

# Southern Resident Killer Whale Executive Order WSF Strategy Report May 31, 2018

Executive Order Task
Develop strategies for quieting state ferries in areas most important to Southern Residents.

<b>Completion Date</b>	May 31, 2018		
<b>Lead Agency</b>	Washington State Department of Transportation (WSDOT)		
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<b>Supporting Agencies, if applicable</b>			

Outcomes/Progress Narrative
<p>Governor Inslee’s Executive Order 18-02, signed on March 14, 2018, required the Washington State Department of Transportation (WSDOT) to develop strategies for quieting state ferries in areas most important to Southern Resident Killer Whales (SRKWs) by May 31, 2018. Washington State Ferries (WSF) has been aware of and working toward mitigating the impacts of noise on marine mammals, including SRKWs, in its area of service for more than a decade. Although the previous focus of this work has been on noise generated from shoreside infrastructure projects, most notably pile driving, within the last few years, WSF has made efforts to address noise generated by the ferry fleet. Funding and the need for additional research have been major challenges to these efforts.</p> <p>In response to Governor Inslee’s Executive Order, this document outlines the current practices, near term actions, and longer term plans that WSF is undertaking to address threats to SRKWs, including the threat of vessel noise. As a whole, these efforts form a strategy for WSF to contribute to the conservation and recovery of SRKWs and meet WSF’s Environmental Program’s vision to “leave it better.”</p> <p><u>Current Practices</u></p> <ul style="list-style-type: none"> <li>• Vessel Noise             <ul style="list-style-type: none"> <li>○ Since 2015, WSF has been a member of the Port of Vancouver’s Enhancing Cetacean Habitat and Observation (ECHO) program, and has contributed to the collaborative development of research and actions to address transboundary vessel noise impacts in the Salish Sea.</li> <li>○ In August of 2017, WSF participated in ECHO’s slow down trial for vessels in Haro Strait with WSF crossings to Sidney, BC, reducing speed from 16 knots to 11 knots through the Haro Strait shipping lanes.</li> <li>○ In April of 2018, WSF issued a Fleet Advisory advising captains of optimum vessel speeds, primarily related to reducing fuel consumption in response to the Governor’s EO 18-01, with a potential co-benefit of lessening noise generated by the vessels.</li> </ul> </li> </ul>

- Shoreside Infrastructure Noise
  - All WSF pile driving includes trained Marine Mammal Observers (MMOs) who monitor for the presence of marine mammals, including SRKWs, within the projected zone of influence of noise generated, and shutdown pile driving if necessary.
  - WSF receives Incidental Harassment Authorization (IHA) from NOAA NMFS for all pile driving work that may affect marine mammals.
  - WSF requires all impact pile driving to use a bubble curtain to reduce the source sound level.
- Water Quality
  - Since 2008, WSF has removed more than 16,000 tons of creosote timber from the Salish Sea.
- Research
  - WSF, in collaboration with the US Navy and the University of Washington, has funded the development of an Underwater Sound Level Meter (USLM) that provides real-time data on in-water noise.
  - WSF has developed a database that leverages an off-the-shelf GIS application to document marine mammal sightings by MMOs during projects.
  - WSF has funded and undertaken research to develop “quiet pile” technology to reduce noise generated by pile driving.
- Policy
  - WSF does not request harassment authorization (“take”) for SRKWs and shuts down all pile driving work when SRKWs are nearing the projected zone of influence of noise generated.
  - WSF has integrated NOAA’s “Be Whale Wise” guidelines into its Safety Management System (SMS) as operating procedure for all vessels. Unless safety dictates otherwise, vessels avoid getting closer than 200 yards from orcas, do not position vessel within 400 yards of oncoming whales, and reduce speed to less than seven knots and avoid course changes within 400 yards of whales.
  - WSF requires vessel crews to report marine mammal sightings to Orca Network and strandings to the Marine Mammal Stranding Network as part of its operating procedures in its SMS.
- Education / Outreach
  - WSF collaborates with Orca Network and the Whale Museum to place naturalists aboard vessels during high season.
  - WSF collaborates with Orca Network, the Whale Trail, and other organizations to place educational materials on vessels and at terminals.

#### Near Term Actions

- Vessel Noise
  - Unless safety or schedule dictate otherwise, WSF will slow its vessels through the Haro Strait shipping channel from 16 knots to 11 knots during its two daily crossings to Sidney, BC beginning with summer schedule on June 24, 2018. From August 2018 to January 2019, WSF will participate in ECHO’s trial of the Whale Report Alert System and use the notifications to indicate when vessels should slow to 11 knots through the Haro Strait shipping channel.
  - WSF is undertaking analysis of existing data to determine if such data can be used to develop baseline noise levels for the entire fleet. (Pilot project on two vessel classes to be completed by July 2018).
  - WSF will seek funding from the Federal Highway Administration (FHWA), NOAA, and others to expand noise analysis pilot project to all existing data and collect additional new data to fill data gaps to develop baseline noise levels for the entire fleet. (Grant opportunities due in Fall 2018 with award likely in 2019).

- Following completion of baseline noise analysis, WSF will identify and implement mitigation measures, both operational and engineered, to address on-vessel sources of frequencies of concern.
- By January 2019, WSF will begin a program to minimize trim on all vessels through enhanced loading procedures, primarily related to reducing fuel consumption in response to the Governor's EO 18-01, with a potential co-benefit of reducing noise generated by pressure differential and cavitation.
- In January of 2019, WSF will incorporate a marine mammal training program as part of its mate orientation.
- WSF will participate as members of the Governor's EO 18-02 Task Force and Vessels Work Group to develop additional measures and support for actions that may benefit SRKWs.

#### Longer Term Plans

- Vessel Noise
  - WSF will include vessel noise reduction as a key criteria for future vessel design-build contracts.
  - WSF will pursue electrification of Jumbo Mark IIs, primarily related to reducing fuel consumption in response to the Governor's EO 18-01, with a potential co-benefit of noise reduction.
  - As part of a current long range planning effort, WSF will investigate an electric hybrid ferry to replace the MV Elwha as one of two vessels in the fleet meeting SOLAS standards for the crossing to Sidney, BC.
- Shoreside Infrastructure Noise
  - WSF will continue negotiations with NOAA NMFS and USFWS for a programmatic Endangered Species Act (ESA) consultation for pile driving that includes a conservation program addressing SRKWs and salmon responsive to the established recovery plans for those species.
  - WSF will pursue a Letter of Authorization (LOA) from NOAA NMFS covering incidental harassment of marine mammals by pile driving noise.
- Water Quality
  - WSF will continue to remove creosote from its assets with 8,000 tons planned for removal by 2020.
- Research
  - WSF will seek funding to study baseline stormwater quality at its facilities.
- Policy
  - WSF will develop additional agency policy addressing SRKW conservation and recovery efforts as needs are identified.
- Education / Outreach
  - WSF will pursue grant and internship opportunities with Orca Network, the Whale Museum, the Whale Trail, and others to increase naturalist and other education programs aboard vessels.