



# **Staff Briefing: Orca Task Force Recommendation #22, Underwater Noise Reduction**

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# Overview

## Orca Task Force Recommendation #22

### Briefing Overview

- Orca Task Force Recommendation #22, “Underwater Noise Reduction”
  - ECHO program
  - Acoustic monitoring network
  - Whale Report Alert System
- **Stakeholder workshop**
- **Schedule and next steps**
- **No action is being requested at this time**



# KILLER WHALE / ORCA

*Orcinus orca*



Average Adult Length: 6-8 m / 20-26 ft



THE NORTHWEST  
SEAPORT ALLIANCE

# Background

## Orca Task Force Recommendation #22

### **Southern Resident Orca Task Force:**

### ***Report and Recommendations (November 2018)***

- Includes 36 recommendations in three categories:
  - Prey availability (Chinook salmon)
  - Contaminants in the food chain
  - Underwater noise
- Orca Task Force to continue to meet through 2019-2020
  - Vessel Working Group
  - Steering Committee



# Background

## Orca Task Force Recommendation #22

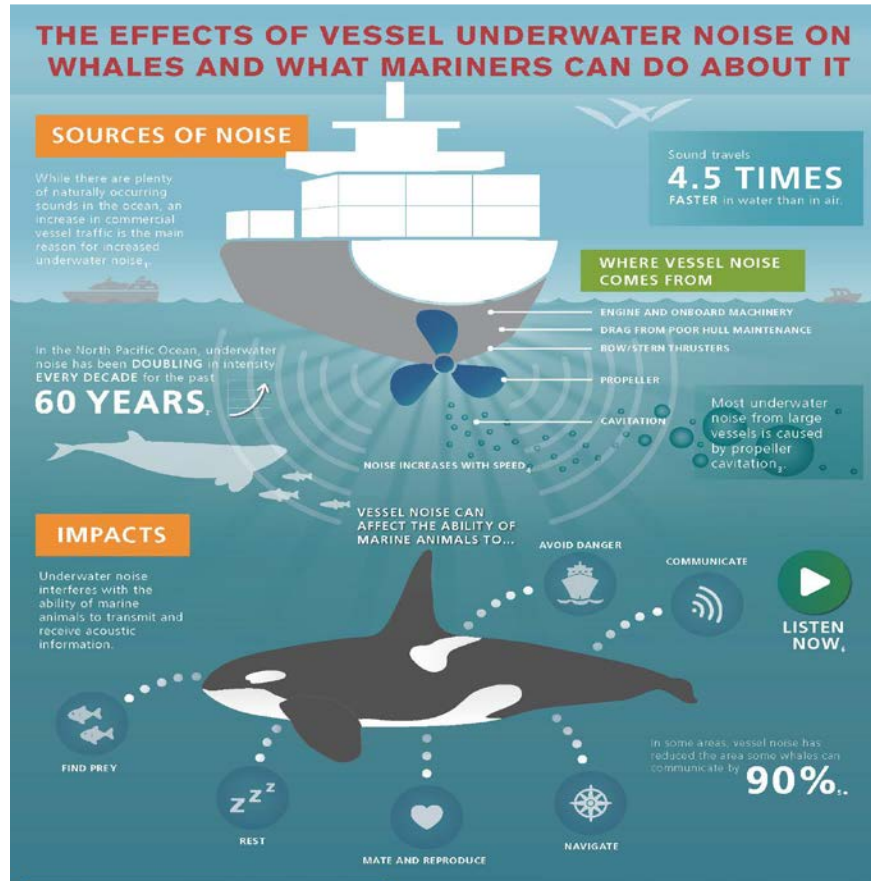
### **Scientific conclusions regarding underwater noise**

- Orcas use sonar to hunt, communicate, navigate, and avoid danger
- Low frequency underwater noise “masks” orca’s sonar, causing:
  - behavioral changes
  - range displacement
  - communication interference
  - decreased foraging efficiency (20-23% or 4.9-5.5 hours/day)
  - hearing damage
  - physiological stress
- Propeller cavitation from large vessels is largest source of low-frequency noise in Puget Sound
- <https://projects.seattletimes.com/2019/hostile-waters-orcas-noise/>



# Background

## Orca Task Force Recommendation #22



<https://www.portvancouver.com/2017-echo-program/>

# Background

## Orca Task Force Recommendation #22

### Recommendation #22: Implement shipping noise-reduction initiatives and monitoring programs

1. Create a program similar to *Enhancing Cetacean Habitat and Observation* program (ECHO, Vancouver-Fraser Port Authority)

- Characterizing types of noise
- Researching ways to quiet ships
- Installing acoustic monitoring stations
- Speed and shipping lane studies
- Large commercial vessel focus
- Annual budget for ECHO is \$1-2m and 2 full time employees



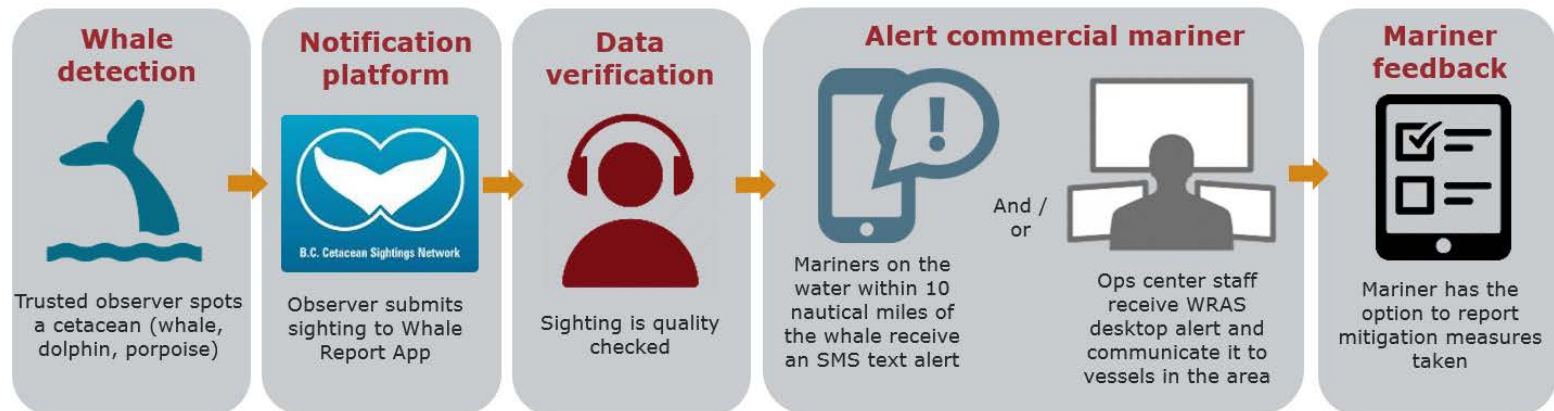
# Background

## Orca Task Force Recommendation #22

### Recommendation #22 (continued)

#### 2. Share data with Whale Report Alert System

- Sightings networks
- User interface (cell-based apps, Facebook, websites, phone calls)
- Sends alerts out to commercial mariners



# Background

## Orca Task Force Recommendation #22

### Recommendation #22 (continued)

#### 3. Complete the underwater acoustic monitoring network

- Detect whale vocalizations
- Measures/records vessel noise
- Can be used with AIS data
- Part of sightings network
- Supports whale alert system



# Background

## Orca Task Force Recommendation #22

### Recommendation #22 (continued)

- Minority report letter from Port of Anacortes Commissioner Kathy Pittis requested change to implementation guidance:
  - Substitute Puget Sound Ports for WPPA
  - Convene a stakeholder meeting to discuss an ECHO-like program in Washington waters
- Meeting will be structured as a “workshop” and co-convened with NOAA, WSF and Puget Sound Partnership
- Focus on large commercial vessels (ferries, cruise, container, fishing, tugs)



# Workshop

## Orca Task Force Recommendation #22

### Workshop Planning Team

- Port Team: NWSA, Port of Seattle, Port of Tacoma
- Kevin Bartoy, Washington State Ferries
- Lynne Barre, NOAA
- Orla Robinson, Vancouver-Fraser Port Authority (ECHO program)
- Todd Hass, Puget Sound Partnership
- Kate Snider, Floyd|Snider

# Workshop

## Orca Task Force Recommendation #22

### Workshop Objectives

- Familiarize attendees with the ECHO program
- Discuss unique conditions in Washington waters
  - Large commercial vessel use patterns and projections
  - Geographic and seasonal distribution of orcas
  - Orca behavior and biology
  - Gaps in the acoustic monitoring network
  - Orca habitat/environment



# Workshop

## Orca Task Force Recommendation #22

### Workshop Objectives (continued)

- Define work for ECHO-like program in Washington waters
  - Acoustic monitoring network
  - Whale Report Alert System and sightings network
  - Vessel noise research and innovation
  - TBD
- Discuss program roles for primary entities
- Identify next steps/schedule with stakeholders and tribes
- Anticipated cost of co-convening workshop ~ \$50k



# Workshop

## Orca Task Force Recommendation #22

### Workshop Participants

- Individuals from ports, industry, NGOs, tribes, agencies & academia who are knowledgeable about:
  - Underwater noise effects on Southern Resident orcas
  - Port of Vancouver's ECHO program
  - Orca Task Force and Vessel Working Group process
  - Issues specific to Washington Waters
  - A range of issues related to large commercial vessels



# Workshop

## Orca Task Force Recommendation #22

### Workshop Participant List

- Orca Task Force Vessel Working Group members
- Key representatives from POS, POT and NWSA
- Western Washington treaty tribes

Others chosen based on interviews with:

- Orla Robinson (Port of Vancouver, ECHO Program)
- Commissioner Fred Felleman (Port of Seattle)
- Todd Hass (Puget Sound Partnership)
- Shandra O'Haleck (NOAA affiliate)
- Kevin Bartoy (Washington State Ferries)
- Lynne Barre (NOAA)

# Workshop

## Orca Task Force Recommendation #22

### **Roles for NWSA/POS/POT in ECHO-like Program**

- Current commitment only involves co-convening workshop
- Future commitment - technical support, facilitation, leadership role?
- Coordinating with other primary entities:
  - Puget Sound Partnership
  - Washington State Ferries
  - Marine Exchange of Puget Sound
  - Washington Maritime Blue
  - Pacific Merchant Shipping Association
  - NOAA
- **Your thoughts and input?**



# Next Steps

## Orca Task Force Recommendation #22

Date	Milestone	Deliverables
June – September 2019	Planning team meetings	<ul style="list-style-type: none"> <li>• Final invite list, Invitations</li> <li>• Final event plan/agenda</li> <li>• Review speaker presentations</li> <li>• Review RSVPs, Updates</li> </ul>
July 2, 2019	Managing Members briefing	<ul style="list-style-type: none"> <li>• Draft event plan/agenda</li> <li>• Updates</li> </ul>
Week of August 12, 2019	Leadership briefing	<ul style="list-style-type: none"> <li>• Final event plan/agenda</li> <li>• Updates</li> </ul>
Week of September 17, 2019	Final leadership briefing	<ul style="list-style-type: none"> <li>• Event overview</li> <li>• Looking ahead</li> </ul>
October 3, 2019	Co-convene workshop w/ NOAA, Washington State Ferries, and Puget Sound Partnership	

