

Marine Debris in Alaska

Report for the NPFMC Ecosystem Committee
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1 Introduction

In 2021 the Ecosystem Committee (committee) tasked Council staff with preparing a report of marine debris events and response in Alaska. The purpose of the report is to provide information to the committee to allow them to determine whether there is a role for the committee or Council in addressing marine debris issues in the large marine ecosystems in Alaska.

In July 2020, residents of the communities in the Bering Strait region began reporting marine debris on beaches that was outside of the normal amount typically observed. The incident was described in detail in Siddon et al. (2020), the following summary is taken from that document. The debris was primarily foreign, with notable Russian and Korean labels easily identified by residents and reviewers. Debris was reported by residents of Gambell, Savoonga, Unalakleet, Nome, Port Clarence, Wales, Little Diomed Island, and Shishmaref (Figure 1). Debris varied by location, but mainly contained consumer debris: beverage bottles, food containers, personal production containers, household aerosol cans, chemical cleaners, and cooking oil containers. Some reports included suspected hazardous materials such as lubricating oils and chemical cleaning products. Items presumed associated with fishing activities were also reported including deck boots, blue bags resembling bucket liners, and longline equipment. Many labels were clear, plastic was not degraded, and some items showed dates of manufacture or expiry in 2020, suggesting that much of the debris had recently entered the ocean.

An initial assessment by NOAA's Office of Response and Restoration's Marine Debris Program (MDP) and Emergency Response Division (ERD) concluded that the pattern of debris accumulation was consistent with a point source release, such as an accidental loss or intentional dumping from a vessel. The debris reported was different from what is normally observed in the northern Bering Sea and Bering Strait, which mainly consists of fishery-related debris (nets, line, floats, banding, etc.).

This debris event added to existing concerns in the Bering Strait region regarding food security and economic impacts from increased maritime activity in the region, and highlighted concerns for local community domain awareness and human safety. Organizations collaborated to establish an ad-hoc task force including Federal and state agencies, local debris community organizations, and coastal communities. The goal of the task force is to share information, build common situational awareness, and identify needs and opportunities for direct actions to address this incident. Activities of the task force included: hindcast modeling to evaluate pathways of debris to identify potential location and timing of its introduction to the ocean; creation of a reporting system for community members including reporting protocols, regional phone contacts, and a dedicated email-based reporting account. This information was widely shared among Tribal organizations and the general public; an assessment of support infrastructure to respond to future debris events; and coordination with the NOAA Office of International Affairs, US

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Coast Guard and other international organizations to assess appropriate international government and industry channels for debris tracing and prevention actions.



Figure 1. Location and dates of marine debris reports in the Northern Bering Sea and Bering Strait region. From Siddon et al., (2020).

2 NOAA’s Marine Debris Program

In 2006, congress authorized the NOAA Marine Debris Program (MDP) as the U.S. Federal government’s lead for addressing marine debris. The MDP achieves its mission through prevention, removal, research, monitoring and detection, response, and coordination. MDP staff is positioned across the country to support projects and partnerships with state and local agencies, tribes, non-governmental organizations, academia, and industry.

The MDP in Alaska has worked with partners since 2006 to conduct debris research, removal, and prevention and has directly funded more than 35 projects in Alaska that have removed over 900 metric tons of debris from shorelines. In many areas, removal efforts are paired with monitoring to determine debris re-accumulation rates and track changes in the types of debris that come ashore.

Disposal and recycling of marine debris remains a high priority for the MDP in Alaska and is challenging with the closure or limitations of local landfills. There is high interest in marine debris in the Arctic, both

domestically and internationally. The remote, roadless nature of Alaska makes all activities more expensive in Alaska compared to other regions.

A large portion of the debris in Alaska is from fishing activities, as would be expected given the large fishing effort in the Bering Sea. However, the vast majority of the fishing debris are small pieces or fragments that reflect expected gear loss rather than any specific negative behavior by the fishing industry.

2.1 Potential collaboration elements

Many other states in the U.S. have action plans on marine debris that describe the collaboration between the MDP and its partners in the areas. The action plans focus on the status, actions, success, gaps, and opportunities to address marine debris issues in those areas. The action plans are available on the [MDP webpage](#). There has been little interest in an action plan for Alaska because of the challenges of size, regional differences within Alaska, and multiple NGOs and other organizations addressing marine debris throughout different regions. However, there is now an increasing interest in developing an action plan for Alaska. Staff from the MDP expressed that it would be of great value to have NPFMC partnership in developing a Marine Debris Action Plan for Alaska. The importance of the fishing industry to Alaska highlights the benefits that would come from having an industry voice in the discussion to provide insight and a balanced perspective of what is possible and realistic. Lessons learned by the MDP in development of other regional action plans could help in the development of an action plan for Alaska.

MDP staff also expressed that it might be helpful for NOAA MDP partners to provide regular updates to the committee about the marine debris issue, particularly if a Marine Debris Action Plan is developed for Alaska.

3 Conclusions

Marine debris in Alaska remains an issue of interest for many people within the State and in NOAA's MDP. There are opportunities for Council partnership with NOAA's MDP, particularly in the development of an Alaskan Marine Debris Action Plan. Council and industry participation would increase the relevance and utility of an Action Plan. There is also the opportunity for regular updates from the MDP to the Council's ecosystem committee, to keep the Council abreast of ongoing national and regional activities.