



Photo credit: U.S. Coast Guard

Tug *Western Mariner* Diesel Spill Natural Resource Damage Assessment Preassessment Phase Update: Results of March 2022 Mussel Sampling



Photo credit: Alaska Department of Fish & Game

On March 21, 2022, at 2:55 a.m., the 83.7 foot tug *Western Mariner* experienced a temporary steering failure and collided with its freight barge *Chichagof Provider* while traveling through Neva Strait approximately 18 miles northwest of Sitka, Alaska. The collision pushed the tug onto the beach, resulting in a release of diesel. The spill continued for multiple days until the source was controlled, and the vessel was refloated and removed from the site. Staff from federal and state agencies (Trustees) are conducting a preliminary Natural Resource Damage Assessment (NRDA) to determine if impacts to fish, wildlife, their habitats, and the human uses of these natural resources have occurred and if it is appropriate to proceed with restoration planning. If found to be appropriate, the Trustees will initiate restoration planning to quantify the injuries to natural resources, demonstrate how the injuries were caused by the spill, and determine the type and amount of restoration warranted to offset those harms. The Trustees and Responsible Party are working cooperatively, following the federal regulations for NRDA under the Oil Pollution Act.

What is the current status of the Tug *Western Mariner* NRDA?

The preliminary steps taken during a NRDA are collectively called the Preassessment Phase. The Trustees are considering information from the emergency response to the oil spill, such as aerial photos, shoreline oiling data, wildlife observations, herring spawning observations, and information about potential impacts to human uses of natural resources. The Trustees conducted field assessments in March and May to collect information about oil exposure and injury to

natural resources. These activities included surveys for potentially impacted wildlife and evaluations of intertidal ecosystem health at oiled shorelines. Mussels and clams were collected and sent to a laboratory to check for oil contamination in their tissues. The lab has not completed the analysis of the May collections yet, so this update focuses only on the samples collected in March.

NATURAL RESOURCE TRUSTEES FOR THE TUG WESTERN MARINER NRDA

U.S. Department of the Interior:
U.S. Fish & Wildlife Service and the
Bureau of Indian Affairs

U.S. Department of Commerce:
National Oceanic and Atmospheric
Administration (NOAA)

U.S. Department of Agriculture:
U.S. Forest Service

Alaska Department of Environmental
Conservation

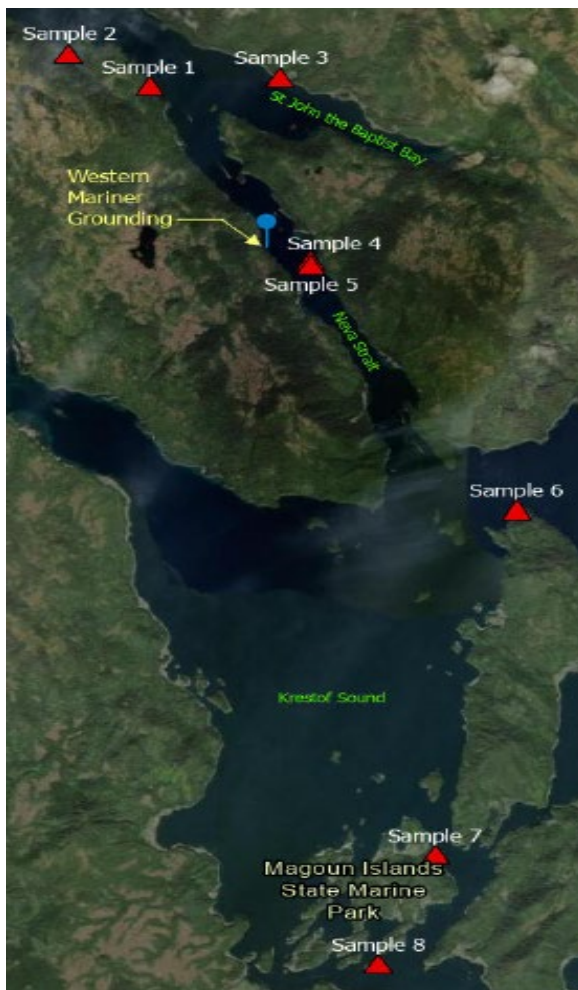
Alaska Department of Law

Alaska Department of Fish and
Game

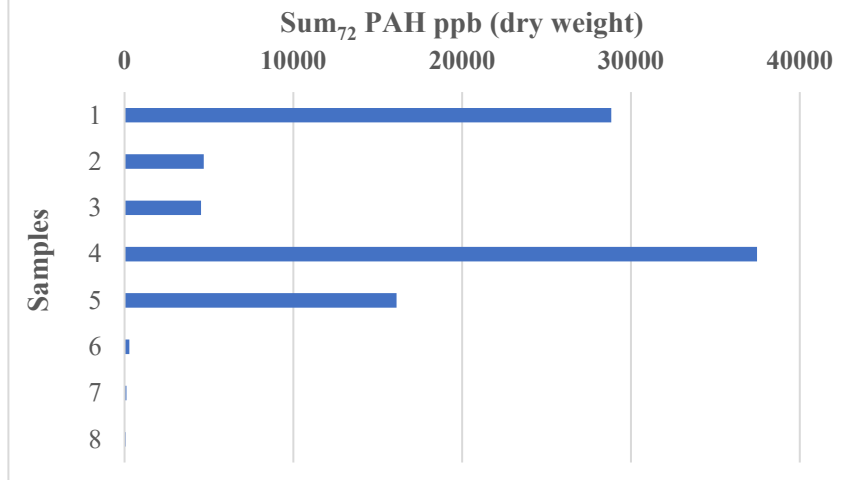
Alaska Department of Natural
Resources

Where were mussels collected and what were the results?

On March 26-27, 2022, while the spill response was ongoing, Trustee scientists collected mussel samples from 8 intertidal areas in Neva Strait, Krestof Sound, and Sitka Sound (see map). In addition to being an important part of the intertidal community, mussels are a commonly used biomonitoring organism that can provide information about the presence, bioavailability, and concentrations of oil chemicals in the environment. The mussel samples were analyzed for a range of petroleum hydrocarbons (oil chemicals), including polyaromatic hydrocarbons (PAHs), which are a primary concern because of their toxicity to natural resources. The mussels were not collected for the purpose of evaluating seafood safety, but the data were provided to the State of Alaska Department of Health for their consideration. The chemical results show elevated PAH concentrations in mussels collected in Neva Strait, adjacent to and north of the grounding site, consistent with oil exposure. The concentrations of PAHs in mussels collected from sites to the south of Neva Strait, at Olga Point and Magoun Islands, are lower, comparable to levels normally present at other sites in Alaska. The detailed chemistry data from these mussel samples are available for download through [NOAA's DIVER web portal \(https://www.diver.orr.noaa.gov/recent-datasets\)](https://www.diver.orr.noaa.gov/recent-datasets).



Concentrations of Polyaromatic Hydrocarbons in Mussels Collected March 26-27, 2022



Concentrations are depicted as the sum of concentrations of 72 individual PAH compounds, with units of parts per billion in the dry weight of mussel tissue. PAH compounds that were not detected in samples (i.e., below method detection limits) were not included in the sums. Concentrations in Samples 7 and 8 were so low that they may not be easily visible in the above graph.

Map not to scale. Base map credit: Earthstar Geographics, State of Alaska, Esri Canada, Esri, HERE, Garmin, SafeGraph, USGS, EPA, NPS, USDA, NRCAN, Parks Canada

What are the next steps for the Western Mariner NRDA?

The Trustees will issue another update when the May sampling results are available. The Trustees continue to evaluate and collect information about the spill's impacts on natural resources and the human uses of those resources, with the goal of determining whether a restoration planning effort is appropriate. If restoration planning is deemed warranted, the Trustees will publish a Notice of Intent to Conduct Restoration Planning and create a draft Restoration Plan that will be made available for public review and input. Throughout the process, the Trustees welcome information from the public.

Who should I contact to obtain more information or to share my information?

For NRDA information, contact the Federal Lead Administrative Trustee, Sarah Allan at 907-202-1859 or sarah.allan@noaa.gov.

For information on seafood safety, contact Sarah Yoder, Alaska Department of Health, at 907-269-8054 or sarah.yoder@alaska.gov

What is Natural Resource Damage Assessment?

[Natural Resource Damage Assessment](#) is a process authorized under the Oil Pollution Act to determine the appropriate type and amount of restoration needed to offset spill-related impacts to fish, wildlife, their habitats, and the human uses of those natural resources. It is separate from the emergency response to an oil spill, which focuses on containing and cleaning up spilled oil. There are three general steps to NRDA:

- Preassessment – Determine if impacts to natural resources have occurred and if it is appropriate to proceed with restoration planning;
- Restoration planning – Quantify the injuries to natural resources, demonstrate how the injuries were caused by the spill, and determine the type and amount of restoration warranted; and
- Restoration implementation – Implement restoration project(s) to restore habitats, resources, and services.