



# 2019 Oregon Marine Debris Action Plan

September 2019

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## Acknowledgements

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# List of Acronyms

Acronym	
<b>COASST</b>	Coastal Observation and Seabird Survey Team
<b>DLCD</b>	Department of Land Conservation and Development
<b>DSL</b>	Department of State Lands
<b>EPA</b>	Environmental Protection Agency
<b>GIS</b>	Geographic Information System
<b>HRAP</b>	Haystack Rock Awareness Program
<b>ICC</b>	International Coastal Cleanup
<b>JTMD</b>	Japan Tsunami Marine Debris
<b>LCEP</b>	Lower Columbia Estuary Partnership
<b>NERR</b>	National Estuarine Research Reserve
<b>NGO</b>	Non-Governmental Organization
<b>NOAA MDP</b>	National Oceanic and Atmospheric Administration Marine Debris Program
<b>OCAq</b>	Oregon Coast Aquarium
<b>OCMP</b>	Oregon Coastal Management Program
<b>ODEQ</b>	Oregon Department of Environmental Quality
<b>ODFW</b>	Oregon Department of Fish and Wildlife
<b>OMDT</b>	Oregon Marine Debris Team (Surfrider Foundation, CoastWatch, Washed Ashore, SOLVE, Oregon Sea Grant)
<b>OPAC</b>	Ocean Policy Advisory Council
<b>OR MDAP</b>	Oregon Marine Debris Action Plan
<b>OSG</b>	Oregon Sea Grant
<b>OSMB</b>	Oregon State Marine Board
<b>OSU</b>	Oregon State University
<b>PSU</b>	Portland State University
<b>PSMFC</b>	Pacific States Marine Fisheries Commission
<b>STEAMSS</b>	Science, Technology, Engineering, Art, Math, and Social Studies
<b>STEM</b>	Science, Technology, Engineering, and Math
<b>USCG</b>	United States Coast Guard

# Introduction

Marine debris is a growing global problem with wide-ranging impacts. Oregon is impacted by marine debris that litters its waters and shoreline, harms ecosystems, marine life, navigation, and the economy.

Over the years, Oregon's agencies, NGOs, academia, and industry have done remarkable work to prevent and remove marine debris. In 2017, the Oregon marine debris community finalized the Oregon Marine Debris Action Plan (OR MDAP) to facilitate more effective and collaborative reduction of marine debris in the state. In the two years since, impressive progress has been made on many of the actions listed in the Action Plan; these accomplishments are captured in Appendix II of this document.

To keep the Oregon Marine Debris Action Plan relevant and applicable over time, partners convened for a workshop in March 2019 to update the Action Plan. They discussed achievements and lessons learned; reviewed and, if needed, modified ongoing actions; and identified future actions on which to embark. The 2019 Oregon Marine Debris Action Plan summarizes the input and insight of workshop participants, as well as the contribution of other partners.

## Action Plan Purpose

The purpose of the Oregon Marine Debris Action Plan is to facilitate and track collaborative and effective actions that prevent and reduce marine debris in Oregon.

## Action Plan Terms

**Overall Action Plan duration:** The overall Action Plan duration is six years. After six years, the plan will be evaluated.

**Action plan operational cycle:** The Action Plan operational cycle is two years. At the end of an operational cycle, partners will participate in a workshop to update the Action Plan, as was done in March 2019.

**Communication:** A newsletter with updates from the partners will be drafted and distributed every six months. The NOAA Marine Debris Program will facilitate the creation and distribution of the newsletter. Additionally, major updates will be provided through a listserv that will include all participants and other interested marine debris stakeholders. Specific teams, such as the outreach and communication team, will meet in person and via conference calls to facilitate the execution of their actions.

# Marine Debris Goals, Strategies & Actions

The tables below are the core of the Action Plan. They list goals, strategies, and ongoing and future actions that contribute to achieving the Action Plan's goals.

## Goals

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The 2019 Oregon Marine Debris Action Plan has four major goals:

**Goal 1: Prevention**

Prevent the generation of marine debris through community engagement and education efforts.

**Goal 2: Removal**

Locate, identify, remove, and recycle or dispose of land- and ocean-based marine debris from Oregon's shorelines and waters.

**Goal 3: Coordination**

Coordinate marine debris actions effectively throughout Oregon.

**Goal 4: Research**

Conduct coordinated, high-quality research to inform actions that reduce the adverse impacts of marine debris.

## Strategies

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In this Action Plan, the strategies define how each goal will be achieved. Typically, there are several strategies per goal.

## Actions

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Actions are the projects and activities undertaken to achieve the goals. Ongoing and future actions are listed for each goal. The actions list leads and partners. Leads and partners are entities that have volunteered to carry out a given action, pending the availability of resources (funding, staff, time, materials, etc.). It is important to note that organizations may still become involved in actions with existing leads and partners. As this plan evolves, there will be more opportunities for new partners to participate in these efforts.



# Goal 1: Prevention

Prevent the generation of marine debris through community engagement and education efforts.

*Outreach event at Oregon Surfrider's Rise Above Plastics Pollution Day (Photo credit: NOAA).*

## Strategy 1.1: Prevent marine debris through engagement.

### Ongoing Actions

Actions	Lead and Partners
1.1.1. Provide funding for recurring cleanup activities on state-owned waterways.	Lead: DSL
1.1.2. Promote education around derelict fishing gear to minimize marine debris.	Partners: PSMFC, OSG, ODFW
1.1.3. Encourage institutional pledges towards zero-waste efforts.	Partners: Waste managers, Surfrider Foundation, PSU
1.1.4. Create Good Samaritan law for the recovery of derelict materials.	Partners: OPAC, Surfrider Foundation
1.1.5. Share information, research, and call to actions regarding alternatives to single-use products to promote Extended Producer Responsibility.	Lead: Everblue Partners: Surfrider Foundation

### Future Actions

Actions	Lead and Partners
1.1.6. Expand stormwater management to reduce sources of debris before they can reach the marine environment.	Partners: Surfrider Foundation, LCEP, ODEQ

**Strategy 1.1: Prevent marine debris through engagement.**

**Future Actions**

Actions	Lead and Partners
1.1.7. Conduct an analysis of local debris plans and integrate marine debris when possible, including coastal communities and those along inner rivers and waterways.	Lead: ODEQ
1.1.8. Assess the permitting process for notifying, consulting, and sharing information with fishermen and the Oregon Fisherman’s Cable Committee on proposed scientific experiments in the territorial sea that could introduce marine debris.	Lead: DSL Partners: OSG, ODFW, Oregon Fishermen’s Cable Committee
1.1.9. Work to improve domestic capacity to recycle plastic locally, rather than shipping overseas.	Lead: ODEQ

**Strategy 1.2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Ongoing Actions**

Actions	Lead and Partners
1.2.1. Utilize the language of the arts to communicate marine debris to K-12 students and the public.	Partners: State agencies, NGOs, academia
1.2.2. Engage students in service learning projects to prevent and remove marine debris.	Partners: Oregon State Parks, Surfrider Foundation, Indian Tribes, SOLVE, CoastWatch, OSG, OCAq
1.2.3. Give presentations on marine debris (formal and informal) to K-12 students and the public.	Partners: State agencies, NGOs, academia, and industry, OCAq, OSG
1.2.4. Conduct educational campaigns, programs, and outreach activities, such as the Surfrider Foundation’s Rise Above Plastics Program and “Hold on to Your Butts” Program.	Lead: Surfrider Foundation Partners: State agencies, NGOs, academia, industry
1.2.5. Create and conduct public service announcements targeting single-use plastics and the value of clean beaches.	Partners: Oregon State Parks, Surfrider Foundation, CoastWatch, SOLVE
1.2.6. Educate participants at cleanup events about marine debris.	Partners: SOLVE, Oregon State Parks, OSG, Surfrider Foundation, Oregon Shores Conservation Coalition, SOLVE, Washed Ashore, and others
1.2.7. Explore ways to leverage and partner on marine debris art projects to connect with artists and those collecting marine debris.	Lead: Washed Ashore Partners: HRAP, SOLVE, Elizabeth Roberts

**Strategy 1.2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
1.2.8. Present to local, regional, and national groups on using the arts to communicate about marine debris.	Lead: Washed Ashore Partner: HRAP, Elizabeth Roberts
1.2.9. Conduct educational messaging about marine debris in feeding narrations at aquaria, including during World Ocean Day and other interpretive programming.	Lead: OCAq Partner: HRAP
1.2.10. Raise awareness about plastic as a material and its environmental impact.	Lead: Washed Ashore, Surfrider Foundation Partners: EPA Trash Free Waters, ODEQ, OSG, Everblue, OCAq
1.2.11. Educate consumers about sustainable and eco-friendly alternatives to single-use, disposable materials.	Lead: Washed Ashore, Surfrider Foundation Partners: Oregon Shores Conservation Coalition, Everblue, HRAP, OCAq, PSU
1.2.12. Develop a framework to designate an Oregon Marine Debris Month and highlight marine debris through messaging, activities, and social media.	Lead: Surfrider Foundation, OMDT Partners: Oregon State Parks, OCMP, DSL, OSMB, OCAq, NOAA MDP, USCG, Indian Tribes, SOLVE, Oregon Shores Conservation Coalition, DLCD, COASST, LCEP, ODEQ
1.2.13. Create a marine debris awareness/social marketing campaign.	Lead: Surfrider Foundation, OCAq Partners: SOLVE, Oregon Shores Conservation Coalition, Everblue
1.2.14. Create a state-wide Rise Above Plastics Day encouraging Oregonians to go one day without using any single-use plastics.	Lead: Surfrider Foundation Partners: OCAq, SOLVE, Oregon State Parks, Oregon Shores Conservation Coalition
1.2.15. Develop marine debris exhibits for educational purposes.	Partners: Washed Ashore, OCAq, Oregon Shores Conservation Coalition, SOLVE, OSG, Everblue
1.2.16. Identify existing marine debris exhibits around Oregon, sharing exhibits that are working well.	Partners: HRAP, PSU, OSG, OCAQ, Washed Ashore, Elizabeth Roberts

**Strategy 1.3: Educate and motivate teachers and students to take action on marine debris.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
1.3.1. Maintain and update the STEAMSS-based marine debris curriculum and conduct educator workshops.	Lead: OSG Partner: OCAq
1.3.2. Develop and implement a 4th-6th grade Integrated Arts Marine Debris Curriculum to educate about and reduce single-use plastics in everyday life.	Lead: Washed Ashore
1.3.3. Offer and conduct virtual outreach opportunities to educate teachers and students about marine debris.	Partners: Elizabeth Roberts, NOAA MDP, HRAP, Washed Ashore, PSU, SOLVE, OCAq, OSG, Surfrider Foundation
1.3.4. Collaborate with other Science, Technology, Engineering, and Mathematics (STEM) hubs to better disseminate information on marine debris and increase awareness.	Leads: Oregon Coast STEM Hub, OSG, Washed Ashore Partners: OCAq, Oregon Shores Conservation Coalition, South Slough NERR

**Strategy 1.4: Educate and engage mariners from commercial fishing boats, recreational boats, and shipping vessels on marine debris best practices.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
1.4.1. Coordinate Clean Marina Program to improve water quality, including prevention of marine debris.	Lead: OSMB Partner: OSG
1.4.2. Coordinate Clean Boater Program to educate and equip boaters to use best practices to improve water quality, including prevention of marine debris.	Lead: OSMB Partner: OSG



## Goal 2: Removal

Locate, identify, remove, and recycle or dispose of land and ocean-based marine debris from Oregon’s shorelines and waters.

*Volunteer beach cleanup (Photo credit: Oregon Surfrider Foundation).*

### Strategy 2.1: Increase response capacity to remove marine debris in Oregon.

#### Ongoing Actions

Actions	Lead and Partners
2.1.1. Respond to reports of large or dangerous marine debris (requiring special equipment and/or permitting) on the ocean shore and remove or coordinate removal.	Lead: Oregon State Parks
2.1.2. Respond to hazardous materials/substances or items such as drums and containers on the ocean shore.	Lead: ODEQ Partners: Oregon State Parks
2.1.3. Host two coast-wide beach cleanups per year (Beach and Riverside/ICC and Spring Cleanup).	Lead: SOLVE Partners: Oregon State Parks, Surfrider Foundation, local coastal haulers, OCAq
2.1.4. Coordinate state-wide Adopt-A-River program and inland cleanups throughout the year.	Lead: SOLVE Partner: OSMB
2.1.5. Conduct year-round marine debris cleanups.	Partners: Surfrider Foundation, SOLVE, OMDT, Oregon State Parks, COASST, CoastWatch
2.1.6. Coordinate and implement ongoing cleanup activities and programs targeted at inland waterways and urbanized areas (e.g., Portland Green Streets Program).	Leads: Surfrider Foundation, SOLVE Partners: Oregon State Parks, LCEP

**Strategy 2.1: Increase response capacity to remove marine debris in Oregon.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.1.7. Evaluate marine debris bag stations and brand materials for consistency.	Lead: Oregon State Parks Partners: OMDT, Surfrider Foundation, SOLVE
2.1.8. Evaluate the use and placement of cigarette butt canisters within coastal Oregon State Parks, inland waterways, and urban areas, prioritizing target areas (e.g., event spaces, bars, ports, marinas, etc.).	Leads: Surfrider Foundation, Oregon State Parks Partners: SOLVE, OSMB
2.1.9. Improve Oregon State Parks ocean shore management capacity. Help support/expand funding for beach cleanups and beach safety programs.	Lead: Surfrider Foundation Partners: Lincoln County
2.1.10. Implement a coast-wide Oregon Adopt-A-Beach Program.	Lead: SOLVE Partners: Oregon State Parks, CoastWatch, NOAA MDP, Surfrider Foundation

**Future Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.1.11. Implement a rapid response program for marine debris cleanup: review existing protocols and identify gaps; generate a priority list by area sensitivity, level of incidents, and type of debris; and explore and improve existing debris notification protocols.	Partners: SOLVE, Oregon State Parks, Surfrider Foundation, OMDT
2.1.12. Evaluate NGO-led Oregon Marine Debris Team (OMDT) for rapid response, monitoring, and scheduled cleanups.	Lead: OMDT
2.1.13. Coordinate beach monitoring with Adopt-A-Beach programs coast-wide.	Partners: Surfrider Foundation, CoastWatch, SOLVE, COASST, Oregon State Parks

**Strategy 2.2: Create or modify existing policies and procedures to improve the effectiveness of marine debris prevention and cleanup in Oregon.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.2.1. Engage Oregonians in plastic pollution policy education and reduction campaigns, where organizationally appropriate.	Lead: Surfrider Foundation Partners: Everblue, Oregon Shores Conservation Coalition

**Strategy 2.2: Create or modify existing policies and procedures to improve the effectiveness of marine debris prevention and cleanup in Oregon.**

**Future Actions**

Actions	Lead and Partners
2.2.2. Develop and disseminate a report on the Division 82 Waterway Rules and implementation of the Submerged Land Enhancement Fund.	Lead: DSL Partner: Surfrider Foundation
2.2.3. Work with the science community to define micro-, nano-, and mesoplastics, implement removal protocols, and identify priority areas for removal.	Partners: PSU, Oregon State Parks, Surfrider Foundation, ODFW, NOAA MDP, SOLVE

**Strategy 2.3: Facilitate volunteer and staff safety during debris cleanups.**

**Ongoing Actions**

Actions	Lead and Partners
2.3.1. Facilitate the distribution of volunteer beach cleanup safety protocols (e.g., beach safety, hazardous materials) during SOLVE-supported events, including a beach captain safety sheet to be covered prior to cleanups.	Lead: SOLVE

**Future Actions**

Actions	Lead and Partners
2.3.2. Improve safety through the identification of sensitive/challenging/hazardous/risky areas for debris removal, development of safety protocols, and execution of training.	Leads: Oregon State Parks, OMDT
2.3.3. Distribute consistent safety messaging for organized beach cleanups in Oregon.	Lead: SOLVE, Oregon State Parks Partners: Surfrider Foundation, CoastWatch

**Strategy 2.4: Conduct response and removal of ocean-based marine debris.**

**Ongoing Actions**

Actions	Lead and Partners
2.4.1. Promote fishing gear recycling.	Leads: PSMFC, ODFW Partner: NOAA MDP

**Strategy 2.4: Conduct response and removal of ocean-based marine debris.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.4.2. Address marine mammal entanglement in the crab fishery.	Partners: West Coast Marine Debris Alliance, OSG, ODFW, PSMFC
2.4.3. Permit commercial crab fishers to recover lost gear.	Lead: ODFW
2.4.4. Compile derelict gear cleanup best practices.	Lead: PSMFC Partner: West Coast Marine Debris Alliance
2.4.5. Conduct dive cleanups in Yaquina Bay.	Lead: OCAq
2.4.6. Implement a statutory program to encapsulate white bead foam.	Lead: OSMB
2.4.7. Administer authorizations for the removal of marine debris on state-owned waterways.	Lead: DSL

**Future Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.4.8. Identify agency roles and statutory responsibilities relative to marine debris removal.	Partners: DSL, ODFW

**Strategy 2.5: Remove abandoned and derelict vessels in Oregon.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.5.1. Reconvene and lead a task force to address abandoned and derelict commercial vessels on the Oregon coast.	Lead: OSG Partner: OSMB
2.5.2. Engage in rulemaking for removing abandoned and derelict structures from state-owned waterways.	Lead: DSL Partner: ODEQ
2.5.3. Fund and coordinate a state-wide abandoned and derelict vessel removal program.	Lead: OSMB Partners: DSL, ODEQ

**Future Actions**

<b>Actions</b>	<b>Lead and Partners</b>
2.5.4. Remove vessels from marinas, bays, and estuaries.	Partners: OSMB, ODEQ, DSL



# Goal 3: Coordination

Coordinate marine debris actions effectively throughout Oregon.

*A collaborative marine debris removal (Photo credit : Oregon Surfrider Foundation).*

## Strategy 3.1: Increase coordination among educators, researchers, and cleanup groups on marine debris topics and events.

### Ongoing Actions

Actions	Lead and Partners
3.1.1. Develop and disseminate consistent educational marine debris reduction messaging.	Lead: OCAq Partners: OMDT, Oregon State Parks, OCAq, COASST, NOAA MDP, ODEQ
3.1.2. Convene an annual meeting of marine debris educators in January with semi-annual calls.	Leads: OCAq, Surfrider Foundation Partners: NOAA MDP

### Future Actions

Actions	Lead and Partners
3.1.3. Carry out a baseline data survey of Oregonian's marine debris knowledge and behaviors.	Partners: OCAq, OSG, OMDT, Surfrider Foundation
3.1.4. Create an annual public-facing action report of metrics.	Partners: Everblue, Surfrider Foundation, Washed Ashore, Elizabeth Roberts, OCAq, NOAA MDP

**Strategy 3.2: Increase coordination among marine debris organizations.**

**Ongoing Actions**

<b>Actions</b>	<b>Lead and Partners</b>
3.2.1. Conduct regional meetings with park staff to coordinate with key groups involved in debris removal, including Oregon State Parks staff and OMDT partners, to work on relationship building and conduct annual strategic planning. Focus on improving rapid response for specific areas of the coast. Develop an annual plan for boots-on-the-ground coordination and cleanup activities.	Lead: Oregon State Parks, Surfrider Foundation Partners: SOLVE, CoastWatch, Washed Ashore, HRAP
3.2.2. Reach out to League of Oregon Cities and the Association of Oregon Counties to include coastal communities in coordinating current marine debris work efforts along the coast.	Lead: City of Newport Partners: Lincoln County

**Future Actions**

<b>Actions</b>	<b>Lead and Partners</b>
3.2.3. Review the interagency (state and federal) response plan developed for the JTMD event, and update for response to other severe marine debris events.	Partners: NOAA MDP, state and federal agencies, ODEQ, DLCD
3.2.4. Improve coordination of beach and watershed cleanups by creating a marine debris collaborative portal with cleanup maps and event calendar, social media, and listserv.	Lead: NOAA MDP Partners: Oregon State Parks, COASST, OMDT



# Goal 4: Research

Conduct coordinated, high-quality research to inform actions that reduce the adverse impacts of marine debris.

*Microplastics display at a beach in Oregon (Photo credit: Portland State University).*

## Strategy 4.1: Improve land-based marine debris data collection, reporting, and accessibility.

### Ongoing Actions

Actions	Lead and Partners
4.1.1. Conduct coordinated marine debris monitoring using existing protocols.	Partners: CoastWatch, OCAq, Surfrider Foundation, OMDT, NOAA MDP, COASST
4.1.2. Implement a citizen science marine debris monitoring module through which participants monitor a beach of a set length once per month and commit to at least a year of surveying. Disseminate the survey results.	Lead: COASST Partners: NOAA MDP
4.1.3. Collect and report citizen science marine debris data with the aid of participants at beach and inland litter cleanups.	Lead: SOLVE, Surfrider Foundation
4.1.4. Conduct a marine debris research coordination workshop.	Lead: OSG Partners: NOAA MDP, COASST
4.1.5. Conduct micro- and mesoplastic research in Oregon and determine their prevalence and impacts in different environments.	Partners: PSU, OSU

**Strategy 4.1: Improve land-based marine debris data collection, reporting, and accessibility.**

**Future Actions**

Actions	Lead and Partners
4.1.6. Expand and improve existing shoreline debris monitoring programs, including analysis and sharing to improve our knowledge of marine debris sources.	Partners: OMDT, COASST, NOAA MDP, Oregon Shores Conservation Coalition, Surfrider Foundation
4.1.7. Research the land-sea connection of debris in order to identify and prevent sources of debris.	Partners: ODEQ, COASST
4.1.8. Develop research priorities for marine debris in Oregon with a focus on sources and reduction strategies. Update the priorities regularly and encourage researchers to address the research priorities identified in Oregon.	Leads: OSG, NOAA MDP Partners: EPA, OSU, COASST, PSU
4.1.9. Evaluate the types of plastics that are ending up as marine debris in Oregon to improve our knowledge of marine debris sources, and inform prevention efforts.	Partners: COASST, Surfrider Foundation, PSU
4.1.10. Evaluate and understand marine debris as an impact and stressor in priority areas of rocky shores, especially in protected and reserve areas, in order to establish baselines.	Leads: OPAC Partners: DLCD, DSL, Oregon State Parks, ODFW, Surfrider Foundation, PSU
4.1.11. Establish uniform data collection (e.g., Marine Debris Tracker App, Clean Swell App). Data collection should match the proposed annual yearly report of metrics, see action 3.1.4.	Partners: DLCD, Surfrider Foundation

**Strategy 4.2: Assess ocean-based debris locations and accumulation, and identify information gaps.**

**Ongoing Actions**

Actions	Lead and Partners
4.2.1. Research and determine criteria for prioritizing removal of marine debris, and prioritize the removal of certain types of debris in more sensitive locations based on established criteria.	Partners: West Coast Marine Debris Alliance, COASST

# Appendix I: List of Participants

List of participants who attended the 2019 Oregon Marine Debris Action Plan workshop.

Name	Organization
Allen, David	City of Newport
Baechler, Britta	Portland State University
Barnea, Nir	National Oceanic and Atmospheric Administration Marine Debris Program
Bauer, Quintin	Oregon SOLVE
Becker, Larry	Oregon State Parks
Carlin Morgan, Kerry	Oregon Coast Aquarium
Comfort, Dennis	Oregon State Parks
Crews, Tracy	Oregon Sea Grant
Custer, Fawn	Oregon Shores Conservation Coalition/Coastwatch
Dolphin, Glenn	Oregon State Marine Board
Doyle, Jamie	Oregon Sea Grant
Goodwin, Bri	Surfrider Foundation
Goodwin, Cait	Oregon Sea Grant
Hillmann, Laurel	Oregon State Parks
Horn, Dorothy	Portland State University
Jacobson, Kaety	Lincoln County
Johnson, Phillip	Oregon Shores Conservation Coalition
Jones, Ellie	Everblue
Kehoe, Christy	National Oceanic and Atmospheric Administration Marine Debris Program, Freestone Environmental Services
Lanier, Andy	Oregon Department of Land Conservation and Development
Marcoe, Keith	Lower Columbia Estuary Partnership
Murphy, Kenneth	Oregon State Parks
Naone, Shanelle	National Oceanic and Atmospheric Administration Marine Debris Program, Freestone Environmental Services
Phillips, Preson	Oregon State Parks
Plybon, Charlie	Surfrider Foundation
Rapelje, RJ	Oregon State Parks
Recht, Fran	Pacific States Marine Fisheries Commission
Rice, Pooka (Laura)	Haystack Rock Awareness Program
Roberts, Elizabeth	Artist
Roubal, James	Washington CoastSavers & Olympic Coast National Marine Sanctuary
Schmidt, Jon	Oregon SOLVE
Sestrich, Doug	Oregon State Parks

Name	Organization
Spendelow, Peter	Oregon Department of Environmental Quality
Sund, Daniel	Oregon Department of Fish and Wildlife
Tannous, John	Washed Ashore
Tonge, Emma	National Oceanic and Atmospheric Administration Marine Debris Program, IMSG
Wing, Teri	Oregon State Parks



Participants of the 2019 Oregon Marine Debris Action Plan Workshop at the Hatfield Marine Science Center in Newport, OR (Photo credit: NOAA).

# Appendix II: 2017-2019 Accomplishments

## Goal 1: Prevention Strategies and Actions

### *Strategy 1: Prevent marine debris.*

#### **Actions**

Engage in rulemaking to establish a process for requesting to utilize the Submerged Lands Enhancement Fund.

- **DSL:** Completed. The Submerged Lands Enhancement Fund was established and has \$100,000 for the 2017-2019 biennium. Information on how to utilize the fund can be found in [OAR 141-082-0311](#). Presently, \$93,000 has been awarded from this fund to improve state-owned submerged land.

Present to K-12 audiences on marine debris.

- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. Presented to 153 students in the past year and are scheduled to present to additional schools in 2019.

### *Strategy 2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.*

#### **Actions**

Engage students in service learning projects to prevent and remove marine debris.

- **SOLVE:** In progress. Coordinated seven service-learning beach cleanups with students in 2018.
- **Surfrider Foundation:** In progress. We respond to requests as they come in and help with 5-10 projects per year.
- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. We continue to engage students and schools in the marine debris surveys. Our volunteer coordinator has met with 5 new school groups to collect debris and upload data to the NOAA Marine Debris Program website.
- **OCAq:** Youth volunteers working on a microplastics removal project.
- **HRAP:** Trash Talk Program has engaged students from 8 area schools.
- **Oregon Sea Grant:** In progress. We conducted two teacher “MWEEs by the Sea” workshops focused on marine debris issues and promoted the marine debris STEAMSS curriculum; hosted two Student Watershed Symposium events in the spring where students shared their marine debris stewardship projects.

**Strategy 2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Actions**

Give presentations on marine debris (formal and informal) to communities and organizations.

- **PSU:** Presentations at Surfrider Foundation event, scientific conferences, Pacific Rim Shellfish Sanitation conference (shellfish growers), Puget Sound Anglers, Beaverton School of Science and Technology, and many more.
- **South Slough NERR:** Marine debris and plastics awareness education tables at Earth Day events and sponsored theater showings of “A Plastic Ocean” in Coos Bay in April 2018. Marine debris education days with middle and high school summer camps.
- **Oregon Shores Conservation Coalition/CoastWatch:** We have presented to other NGOs such as Shoreline Education for Awareness, the Northwest Aquatic and Marine Educators, Oregon Coast Literacy Institute, and scheduled presentations with marine debris researchers along the coast.
- **Washed Ashore:** In progress. Presentations and tours are given regularly at our gallery in Old Town Bandon and also where we exhibit across the U.S.
- **HRAP:** Trash Talk Program has presented to over 12 community organizations regarding marine debris.
- **OSG:** Public presentations at Hatfield Marine Science Center Marine Science Day in April 2018.

Conduct educational campaigns, programs and outreach activities such as the Surfrider Foundation’s Rise Above Plastics Program and “Hold on To Your Butts” Program.

- **Surfrider Foundation:** In progress. Our programs are “Hold on to Your Butts” (in Portland and Newport), Ditch the Straw (in Portland and Newport), Ocean Friendly Restaurants (Portland, Newport, and Coos Bay), Litter Cleanups (coast wide and Portland), and beyond. We also incorporate this messaging into all of our activities and communications.
- **HRAP:** Created the Trash Talk Program to bring awareness to the marine debris issue through STEM activities and marine debris art creation. Under this program we have Trash Talk Jewelry (wearable storytelling devices), Trash Talk Windows (reclaimed windows that resemble stained glass art pieces) and the Bigger Picture Project, which creates murals with 24 separate squares completed by different organizations.
- **OSG:** Recruited school groups and supported student transportation to the Rise Above Plastics event in Salem in March 2019. Held Student Watershed Symposium events in 2018 and 2019, in which students shared marine debris information and actions with the community.

Create and conduct Public Service Announcements targeting single-use plastics and the value of clean beaches.

- **SOLVE:** In progress. In partnership with others listed, are participating in a Rise Above Plastics campaign. SOLVE will include education materials at tabling events as well as at beach cleanups.
- **Surfrider:** In progress. Working with Root Solutions to develop toolkits as part of the larger Rise Above Plastics project.
- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. Oregon Shores Conservation Coalition has created and conducted Public Service Announcements for each marine debris survey training event provided to CoastWatchers and the general public (always invited to CoastWatch events).
- **Oregon State Parks:** In progress. In partnership with above-referenced Rise Above Plastics Pollution project.
- **HRAP:** In progress. Uses social media and media engagements to speak on the value of clean beaches and the discouragement of single-use plastics.

**Strategy 2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Actions**

Educate participants at cleanup events about marine debris.

- **SOLVE:** In progress. Includes education about marine debris to beach cleanup volunteers as part of their orientation. Additionally, volunteers receive information via email, on our website, and on the event brochures educating them about marine debris issues.
- **Surfrider Foundation:** In progress. Provide educational information at all of our 40+ beach cleanups each year.
- **Oregon Shores Conservation Coalition/CoastWatch:** Through every presentation and tabling event we work to educate participants about eco-friendly alternatives.
- **Oregon State Parks:** In progress. Occurs during beach cleanups.
- **HRAP:** Has partnered with Surfrider Foundation, SOLVE, and Sea Turtles Forever to educate participants and reclaim plastics in an effort to keep them out of the landfill and repurpose them in educational STEM activities and art projects aimed at creating meaningful discussions surrounding marine debris.

Develop a portable marine debris exhibit to educate about the issue of and solutions to marine debris.

- **NOAA MDP/South Slough NERR/NOAA Office for Coastal Management:** Portable exhibit completed. A brief description is available [here](#).
- **PSU/OSG/OCAq:** Temporary exhibit at Oregon Coast Aquarium, will travel after 1 year.
- **HRAP:** Trash Talk has created 11 murals so far and is scheduled to create another 12.

Build and exhibit aesthetically powerful sculptures made of marine debris to raise awareness about plastic pollution.

- **Washed Ashore:** In progress. Washed Ashore exhibited in Chicago, Florida, New Orleans, and St. Paul in 2018, and is going next to Disney's Epcot and Animal Kingdom, plus the Clinton Library, Tulsa, Salt Lake City, and Toronto. In January 2020, Washed Ashore will exhibit in Portland, and has plans for more placement of exhibitions and art in Oregon in 2020.
- **Oregon State Parks:** In progress. Provide materials from routine and organized beach cleanups.

Present to local, regional, and national groups on using the arts to communicate about marine debris.

- **Washed Ashore:** In progress. Presentations are made in all exhibition locations (see above). Additional presentations will be focused on the southern Oregon coast. The Integrated Arts Marine Debris Curriculum (1.3.2) has also been presented at all exhibit locations.
- **HRAP:** Trash Talk has presented our art program to over 24 different groups from Alaska to Newport regarding using marine debris for art.

Conduct educational messaging about marine debris in feeding narrations, including World Ocean Day and other interpretive programming.

- **OCAq:** In progress. Messages have been incorporated into feedings, World Ocean Day and volunteer training.
- **HRAP:** Includes this messaging in all our presentations, school tours and in our day to day environmental interpretation program which is available to visitors at every low tide from February through October. We also participate in World Ocean Day.

**Strategy 2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Actions**

Raise awareness about plastic as a material and its environmental impact.

- **Washed Ashore:** In progress. See exhibits above in 1.2.7.
- **HRAP:** Trash talk exists for this purpose and engages the general public through our Facebook and Instagram pages, as well as class offerings. This program is included in all our presentations.
- **OSG:** In progress. Issue of plastic marine debris incorporated into Hatfield Marine Science Center Marine Science Education programming, such as Summer Camps, Homeschool Day, and Career Day. Engage public audiences at the Hatfield Marine Science Center Marine Science Day April 2018.
- **LCEP:** Hosted a Science to Policy Summit meeting addressing plastic pollution in the lower Columbia River. Focused on single-use plastics, including the scope and impact of the problem in the lower Columbia, and what steps restaurants, grocery stores, and municipalities are currently taking to reduce their use of these products.

Educate consumers about sustainable and eco-friendly alternatives to single-use, disposable materials.

- **PSU:** Various presentations and educational booths.
- **Surfrider Foundation:** In progress. This is done through our Ocean Friendly Restaurants, Ban the Bag, and Ditch the Straw programs.
- **Oregon Shores Conservation Coalition/CoastWatch:** Through every presentation and tabling event we work to educate participants about eco-friendly alternatives.
- **Washed Ashore:** Retail store in gallery at Old Town Bandon offers some alternative products for consumers to reduce single-use plastics. Later in 2019, the store will go online.
- **OCAq:** Partnering with Surfrider Foundation on Ditch the Straw efforts.
- **HRAP:** We do this in the process of our presentations as well as through our social media pages.
- **OSG:** In progress. Modeling consumer practices by working toward zero plastic waste workshops and professional meetings.

Develop marine debris exhibits for educational purposes.

- **PSU/OSG/OCAq:** Temporary exhibit at Oregon Coast Aquarium, will travel after 1 year.
- **Oregon Shores Conservation Coalition/CoastWatch:** We have developed a marine debris hand-out and have marine debris artifacts and specimens that are used to educate participants at all tabling events.
- **Washed Ashore:** In progress. See 1.2.7 above. More sculptures are under construction.

Develop a framework to designate an Oregon Marine Debris Month and highlight marine debris through messaging, activities, and social media.

- **SOLVE:** In progress. As part of the 'Rise Above Plastics' campaign, May will be designated as 'Rise Above Plastics' month. SOLVE will share social media posts developed under this project as well as share additional messages at projects and tabling events during May 2019.
- **Surfrider Foundation:** Through funding from the NOAA Marine Debris Program, we're working with partners to host Oregon's first Rise Above Plastics Pollution Month in May 2019!
- **Oregon Shores Conservation Coalition/CoastWatch:** Partnering with Surfrider Foundation, SOLVE and others to offer the 2019 Rise Above Plastics Day at the Capitol, in March, and on Rise Above Plastics Month in May.

**Strategy 2: Educate and motivate Oregonians to engage in marine debris prevention and removal through coordinated education and outreach.**

**Actions**

Create a marine debris awareness/social marketing campaign.

- **SOLVE:** In progress. A social media toolkit is being created as part of the 'Rise Above Plastics' campaign. SOLVE will be using this in 2019, especially in May.
- **Surfrider Foundation:** Working with Root Solutions to develop social media toolkits as part of Oregon's Rise Above Plastics Month.
- **Oregon Shores Conservation Coalition/CoastWatch:** As part of our trainings for our citizen science projects, and particularly for the marine reserve community science teams we are developing, marine debris is in the forefront of the training.
- **OCAq:** Graduate student collected data at 3 sites on people's plastic consumption, barriers to decreasing plastic use, and tested messages for specific behavior asks.
- **HRAP:** Trash Talk is the marine debris awareness/social marketing campaign for the Haystack Rock Awareness Program.

Create a state-wide Rise Above Plastics Day encouraging Oregonians to go one day without consuming any single-use plastics.

- **SOLVE:** In progress. Will be in Salem tabling for the 'Rise Above Plastics' Day on March 14.
- **Surfrider Foundation:** Hosting a Rise Above Plastics Pollution Day in the Capitol Building as part of our larger Rise Above Plastics Project.
- **Oregon Shores Conservation Coalition/CoastWatch:** Partnering with Surfrider Foundation, SOLVE, and others to offer the 2019 Rise Above Plastics Pollution Day at the Capitol, in March.
- **Oregon State Parks:** In progress. Rise Above Plastics partnership listed above.
- **OCAq:** In progress. Rise Above Plastics partnership listed above.

**Strategy 3: Educate and motivate teachers and students to take action on marine debris.**

**Actions**

Maintain and update the [STEAMSS-based marine debris curriculum](#) and conduct educator workshops.

- **OSG:** Website curriculum maintenance in progress. Conducted 9 teacher "MWEEs by the Sea" teacher workshops in 2018-19 focused on marine debris issues and other watershed issues. Workshops incorporated "Mitigating Microplastics" curriculum and marine debris STEAMSS curriculum and share marine debris-related materials available for coastal teachers to borrow through the Oregon Coast STEM Hub. Two more marine debris teacher workshops are planned for 2019.
- **OCAq:** In progress. The Aquarium is planning a plastic pollution workshop in August 2019 that incorporates the STEAMSS curriculum.
- **HRAP:** Working with StemHub to update. We donated two of our Marine Debris STEM boxes to the Clatsop and Tillamook STEM Hub trailers for check out by area schools.

Develop and implement a 4th-6th grade Integrated Arts Marine Debris Curriculum to educate about and reduce single-use plastics in everyday life.

- **Washed Ashore/NOAA MDP:** Completed. Curriculum available at: <https://washedashore.org/iamdc/>

*Strategy 3: Educate and motivate teachers and students to take action on marine debris.*

**Actions**

Collaborate with other STEM hubs to better disseminate information on marine debris and increase awareness.

- **OSG:** Promote marine debris STEAMSS curriculum and Rise Above Plastics day to STEM Hubs around the state through the [www.stemoregon.org](http://www.stemoregon.org) website.
- **Oregon Shores Conservation Coalition/CoastWatch:** We are partnered with Oregon STEM Hub to offer workshops and guided beach cleanups and marine debris surveys. This is a continuing partnership.

*Strategy 4: Educate and engage mariners from commercial fishing boats, recreational boats, and industrial vessels on marine debris best practices.*

**Actions**

Coordinate clean marina program to improve water quality, including prevention of marine debris.

- **OSMB:** Recertified 42 marinas as still meeting the program standards. Participating marinas receive a re-certification site visit every three years.

Coordinate Clean Boater Program to educate and equip boaters to use best practices to improve water quality, including prevention of marine debris.

- **OSMB:** All 64 certified Clean Marinas actively engage their boating customers about Clean Boating best practices. Facilities distribute “boater spill kits” supplied by OSMB to help educate boaters on protecting the environment.

## Goal 2: Removal Strategies and Actions

*Strategy 1: Increase response capacity to remove marine debris in Oregon.*

**Actions**

Respond to reports of large or hazardous marine debris on the ocean shore and remove or coordinate removal.

- **Oregon Shores Conservation Coalition/CoastWatch:** CoastWatchers report, immediately when finding large or hazardous marine debris, by contacting either Oregon State Parks or the CoastWatch volunteer coordinator, who then passes the information on to the local authority.
- **Oregon State Parks:** In progress. Routine activity that is part of the job duties of the 10 beach and trail rangers.

Respond to hazardous materials/substances or items such as drums and containers on the ocean shore.

- **Oregon State Parks:** In progress. Responsibility on the ocean shore that is part of the job duties of the 10 beach and trail rangers.

## Strategy 1: Increase response capacity to remove marine debris in Oregon.

### Actions

Host two coast-wide beach cleanups (Beach and Riverside/ICC and Spring Cleanup) per year.

- **SOLVE:** In progress.
  - 2017 Spring Beach Cleanup: 4,961 volunteers removed 56,076 lbs.
  - 2017 Beach & Riverside Cleanup: 4,884 volunteers removed 76,442 lbs.
  - 2018 Spring Beach Cleanup: 3,047 volunteers removed 16,100 lbs.
  - 2018 Beach & Riverside Cleanup: 4,600 volunteers removed 48,600 lbs.
- **Surfrider Foundation:** In progress. Host 5-7 sites during SOLVE's event.
- **Oregon State Parks:** In progress. Responsibility on the ocean shore that is part of the job duties of the 10 beach rangers and other park staff.

Coordinate a state-wide Adopt-A-River program and inland cleanups throughout the year.

- **SOLVE:** In progress. Continues to be the lead coordinator for the Adopt-A-River program in partnership with the OSMB. SOLVE coordinates and conducts hundreds of inland cleanups every year, see: [Adopt-A-River](#) and [Project Oregon](#).
- **OSMB:** Provides funding to SOLVE for support of the program coordinator.

Remove large debris (requiring special equipment and/or permitting) on demand.

- **Oregon State Parks:** In progress. Responsibility on the ocean shore that is part of the job duties of the 10 beach rangers and other park staff, as necessary.

Conduct year-round marine debris cleanups.

- **SOLVE:** In progress. Supports monthly beach cleanups in Seaside, monthly cleanups in Cannon Beach (summer), and monthly cleanups in Bandon with Washed Ashore, quarterly cleanups near Bandon with Seashore Education for Awareness, Inc. SOLVE supports approximately 50 additional beach cleanups conducted by school and corporate groups, scout troops and others throughout the year.
- **Surfrider Foundation:** In progress. Host 50+ beach cleanups per year. Oregon Beach Ambassador program comprised of 20 volunteers who conduct monthly cleanups and collect data at each cleanup.
- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. CoastWatchers clean their mile of beach with each walk on the beach, marine debris is collected year round at our registered Marine Debris Monitoring and Assessment sites, with new sites being added.
- **Washed Ashore:** Conducted two beach cleanups so far in 2019. Will conduct about 6-8 beach cleanups per year at Cape Blanco State Park and other remote areas north and south of Bandon. Will also collect debris from other organizations' beach cleanups when possible.
- **Oregon State Parks:** In progress. Responsibility on the ocean shore that is part of the job duties of the 10 beach rangers and other park staff, as necessary.
- **Lower Rogue Watershed Council:** Completed the annual Rogue River Cleanup of 32 river miles. With over 100 volunteers, we collected nearly 20 cubic yards of garbage from the river bars and the river itself (tires, mattresses, plastics, lawnmowers, etc.).

Install marine debris bag stations to facilitate cleanup.

- **SOLVE:** In progress. Not sure how many bag stations are currently in place and being used.
- **Surfrider Foundation:** In progress. Partner with Oregon State Parks on this.
- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. CoastWatchers contact either their local Oregon State Parks Ranger or the CoastWatch volunteer coordinator about the need for additional bags at their bag stations.
- **Oregon State Parks:** In progress. Will try to get a number of new stations installed in 2018.

## Strategy 1: Increase response capacity to remove marine debris in Oregon.

### Actions

Coordinate and implement ongoing cleanup activities and programs targeted at inland waterways and urbanized areas (e.g., Portland Green Streets Program).

- **SOLVE/City of Portland:** In progress. Launched, '[Keep it Pretty, Rose City](#)' in February 2018 focusing on litter removal within Portland city limits. '[Pick it up, Portland](#)' is another annual program that features 10 litter removal projects around the city of Portland each June.
- **Surfrider Foundation:** In progress. Monthly Green Streets Cleanups. Annual Ross Island Cleanup.

Install cigarette butt canisters within coastal Oregon State Parks, inland waterways, and priority urban areas.

- **SOLVE:** Piloted a temporary cigarette butt canister program in partnership with Keep America Beautiful. In 2018 containers were placed at public events and provided to businesses and public housing complexes.
- **Surfrider Foundation:** In progress in Newport and Portland and coast-wide with Oregon State Parks. The City of Newport recently purchased 10 canisters. In 2018, Oregon State Parks placed 27 new canisters.
- **Oregon State Parks:** As noted above, we installed a number of new canisters at Oregon State Parks and beach access points in partnership with Surfrider Foundation.

Improve Oregon State Parks ocean shore management capacity. Help support/expand funding for beach cleanups and beach safety programs.

- **Surfrider Foundation:** Surfrider Foundation's advocacy lead to Oregon State Parks receiving funding for more beach rangers in 2018. The Ocean Beach Fund Bill has been resurrected for the 2019 legislative session.

Implement a rapid response program for marine debris cleanup: review existing protocols and identify gaps; generate priority list by area sensitivity, level of incidents, and type of debris. Explore and improve existing debris notification protocols.

- **Surfrider Foundation:** In progress. We have continued rapid response cleanups, but have not reviewed protocols, etc.
- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. CoastWatchers report needs for rapid response cleanups when observed; when requested by the local beach ranger, CoastWatchers are then contacted by the CoastWatch volunteer coordinator and recruited to help.
- **Oregon State Parks:** In progress. This relates to rapid response, as noted by Surfrider Foundation, an evaluation has yet to occur.

Implement a coast-wide Oregon Adopt-A-Beach Program.

- **SOLVE:** In progress. A pilot program was established on the north coast in 2017 which continued to grow throughout 2018. Documents created include a program brochure, agreement form and a certificate of adoption. 14 groups have adopted sections of the coast. SOLVE is currently seeking funding to expand beyond the scope of the pilot.
- **Surfrider Foundation:** Preliminary talk with SOLVE about combining forces of Adopt-A-Beach and Oregon Beach Ambassadors.
- **Oregon State Parks:** In progress pilot partnership with SOLVE on the north coast.

**Strategy 2: Create or modify existing policies to improve effectiveness of marine debris prevention and cleanup in Oregon.**

**Actions**

Engage Oregonians in plastic pollution policy education and reduction campaigns (where organizationally appropriate).

- **Surfrider Foundation:** Engaging volunteers in local and state level policies regarding plastic pollution. Planning Rise Above Plastics Pollution Day at the Capitol for March 14th.

Complete the Division 82 Waterway Rules and implement the Submerged Land Enhancement Fund to support removal projects for priority debris on submerged and submersible lands.

- **DSL:** Completed, see 1.1.1.

Evaluate methods for incorporating marine debris into the Territorial Sea Plan Rocky Shores Management Strategy, now under revision, and other sections as appropriate.

- **OCMP:** Marine Debris was added as a stressor to the draft amendments to the Rocky Shores Management Strategy. This can be further enhanced during Phase II (this coming summer and fall) of the amendment process, when recommendations for site specific actions could have a marine debris removal strategy components added.

**Strategy 3: Facilitate volunteer and staff during debris cleanups.**

**Actions**

Facilitate distribution of volunteer beach cleanup safety protocols during SOLVE-supported events, including a beach captain safety sheet (e.g., beach safety, hazardous materials covered prior to cleanups).

- **SOLVE:** In progress. The following documents are distributed to SOLVE project leaders who conduct beach cleanups throughout the year: 'Do Not Touch' signs, a Beach Safety Sheet and a Beach Safety Checklist.

**Strategy 4: Conduct response and removal of ocean-based marine debris.**

**Actions**

Promote fishing gear recycling.

- **NOAA MDP:** In progress. Fishing for Energy provides recycling bins in Garibaldi and Newport, OR.

Address marine mammal entanglement in the crab fishery.

- **OSG:** Assembled and led a functional [whale entanglement work group](#) in 2018-19.

Permit commercial crab fishers to recover lost gear.

- **ODFW:** During 2016-18, ODFW and fishers partnered to recover 2731 derelict crab pots, as described in annual [ODFW fishery newsletters](#) to crab industry.

Implement a statutory program to encapsulate white bead foam.

- **OSMB:** Oregon Administrative Rules for encapsulation of foam flotation were updated January 1, 2019.

## Goal 3: Coordination Strategies and Actions

*Strategy 1: Increase coordination among educators, researchers, and cleanup groups on marine debris topics and events.*

### Actions

Develop and disseminate consistent educational/alternate messaging and create a platform to share educational messages.

- **NOAA MDP:** In progress. The collaboration portal has been developed and should launch by May 2019.
- **OCAq:** Messages being tested by graduate student.

Carry out a baseline data survey of Oregonian's marine debris knowledge and behaviors.

- **OCAq:** In progress. Graduate student collected data at 3 coastal sites on people's plastic consumption, barriers to decreasing plastic use, and tested messages for specific behavior asks.

*Strategy 2: Increase coordination among marine debris organizations (e.g., agencies, NGOs).*

### Actions

Build upon past JTMD response efforts through continued coordination through the OMDT framework.

- **Oregon State Parks:** This has not occurred to-date as the OMDT has not been re-initiated.

Conduct regional meetings with park staff to coordinate with key groups involved in debris removal, including Oregon State Parks staff and OMDT partners to work on relationship building and conduct annual strategic planning. Focus on improving rapid response for specific areas of the coast. Develop an annual plan for boots-on-the-ground coordination and cleanup activities.

- **Surfrider Foundation:** In progress. We had a preliminary meeting with Oregon State Parks about this and have been discussing with partners.
- **Oregon Shores Conservation Coalition/CoastWatch:** Working with partners.
- **Oregon State Parks:** In progress. As noted above there have been initial meetings with Surfrider Foundation.

Improve coordination of beach and watershed cleanups by creating a Marine Debris Information Hub with cleanup maps and event calendar, social media, and listserv.

- **NOAA MDP:** In progress. The collaboration portal has been developed and should be available in May 2019.

## Goal 4: Research Strategies and Actions

*Strategy 1: Improve land-based marine debris data collection, reporting, and accessibility.*

### Actions

Conduct regular marine debris monitoring using NOAA protocol at ten sites.

- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. We have recruited new team members to cover derelict sites and form new marine debris monitoring sites. We continue to encourage teams to monitor marine reserve sites. We now have 14 sites with two more being set up within the month. They are all monitoring at variable rates. Our most consistent sites are Haystack Rock, Arch Cape, Otter Rock, Manhattan Beach, Cove Beach and Muriel Ponsler.

## Strategy 1: Improve land-based marine debris data collection, reporting, and accessibility.

### Actions

Implement a citizen science marine debris monitoring module. Participants monitor a beach of a known length once per month and commit to at least a year of surveying. Data is related to impacts and sources of marine debris.

- **HRAP:** Participates in the NOAA Marine Debris Survey for OR Mile 313 N through Oregon Shores Conservation Coalition/CoastWatch.
- **COASST:** Supports citizen science monitoring for marine debris at 23 sites in Oregon from the Washington border to Yachats. Surveys quantify debris upwards of 2.5mm by size, type, color, material, logos/brands, language, barcodes, biofouling, floppiness, loopiness, sharpness, shininess, intactness, weathering, containerness (traps, windage) and beak marks - collective indicators of source and impacts. Data can be mapped to NOAA Marine Debris Program categories to compare and combine datasets.

Monitor marine debris remotely via webcam "PICES Project".

- **Tokyo University/Surfrider Foundation/Lincoln County/NOAA MDP:** Completed. Project article available at: <https://www.sciencedirect.com/science/article/pii/S0025326X18303072>

Evaluate the Marine Debris Tracker App.

- **NOAA MDP:** Completed. Project report submitted.

Analyze ICC and NOAA shoreline monitoring data including Oregon.

- **NOAA MDP:** Completed. A report titled "[An Analysis of Marine Debris in the US](#)" has been published, and is posted online.

Expand and improve existing shoreline debris monitoring programs including analysis and sharing.

- **Oregon Shores Conservation Coalition/CoastWatch:** In progress. We have recruited new team members to cover derelict sites and form new marine debris monitoring sites. We continue to encourage teams to monitor marine reserve sites. We now have 14 sites with two more being set up within the month. Students have presented their data at the Northwest Aquatic and Marine Educators conference and are using the data for their senior projects, working with the CoastWatch volunteer coordinator and local researchers.
- **LCEP:** During 2016 and 2017 LCEP conducted marine debris monitoring along 380 miles of lower Columbia River shoreline, and developed web-based mapping and reporting tools to track and report marine debris throughout the lower river.
- **COASST:** Continues to host trainings to expand data collection and supports current volunteers via feedback and regular communications, including a monthly newsletter "What's Washed In" that features marine debris finds and related stories. In 2018 we undertook an analysis to compare quantities and sizes of marine debris between the north coast of Oregon and Puget Sound. Results are posted here: <https://sites.uw.edu/coasst/2018/11/20/sizing-up-marine-debris/>

Develop research priorities for marine debris in Oregon with a focus on sources and reduction strategies. Encourage research to quantify and prevent the impacts of marine debris.

- **NOAA MDP/OSG:** Completed in May 2017. Report available at: [https://marinedebris.noaa.gov/sites/default/files/publications-files/Oregon\\_Marine\\_Debris\\_Research\\_Priorities\\_Workshop\\_Proceedings.pdf](https://marinedebris.noaa.gov/sites/default/files/publications-files/Oregon_Marine_Debris_Research_Priorities_Workshop_Proceedings.pdf)

## Goal 5: Abandoned and Derelict Vessels Strategies and Actions

### *Strategy 1: Remove abandoned and derelict vessels in Oregon.*

#### **Actions**

Initiate and lead a task force to address abandoned and derelict commercial vessels on the Oregon Coast.

- **OSMB:** Initial findings paper from the task force submitted to NOAA.

Engage in rulemaking for removing abandoned and derelict structures from state-owned waterways.

- **DSL:** Completed, see 1.1.1.

Fund and coordinate a state-wide abandoned and derelict vessel removal program.

- **OSMB:** Manages an abandoned and derelict vessel fund of \$150,000 per biennium.

Remove vessels from marinas, bays, and estuaries.

- **OSMB:** Assisted with the removal, storage, and disposal of 34 vessels between July 2017 and January 2019, with additional vessel removals expected to be completed by the end of the biennium taking the total number of removed ADVs in the 2017-2019 biennium over 40.
- **DSL:** Completed the cleanup of the Goble site on the Columbia River. Ten vessels, including the River Queen, were removed from the site. Overall, 617 tons of solid waste, 209 tons of hazardous waste, 114 tons of liquid waste, and 933 tons of recyclable steel were removed.

# Appendix III: Future Actions without Current Leads and Partners

Future Actions	
Actions	Lead and Partners
Identify and make use of existing direct outreach and training to include marine debris.	
Determine existing amount, composition, and sources of marine debris. Utilize existing resources and reports to identify current baselines for both land-based and ocean-based debris. Host data in a publicly accessible database.	
Determine target reductions and milestones. Create realistic and quantifiable targets to ensure that proper steps are being taken to reach marine debris reduction and prevention targets.	



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