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Washington State Ferries: update on ferry vessel noise in the Salish Sea

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Salish Sea Ferries
Vessel Noise Update
Washington State and British Columbia Ferries

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WSF/BCF

- **WSF**
  - 22 vessels
  - 20 routes
  - 19 terminals

- **BCF**
  - 35 vessels
  - 26 routes
  - 47 terminals
Thousands of Sailings/Year

- 57 Ferries = 70% of the Salish Sea Noise Budget
- Average noise level of 185 dB
WSF Vessel Noise Studies

- **Data Analysis/Collection:**
  - **Phase I** - Analyze existing noise data for 2 vessel classes.
  - **Phase II** – Collect and analyze remaining 5 vessels classes.
WA Governors Executive Orders

• 18-02 Southern Resident Killer Whale Recovery and Task Force
  – WSF directed to address ferry vessel noise.
• 14-04 Washington Carbon Pollution Reduction and Clean Energy Action
  – WSF directed to address ferry vessel Greenhouse Gas Emissions.
WSF Greenhouse Gas Emissions

- WSF Vessel Contribution: 19% of all State Agencies
- 17 million gallons of diesel/year

Sources of State Agencies' GHG Emissions (2015)

- Electricity and Steam (0.46)
- Natural Gas and Other Fuel (0.32)
- WSF Vessels (0.21)
- State Fleet Vehicles (0.09)
Vessel Retrofits

• Three Jumbo Mark II Hybrid Conversion
• $600,000 in WSDOT budget for hybridization pilot
  – Fuel savings
  – GHG reduction
  – Potential noise reduction
  – Will compare pre/post retrofit noise data
• Two Vessels Complete – 2020
• Third Vessel Complete – 2021
Vessel Retrofits

- 4 to 5 Blade Propeller Replacements
  - Fuel savings
  - Reduce cavitation
  - Potential noise reduction (compare pre/post noise)

- Hull and Propeller Cleaning
- Low Friction Vessel Coatings
- Operational Efficiencies (slow down)
Future Outlook

- Vessel Design - Future vessel construction with in-water noise reduction as a goal.
Questions?

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