



2025 Long-Term Environmental Monitoring Program

PWSRCAC Board Presentation Jan 23, 2026

Morgan Powers, PhD




1

Agenda

1. Monitoring Program and Timeline
2. 2025 Results
3. Communication / Outreach
4. LTEMP in Context (Oil Spill Recovery Institute project)



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2

2

Monitoring Program Goals

1. Monitor impacts from oil transportation activities on the biota of Prince William Sound and the Gulf of Alaska at selected sites
2. Identify the sources of hydrocarbon residues in sediments and mussel tissue
3. Provide recommendations for future response and mitigation measures

Meets mandates under the Oil Pollution Act of 1990 and requirements of the contract with Alyeska Pipeline Service Company



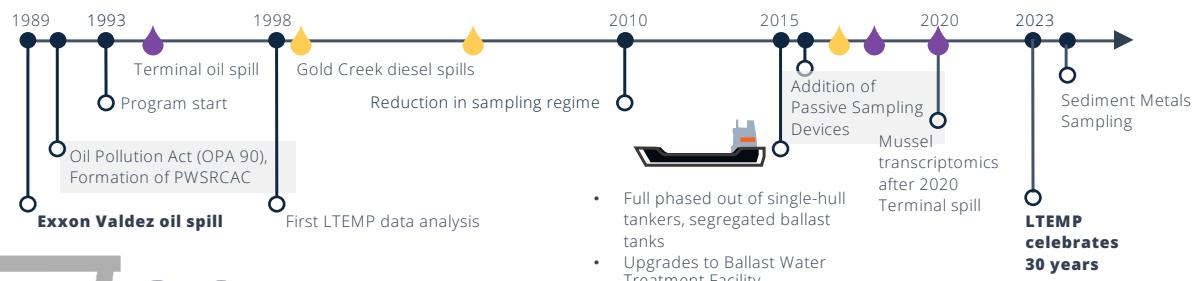
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3

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Long-Term Environmental Monitoring Program Timeline of Events



32
Years
of environmental sampling

257k
Chemical Datapoints
in dataset

4

2



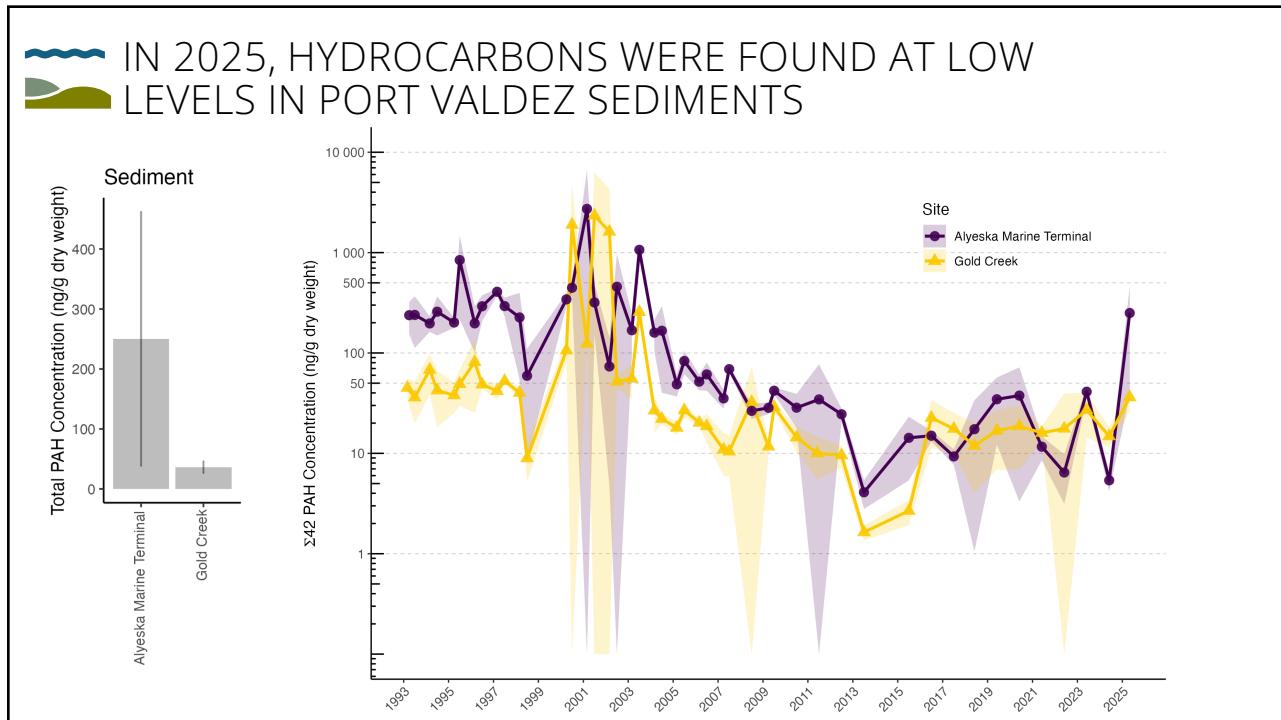
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2025 Field Sampling

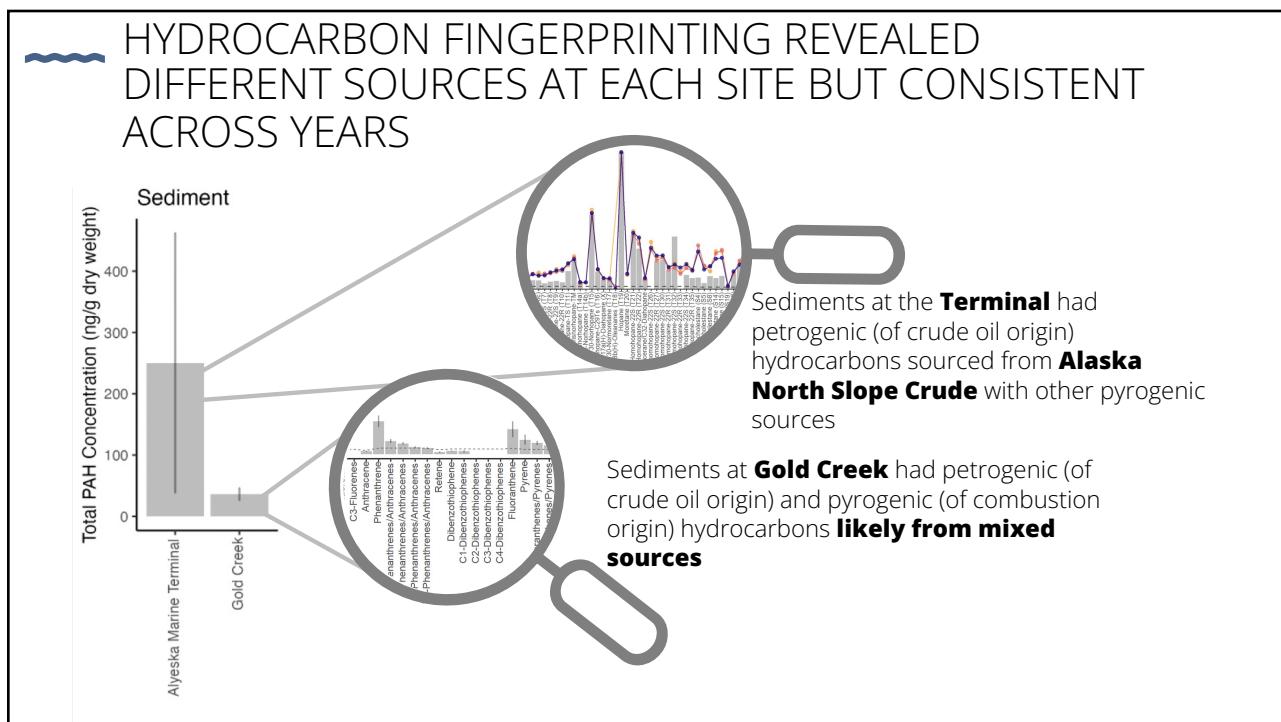
- Fieldwork was carried out by PWSRCAC's Danielle Verna, Jeremy Robida, student intern Tim, and contractor Morgan Powers in May 2025 aboard the FV Solstice
- Chemical analysis was done by Alpha Analytics and by Oregon State University FSES laboratory
- Reporting was divided into a brief **Summary Report** and a **Technical Supplement** like in 2021, 2023, & 2024



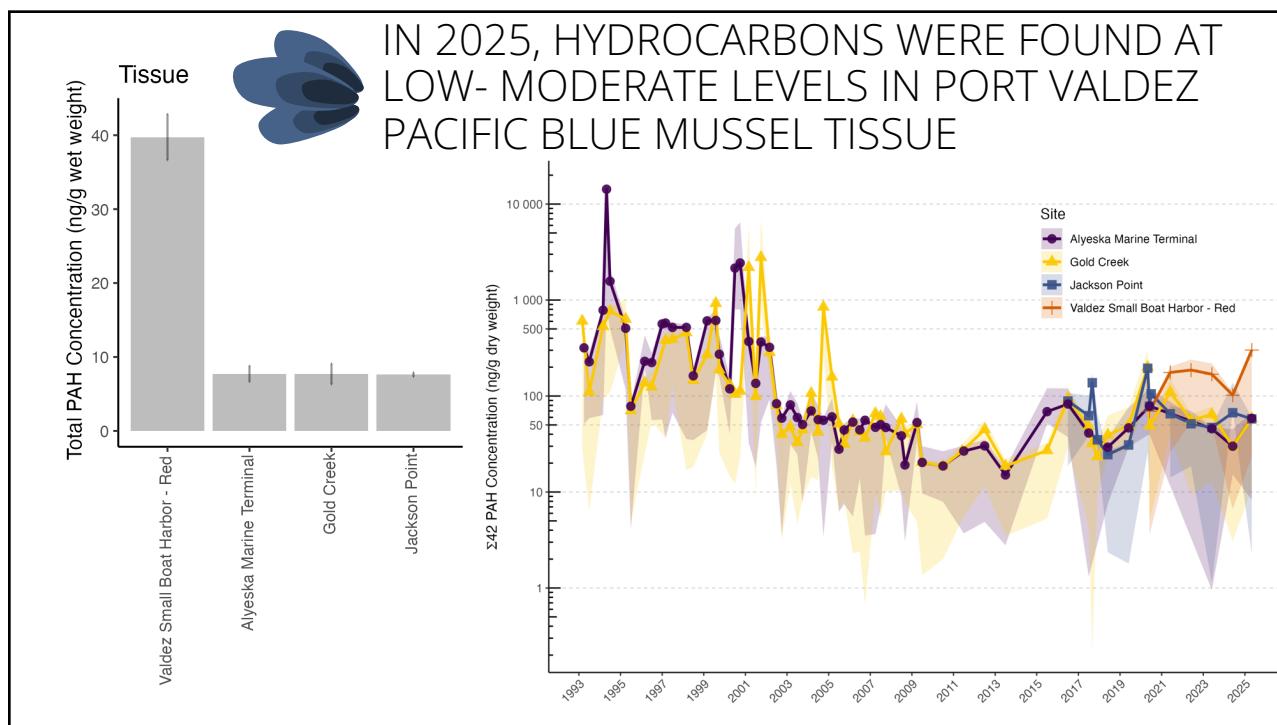
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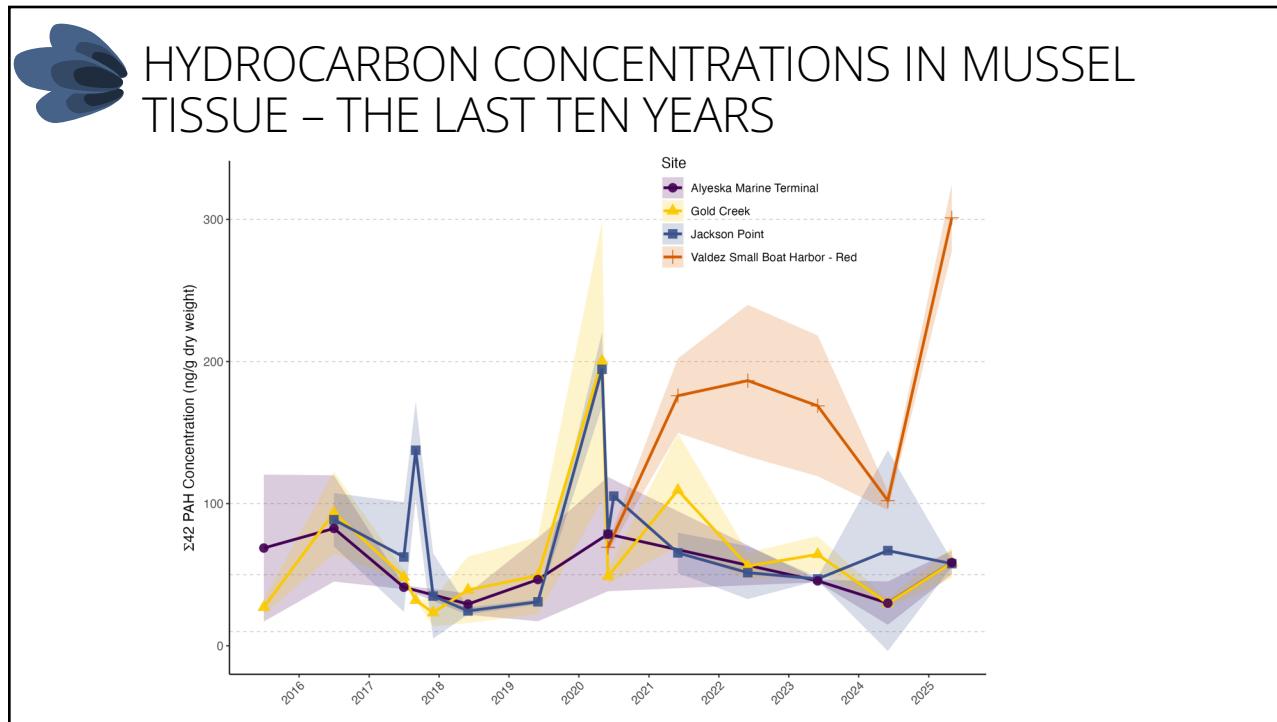
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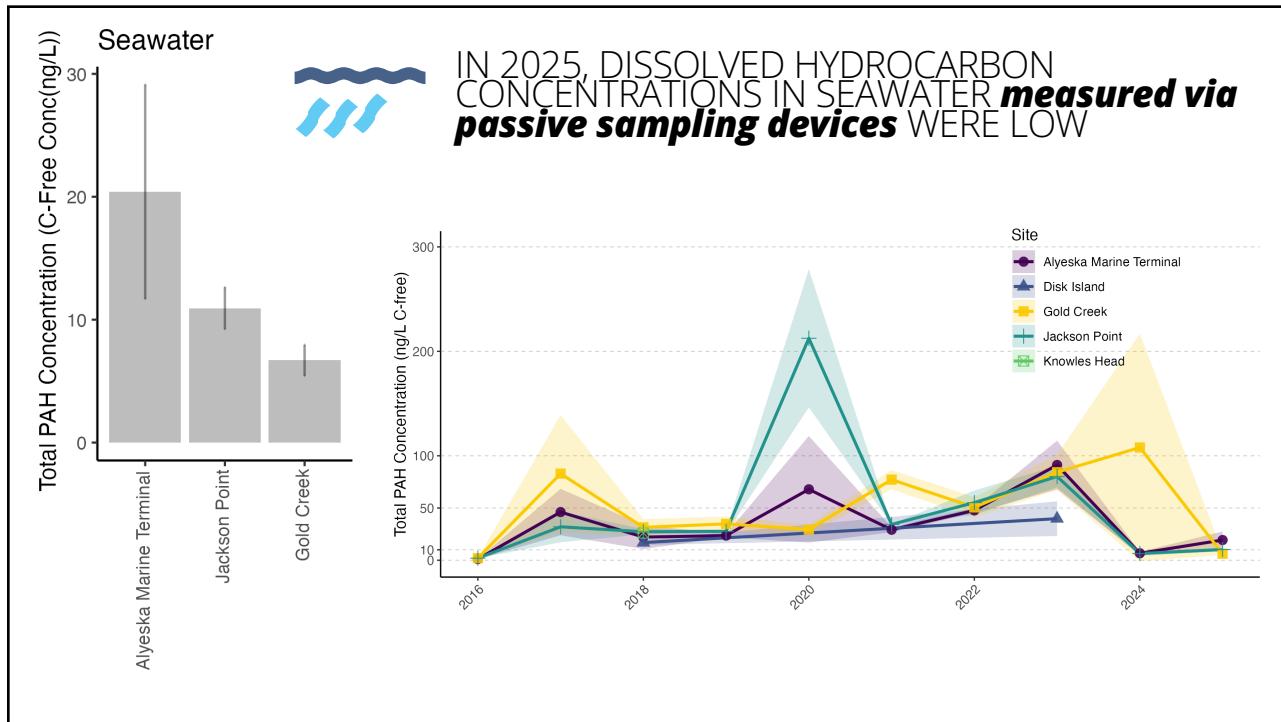
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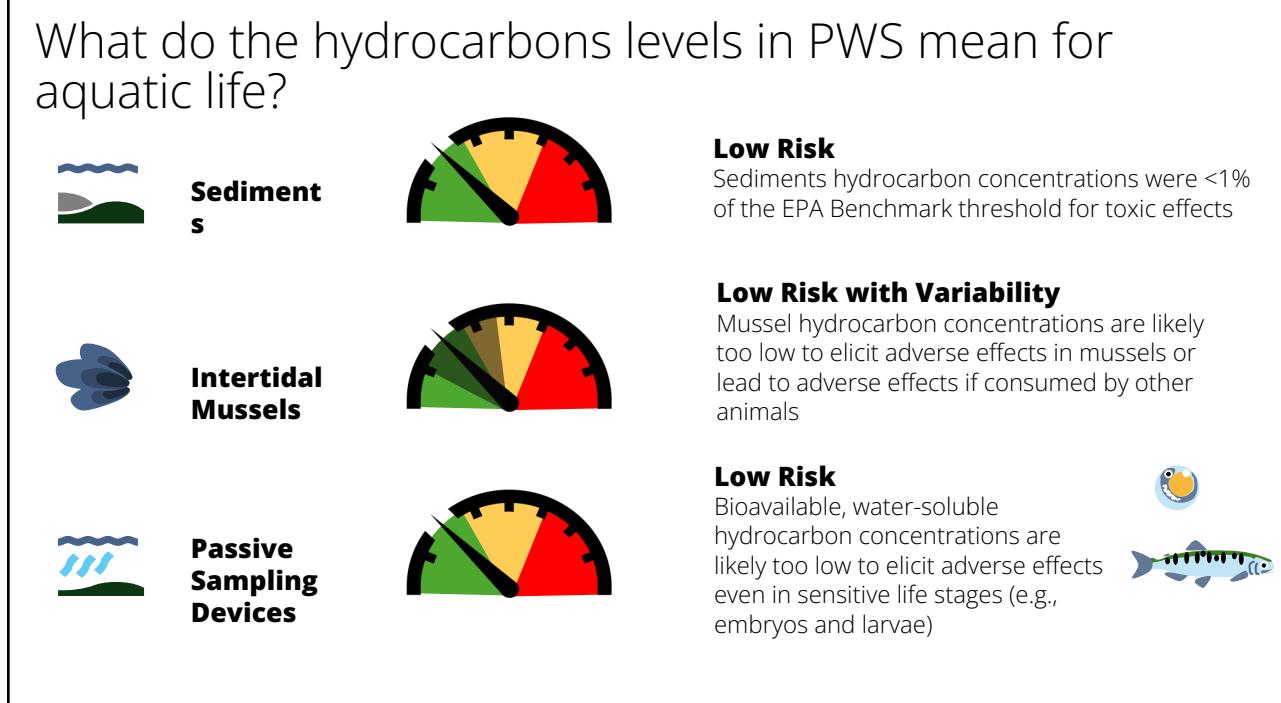
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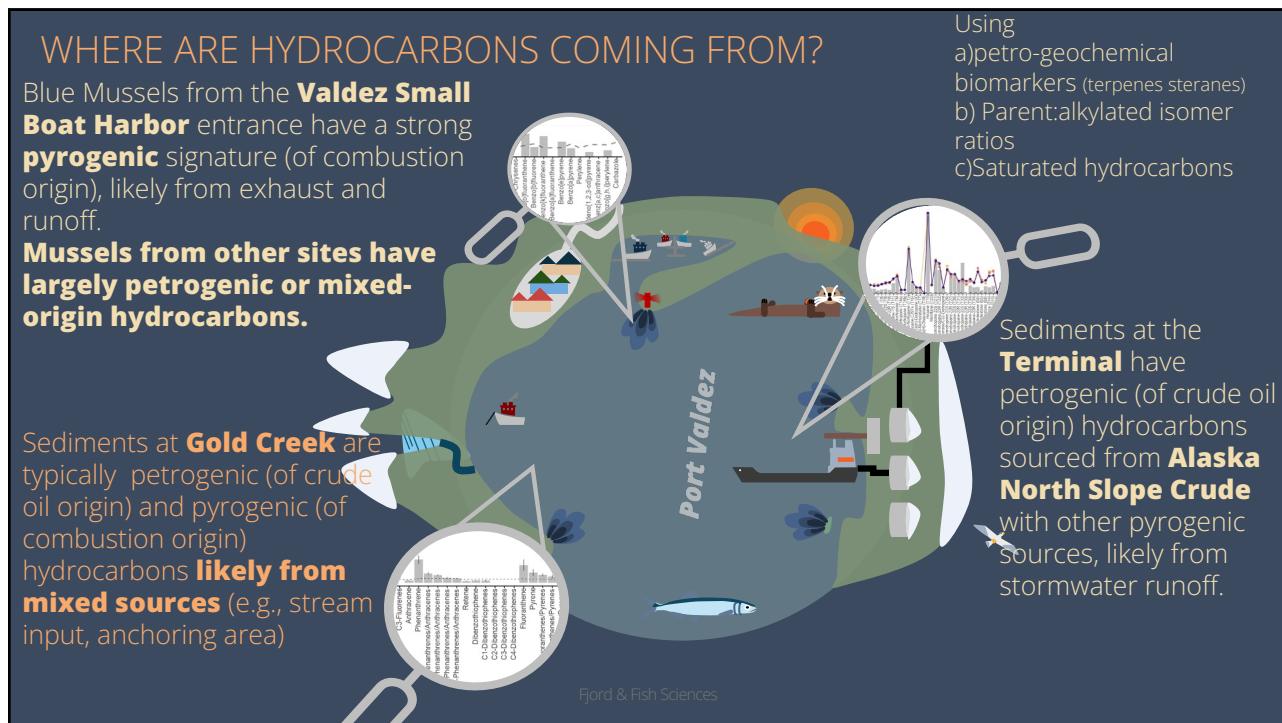
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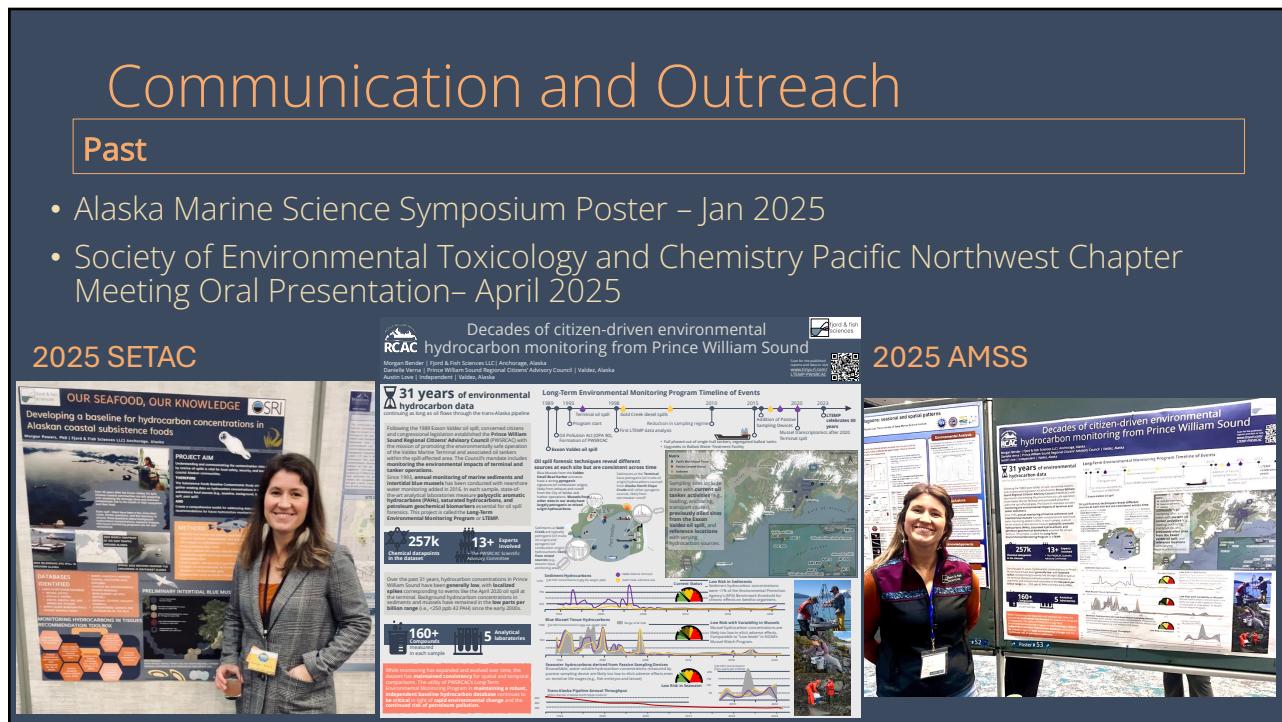
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12



13



14

IMPORTANCE OF THIS MONITORING PROGRAM IN THE FUTURE

- a. Long-term monitoring is essential in evaluating the success of PWSRCAC's mission: "Promoting the environmentally safe operation of the Alyeska terminal and associated tankers"
- b. Detect change, injury, or recovery, i.e., in the event of a spill or other environmental change
- c. Provides strong, independent data to be used in ongoing and future analysis

2025 Sample Crew at Gold Creek



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15

15

FUTURE RECOMMENDATIONS

1. Increase the dissemination efforts
 - a. Conference presentations
 - b. Manuscript publishing
 - c. Outreach events
2. Additional analysis as part of manuscript drafting
 - a. Detecting change over time and space
 - b. Comparison to other oil terminals
3. Data Archival and Preservation
4. Maintaining a reference site (mining upstream at Gold Creek)

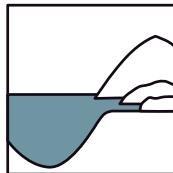
2025 LTEMP Intern Tim collects blue mussels



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16



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LTEMP in Context

2025 Subsistence Foods Background Contaminants Report

A State of the Science Review of Hydrocarbons in Coastal
Alaskan Wild Foods

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17

Oil Spill Contaminants in our Seafood: How much do we know?



In Alaska, marine fish, shellfish, seabirds, marine mammals, and marine plants are harvested for food, culture, and way of life. However, these same **foods face risks from hydrocarbon contamination** due to marine oil spills—from disasters like the 1989 **Exxon Valdez**, 2004 **Selendang Ayu**, and 2022 **Tug Western Mariner** oil spills.

Oil contaminants can build up in marine organisms, where they can **affect growth and reproduction, even survival**. When these species are harvested and eaten, the contaminants in these organisms may impact the people who consume them.



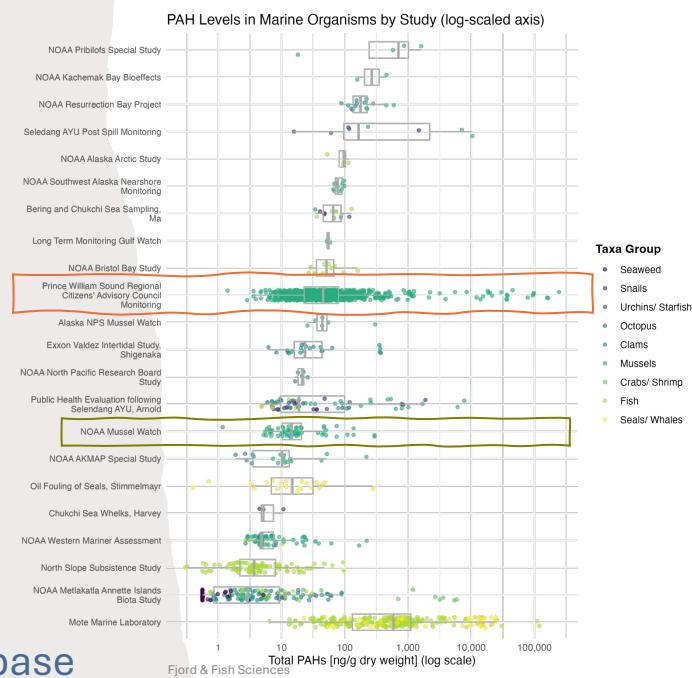
Understanding where, when, and how much oil contaminants are found in marine subsistence species is a critical part of protecting both **environmental and community health**.

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18

LTEMP in Context

LTEMP is the largest dataset for hydrocarbon tissue concentrations in Alaska

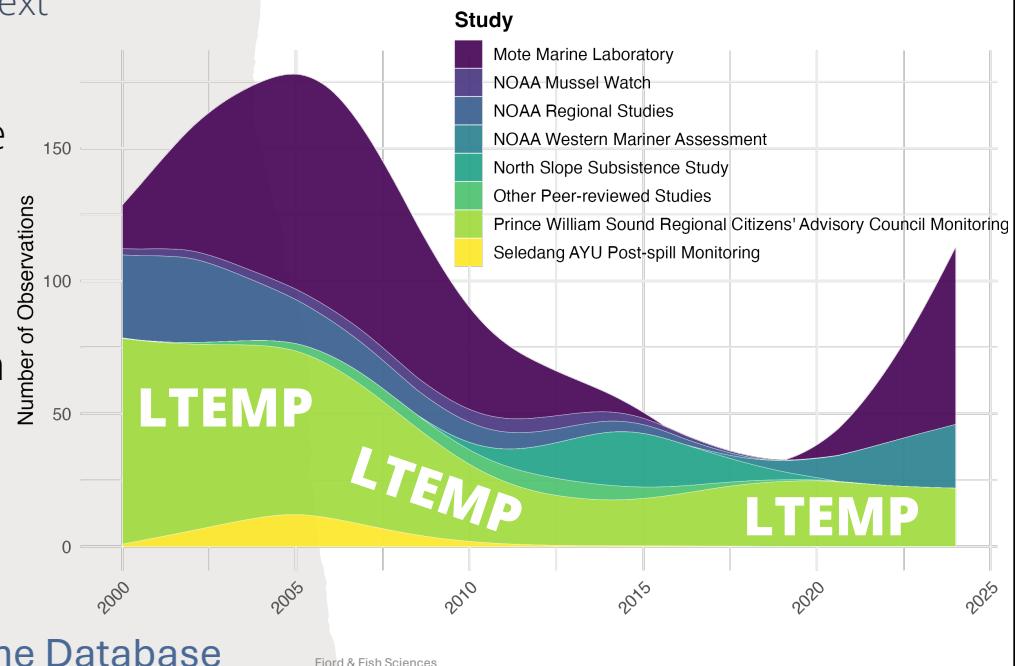


Describing the Database

19

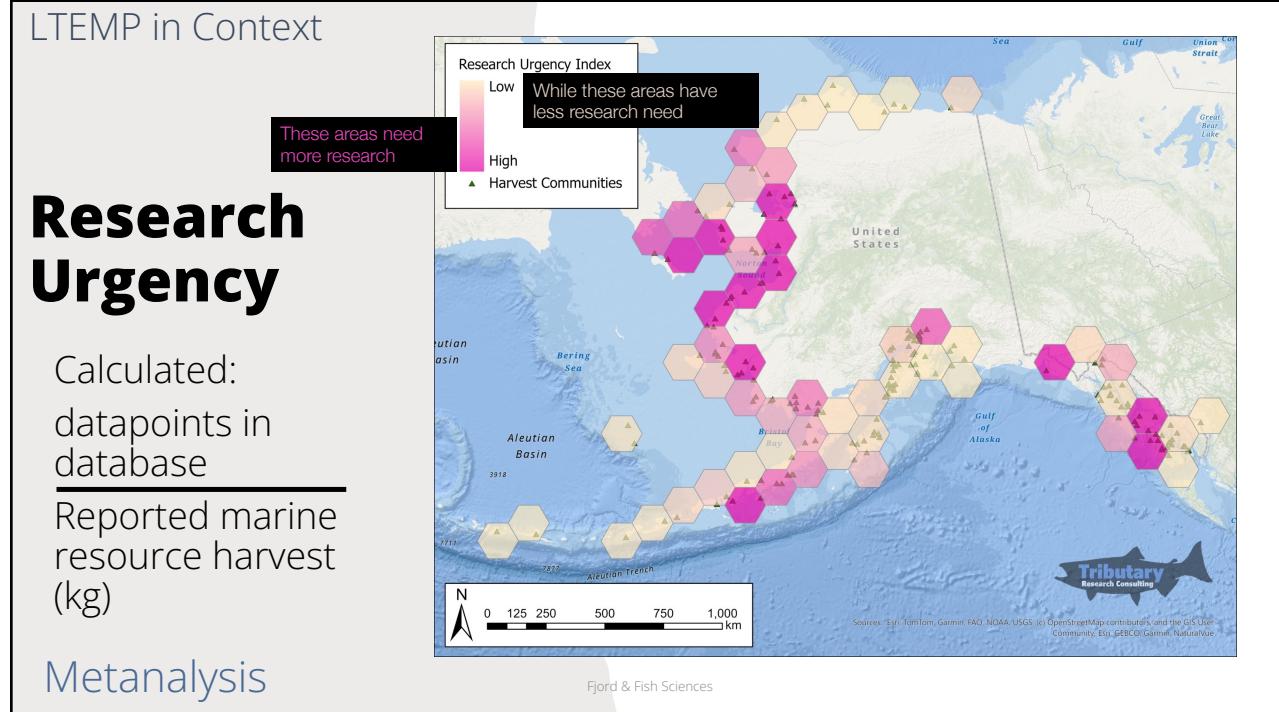
LTEMP in Context

LTEMP provides the consistent sampling effort over time - greater than any other study in Alaska.

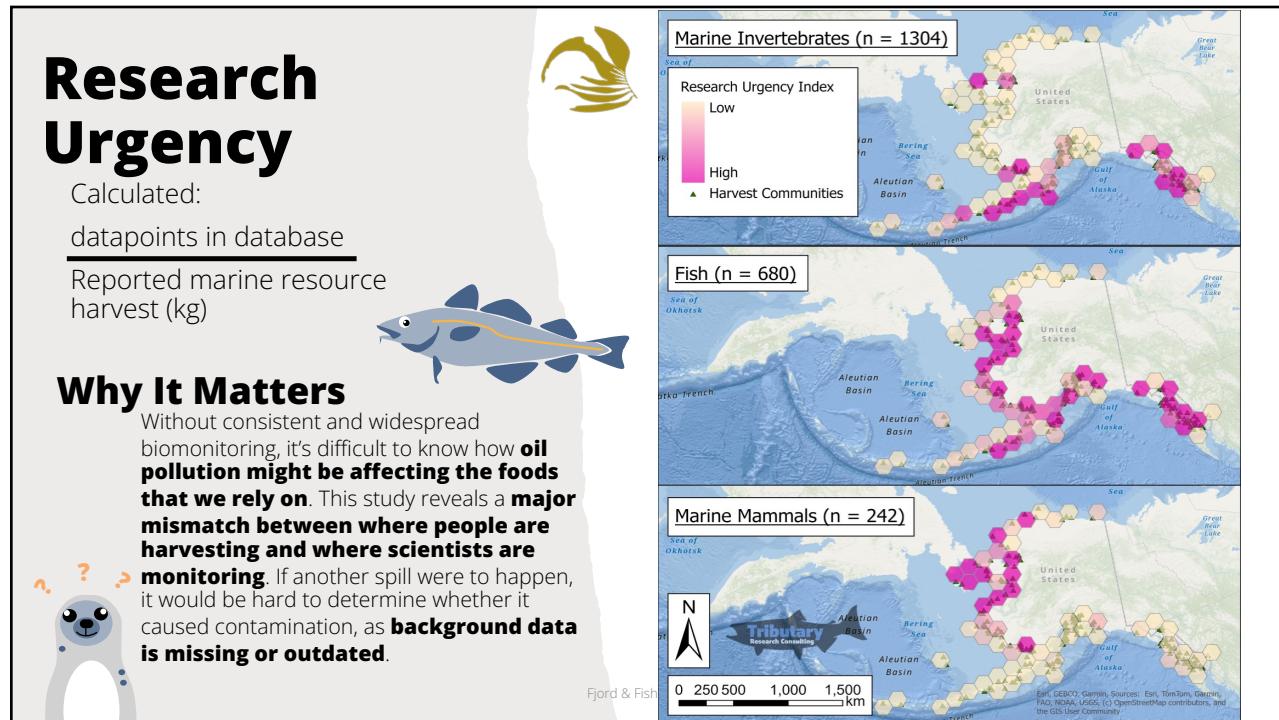


Describing the Database

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21



22

Questions and comments ?
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23