria” developed by Washington State Task Force

Vessel Management Measures



Key Milestones



Proposed 2022 Vessel Measures

<p>400 m Approach Distance</p>	<ul style="list-style-type: none"> Continue 400 m approach distance between Campbell River & Ucluelet, year-round. Increase education & outreach around Campbell River. 	<p>Sustainable Whale Watching Agreement</p>	<ul style="list-style-type: none"> Whale watcher authorizations to view non-Southern Residents at 200 m Reviewing policies & procedures on denial / revocation of authorization
<p>Interim Sanctuary Zones</p>	<ul style="list-style-type: none"> Pender & Saturna Island ISZs - June 1-Nov 30 		
<p>Seasonal Slowdown Areas</p>	<ul style="list-style-type: none"> Two proposed Seasonal Slowdown Areas at Swiftsure Bank - June 1-Nov 30 		
<p>Voluntary Measures</p>	<ul style="list-style-type: none"> Continue to encourage voluntary measures in alignment with Be Whale Wise 		

Sustainable Whale Watch Agreement

- Transport Canada enters into agreements with Canadian & US whale watching & ecotourism companies
- Companies can apply for an authorization to approach between 200 m & 400 m of non-Southern Residents
- Commit to not offer, plan or promote excursions based on Southern Residents & to report unintentional encounters



Measuring Effectiveness



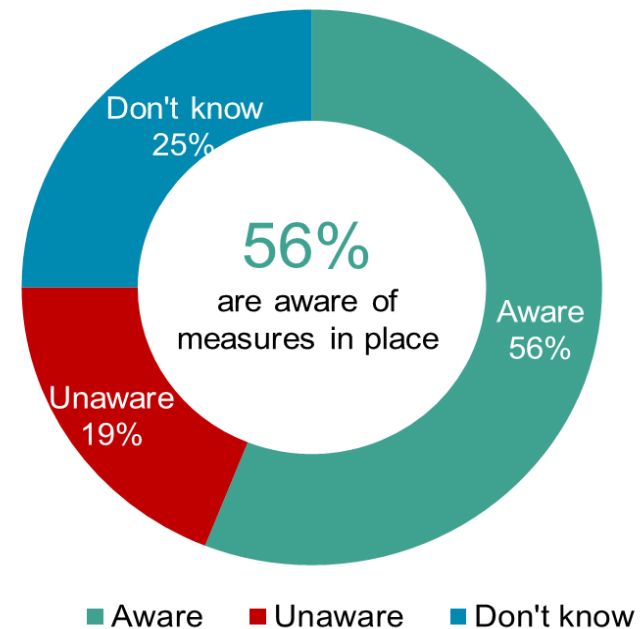
Evaluating Measures Effectiveness

- [Southern Resident Killer Whale Accountability Framework](#) evaluates data collected by the Government of Canada & its partners through 3 priority action categories each with its own indicators & performance measures:
 1. Monitor & Understand
 2. Reduce Threats
 3. Activate Support for Recovery (includes outreach & education, & compliance)

Measuring Vessel Measures

- TC measures the success of acoustic & physical disturbance reductions through a range of metrics:
 - Underwater noise data from hydrophones
 - Number & type of enforcement actions taken annually
 - Vessel traffic data
 - Number of outreach & education products distributed annually
 - Feedback from engagement & consultation
 - Public surveys (e.g., on boater awareness of measures)

Southern Resident Measures & Boating Safety Public Opinion Research 2021 Results



Transboundary Collaboration & Alignment



Photo Credit: Miles Ritter

Transboundary Collaboration

Longstanding relationships with transboundary partners, & partnerships are growing!

- TC, CCG & USCG have partnered for many years to manage vessel traffic in shared waters
- US partners participated in Canadian initiatives ahead of launch of Whales Initiative (ECHO Program, Southern Resident Killer Whale Symposium)
- Orca Task Force - strengthened relationship with Washington State & Puget Sound Partnerships
- US participation in IMAG & TWG processes
- Be Whale Wise partnership
- Marine Educators working group
- Olympic Coast National Marine Sanctuary Working Group
- Multi-agency cross border enforcement coordination
- CWWLP Intergovernmental Coordination Group



Alignment

- Engagement of US participants in Canadian processes & vice-versa facilitates alignment
- This can include state & federal officials, scientists & researchers, marine users, educators, industry, public & community members, stakeholders & Indigenous groups
- While alignment of measures where possible is an overarching goal, governments need to respect their unique legislative & regulatory requirements, processes & timelines
- On-going consideration & reflection of our respective processes, management measures & implementation – both challenges & successes – promotes alignment
- Communication, cooperation, shared goals & relationships are key!!!

Challenges & Achievements



Challenges

- Salish Sea is heavily utilized by an abundance of on-water recreational & ecotourism activities that cross the marine border regularly, & this traffic is growing
- Mandatory measures differ across the marine border – education & awareness is critical – common voluntary measures can help
- Simple & consistent messaging is required to alleviate boater confusion on measures given different rules in Canada vs. US waters
- Imperial vs metric system may complicate communication around respective approach distance requirements
- Limitations of monitoring vessel traffic not equipped with an Automatic Identification System (AIS)

Achievements

- Agreement to work together to identify collaborative actions to address acoustic & physical disturbance
- Regular cross-border engagement & input from marine industry, stakeholders, scientists, research-based organizations & Indigenous groups & collaboration amongst these groups
- Information sharing including on health of whales, operational & technical measures, real-time whale detection & avoidance, underwater noise soundscapes, evaluation tools, & future research etc.
- Coordination of communications, education & outreach materials & distribution. Development of [Be Whale Wise Outreach Toolkit](#) for transboundary application & use
- Enhanced communication between Canadian & US enforcement counterparts to share information & facilitate transboundary compliance

Lessons Learned



Lessons Learned

- Different solutions are required for different vessel types & uses given the complexity of the issue & the number of vessels utilizing the Salish Sea
- Adaptive approach allows for adjustments as new science & information becomes available
- Continuous evaluation of measures allows for real-time learning & the implementation of an adaptive approach
- Industry, governments, ports, NGOs & Indigenous communities play an important role in identifying, analyzing & developing potential solutions
- Collaboration is key. Finding solutions to the challenge is not something that one group, country or level of government can tackle on its own





Thank You

Sonja Henneman

Manager, Clean Water Policy, Transport Canada

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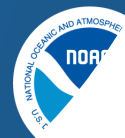
NOAA Programs to Reduce Vessel Impacts

Grace Ferrara
NOAA Fisheries,
West Coast Region

Research



NOAA



Understanding Vessel Impacts

- Collaborative research with DFO and NWFSC
- Studied impacts using surface observations and DTAG analysis

➔ Vessel noise and physical presence impacts behavior

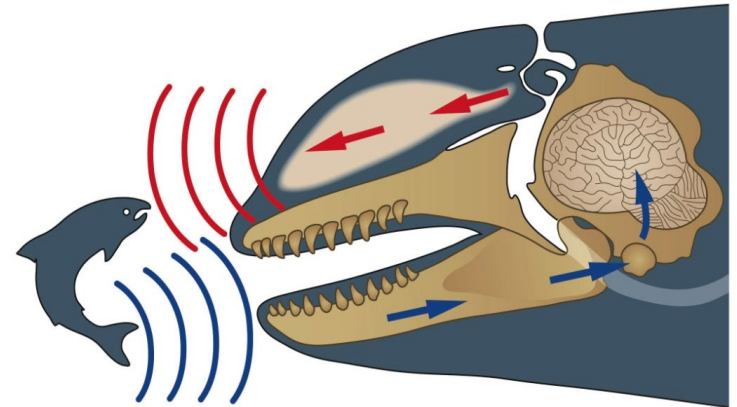


Illustration by Uko Gorter



Understanding Vessel Impacts

- Monitoring vessel behavior
- Mapping soundscapes, passive acoustic monitoring



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Regulations – Implementation and Monitoring

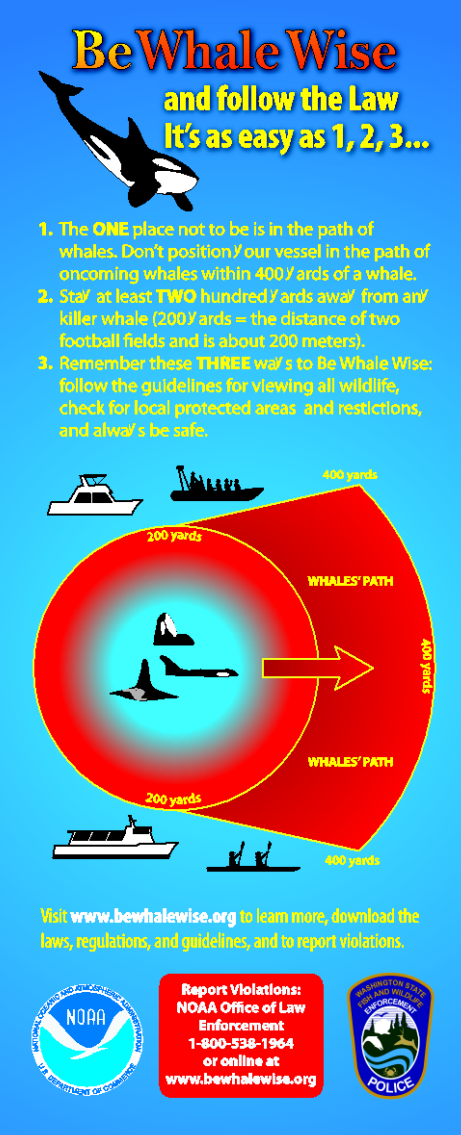


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Vessel Regulations

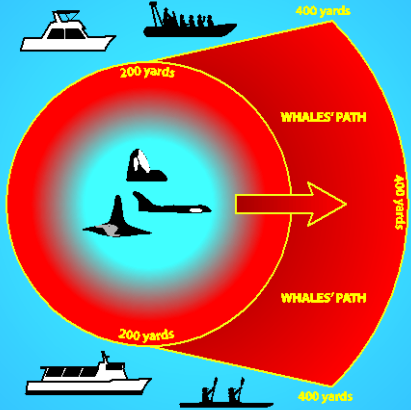
Approach Restrictions: Prohibits vessels from approaching any killer whale in inland waters of WA closer than 200 yards

Parking in the Path Prohibition: Requires vessels to keep clear of the whales' path within 400 yards of the whales



Be Whale Wise
and follow the Law
It's as easy as 1, 2, 3...

1. The **ONE** place not to be is in the path of whales. Don't position your vessel in the path of oncoming whales within 400 yards of a whale.
2. Stay at least **TWO** hundred yards away from any killer whale (200 yards = the distance of two football fields and is about 200 meters).
3. Remember these **THREE** ways to Be Whale Wise: follow the guidelines for viewing all wildlife, check for local protected areas and restrictions, and always be safe.



Visit www.bewhalewise.org to learn more, download the laws, regulations, and guidelines, and to report violations.

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

Report Violations:
NOAA Office of Law Enforcement
1-800-538-1964
or online at
www.bewhalewise.org

WASHINGTON STATE
WATERCRAFT
POLICE

Evaluation of Regulations

Evaluated 5 measures of effectiveness in 2017: Education and outreach, enforcement, compliance, biological effectiveness, and economic impacts.

Used data from Soundwatch and the DTAG studies 5 years before and after implementation

Reducing Disturbance from Vessels to Southern Resident Killer Whales: Assessing the Effectiveness of the 2011 Federal Regulations in Advancing Recovery Goals

Grace A. Ferrara, Teresa M. Mongillo, and Lynne M. Barre



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

NOAA Technical Memorandum NMFSOPR-58
December 2017



Evaluation of Regulations

Conclusions

- Awareness is low
- Compliance is higher in the presence of enforcement and among commercial operators
- Compliance is improving over time
- Received noise levels did not decrease
- No discernable economic impacts



Evaluation of Regulations

Gaps Identified

- Differences across the border made the regulations confusing
- Opportunities for improving education and outreach efforts
- Enforcement effort was lower than desired
- Very little pre-regulation acoustic data

What Now?

- Recent studies support increased protections
- NOAA is developing new regulations BUT- resources are scarce and the regulatory process takes time
- FY22 appropriations have allocated more funding for SRKW research and recovery



Transboundary and Interagency Coordination



Getty



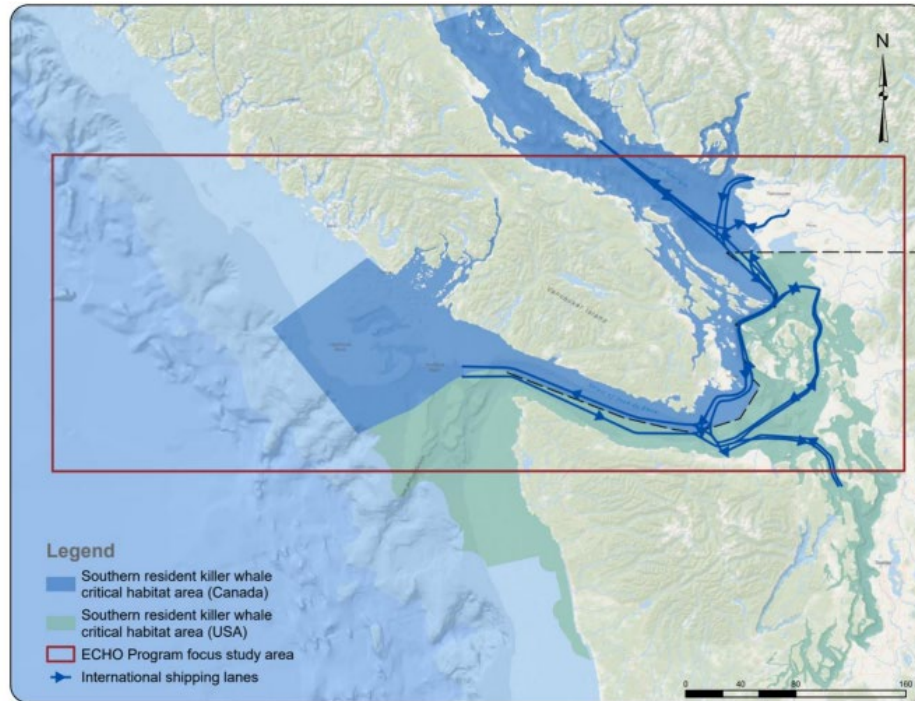
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State and Canadian Measures

- Work with our Canadian colleagues to provide input on interim measures and evaluation metrics
- Served on Interagency Advisory Panel for Washington's Commercial Whale Watch Licensing Program
- Continue to coordinate closely with State and Canadian partners



Reducing Shipping Impacts



ECHO Program Focus Areas (ECHO 2021 Annual Report)



Be Whale Wise Guidelines



100 metres/yards no approach zone for all other marine mammals in US & Canada; and keep 200 metres away from whales, dolphins or porpoises if they are resting or with their calf.



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Education and Outreach



Outreach Partners

- Killer Whale Tales
- The Whale Museum
- Soundwatch
- Seattle Aquarium
- The Whale Trail
- Sighting Networks
- Naturalists
- NGOs



REPORT KILLER WHALE SIGHTINGS
Help us learn where the whales live in coastal waters

1-866-672-2638
1-866-ORCANET

A collaborative effort by:

the
CENTER for WHALE RESEARCH
www.whaleresearch.com
P.O. Box 1577
Friday Harbor, WA 98250

 **Northwest Fisheries Science Center**
Dawn.Noren@noaa.gov
www.nwfsc.noaa.gov/features/kwsightings.cfm



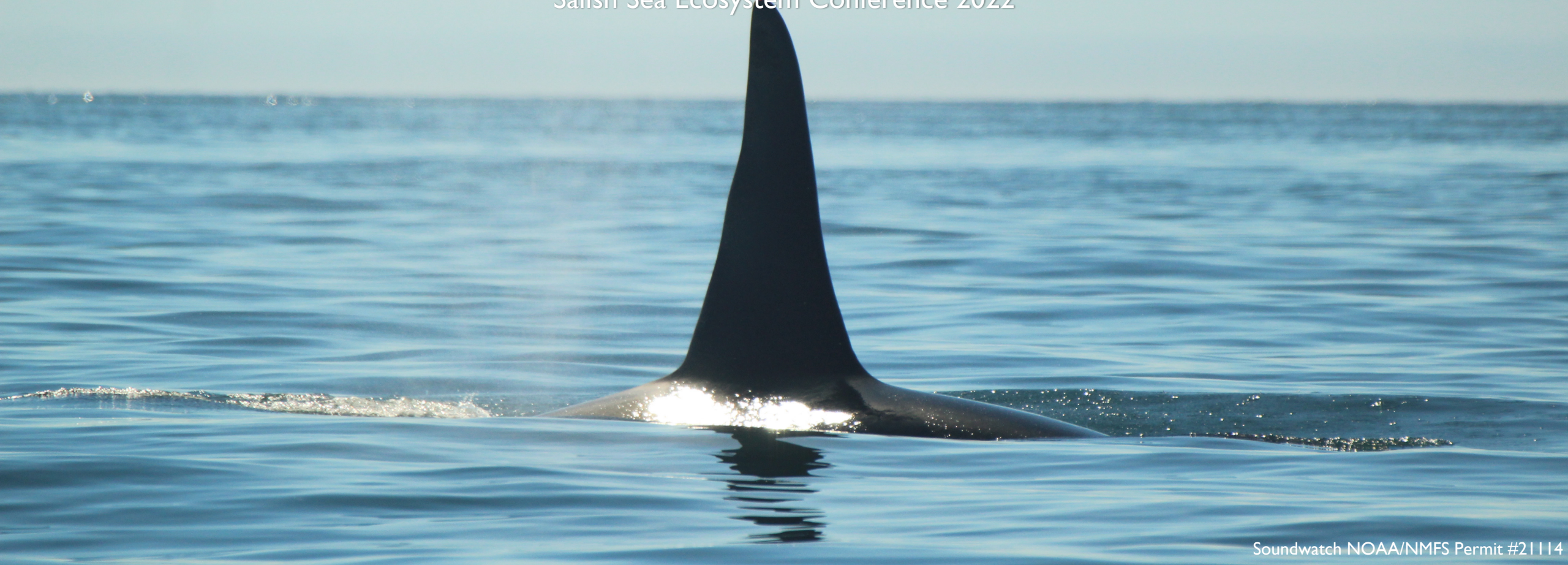
Thank you!



SOUNDWATCH BOATER EDUCATION PROGRAM

Research, Education & Monitoring in the Salish Sea

Salish Sea Ecosystem Conference 2022





WHAT IS SOUNDWATCH?

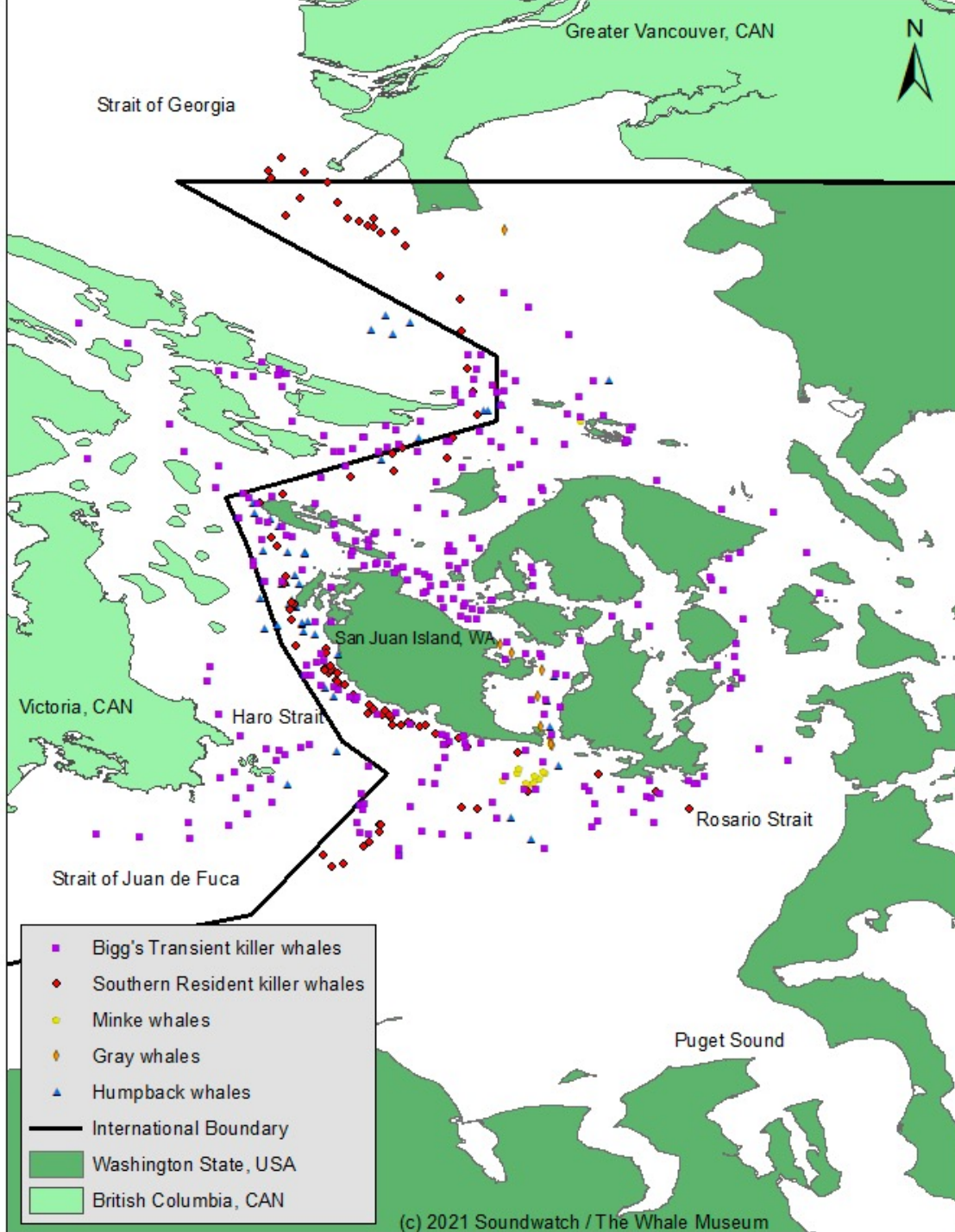
- Established 1993
- Primary Mission: Prevent vessel disturbance to killer whales and other marine life in the Salish Sea



SOUNDWATCH ON-WATER OPERATIONS

- May-September
- Research, monitoring, education & outreach of marine life and vessels
- 13,680 observational & outreach hours in the Salish Sea





RESEARCH AND MONITORING: WHAT WE COLLECT

- Boat Counts
- Incidents
- Rec Contacts
- Whale Behavior

EDUCATION AND OUTREACH

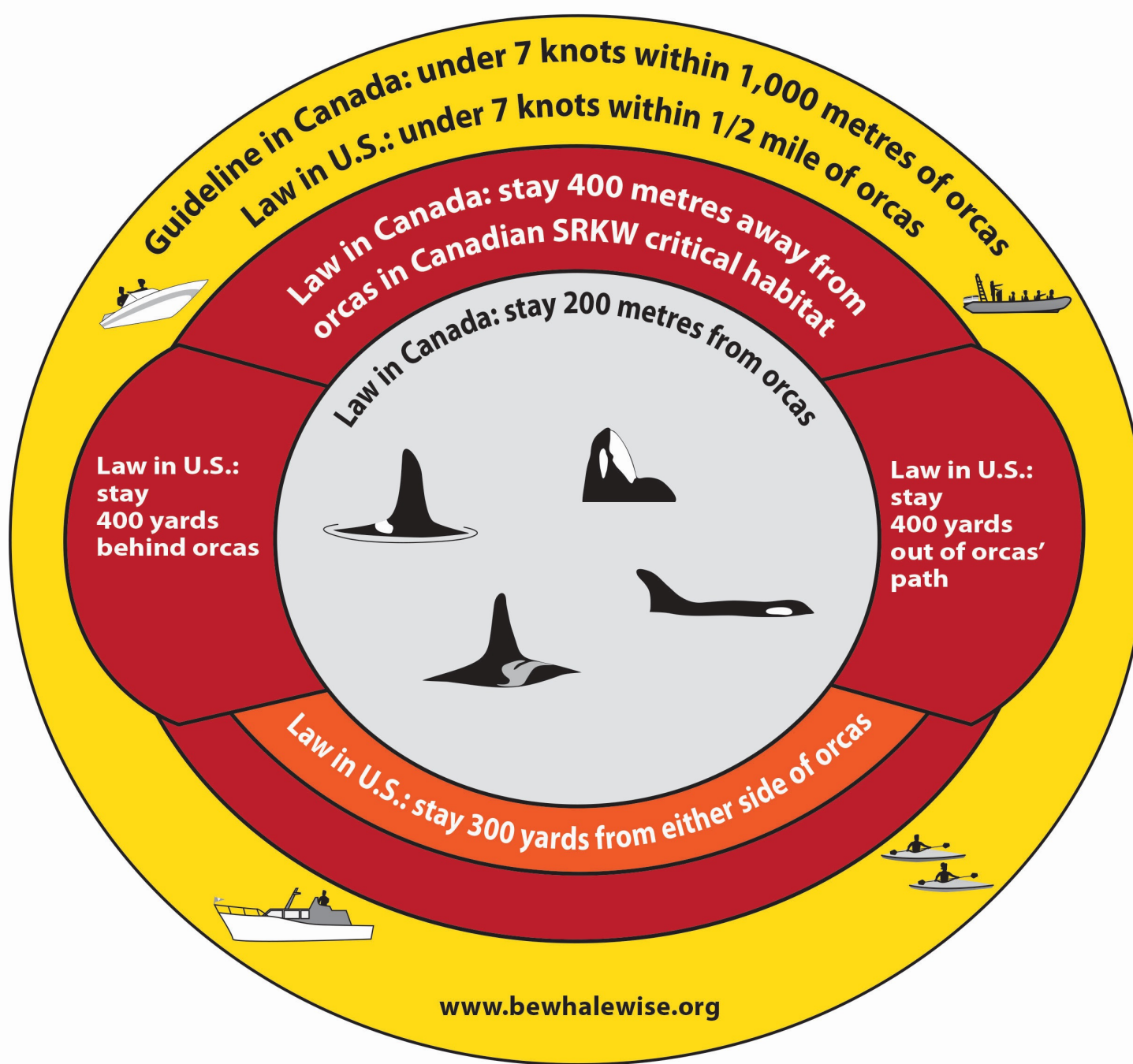
- On-water
 - In-situ education
 - Distribution of materials
- Off-water
 - Dock Talks
 - Training seminars & conferences
 - Boat shows





BE WHALE WISE

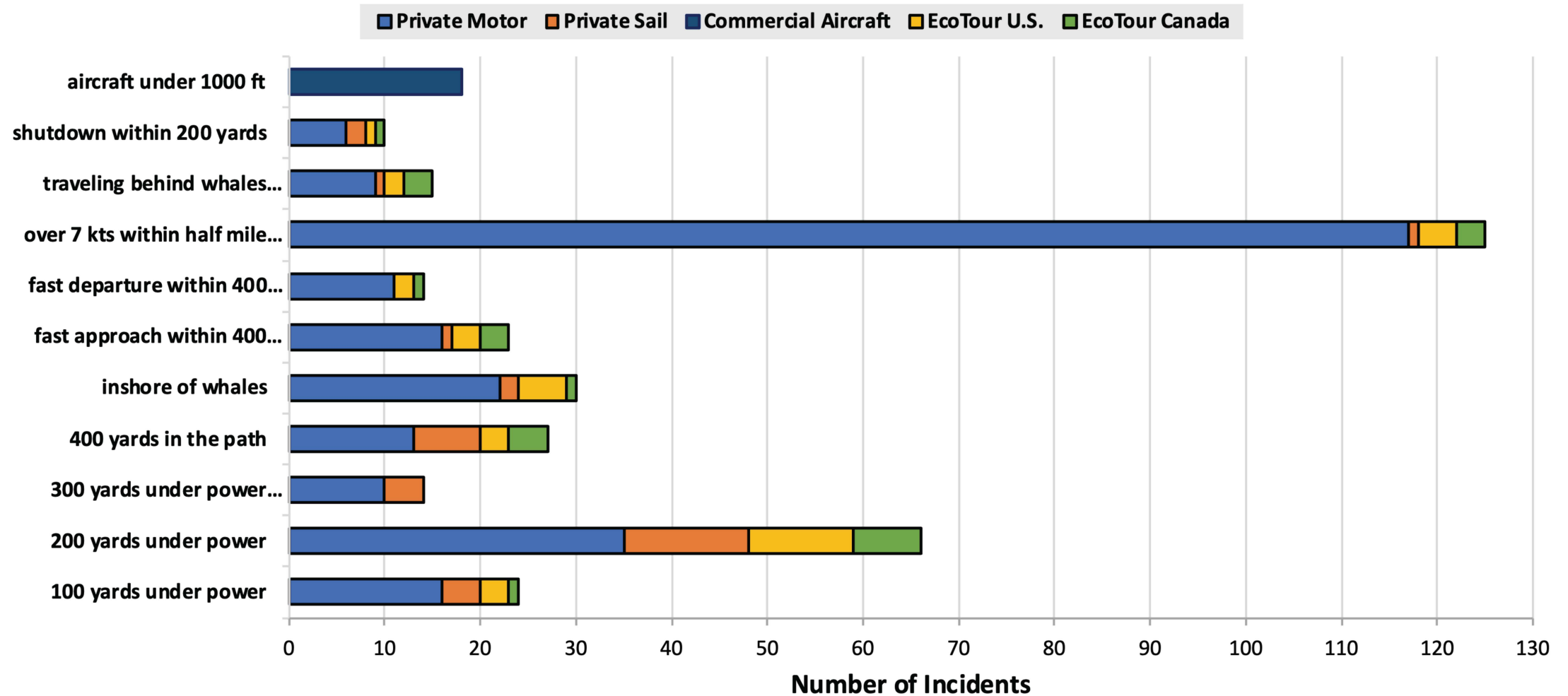
- **Partnership** of governmental agencies, non-profits and other stakeholders in the Salish Sea to **research, implement and educate best vessel practices** to protect the unique and fragile marine resources found in the area.
- **Reduce vessel-related impacts** on marine wildlife **by increasing awareness and compliance with regulations and guidelines.**
- Be Whale Wise promotes the protection of all marine resources with a **focus on the endangered Southern Resident Killer Whale**



100 metres/yards no approach zone for all other marine mammals in US & Canada;
 and keeping 200 metres away from whales, dolphins or porpoises if they are resting or with their calf.


Frequent Vessel Incidents in 2021

(c) 2021 Soundwatch / The Whale Museum

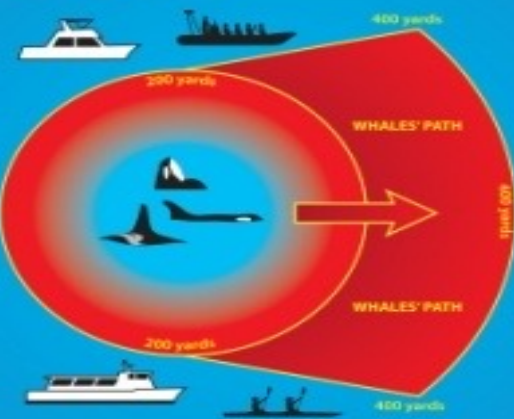


CHALLENGES: LEARNING & UNDERSTANDING REGULATIONS

Be Whale Wise and Follow the Law It's as easy as 1, 2, 3...




- The **ONE** place not to be is in the path of whales. Don't position your vessel in the path of oncoming whales within 400 yards of a whale.
- Stay at least **TWO** hundred yards away from any killer whale (200 yards = the distance of two football fields or about 200 meters).
- Remember these **THREE** ways to Be Whale Wise: follow the guidelines for viewing all wildlife, check for local protected areas and restrictions, and always be safe.




Visit www.bewhalewise.org to learn more, download the laws, regulations, and guidelines, and to report violations.

Report Violations:
NOAA Office for Law Enforcement
1-800-853-1964
or online at www.bewhalewise.org



Be Whale Wise

MARINE WILDLIFE GUIDELINES FOR BOATERS, PADDLERS AND VIEWERS



TRANS-BOUNDRY GUIDELINES FOR THE UNITED STATES AND CANADA APPLIES TO ALL MARINE MAMMALS AND BIRDS.

- DO NOT APPROACH** or position your vessel closer than 200 metres/yards to any killer whale in the U.S. **DO NOT APPROACH** or get closer than 100 metres/yards to any other marine mammals or birds, whether on the water or on land.
- BE CAUTIOUS, COURTEOUS AND QUIET** when around areas of known or suspected marine wildlife activity, in the water or at haul-outs and bird colonies on land. Especially from May to September during breeding, nesting and seal pupping seasons.
- LOOK** in all directions before planning your approach or departure from viewing wildlife.
- SLOW DOWN** reduce speed to less than 7 knots when within 400 metres/yards of the nearest marine mammal to reduce your engine's noise and vessel's wake.
- ALWAYS** approach and depart from the side, moving parallel to the animal's direction of travel. If the animal(s) are approaching you, cautiously move out of the way and avoid abrupt course changes. **DO NOT** approach from the front or from behind.
- If your vessel is not in compliance with the 100 metres/yards approach guideline (#1), place engine in neutral and allow animals to pass.
- PAY ATTENTION** and move away, slowly and cautiously, at the first sign of disturbance or agitation.
- STAY** on the **OFFSHORE** side of the whales when they are traveling close to shore.
- ALWAYS** avoid going through groups of porpoises or dolphins and hold course and reduce speed gradually to discourage bow or stern-riding.
- LIMIT** your viewing time to 30 minutes or less. This will reduce the cumulative impact of all vessels and give consideration to other viewers.
- DO NOT** disturb, swim with, move, feed or touch any marine wildlife. If you are concerned about a potentially sick, stranded animal, or entangled animal, contact your local stranding network.

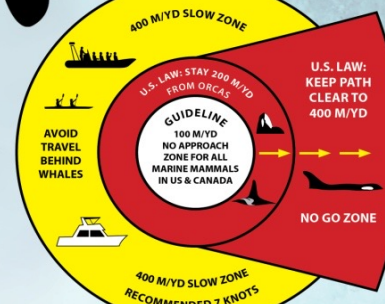
DRONES/UNMANNED AIRCRAFT VEHICLE OR SYSTEM (UAV/UAS) GUIDANCE

It is illegal to harm or disturb wildlife. To prevent disturbances from an unmanned aerial vehicle (UAV/drone) over the marine environment operators must use extreme caution. UAV/drones may cause a disturbance to the animal. Fly during daylight hours, keep your drone in sight and limit your viewing time to reduce the cumulative impact. This is rapidly evolving technology...Know and follow all local regulations.

MARINE PROTECTED AREAS, WILDLIFE REFUGES, ECOLOGICAL RESERVES AND PARKS

- CHECK** your nautical charts for the location of various protected areas.
- ABIDE** by posted restrictions or contact a local authority for further information.

www.bewhalewise.org



IN INLAND WATERS OF WASHINGTON IT IS UNLAWFUL FOR ANY PERSON TO:

- Cause a vessel to approach, in any manner, within 200 yards/meters of any killer whale.
- Position a vessel to be in the path of any killer whale at any point located within 400 yards/meters of the whale.

The regulation applies to all motorized and non-motorized vessels (including kayaks and paddleboards) with exemptions for government vessels conducting official duties, ships in the shipping lanes, permitted research vessels, and vessels lawfully engaged in commercial or treaty Indian fishing that are actively setting, retrieving, or tending fishing gear.

LAWS: Regulations in Canada and the U.S. prohibit the harassment and disturbance of marine mammals. Many species are threatened or endangered and subject to additional protections under the Endangered Species Act (U.S.) and the Species at Risk Act (CANADA).

TO REPORT A MARINE MAMMAL DISTURBANCE OR HARASSMENT

CANADA/B.C. GULF ISLANDS: To report injured, distressed, dead, stranded or entangled marine mammals or sea turtles:
Fisheries & Oceans Canada/B.C. Marine Mammal Incident
24/7 Hotline: 1-800-465-4336


US/INLAND WA WATERS: To report a marine mammal harassment, entanglement or stranding:
NOAA Fisheries, Office for Law Enforcement: 1-800-853-1964
Entanglements: 1-877-707-9425 / Strandings: 1-866-767-6114
Download the dolphin and whale 911 app

DO YOU SEE A WHALE?

TO REPORT A MARINE MAMMAL & SEA TURTLE SIGHTING:
CANADA/B.C. GULF ISLANDS: B.C. Cetacean Sightings Network
1-866-472-9663 or sightings@viva.noaa.gov
WhaleReport app available on iTunes and Google Play

US/INLAND WA WATERS: The Whale Museum Hotline (WA):
hotline@whalemuseum.org or 1-800-562-8832


Orcas Network (WA): orcaonetw.org or 1-866-672-2638



Be Whale Wise

Marine Wildlife Laws & Guidelines for Boaters, Paddlers and Viewers

(Revised 2021)
www.bewhalewise.org



REGULATIONS FOR KILLER WHALES IN US AND CANADIAN WATERS

What do the regulations require (except for specific exemptions)?

In the U.S., it is unlawful to:

- Cause a vessel to approach, in any manner, within 300 yards (274.3 meters) of Southern Resident killer whales (SRKW) and 200 yards from transients.
- Position a vessel to be in the path of or behind any killer whale at any point located within 400 yards (365.8 metres) of the whale.
- Travel faster than 7 knots within 1/2 mile of any killer whale or fail to disengage engine within 300 yards.

In Canada (British Columbia):

- Vessels are required to maintain a minimum approach distance of 400 metres from all killer whales in all southern BC coastal waters between Campbell River and just north of Ucluelet; 200 metres (218.7 yards) from all killer whales in B.C. waters year-round.
- Avoid boating or fishing in Interim Sanctuary Zones.

Who do the regulations apply to? All motorized and non-motorized vessels (including kayaks and paddleboards), with exceptions to maintain safe navigation and for certain types of vessels.

Additional information, specific details on exceptions and more can be found on the website: <http://bewhalewise.org>

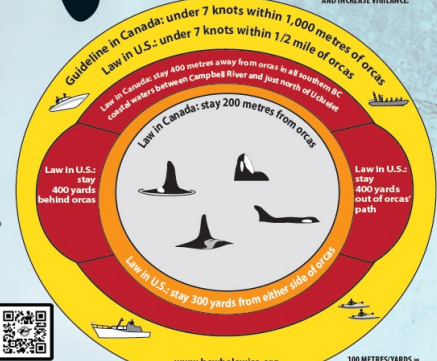
TRANS-BOUNDARY LAWS AND GUIDELINES FOR THE U.S. AND CANADA APPLY TO ALL MARINE MAMMALS AND BIRDS

LAWS:

- DO NOT** disturb, swim with, move, feed or touch any marine wildlife. If you are concerned about a potentially sick, stranded or entangled animal, contact your local stranding or response network.
- In Canada, keep 100 metres away from all whales, dolphins and porpoises or 200 metres away if they are resting or with a calf and abide by specific approach distances for killer whales.

GUIDELINES:

- DO NOT APPROACH** or get closer than 100 metres/yards to any other marine mammals or birds.
- BE CAUTIOUS, COURTEOUS AND QUIET** around areas of known or suspected marine wildlife activity, in the water or at haul-outs and bird colonies. When safe to do so, turn off fish finders and echo sounders.
- LOOK** in all directions before planning your approach or departure from viewing wildlife. Be vigilant for signs of marine mammal presence. Whales may change direction or surface unpredictably.
- SLOW DOWN.** Reduce speed to less than 7 knots when within a half mile or 1,000 metres of the nearest marine mammal to reduce your engine's noise and vessel's wake.
- ALWAYS** approach and depart from the side, moving parallel to the animal's direction of travel. If the animal(s) are approaching you, cautiously move out of the way and avoid abrupt course changes. **DO NOT** approach from the front or from behind.
- PLACE ENGINE IN NEUTRAL OR SHUTDOWN** and allow animals to pass if your vessel is not in compliance with regulations.
- PAY ATTENTION** and move away, slowly and cautiously, at the first sign of disturbance or agitation.
- STAY** on the **OFFSHORE** side of whales as they are traveling close to shore.
- ALWAYS** avoid going through groups of porpoises or dolphins. Hold course and reduce speed gradually to discourage bow or stern-riding.
- LIMIT** your viewing time to 30 minutes or less. Consider number of vessels present to reduce the cumulative impact of all vessels and give consideration to other viewers.



Keep 200 metres away from whales, dolphins or porpoises if they are resting or with their calf, and 100 metres/yards no approach zone to any other marine mammals in U.S. & Canada.

CANADA

To report marine mammal disturbance, or injured, distressed, dead, stranded or entangled marine mammals or sea turtles:
Fisheries & Oceans Canada/B.C. Marine Mammal Incident Reporting 24/7 Hot-line: 1-800-465-4336
1-866-472-9663
WhaleReport app available on iTunes and Google Play

NEED MORE INFORMATION?

Fisheries & Oceans Canada:
www.cmec.ca/en/fisheries-oceans.html
Transport Canada TCS/SRW-ERS/TCeP/pc.ca
Robson Blight (Michael Bigg) Ecological Reserve:
www.mv.gov.bc.ca/bcparks/eco_reserve/whsrb_01.html
Straitwatch: www.straitwatch.org or 1-250-590-7723
North Island Marine Mammal Stewardship Association
www.nimmsa.org
MERS www.seabirdslow.org

UNITED STATES

To report a marine mammal harassment, entanglement or stranding:
NOAA Fisheries, Office for Law Enforcement
1-800-853-1964
Entanglements: 1-877-707-9425
Strandings: 1-866-767-6114
Download the Dolphin and Whale 911 app


REPORT MARINE MAMMAL SIGHTINGS:

The Whale Museum Hotline (U.S. and Canada):
hotline@whalemuseum.org or 1-800-562-8832

Orcas Network (WA State):
orcaonetw.org or 1-866-672-2638

NEED MORE INFORMATION?

Soundwatch Boater Education Program
www.whalemuseum.org or 1-360-378-4710 ext. 33
NOAA Fisheries, West Coast Region:
<http://www.westcoast.fisheries.noaa.gov>



CHALLENGES: STATE, FEDERAL, AND INTERNATIONAL

- **State vs Federal**

- **U. S. Federal regulation = 200 yards** from all killer whales
- **Washington State regulation = 300/400 yards** from SRKW

- **International**

- **7 knot speed limit** = regulation in the US, and a guideline in Canada
- **Drone use** = regulations in Canada, but guidelines in the US
- **400m Approach Distance** = In southern BC waters

CHALLENGES: COMPLYING WITH REGULATIONS

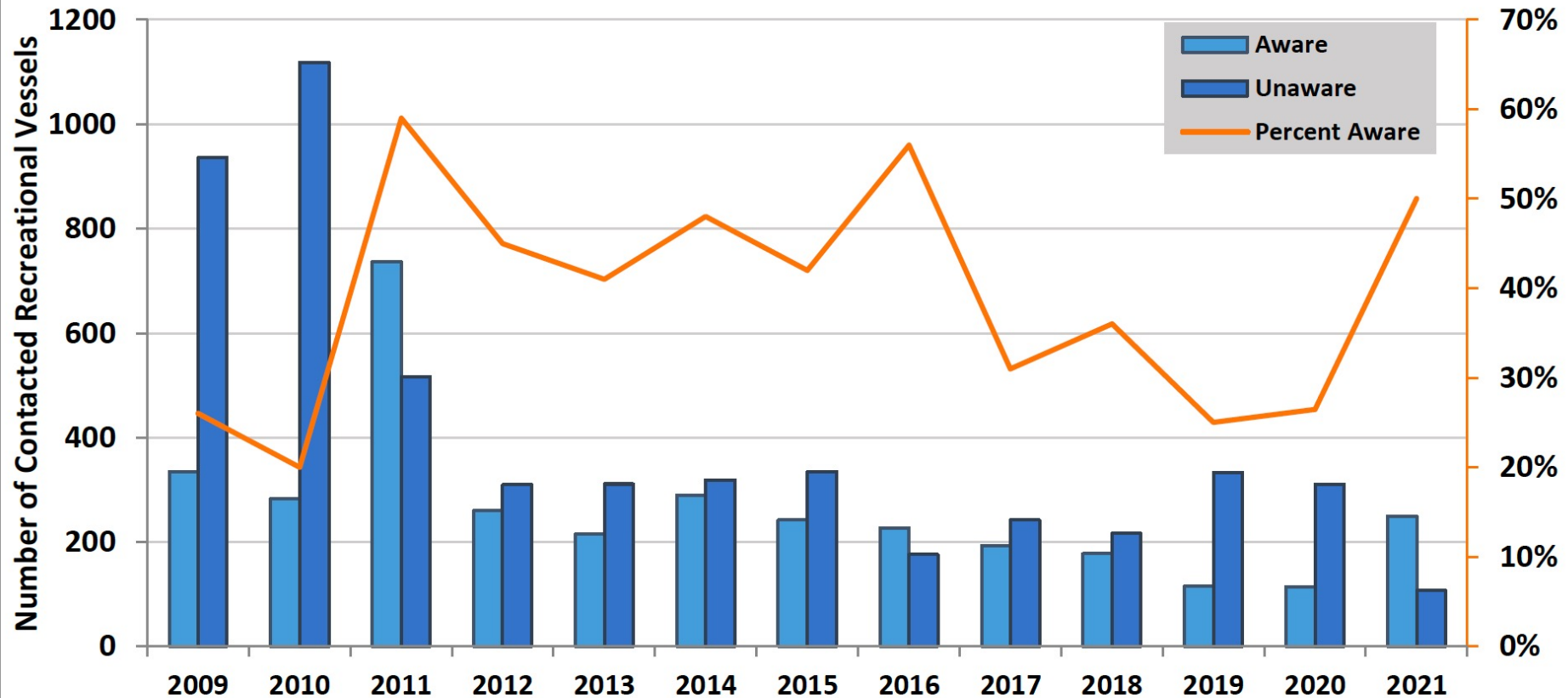
- **Determining distances on the water**
 - By eye
 - Laser rangefinder
 - RADAR



MEASURING EFFECTIVENESS: AWARENESS

Trends in Awareness of Guidelines Among Contacted Recreational Vessels (2009 - 2021)

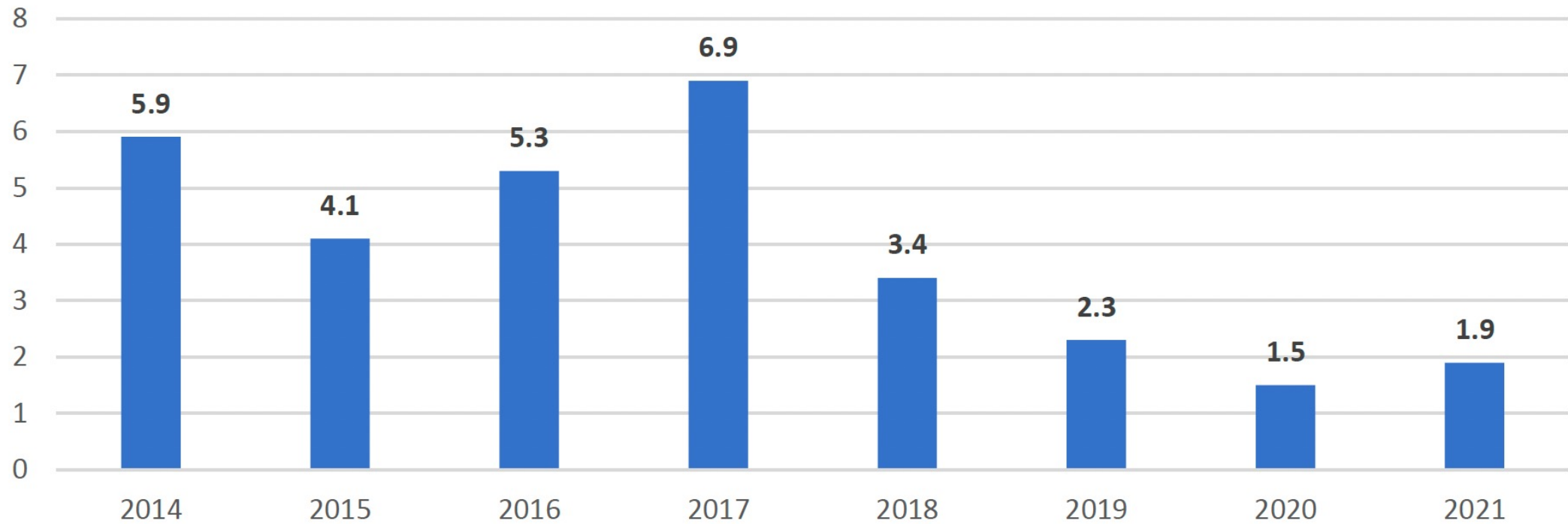
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MEASURING EFFECTIVENESS: RATE OF INCIDENTS

Vessel Incident Rates (May - September 2014 - 2021)

(c) 2021 Soundwatch / The Whale Museum



LOOKING AHEAD

- Transboundary collaboration
- Expand education and outreach
- Identify and reach target audiences



THANK YOU



✉ soundwatch@whalemuseum.org
📷 @soundwatch_twm



Who We Are

Cetus is a non-profit Conservation and Research Society that focuses on protecting Cetaceans in the Salish Sea.





What We Do

Reduce the impact of vessel and acoustic disturbance to whales.

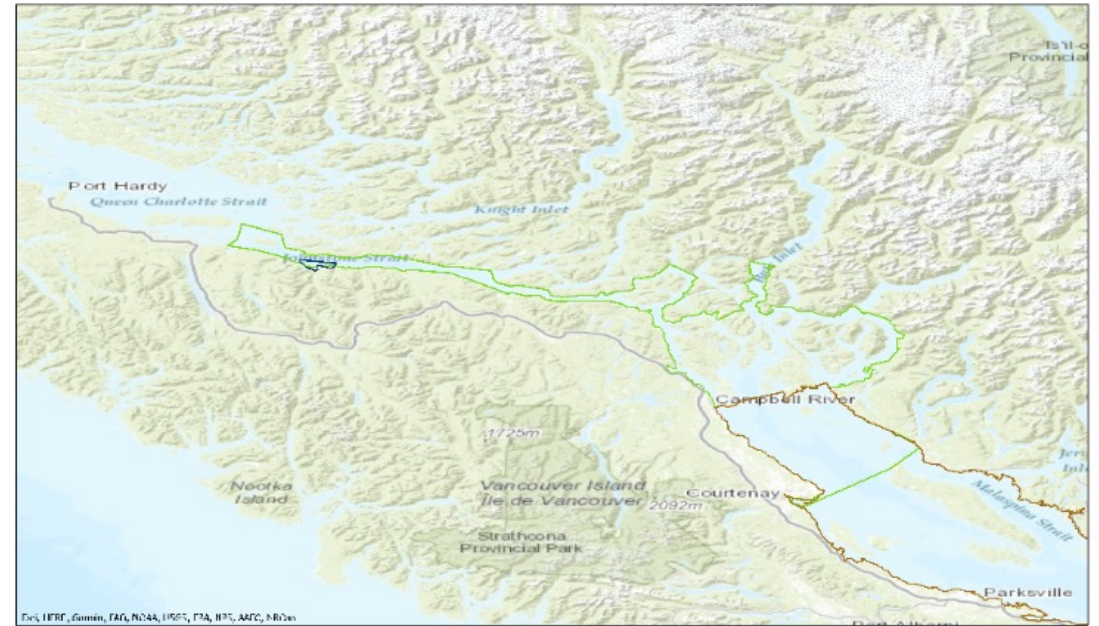
- Monitor recreational and whale-watching vessels.
- We attempt to prevent disruption and harassment to animals first and directly intervene boaters when necessary.
- Gather data on vessel and whale interactions to help inform government to create effective whale protection policies.
- Educate boaters on the guidelines and laws



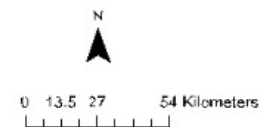
- Cetus Range
- Sanctuary Zones
- Critical Habitat



Analysis prepared for
 Delta Research and Conservation Society
 December 2020
 Spatial Reference
 NAD 83 UTM 18Q UTM
 Datum: 1983
 Units: Metric



- Range
- North
- Warden
- Critical Habitat



Analysis prepared for
 Delta Research and Conservation Society
 December 2020
 Spatial Reference
 NAD 83 UTM 18Q UTM
 Datum: 1983
 Units: Metric

Figure 1: Range of Straitwatch South including SRKW exclusion zones and critical habitat

Figure 2: Range of Straitwatch Quadra including Warden Program Range and SRKW designed 400m habitat range

What are the challenges?

- Communicating all BWWG and MMR during a vessel contact.
- Resentment from boaters
- Limited enforcement presence.



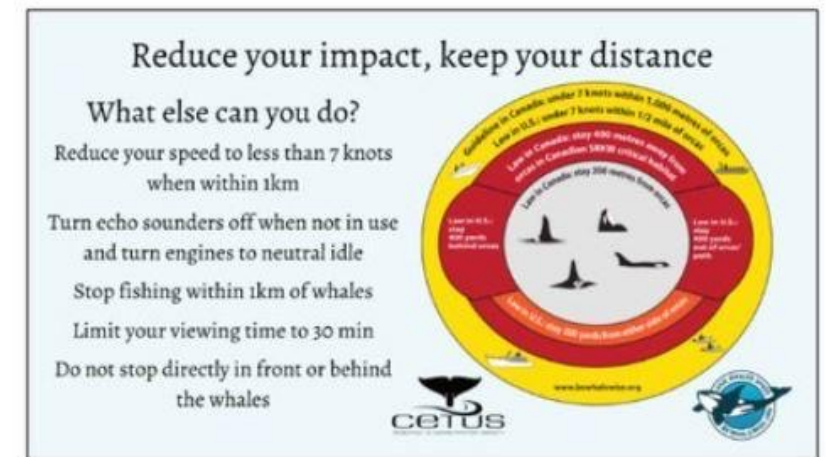
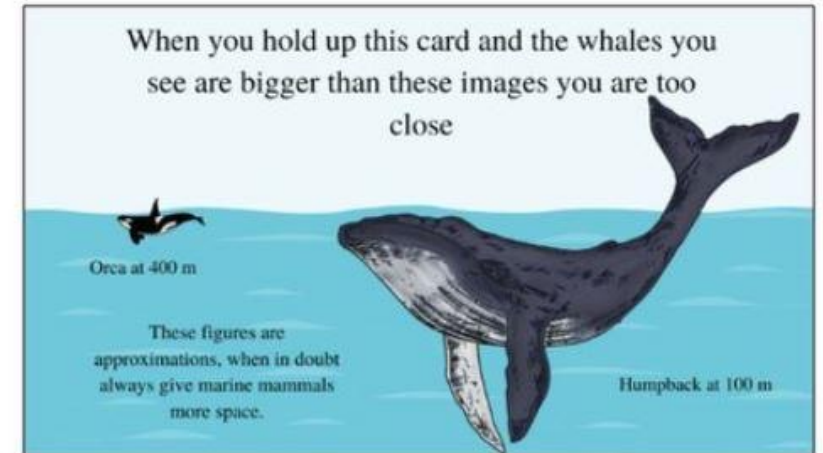
Where are the gaps?

- The public does not know how to judge distance on the water
- Accurately measuring boater awareness
- No ticketing system to motivate boaters
- No temporary protection measures in Canada



What are the successes, so far?

- Distance increase to 400m for Orcas
- Humpback population rebound
- Targeted outreach materials
- Ecotour vessels reduced viewing time with SRKW in Canada and US
- Reduced # of ecotour vessels on scene with SRKW
- Increasingly more positive response from fisherman



How does your program measure its effectiveness?

- Comparing data from previous years and to similar organizations.
- We want boater awareness to increase and incidents to decrease



How do we adapt to new science and emerging threats?

- We reference recent and relevant studies when educating the public
- We tackle new threats if we have the capacity to do so
- We can distribute additional educational materials on emerging threats through our existing network



What is the biggest gap or area of need for transboundary alignment and how would you propose to address it?

-
- Regulations are confusing for privates to follow due to inconsistency between Canada and US
 - Privates do not know how to identify whales
 - Unify regulations transboundry
 - Transboundry enforcement efforts





Thank you

Contact Information

Straitwatch South Crew

Seasonal contact (June– September)

Boat phone: (250) 590 – 7723

Emily Perkovic

Seasonal Coordinator (May – September)

Email: Emily.perkovic@cetusociety.org