2019 Gulf of Maine
Marine Debris Action Plan

November 2019

Photo: NOAA

2019 Gulf of Maine Marine Debris Action Plan

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Acknowledgement
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Several actions contained herein reference potential legislative changes. These actions will be carried out by interested partner organizations and are not affiliated with NOAA or the Marine Debris Program.

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Background

The National Oceanic and Atmospheric Administration Marine Debris Program (NOAA MDP) defines marine debris 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.

Debris in the Gulf of Maine ranges from microplastics to abandoned and derelict vessels and is generally classified into two source categories: ocean-based and land-based. Ocean-based debris are those items that may be dumped, swept, or blown from vessels or stationary platforms at sea, as well as abandoned, lost, or derelict fishing gear. Land-based debris includes debris from intentional or unintentional littering and dumping in rivers and streams, as well as storm water discharges, and waste management practices.

Marine debris can have many negative impacts, including threats to navigation, damage to ships and fishing equipment, and risks of ingestion by, and entanglement of, marine species. Debris also has the ability to smother fragile habitats such as coral reefs and seagrass beds. It affects tourism, recreation, fisheries, ecosystem functions, quality of life, and economies.

Marine debris is a global issue. However, there are solutions to this problem. We have a responsibility to protect the marine environment upon which we all depend. We will need to work together not only on tactics to assist with cleanup, but on solutions to stop the pollution at the source.

Action Plan Purpose

The Gulf of Maine Marine Debris Action Plan establishes a comprehensive framework for strategic action to ensure the Gulf of Maine and its coasts, people, and wildlife are free from the impacts of marine debris. This Action Plan encompasses work that will be undertaken in the next five years (2019 - 2024). The Gulf of Maine Marine Debris Action Plan (Action Plan) is one of several being implemented in coastal regions across the country. Due to the complexity of marine debris issues, many stakeholders can play a role in the Action Plan's implementation, including private citizens, federal, state, and local governments, private businesses and industry, and nongovernmental and academic organizations. All are welcome to participate in these efforts, and can engage directly by emailing the NOAA MDP Northeast Regional Coordinator, Demi Fox, at demi.fox@noaa.gov.

Mission

To reduce the impacts of marine debris in the Gulf of Maine by increasing understanding of the problem, taking preventative actions, and collaborating with diverse partners on solutions.

Vision

The Gulf of Maine, its coasts, people, and wildlife free from the impacts of marine debris.

Timeline

Date	Event	Outcome
2011	Fifth International Marine Debris Conference	Honolulu Strategy
2015	First Gulf of Maine Marine Debris Planning Meeting	Identified priority topics: • Consumer Debris • Derelict Fishing Gear (DFG) • Wildlife and Habitat Impacts • Marine Debris Education and Outreach
2016	Gulf of Maine Council proposes marine debris work plan	Facilitated collaboration between Canadian and U.S. counterparts
2017	Second Gulf of Maine Marine Debris Planning Meeting	Developed: • Goals • Objectives • Actions
2018	Sixth International Marine Debris Conference	Identified the need for a Consumer Debris Working Group meeting, identified global partners to pursue fishing gear recycling efforts
2018	Consumer Debris Working Group meeting	Shared information regarding Sea Education Association's Trash Shouldn't Splash program and the potential for expansion
2019	Third Gulf of Maine Marine Debris Planning Meeting	Finalized actions, Action Plan published
2022	Mid-Plan Review	Actions and progress on completion is assessed, Action Plan is adjusted accordingly
2024	Plan completion	Final evaluation produced

Action Plan Governing Structure

This Action Plan is centered on the development and maintenance of strategic partnerships to address marine debris in the Gulf of Maine Region. As such, ownership of this Action Plan belongs to the wider Gulf of Maine community. Action Plan partners participate in one of four Working Groups: Consumer Debris; Derelict Fishing Gear; Microplastics; and Research, Information, and Risk Assessment for Wildlife and Habitat. These Working Groups are representative of the community's priority marine debris topics. The Action Plan is organized by these priority topics with associated actions. For each action, a participating partner organization, or several working together, will take the lead. Lead organizations are responsible for coordinating the design and implementation of procedures to accomplish an action.

Action Plan Tracking

Regular communication is essential to maintain the strategic partnerships needed to accomplish the goals of this Action Plan. We will share progress toward actions quarterly. The NOAA MDP will facilitate the overall coordination of check-ins and reporting. Progress will be compiled by the NOAA MDP and recorded in an Annual Progress Report. This role may be adapted as the Action Plan proceeds.

The Gulf of Maine marine debris community recognizes the need for this Action Plan to be evaluated and revisited within the five-year timeframe. Unforeseen challenges or gaps may arise in its implementation. Therefore, a mid-Action Plan review and evaluation will be performed to better understand which objectives, strategies, and actions are well supported and achievable and which may require further assistance. Elements of the Action Plan may be adapted and new actions or objectives may be added at this time. Upon the conclusion of the five years, the Action Plan will undergo a final evaluation and an Accomplishments Report will be generated.

Participants engaging in discussion and planning at the Third Gulf of Maine Marine Debris Planning Meeting in Gloucester, Massachusetts (Photo credit: NOAA).

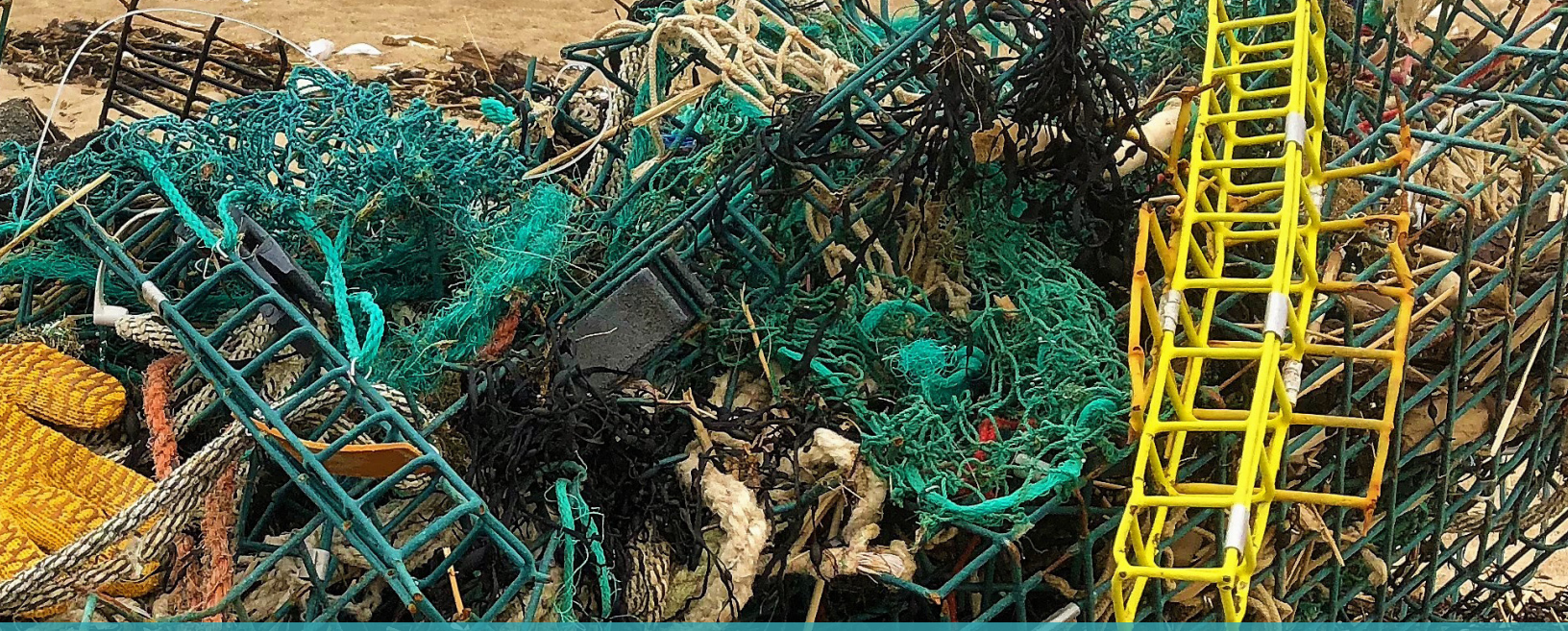
Consumer Debris

Chip bags and other food packaging removed from beaches in Northern Massachusetts (Photo credit: NOAA).

Goal 1: Reduce consumer debris in the Gulf of Maine Region	
Objective 1. Reduce the quantity of single-use plastics in the environment	
Strategy 1.1: Identify tools to prevent single-use plastics from entering the watershed	
Action	**Partner(s)**
1. Generate inventory of existing intervention products (Sidewalk Buttler, Surfrider Foundation: Hold on to Your Butts, etc.), current projects/uses, and successes/barriers	NOAA MDP, Maine Coastal Program, Salem Sound Coastwatch, Ocean Conservancy, Seaside Sustainability, Urban Harbors Institute, Surfrider Foundation
Objective 2. Reduce barriers to sustainable consumer choices	
Strategy 2.1: Reduce single-use plastic products in public institutions (e.g., universities, event conference centers, hotels, municipalities)	
Actions	**Partner(s)**
1. Identify initiatives related to reducing single-use plastic products in public institutions	NOAA MDP, Maine Coastal Program, Surfrider Foundation, Huntsman Marine Science Centre

Strategy 2.1: Reduce single-use plastic products in public institutions (e.g., universities, event conference centers, hotels, municipalities)	
Actions	**Partner(s)**
2. Create or tailor a regional guide of actions that institutions can initiate related to single-use plastic products and a cost/benefit analysis of those actions	CARE for the Cape and Islands
3. Engage businesses who have adopted sustainable alternatives to single-use plastics to help generate case studies for integration into the Northeast Marine Debris Collaborative website; share best practices	Surfrider Foundation, Seaside Sustainability
Strategy 2.2: Encourage reductions in plastic foam and other single-use plastic packaging in restaurants	
Action	**Partner(s)**
1. Develop and implement messaging highlighting certification programs for restaurants	Surfrider Foundation: Ocean Friendly Restaurants, Ocean Conservancy, Coastal Action
Strategy 2.3: Develop a system to catalog existing alternatives to single-use plastics available in the Gulf of Maine	
Actions	**Partner(s)**
1. Support the Gulf of Maine Council in researching regional examples of restaurants, hotels, shops, and tourist attractions successfully implementing sustainable practices	NOAA MDP, Huntsman Marine Science Centre, Fisheries and Oceans Canada, Maine Coastal Program
2. Partner with wholesalers to offer restaurants, hotels, shops, and tourist attractions cost-effective rates for bulk reusable, recyclable, or compostable items	CARE for the Cape and Islands
3. Support and promote products, companies, and innovative strategies focused on the reduction of single-use plastics	Center for Coastal Studies
Objective 3. Engage businesses in offering sustainable options	
Strategy 3.1: Research and educate audiences about compostable and biodegradable plastics and the likelihood for these products to break down in the context of the ocean environment	
Action	**Partner(s)**
1. Identify target audiences (e.g., businesses, end-user) and create effective messaging regarding the likelihood for compostable alternatives to break down in the context of the ocean environment and how consumers can make the most informed, sustainable choices based on their geography	Center for Coastal Studies

Objective 4. Motivate behavior change away from single-use products	
Strategy 4.1: Utilize social marketing messages that identify marine debris sources and change behavior	
Action	**Partner(s)**
1. Create a one-pager of best practices	Surfrider Foundation, NOAA MDP, Huntsman Marine Science Centre, Fisheries and Oceans Canada, Maine Coastal Program
Strategy 4.2: Identify/inventory effective messengers (key influencers) such as community leaders, teen mentors, churches, schools, offices, doctors, nongovernmental organizations, celebrity chefs, youth (diversity, equity, and inclusion)	
Action	**Partner(s)**
1. Create a repository of champions	Blue Ocean Society, Surfrider Foundation
Strategy 4.3: Promote better quality, more accessible, reusable products	
Action	**Partner(s)**
1. Assemble a list of existing products and opportunities	Ocean Conservancy
Strategy 4.4: Promote and engage organizations in campaigns targeting cigarette butt disposal	
Action	**Partner(s)**
1. Support the installation and proper use of cigarette disposal receptacles in collaboration with smoke-free beaches resolutions to limit butts on the beach	Surfrider Foundation: Hold on to Your Butts



Derelict Fishing Gear (DFG)

Abandoned, lost, or otherwise discarded fishing gear on Old Orchard Beach, Maine (Photo credit: NOAA).

Goal 1: Collaborate with industry to reduce impacts of DFG (wild harvest and aquaculture) in the Gulf of Maine	
Objective 1. Understand and communicate the rates, quantities, and varieties of fishing gear loss	
Strategy 1.1: Identify reasons for gear loss	
Action	**Partner(s)**
1. Analyze Maine Department of Marine Resources (ME DMR) and Massachusetts Division of Marine Fisheries (MA DMF) gear loss surveys and disseminate results to industry contacts	Center for Coastal Studies
Strategy 1.2: Assess environmental/economic costs of DFG	
Action	**Partner(s)**
1. Replicate Massachusetts-based DFG mortality studies in Maine and New Hampshire	Center for Coastal Studies, Gulf of Maine Lobster Foundation, Blue Ocean Society

Objective 2. Investigate alternative options for disposal of DFG, plastics, and vessel waste	
Strategy 2.1: Expand convenient shoreside/onboard disposal and recycling options	
Actions	**Partner(s)**
1. Continue to pursue programs that provide shoreside DFG recycling and disposal	Center for Coastal Studies
2. Research successful DFG recycling and disposal programs and evaluate for adaptation in the Gulf of Maine	Center for Coastal Studies
3. Coordinate directed fishing gear disposal events in Gulf of Maine communities	Center for Coastal Studies, Gulf of Maine Lobster Foundation
Strategy 2.2: Expand plastics reduction programs for fishing and aquaculture industries	
Action	**Partner(s)**
1. By the end of the Action Plan, inventory existing best management practices and consider modifications for the Northeast Region in collaboration with fishing and aquaculture industries	Center for Coastal Studies
Strategy 2.3: Promote responsible practices and inspire industry action	
Actions	**Partner(s)**
1. Provide a platform through which harvesters and others can anonymously report underwater gear accumulations	Gulf of Maine Lobster Foundation
2. Engage industry in underwater cleanups	Center for Coastal Studies
3. Acquire trash bags for fishing vessels	Massachusetts Lobstermen's Association, Ocean Conservancy
4. Design shoreline cleanups that facilitate industry participation	Center for Coastal Studies
5. Develop disposal strategies and educational materials for angling gear (e.g., monofilament, hooks, etc.)	NOAA Fisheries, NOAA MDP, Seaside Sustainability, Blue Ocean Society
6. Investigate the potential to require foam docks to be encased in hard plastics	Blue Ocean Society, Rozalia Project
Strategy 2.4: Engage management bodies in methods to handle DFG	
Actions	**Partner(s)**
1. Engage appropriate management bodies to allow for removal effort partnerships	Center for Coastal Studies
2. Engage mobile gear industry in DFG removal during lobster closures	Center for Coastal Studies
3. Assemble law enforcement and regulatory agencies to discuss how fishing gear can be legally recovered by persons other than the gear owner, how reporting can be conducted to help determine areas with built up gear, the feasibility of trap fees, etc.	Center for Coastal Studies, MA DMF

Objective 3. Improve the ability to address DFG through sustainable funding sources	
Strategy 3.1: Develop DFG prevention/removal funding options	
Actions	**Partner(s)**
1. Research DFG prevention/removal funding options and user fee case studies to determine the effective costs of DFG removal and whether user fees would cover such activities	Gulf of Maine Lobster Foundation
2. Research corporate sponsorship opportunities	Center for Coastal Studies, OceansWide
Strategy 3.2: Research stakeholder benefits of supporting DFG prevention programs	
Action	**Partner(s)**
1. Develop a campaign to identify and engage new partners in DFG prevention programs	OceansWide
Objective 4. Assess previous gear innovation studies and the potential for updated gear innovations	
Strategy 4.1: Analyze previous gear innovation studies	
Action	**Partner(s)**
1. Compile results of past gear innovation projects	NOAA MDP
Strategy 4.2: Assess the potential for future gear innovations	
Actions	**Partner(s)**
1. Share gear innovation funding opportunities	NOAA MDP
2. Share the advancement of successful gear innovations	NOAA MDP
Strategy 4.3: Raise fishing gear innovation ideas in forums outside of the Gulf of Maine Marine Debris Action Plan	
Actions	**Partner(s)**
1. Attend fishery management meetings to discuss marine debris issues	Center for Coastal Studies
2. Attend lobster industry meetings (Zone Council, Advisory Council, Associations) to seek input and discuss issues	Center for Coastal Studies

Goal 2: Expand collaboration with recreational fisheries

Objective 1. Increase awareness of the role of recreational fisheries in marine debris issues

Strategy 1.1: Support and expand relevant marine debris components in education and outreach to recreational fishers

Actions	Partner(s)
1. Incorporate gear avoidance into existing boater education courses	NOAA MDP, Ocean Conservancy
2. Develop fact sheet to include in mailings to recreational boaters/ fishers	Ocean Conservancy
3. Integrate marine debris issues into recreational fisheries action plans	NOAA Fisheries

Strategy 1.2: Investigate and adjust existing recreational fisheries' regulations to prevent, mitigate, or intercept DFG and marine debris

Actions	Partner(s)
1. Convey results of DFG recovery programs to state and regional fisheries managers to highlight the role of recreational fishing (lobster, rod-and-reel) in generating DFG	Center for Coastal Studies
2. Identify possible measures to reduce DFG including limiting traps and/or permits, disposal options, enforcement actions	Center for Coastal Studies

Microplastics

Microplastics on a beach (Photo credit: NOAA).

Goal 1: Reduce microplastic debris in the Gulf of Maine	
Objective 1. Compile the latest scientific studies on microplastics and create a tool for broad access	
Strategy 1.1: By 2021, create a user-friendly, searchable database of peer-reviewed microplastics literature	
Actions	**Partner(s)**
1. Create and populate a platform or portal for information on published microplastics literature	NOAA MDP
2. Mine existing listservs and databases to assemble peer-reviewed microplastics literature	NOAA MDP, Clean Ocean Action
Strategy 1.2: By 2021, provide database access to regional stakeholders	
Actions	**Partner(s)**
1. Use the NOAA MDP network, regional partners, and social media to share the microplastics literature database (Strategy 1.1)	NOAA MDP
2. Link the microplastics literature database to existing organizational websites	UNH Sea Grant

Objective 2. Increase public awareness of marine microplastics pollution through citizen science	
Strategy 2.1: Compile and standardize protocols and equipment list for citizen science microplastics sampling and processing/analyzing	
Actions	**Partner(s)**
1. By 2021, research and compile existing microplastics citizen science methodologies and equipment	UNH Sea Grant, Clean Ocean Action, Sea Education Association
2. By 2021, standardize statistically sound microplastics citizen science protocols or metadata, including detailed resources for acquiring sampling materials and open access data, including mobile applications	UNH Sea Grant
Strategy 2.2: By the end of the Action Plan, provide access to microplastics citizen science protocols, equipment list, and mobile application resources	
Action	**Partner(s)**
1. House the microplastics citizen science resources, engagement opportunities, and data on a publicly accessible website(s)	NOAA MDP
Strategy 2.3: Use microplastics citizen science data to inform and promote future efforts	
Actions	**Partner(s)**
1. Share microplastic citizen science updates via the Northeast Regional Marine Debris Collaboration Portal	NOAA MDP
2. Promote and recruit volunteers for microplastics citizen science protocols and increase participation via social media	Clean Ocean Action, Boothbay Sea and Science Center, The Harborkeepers
Objective 3. Build awareness of marine microplastics pollution in aquaculture and fishing industries	
Strategy 3.1: Inform fisheries and aquaculture industry of the potential impacts of microplastics on target resources, products, and bottom lines	
Actions	**Partner(s)**
1. Inventory and develop at least two digital and print outreach materials for fishing and aquaculture industry, including a microplastics fact sheet	UNH Sea Grant
2. Distribute/make available microplastics outreach materials at regional fishing association forums at least twice per year	UNH Sea Grant, Gulf of Maine Lobster Foundation
3. Partner with state fisheries managers to identify contacts for microplastics information sharing	UNH Sea Grant, UMass Boston

Strategy 3.2: Improve our understanding of fishing and aquaculture gear as potential sources of microplastic pollution	
Actions	**Partner(s)**
1. Perform a gap analysis of existing efforts and develop a prioritized research question list	UMass Boston
2. Share funding opportunities regarding fishing and aquaculture gear as potential sources of microplastic pollution	UNH Sea Grant, UMass Boston
3. Share current partner research and analysis of fishing and aquaculture gear as potential sources of microplastic pollution	UNH Sea Grant, UMass Boston
Objective 4. Inform marine educators about marine microplastic pollution and its impact on wildlife	
Strategy 4.1: Identify targeted marine educator audiences and provide resources for incorporating microplastics lessons into curricula	
Actions	**Partner(s)**
1. Compile regional education contacts and resources using the Northeast Marine Debris Collaboration Portal	NOAA MDP
2. By the end of 2020, modify existing microplastics fact sheets for educator use	Boothbay Sea and Science Center
3. Develop microplastics workshop for educators	Boothbay Sea and Science Center, Blue Ocean Society, Rozalia Project
4. Provide information and microplastics samples to education networks for incorporation of microplastics pollution lessons into curricula	NOAA MDP
Strategy 4.2: Encourage changes within educators' home institutions to reduce the use of single-use plastics	
Action	**Partner(s)**
1. Develop and distribute a guidance document for alternatives to single-use plastic service ware	Surfrider Foundation

Research, Information, and Risk Assessment for Wildlife and Habitat

North Atlantic right whales in Stellwagen Bank National Marine Sanctuary (Photo credit: NOAA).

Goal 1: Identify, prevent, and reduce marine debris impacts to wildlife and habitat	
Objective 1. Study the impact of various types of marine debris on wildlife and habitat	
Strategy 1.1: Assess marine debris risks to wildlife and habitat	
Action	**Partner(s)**
1. Compile a literature review on marine debris impacts ranked by threat to wildlife and/or habitat, determine gaps in information	USFWS Migratory Birds (via student internship)
Strategy 1.2: Collect and share anecdotal marine debris/wildlife interaction data from stakeholders in the Gulf of Maine Region	
Actions	**Partner(s)**
1. Collect, analyze, and share anecdotal marine debris/wildlife interaction data	NOAA MDP, Blue Ocean Society, Seacoast Science Center
2. Share a list of applicable marine debris, wildlife, and habitat listservs available for dissemination of information	NOAA MDP

Objective 2. Increase awareness of the impacts of marine debris on wildlife and habitat	
Strategy 2.1: Develop standardized, effective messaging regarding the impacts of marine debris that can be tailored to different audiences	
Action	**Partner(s)**
1. Develop a uniform message based on the outcome of Strategy 1.1 that can be tailored for different audiences (e.g., fishing industry, beachgoers, etc.) and reiterated throughout the Region	USFWS Migratory Birds
Strategy 2.2: Affect legislation, regulations, or policies that may protect wildlife and habitat from the impacts of marine debris	
Actions	**Partner(s)**
1. Educate elected officials, state and federal land managers, and community leaders on the impacts of marine debris; build trust	Seacoast Science Center, Blue Ocean Society, Surfrider Foundation
2. Build relationships and support enforcement of existing regulations by collaborating with environmental law enforcement agencies	Seacoast Science Center
3. Research existing legislation and assess the effectiveness of legislation meant to protect wildlife and habitat from the impacts of marine debris	Surfrider Foundation
Strategy 2.3: Influence community behavior by increasing awareness of marine debris impacts on wildlife and habitat	
Actions	**Partner(s)**
1. Develop an effective social media campaign on the impacts of marine debris on wildlife and habitat using common language	USFWS Migratory Birds
2. Share resources and links to citizen toolkit, which includes templates and tools to empower communities to effect change	NOAA MDP
3. Draft 'beachcombers guide to marine debris' depicting typical types of debris found on the Region's beaches	OceansWide, Center for Coastal Studies
Objective 3. Reduce risks posed by marine debris to wildlife and habitat	
Strategy 3.1: Clean up existing marine debris	
Actions	**Partner(s)**
1. Remove debris from seabird nesting and staging areas and other habitat critically important to wildlife	Center for Coastal Studies, Blue Ocean Society
2. Conduct coastal habitat cleanups, including areas surrounding rivers, lakes, etc.	Seacoast Science Center, Blue Ocean Society, Gulf of Maine Lobster Foundation, Center for Coastal Studies, Rozalia Project

Goal 2: Prepare to effectively respond to marine life and habitat impacted by marine debris	
Objective 1. Determine best practices for responding to marine life impacted by marine debris	
Strategy 1.1: Develop infrastructure for responding to marine life impacted by marine debris	
Actions	**Partner(s)**
1. Develop standardized shoreside responder protocols to include ingestion/entanglement information	Seacoast Science Center, Blue Ocean Society, NOAA Fisheries
2. Provide information on protocols and best practices to responders answering rescue hotlines	Seacoast Science Center, NOAA Fisheries
Objective 2. Determine best practices for responding to marine habitat impacted by marine debris	
Strategy 2.1: Develop infrastructure for responding to marine habitat impacted by marine debris	
Actions	**Partner(s)**
1. Create a volunteer network to respond to storm events or other acute threats from marine debris	Blue Ocean Society
2. Share funding opportunities and resources to support habitat cleanup efforts	NOAA MDP

Appendix I: Future Actions

Consumer Debris

Goal 1: Reduce consumer debris in the Gulf of Maine Region
Objective 1. Reduce the quantity of single-use plastics in the environment
Strategy: Identify tools to prevent single-use plastics from entering the watershed
Actions
A1. Identify pathway and points of intervention on the pathway of single-use plastics from production to consumer, and assess intersecting spatial synergies and conflicts
A2. Identify pathway and points of intervention on the pathway of single-use plastics from consumer to ocean (e.g., recycling), and assess intersecting spatial synergies and conflicts
A3. Develop fact sheet or infographic, based on Actions A1 and A2, to engage with identified audiences (e.g., state representatives)
A4. Review existing legislation and proposed legislation; generate a list of towns and recycling committees that have promoted single-use policies
A5. Propose local, state, and federal legislation and policy related to common marine debris items, including but not limited to balloons, single-use plastic bags, plastic foam, and single-use beverage bottles
Objective 2. Reduce barriers to sustainable consumer choices
Strategy: Encourage reductions in plastic foam and other single-use plastic packaging in restaurants
Action
A1. Implement restaurant sustainability programs with businesses in the Gulf of Maine Region (e.g., SEA: Trash Shouldn't Splash, Surfrider Foundation: Ocean Friendly Restaurants)
Strategy: Develop system to catalog existing alternatives to single-use plastics available in the Gulf of Maine
Action
A1. Identify barriers to plastic-free, reusable, alternative choices in restaurants, hotels, shops, and tourist attractions
Objective 3. Engage businesses in offering sustainable options
Strategy: Research and educate about compostable and biodegradable plastics and the likelihood for these products to break down in the context of the ocean environment
Actions
A1. Review research on the composition of compostable and biodegradable plastics
A2. Assess current messaging surrounding compostable and biodegradable plastics and develop one-pagers and website content regarding the status of these products and their environmental impacts

Strategy: Use science and economics to motivate consumers and businesses in making sustainable choices
Actions
A1. Use/promote accurate life cycle analyses; groundtruth for Gulf of Maine regional analysis
A2. Evaluate Ocean Friendly Restaurants' economic impact in the Gulf of Maine

Derelict Fishing Gear (DFG)

Goal 1: Collaborate with industry to reduce impacts of DFG (wild harvest and aquaculture) in the Gulf of Maine
Objective 1. Understand and communicate the rates, quantities, and varieties of fishing gear loss
Strategy: Identify reasons for gear loss
Actions
A1. Replicate ME DMR gear loss survey considering updated gear specifications
A2. Create a summary report of the values and challenges of enforcing wet storage requirements
A3. Work with the Northeast Regional Ocean Council to integrate existing data on DFG into the Northeast Ocean Data Portal
Strategy: Assess environmental/economic costs of DFG
Action
A1. Examine DFG recovery data for economic implications (commercial or recreational fishery, gear loss value, cost of disposal, etc.)
Objective 2. Investigate alternative options for disposal of DFG, plastics, and vessel waste
Strategy: Expand plastics reduction programs for fishing and aquaculture industries
Action
A1. Develop methodology for a fishing trap tag buyback pilot program
Strategy: Promote responsible practices and inspire industry action
Action
A1. Research fishing gear deposit and incentive programs
Objective 3. Improve the ability to address DFG through sustainable funding sources
Strategy: Develop DFG prevention/removal funding options
Action
A1. Research the potential to redirect existing fees (e.g., seafood import tariffs, fishing permits)

Goal 2: Expand collaboration with recreational fisheries
Objective 1. Increase awareness of the role of recreational fisheries in marine debris issues
Strategy: Support and expand relevant marine debris components in education and outreach to recreational fishers
Action
A1. Promote training courses and educational materials for recreational boaters/fishers
Strategy: Provide education on fishing gear loss for harbormaster associations, yacht clubs, and other organizations
Action
A1. Educate harbormaster associations on gear placement requirements to avoid gear loss

Appendix II: Contacts

Location	Organization	Last Name	First Name
INT	Gulf of Maine Council on the Marine Environment		
INT	Ocean Conservancy	Kollar	Sarah
INT	Ocean Conservancy	Schutes	Allison
CAN	University of New Brunswick	Beardy	Krista
CAN	Clean Nova Scotia	Burbidge	Erin
CAN	New Brunswick Government	Coombs	Karen
CAN	Ocean Wise/Great Canadian Shoreline Cleanup	Debreceni	Susan
CAN	Ocean Wise/Great Canadian Shoreline Cleanup	Le Souef	Kate
CAN	Clean Nova Scotia	Robertson	Charlynne
CAN	Clean Nova Scotia	Smith	Sonia
CAN	Fisheries and Oceans Canada	Stuart	Erica
CAN	Huntsman Marine Science Centre	Walker	Jackie
CAN	World Wildlife Fund Canada	Winterton	Sarah
USA	National Sea Grant Law Center (University of Mississippi, School of Law)	Bowling	Terra
USA	Conservation Law Foundation	Brooks	Priscilla M.
USA	National Fish and Wildlife Foundation	Goldsmith	Kaitlin
USA	American Chemistry Council	Harris	Stewart
USA	From the Bow Seat	Irizarry	Alyssa
USA	Covanta Energy	Morris	Margretta (Meg)
USA	National Fish and Wildlife Foundation	Pico	Michelle
USA	Terracycle	Sanfilippo	Rudy
USA	BoatU.S. Foundation	Shingledecker	Susan
Regional	International Joint Commission		
Regional	Gulf of Maine Research Institute	Baukus	Adam
Regional	New England Ocean Science Education Collaborative	Bonanno	Aimee
Regional	Environmental Protection Agency	Cote	Mel
Regional	Conservation Law Foundation	Felt	Jennifer
Regional	National Oceanic and Atmospheric Administration Marine Debris Program/Freestone Environmental Services	Fox	Demi
Regional	Surfrider Foundation	Gates	Melissa
Regional	Environmental Protection Agency	Guza-Pabst	Olga
Regional	National Oceanic and Atmospheric Administration	Jaburek	Shannah
Regional	National Oceanic and Atmospheric Administration	Keane	Ellen
Regional	National Oceanic and Atmospheric Administration	Kelly	Moira
Regional	Atlantic States Marine Fisheries Commission	Kerns	Toni
Regional	National Oceanic and Atmospheric Administration	Kinkade	Chris
Regional	Sea Education Association	Law	Kara Lavender
Regional	National Oceanic and Atmospheric Administration	Lehmann	Steve
Regional	Environmental Protection Agency	Lyons	Regina
Regional	National Oceanic and Atmospheric Administration	Madley	Kevin
Regional	Rozalia Project	Miller	Rachael
Regional	Northeastern Regional Association of Coastal Ocean Observing Systems	Morrison	Ru

Location	Organization	Last Name	First Name
Regional	National Oceanic and Atmospheric Administration	Nicholson	Betsy
Regional	Sidewalk Buttler	Roylos	Mike
Regional	Sea Education Association	Siuda, PhD	Amy NS
Regional	National Oceanic and Atmospheric Administration	Smith	Ainsley
Regional	U.S. Fish and Wildlife Service, Migratory Bird Program	Spiegel	Caleb
Regional	Rozalia Project	Sullivan	Ashley
ME	Shaw Institute		
ME	Surfrider Foundation Maine Chapter		
ME	Maine Legislature	Ankeles	Dan
ME	College of the Atlantic	Barrows	Abby
ME	University of Maine	Bien	Lauren
ME	University of Maine	Bisson	Beth
ME	Friends of Casco Bay	Cerullo	Mary M.
ME	Wells National Estuarine Research Reserve/Laudholm Trust	Charov	Nik
ME	State of Maine	Cloutier	Major Rene
ME	State of Maine	Cotnoir	Sarah
ME	Downeast Lobstermen's Association	Dassatt	Sheila
ME	Wells National Estuarine Research Reserve	Dest	Paul
ME	Maine Legislature	Devin	Mick
ME	Maine Department of Agriculture, Conservation & Forestry	DiBello	Carol
ME	Boothbay Sea and Science Center	Dion	Pauline
ME	Marine Mammals of Maine	Doughty	Lynda
ME	Friends of Casco Bay	Frignoca	Ivy
ME	State of Maine	Gilbert	Deirdre
ME	Maine Island Trail Association	Jenness	Maria
ME	Wells National Estuarine Research Reserve	Kahn	Suzanne
ME	OceansWide	Knott	Janet
ME	National Audubon Society	Lyons	Don
ME	Maine Island Trail Association	Marcaurelle	Brian
ME	Maine Coast Fishermen's Association	Martens	Ben
ME	Maine Lobstermen's Association	McCarron	Patrice
ME	Maine Department of Agriculture, Conservation & Forestry	Noll	John
ME	United States Coast Guard	Odom	Lt. Matthew
ME	Gulf of Maine Lobster Foundation	Pelletier	Erin
ME	Maine Harbormaster's Association	Pinkham	Jay
ME	State of Maine	Reardon	Kathleen
ME	Oceanswide	Scott	Buzz
ME	The Nature Conservancy	Smith	Geoffrey
ME	Gulf of Maine Lobster Foundation	Stymiest	Cassie
ME	State of Maine	Summers	Erin
ME	State of Maine	Torrent	Theresa
ME	United States Fish and Wildlife Service	Welch	Linda
ME	State of Maine	Wilson	Carl
ME	Rozalia Project	Winslow	Brooke
NH	Surfrider Foundation New Hampshire Chapter		

Location	Organization	Last Name	First Name
NH	University of New Hampshire	Bradt	Gabriela (Gabby)
NH	University of New Hampshire	Chapman	Erik
NH	New Hampshire Department of Environmental Services	Couture	Steve
NH	New Hampshire Department of Environmental Services	Diers	Ted
NH	New Hampshire Fish and Game Department	Eastman	Lt. Michael
NH	New Hampshire Sea Grant & Cooperative Extension	Eberhardt	Alyson
NH	New Hampshire Fish and Game Department	Grout	Doug
NH	Blue Ocean Society for Marine Conservation	Kennedy	Jennifer
NH	New Hampshire Fish and Game Department	O'Donnell	Conor
NH	Conservation Law Foundation	Paly	Melissa
NH	New Hampshire Fish and Game Department	Patterson	Cheri
NH	New Hampshire Department of Environmental Services	Pelletier	Rene
NH	Seacoast Science Center	Perez	Sarah
NH	New Hampshire Fish and Game Department	Riley	Cory
NH	University of New Hampshire	Seavey	Jennifer
NH	Seacoast Science Center	Stokes	Ashley
NH	New Hampshire Department of Environmental Services	Williams	Chris
MA	Surfrider Foundation Massachusetts Chapter		
MA	Seaside Sustainability	Arthur	Emily
MA	Friends of Winthrop Beach	Bishop	Barbara
MA	U.S. Coast Guard	Borges	Omar
MA	Woods Hole Sea Grant	Brodeur	Jeffrey
MA	Cohasset Center for Student Coastal Research	Buckley	Jack
MA	State of Massachusetts	Burke	Erin
MA	Massachusetts Lobstermen's Association	Casoni	Beth
MA	Massachusetts Lobstermen's Association	Casoni	Dave
MA	Product Stewardship Institute	Cassell	Scott
MA	National Oceanic and Atmoshpheric Administration Office of National Marine Sanctuaries	Cowie-Haskell	Ben
MA	State of Massachusetts	DiBona	Pam
MA	Salem Sound Coastwatch	Flaherty	Emily
MA	State of Massachusetts	Glenn	Bob
MA	State of Massachusetts	Grady	Sara
MA	Boston Harbor Now	Horwood	Jill Valdes
MA	Center for Coastal Studies	Hudak	Christy
MA	U.S. Coast Guard	Hunt	Hayden
MA	New England Aquarium	Kingston	Ryan
MA	State of Massachusetts	Lacey	Robin
MA	TrapSaver	Liebenberg	David
MA	Center for Coastal Studies	Ludwig	Laura
MA	Maritime Gloucester	Madeira	Amanda
MA	Manchester-Essex Green Team/Seaside Sustainability	Magers	Eric
MA	Massachusetts Department of Conservation and Recreation	Magnifico	Mike
MA	Seaside Sustainability	McAlpin	Skylar
MA	State of Massachusetts/Northeastern University	McCauley	Carole

Location	Organization	Last Name	First Name
MA	The Nature Conservancy	McGuire	Christopher
MA	U.S. Coast Guard	McInnish	Adam
MA	Massachusetts Division of Marine Fisheries	McKiernan	Dan
MA	Center for Coastal Studies	Mechling	Jesse
MA	Clean River Project	Morrison	Rocky
MA	State of Massachusetts	Muramoto	Joann
MA	State of Massachusetts	Nash	Matthew
MA	Salem Sound Coastwatch	Nessen	Jack
MA	National Oceanic and Atmospheric Administration	Newhall	Becca
MA	Center for Coastal Studies	Nicholson	Owen
MA	Nahant S.W.I.M.	Patek	Vi
MA	Coonamessett Farm Foundation	Patel	Samir H.
MA	Massachusetts Institute of Technology	Pederson	Judy
MA	State of Massachusetts	Phippen	Peter
MA	Emanate Surf Project	Reed	Grant
MA	TrapSaver	Sandberg	Willem
MA	New England Aquarium	Spitzer	William
MA	Urban Harbors Institute	Starbuck	Kimberly
MA	U.S. Coast Guard	Stoyka	Bella
MA	CARE for the Cape and Islands	Talladay	Jill
MA	Urban Harbors Institute	Uiterwyk	Kristin
MA	Salem Sound Coastwatch	Warren	Barbara
MA	Cape Cod Baykeeper	Wilde	Chris
MA	National Oceanic and Atmospheric Administration Office of National Marine Sanctuaries	Wiley	David
RI	11th Hour Racing	Carnevale	Michelle
RI	Commercial Fisheries Research Foundation	Petruny-Parker	Peg
RI	Marine Affairs Institute & Rhode Island Sea Grant Legal Program	Porter	Read
NJ	Clean Ocean Action	Tobin	Catie

Wilbur L. Ross, Jr.
United States Secretary of Commerce

Dr. Neil Jacobs
Assistant Secretary of Commerce for Environmental Observation and Prediction,
performing the duties of Under Secretary of Commerce for Oceans and Atmosphere

Nicole R. LeBoeuf
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