



2021-2025

Strategic Plan

NOAA Marine Debris Program

NOAA Marine Debris Program FY 2021-2025 Strategic Plan

November 2020

Cover photo courtesy of Ata Vaimaona, Remote Elite Services

Acknowledgement

The Marine Debris Program Fiscal Year 2021-2025 Strategic Plan was developed through expert input from numerous stakeholders across the United States. Many thanks to the workshop participants from national non-profit organizations and federal agencies, regional action planning partners, those who provided comments and interviews, and others who contributed to the plan and will participate in its implementation. We would also like to thank the Morris K. Udall and Stewart L. Udall Foundation for their help in meeting facilitation. The planning process was funded and executed by the NOAA Marine Debris Program.

For citation purposes, please use:

National Oceanic and Atmospheric Administration Marine Debris Program. (2020). NOAA Marine Debris Program FY 2021-2025 Strategic Plan. Silver Spring, MD: National Oceanic and Atmospheric Administration Marine Debris Program.

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Marine Debris

is defined as any persistent **solid material** that is manufactured or processed and directly or indirectly, intentionally or unintentionally, **disposed** of or **abandoned** into the **marine environment** or the **Great Lakes**.



Mission

The mission of the NOAA Marine Debris Program is to investigate and prevent the adverse impacts of marine debris.

Vision

The NOAA Marine Debris Program envisions the global ocean and its coasts free from the impacts of marine debris.



Introduction

Marine debris touches every corner of the world, from remote islands to the world's largest cities, and it is easy to become overwhelmed by the sheer volume and complexity of the issue. Consumer plastics, microplastics, microfibers, metals, rubber, paper, textiles, derelict fishing gear, vessels, and other lost or discarded items enter the marine environment every day, making marine debris one of the most widespread pollution problems facing the world's ocean, waterways, and the Great Lakes. However, there is hope. Marine debris is a human-caused problem and, therefore, has human solutions. As public awareness of and interest in marine debris continues to grow, so does the community of people working to address the issue. The National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program (MDP), a division of the Office of Response and Restoration within the National Ocean Service, is proud to work with dedicated staff and partners to make a measurable change toward reaching our vision: the global ocean and its coasts free from the impacts of marine debris.

The Marine Debris Act (33 U.S.C. § 1951), passed by Congress and signed into law in 2006 and amended in 2012 and 2018, establishes the MDP as the federal lead in addressing the adverse impacts of marine debris on the United States economy, the marine environment, and navigation safety. With the 2018 passing of the Save Our Seas Act, the MDP is expanding its role to further support domestic and international efforts, education and outreach, and response to severe marine debris events. We have a heightened awareness of the need for increased interagency collaboration and will continue to lead efforts through the Interagency Marine Debris Coordinating Committee (IMDCC). The MDP has chaired the IMDCC since 2006, hosting quarterly meetings for partners representing federal agencies working on marine debris issues to share information, assess and promote best management practices, and coordinate interagency responses to marine debris.

Before compiling the fiscal year (FY) 2021-2025 plan, the MDP conducted a situation assessment



Photo: NOAA

to analyze how we can best serve our partners and the public. The MDP FY 2016-2020 Strategic Plan's metrics were evaluated and compared against the needs outlined in each of the MDP's Regional Marine Debris Action Plans. We held workshops with national and federal partners, conducted interviews with fellow NOAA Office of Response and Restoration staff, and hosted an open public feedback period. The new strategic plan reflects the insights gathered through this process, including the MDP's unique position to serve as a neutral, science-driven party to convene and align the efforts of many partners. Though many of the goals from the previous plan remain intact, through these updated objectives, we build upon past efforts and use the new plan to focus our collective action moving forward. We've built metrics into our objectives, where practical, and aim to share our accomplishments annually with our partners and the public.

Six goals will guide the next five years: prevention, removal, research, response, coordination, and our new goal: monitoring and detection. In this new plan, the MDP seeks to support the Nation's blue economy through projects that benefit commercial and recreational fisheries, small businesses, and coastal communities by preventing marine debris from entering the marine environment in the first place and removing existing debris from shorelines and coastal areas. Further, through the use of the next generation of remote sensing technologies, we can better detect marine debris and gather data on the types, abundances, and location of marine debris. The use of innovative technologies will enhance our efficiency and inform effective policy and management approaches.

In addition, we identified several overarching values to hold as the standard in all of the MDP's work, which first and foremost includes a commitment to diversity, inclusion, and equity. We will intentionally seek a diversity of perspectives, building a culture of inclusion to drive the innovation necessary to meet the global challenge of marine debris. The MDP is committed to engaging a more diverse community by including new voices in the formation of our products and taking measurable action, such as funding projects in underserved and underrepresented communities, increasing the availability of marine debris data in areas where it has not previously been recorded, and translating materials into non-English languages.

The MDP also prioritizes prevention as the ultimate solution to marine debris. Though our work must continue to address the immediate needs for removal and response, we recognize that the problem of marine debris will only be solved through prevention, and as such, we place it at the core of all we do. This includes setting an example by reducing the waste we produce through our daily operations, events, and partnerships and leading an initiative across the National Ocean Service to do the same.

A global ocean free from the impacts of marine debris is no small feat, but we feel a responsibility to strive for nothing less. As we work to implement these actions, we are inspired by the marine debris community's perseverance to find solutions when obstacles only seem to mount. This plan will drive daily operations, set annual milestones, and challenge the MDP to reach more ambitious goals than ever previously set. The path forward is one filled with hope for a healthier ocean and healthier planet.



Goal 1: Prevention

Goal Statement: Prevent marine debris by conducting education and outreach, and providing practical solutions

Photo: NOAA

Prevention is the ultimate solution to marine debris. The NOAA Marine Debris Program is dedicated to reducing and preventing the impacts of marine debris by conducting education and outreach, and supporting practical solutions to marine debris problems. We aim to accomplish this by increasing participation in education and outreach opportunities, developing outreach products that raise awareness of marine debris, reducing waste in internal operations, and supporting projects that promote the long-term prevention of marine debris. We acknowledge that there is more work to do to better understand the needs of underserved and underrepresented audiences. We will identify and seek to overcome barriers to participation and ensure equal access to our educational resources and opportunities. Through these prevention efforts, we can stop marine debris before it enters our ocean and Great Lakes.

Goal Objectives

1. Increase the number of youth and adults participating in formal and informal marine debris education and outreach opportunities
2. Identify the needs of underserved and underrepresented audiences and advance inclusion, diversity, equity, and access to educational resources and opportunities
3. Increase the number of formal and informal educators participating in marine debris professional learning opportunities
4. Support and develop public-facing outreach products, including exhibits, to raise awareness about marine debris
5. Reduce waste in internal operations and promote sustainable practices through information sharing
6. Support at least 60 prevention projects that provide practical solutions to reduce marine debris



Goal 2: Removal

Goal Statement: Support the removal of marine debris to measurably reduce its impacts on natural resources, navigational safety, and the economy

Photo: NOAA

While we hope our efforts will significantly reduce the need for debris removal from our ocean, coasts, and Great Lakes, removal continues to be a priority for the NOAA Marine Debris Program. We are committed to promoting alternative disposal methods and reducing the adverse effects of marine debris on natural resources, navigation safety, and the economy. Over the next five years, we will continue to support removal efforts in the United States and a new partnership internationally in order to see our waters and coasts free from the impacts of marine debris.

Goal Objectives

1. Support the completion of at least 40 removal projects to reduce the negative impact on NOAA trust resources and important habitat areas
2. Increase the percentage of alternatively disposed debris in all removal efforts
3. Establish at least one international partnership for marine debris removal
4. Support monitoring and data collection on the natural resource impacts of marine debris in at least three removal projects



Goal 3: Research

Goal Statement: Support the scientific community to improve the global understanding of marine debris

Photo: NOAA

Research on marine debris has grown exponentially in recent decades. The issue is multifaceted and often involves research across several disciplines. To maintain our role as the federal lead for marine debris, the NOAA Marine Debris Program will remain at the forefront of research by funding and guiding the scientific community, focusing on knowledge gaps, and producing relevant, practical, and applicable results that advance marine debris science. We will share our research priorities and findings and seek opportunities for collaboration with federal and international partners.

Goal Objectives

1. Evaluate information needs for marine debris science to address emerging research priorities
2. Fund research to expand the frontiers of marine debris science in the focal areas of source, fate, and transport, from upstream to the coastal zone
3. Develop collaborative research projects with federal and international partners, and within NOAA to advance shared research priorities
4. Disseminate marine debris research findings through webinars, workshops, and presentations to inform and connect stakeholders
5. Pursue learning activities to continuously build staff knowledge of the current state of marine debris science



Photo: NOAA

Goal 4: Monitoring & Detection

Goal Statement: Generate and share marine debris detection and shoreline monitoring data, products, and guidance to inform decision making

The NOAA Marine Debris Program will improve our understanding of the scope, scale, and distribution of marine debris in the environment through marine debris monitoring and detection efforts. The Marine Debris Monitoring and Assessment Project (MDMAP) will continue to provide tools and resources to partners across the Nation and world to facilitate standardized shoreline marine debris surveys. Data collected and shared through the MDMAP empowers the development of local efforts to mitigate the impacts of marine debris. In addition to on-the-ground surveys, the Marine Debris Program will harness and facilitate the use of emerging remote sensing technologies and techniques for marine debris detection. Monitoring and detection data on the types, abundances, and location of marine debris is critical to inform effective policy and management approaches to address the issue.

Goal Objectives

1. Complete a new national survey to assess the status and trends of marine debris on United States shorelines based on an existing, structured MDMAP survey design
2. Increase the number of volunteer-surveyed monitoring sites by 50% to expand the spatial coverage of the MDMAP dataset
3. Retain 75% of new MDMAP sites for at least two years to expand the number of long-term monitoring partnerships for data continuity
4. Improve MDMAP data accessibility and visualizations to increase use by monitoring partners and the public
5. Integrate appropriate emerging remote sensing technologies and techniques to improve debris detection capabilities and outputs within the marine debris community
6. Facilitate the use of suitable opportunistic detection platforms and systems to increase the availability of marine debris data



Goal 5: Response

Goal Statement: Prepare for, respond to, and recover from the impacts of significant, acute marine debris incidents through coordination and scientific support

Photo: Federal Emergency Management Agency

The NOAA Marine Debris Program works collaboratively to prepare the United States and its territories for the impacts of natural disasters, such as hurricanes, floods, and tsunamis, that can result in large amounts of marine debris. With the intensity of these storm events increasing, we need to be prepared to respond. Through the development of emergency response products, coordination with regional partners, and scientific support, the Marine Debris Program works to improve the response to and recovery from acute marine debris incidents.

Goal Objectives

1. Implement new and existing marine debris emergency response guides for all coastal and Great Lake states, and United States territories
2. Develop marine debris response products to improve preparedness for and recovery from disasters
3. Ensure staff readiness to respond to acute marine debris incidents
4. Participate in at least ten different external response drills, conferences, or meetings per year that are relevant to marine debris
5. Support regional partners, remotely or onsite, with actions, projects, and activities during the initial response and long-term recovery efforts related to acute marine debris incidents



Goal 6: Coordination

Goal Statement: Coordinate marine debris actions through communication, planning, engagement, and information sharing at local, regional, national, and international levels

Photo: Tijuana River National Estuarine Research Reserve

The NOAA Marine Debris Program is dedicated to coordinating with diverse partners to understand marine debris issues and implement solutions. We aim to accomplish this by making connections, building relationships, and facilitating information sharing across disciplines, regions, and international borders. We will keep those in leadership positions, both within and outside of NOAA, informed and engaged. We will provide accurate and current resources for the public to understand marine debris, its impacts, and solutions. Through careful coordination and team members positioned across the country, we will work toward our common goal.

Goal Objectives

1. Build global capacity to better understand and more effectively address marine debris
2. Coordinate at least 20 opportunities per year for Congress, the Administration, and NOAA leadership to learn more about the NOAA Marine Debris Program and its mission
3. Facilitate a cohesive national effort to address marine debris within NOAA and across United States federal agencies
4. Create opportunities for collaboration within and across the NOAA Marine Debris Program's regions through Marine Debris Action Plans, regional communications, and region-specific efforts
5. Provide the public with accurate, engaging, and current information on marine debris and its types, sources, impacts, and solutions

Glossary

Acute marine debris incident: An incident that produces large amounts of marine debris.

Alternative disposal: The disposal method that is the most environmentally friendly given the location, availability, and resources of the specific removal effort. Examples may include: recycling, reuse, waste-to-energy, or other innovative disposal methods. In some cases, landfill disposal may be the most appropriate disposal method.

Formal education: Learning within a structured education system in which children or adults are required to demonstrate proficiency.

Incident: An occurrence, natural or human-caused, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response. (Source: [Federal Emergency Management Agency](#))

Informal education: Learning outside the established formal system that meets clearly defined objectives through organized education activities.

Internal operations: Day-to-day activities of the NOAA Marine Debris Program, as well as Program-hosted meetings and workshops.

Marine debris: Any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes.

Natural resource impacts: A measure of area (spatial) and time to recover (temporal) to better assess impacts to natural resources that are negatively affected by the presence of marine debris.

NOAA Marine Debris Program Regions: Ten coastal areas across the country that include: Alaska, California, Florida and the Caribbean (Puerto Rico and the U.S. Virgin Islands), Great Lakes (Ohio, Michigan, Wisconsin, Minnesota, Illinois, Indiana, and the Great Lakes shorelines of Pennsylvania and New York), Gulf of Mexico (Alabama, Mississippi, Louisiana, and Texas), Mid-Atlantic (Atlantic shoreline of New York, New Jersey, Delaware, Maryland, Washington D.C., and Virginia), Northeast (Connecticut, Rhode Island, Massachusetts, New Hampshire, and Maine), Pacific Islands (Hawaii, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands), Pacific Northwest (Washington and Oregon), and Southeast (North Carolina, South Carolina, and Georgia).

Professional learning opportunities: An organized set of educational activities that are designed: 1) for educators as the primary target audience, 2) to enhance their understanding of NOAA-related topics, and 3) to provide guidance on how to integrate knowledge, skills, and NOAA educational and scientific resources to educate others. (Source: [NOAA Education Council](#))

Regional Marine Debris Action Plan: A strategic framework for partners across a specific state or region to address the problem of marine debris.

Remote sensing technologies and techniques: The combination of platforms, sensors, and deployment and processing techniques that aid obtaining information about objects or areas from a distance. Platforms may include satellite, manned aircraft, unmanned aerial systems, and vessels. (Adapted From: [NOAA National Ocean Service](#))

Underrepresented: This category comprises four racial or ethnic minority groups (blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, and Native Hawaiians or Other Pacific Islanders) whose representation in Science and Engineering education or employment is smaller than their representation in the U.S. population. (Source: [NOAA Education Strategic Plan](#); [National Science Foundation National Center for Science and Engineering Statistics](#))

Underserved: Populations who receive inadequate or inequitable services, who experience quality-of-life disparities, and who by design have little power or influence over outside decisions that impact their daily quality-of-life. (Source: [NOAA Education Strategic Plan](#), [DEIJ in Action: A Diversity, Equity, Inclusion, and Justice Guide for the Chesapeake Bay Watershed](#))



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