



2021 Mid-Atlantic Marine Debris Summit

FINAL SUMMIT REPORT

Acknowledgements:

The 2021 Mid-Atlantic Marine Debris Summit was sponsored by the Virginia Coastal Zone Management Program (Virginia CZM Program) via a grant from the NOAA Office for Coastal Management (OCM). Virginia CZM contracted with the Mid-Atlantic Regional Council on the Ocean (MARCO) to coordinate the planning and delivery of the Summit.

MARCO would like to thank Virginia CZM and NOAA OCM for their support. Additionally, MARCO thanks the members of the Summit Planning Team, all of whom are also members of the Mid-Atlantic Marine Debris Work Group and include: Katie Register and Makayla Jennings of Clean Virginia Waterways of Longwood University; Christy Kehoe, NOAA Marine Debris Program; Matt Robinson, Washington DC's Dept of Energy & Environment; Christie Mazzeo-Pfoertner, NYS Dept of State; Virginia Witmer, Virginia CZM Program; and Karl Vilacoba, Monmouth University. Finally, MARCO thanks the Longwood University Event and Conference Staff, who seamlessly managed the technical support before, during, and after the event.

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Executive Summary

The 2021 Mid-Atlantic Marine Debris Regional Summit brought together entities from across sectors to build a shared understanding of current and emerging marine debris fields and encourage new partnerships and collaborations. During the Summit, researchers, educators, policymakers, and businesses presented about research and solutions to decrease litter and marine debris in the Mid-Atlantic and envision a future without marine debris.

The Summit began with opening remarks from an exciting global leader, Oceana Senior Advisor Alexandra Cousteau, who spoke about the importance of preserving the health of the world's oceans and why marine debris reduction and prevention is so critical to the planet's marine wildlife, ecosystems, and economies. Senator Christopher Coons then spoke about the importance of marine debris reduction. Leaders and policymakers presented about impactful, ground-breaking new policies and initiatives that aim to reduce or prevent marine debris at the federal, regional, and state levels. The second day of the Summit focused on different marine debris types, addressing the latest in microplastics and microfibers as well as tackling derelict fishing gear. Attendees learned about ongoing innovative projects and studies evaluating debris types and their potential of human health, wildlife, and ecological impacts, as well as efforts for removing or preventing debris. The final day of the Mid-Atlantic Marine Debris Summit focused on single-use plastics, how they are impacting the marine environment, and solutions that people are implementing throughout the region to reduce and prevent this issue.

While the Summit had been proposed as an in-person event, ultimately it was held virtually due to ongoing COVID-19 precautions and restrictions. Hosting this workshop virtually allowed for participants from all over the world to attend: twenty-one international countries were represented in the audience, as well as over fifteen U.S. states. Participants engaged with presenters and moderators via the webinar platform chat function and completed several polls throughout each day. This information provided some insight into attendees' specific interests as they relate to marine debris reduction and prevention. Additionally, several attendees completed a post-Summit survey, which indicated that the topics presented were extremely well-received and validated the decision to host it virtually (several respondents said they would not have been able to join an in-person workshop this year).

Summit Background, Goal, and Objectives

Marine debris is a growing global problem with wide-ranging impacts to water quality, human health, marine and coastal wildlife, and more. Over the years, Mid-Atlantic governmental agencies, Tribal Nations, NGOs, and industry have done remarkable work to prevent and remove marine debris, both independently and collaboratively. The Mid-Atlantic Regional Council on the Ocean (MARCO) states have agreed that reducing marine debris is a priority, and collaborate with each other and with federal agencies, non-profit organizations, and academia through the Mid-Atlantic Marine Debris Work Group (“Work Group”). The Work Group was established under the 2016 Mid-Atlantic Ocean Action Plan and is led by the Virginia CZM Program Manager in collaboration with MARCO staff, NOAA, and EPA.

One of the four activities in the Work Group 2021 Work Plan was to host a Mid-Atlantic Marine Debris Regional Summit to bring together many of these entities from across sectors, with the purpose of increasing coordination and building a shared understanding of current and emerging marine debris fields. The first Mid-Atlantic Marine Debris Summit had been held in 2019 at George Mason University in Arlington, Virginia, and was coordinated by the Virginia Coastal Zone Management and Clean Virginia Waterways. Summit attendees received updates on marine debris science and trends and explored techniques and tools effective in enhancing knowledge, changing behavior, and influencing policies that reduce marine debris. Participants also had focused discussions about first steps for a marine debris reduction plan for the Mid-Atlantic. The response from the 2019 Summit was overwhelmingly positive and suggested a desire from the regional community for the Summit to occur bi-annually. Thus, the Work Group undertook the planning of the 2021 Summit under the leadership of MARCO.

Summit Goal:

The goal of the 2021 Mid-Atlantic Marine Debris Summit was to bring together Mid-Atlantic regional entities working on marine debris (including litter that becomes marine debris) - including state and federal agencies, tribes, non-profit organizations, academia, and other groups - to identify opportunities for coordination, discuss current and emerging marine debris fields, and highlight solutions to marine debris prevention and reduction.

Summit Objectives:

- Strengthen collaborative efforts to address marine debris issues in the Mid-Atlantic region by sharing successes and challenges from diverse stakeholder groups, including those representing state and federal agencies, tribes, fisheries, non-profit organizations, and academia
- Receive updates on current marine debris science and trends
- Learn about techniques and tools to change behavior and influence decisions that prevent or reduce marine debris

Summit Format

The Summit was planned over the course of three, half-days using a virtual platform due to the continued health and safety protocols of COVID-19. The entire Summit was recorded, and can be viewed here:

<https://www.youtube.com/playlist?list=PL7Xdmd7DIJx9NCFWAmPnVpEQUQLHG7P3c>

Participants were muted for the duration of the Summit and were able to submit questions and comments in the questions box of the virtual platform. Summit Planning Team members and Session Moderators ensured that the questions were addressed either in written form or live by the presenters. Additionally, to increase participant interaction and engagement, several polls were delivered throughout the presentations.

Summary of Presentations

Day 1

The Summit began with [OPENING REMARKS](#) from an exciting global leader, Oceana Senior Advisor Alexandra Cousteau, who spoke about the plastic pollution crisis threatening our blue planet and the most effective ways to protect marine wildlife, ecosystems, and economies from marine debris. Senator Christopher Coons then provided remarks about the importance of marine debris reduction, and the ways that legislators are approaching this issue such as by passing the United for our Oceans Act which established a global trust fund to begin an initiative to reduce marine debris. Leaders and policymakers presented about impactful, ground-breaking new policies and initiatives that aim to reduce or prevent marine debris at the national, regional, and local levels, as well as on Tribal lands. Secretary Matthew Strickler from Virginia provided additional opening remarks about how the Commonwealth is approaching marine debris prevention and reduction, including the Virginia Marine Debris Reduction Plan which was funded by the Virginia Coastal Zone Management Program. Tommy Wells, Director of the DC Department of Energy and Environment, then spoke about the programs in Washington DC that have been implemented to address waste, such as the Bag Law which has resulted in significant reductions in plastic bags found during DOEE cleanups. Final opening remarks were provided by Dr. Kelsey Leonard of the Shinnecock Nation in New York who spoke about Tribal perspectives on marine debris, including the Shinnecock Nation's *Keep Paumanok Beautiful* program, which will be developing a Community-Based Social Marketing (CBSM) campaign to reduce cigarette butt and other waste on Long Island, New York.

After these opening remarks were delivered, the agenda transitioned to highlight new policies and initiatives at the [STATE](#) and [REGIONAL](#) levels. Donna Morrow from the Maryland Department of Natural Resources presented about the boat shrinkwrap recycling program in Maryland. Adam Schlachter from the Delaware Department of Natural Resources and Environmental Control followed with a presentation about the state's Recyclopedia program. Finally, Amy Bloomfield and Kayla Montanye from the New York State Department of Environmental Conservation spoke

about the state's foam ban, and the Bag Waste Reduction Law. At the regional level, Christy Kehoe from the NOAA Marine Debris Program spoke about their regional action planning process and funding opportunities and then Avalon Bristow from MARCO talked about the Mid-Atlantic Marine Debris Work Group and its work, including the Balloon Release Reduction Community Based Social Marketing Campaign.

Nancy Wallace, Director of the NOAA Marine Debris Program, set the stage for learning about [FEDERAL MARINE DEBRIS INITIATIVES](#), the final portion of the Summit's first day. Nancy talked about the priorities of NOAA's Marine Debris Program, including efforts that have resulted from the Save our Seas 2.0 Act such as the establishment of the Marine Debris Foundation. Gabriella Neusner then provided an overview of the U.S. EPA's Trash Free Waters Program. Finally, Ben Maurer from the National Renewable Energy Laboratory (NREL) presented about their Waterborne Plastic Assessment and Collection Technologies (WaterPACT) initiative.

Day 2

The second day of the Summit focused on different marine debris types, addressing the latest in [MICROPLASTICS AND MICROFIBERS](#) as well as [TACKLING DERELICT FISHING GEAR](#). Attendees learned about ongoing innovative projects and studies evaluating debris types and their potential of human health, wildlife, and ecological impacts, as well as efforts for removing or preventing debris.

Matt Robinson of the DC Department of Energy and Environment kicked off the day's agenda with a brief introduction about what is currently known about microplastics and microfibers in key waterways in the Mid-Atlantic such as the Anacostia River and the Chesapeake Bay. Bob Murphy from the Tetra Tech Center for Ecological Sciences then spoke about a microplastics ecological risk assessment model for the Potomac River and Chesapeake Bay. Dr. Sherri Mason from Pennsylvania State University gave an insightful presentation about how microplastics impact human health. Chris Burbage from the Hampton Roads Sanitation District then presented about how microplastics are being addressed at wastewater treatment plants. Finally, Rachael Z Miller spoke about her research on microfibers and how Cora Balls can help capture microfibers before they enter the waterways.

Christy Kehoe, of the NOAA Marine Debris Program, then gave a brief introduction about derelict fishing gear. Jaclyn McGarry from the Ocean Conservancy gave a presentation about their Global Ghost Gear Initiative. Then, Dr. Susan Barco from the Virginia Aquarium talked about marine debris, including derelict fishing gear, found in and on stranded marine wildlife such as marine mammals and sea turtles. Kate Fleming from Delaware Sea Grant then talked about Delaware's community-based program to remove derelict crab pots and associated underwater mapping from the state's recreational blue crab fishery. Sarah Aubrey from Net Your Problem wrapped up the day's presentations with an overview how the organization is stewarding the ocean through developing a fishing gear recycling and circular economy program.

Day 3

The final day of the Mid-Atlantic Marine Debris Summit focused on [SINGLE-USE PLASTICS](#), how they are impacting the marine environment, and solutions that people are implementing throughout the region to reduce and prevent this issue. The Summit culminated with [SUCCESS STORIES](#) of how projects in the Mid-Atlantic have reduced single-use plastics and other debris, and ideas for how every person can play a part in the solution to this global issue.

Katie Register, Executive Director of Clean Virginia Waterways, kicked off the final day of the Summit with a brief introduction into the sources and hazards of single-use plastics. Matt Gove from the Surfrider Foundation then presented about what their organization is doing to reduce plastics in and around the ocean, including their policy toolkit and Ocean Friendly Restaurant campaign. Dr. Cynthia Smith from George Mason University then joined the Summit along with three of her students - Ashley Munoz-Trujillo, Stephani Ruiz Molina, and Elizabeth Short - to talk about her campaign to reduce single-use water bottle use at two high schools in Prince William County, Virginia. Dr. Britta Baechler from the Ocean Conservancy then presented about pollution related to the pandemic, such as from Personal Protective Equipment.

After the presentations, Katie Register moderated a panel Q&A session with the presenters. The first question asked was about extended producer responsibility (EPR): Dr. Baechler from Ocean Conservancy talked about the resources on their website related to this, including an EPR playbook. Matt Gove also weighed in on what states can do, including examples of bills that have been introduced in some states. The next question was about the International Coastal Cleanup data. Dr. Baechler discussed that food wrappers have risen to the number one most common item found and noted that the “other” category may include PPE. Dr. Smith weighed in that bringing people out to cleanups is necessary for demonstrating the sheer amount of plastic near the oceans – people need to experience the waste. The full discussion can be viewed in [THE RECORDED VIDEO](#) of this session.

The final session of the Summit encompassed a variety of perspectives from practitioners about effective ways to reduce, prevent, and monitor marine debris. Curtis Bennett of the National Aquarium started the final session of the Summit with a presentation about the National Aquarium’s community engagement work in Baltimore, MD. Among many other things, Curtis talked about the co-design process in creating meaningful and effective programs. Hilary Burgess from the NOAA Marine Debris Program then presented about their Marine Debris Monitoring and Assessment Project and how it helps contribute to assessing the effectiveness of policies like plastic bag bans. Christina Trapani followed with a presentation about her company, EcoManiac, which distributes eco-friendly and reusable goods. Steve Raabe from OpinionWorks culminated the presentations with an overview of the Community-Based Social Marketing approach, and how this has been implemented in the Mid-Atlantic Marine Debris Work Group’s community-based social marketing campaign to reduce balloon release behavior.

Summit Polls

1. Which debris type are you most concerned about?

Balloons	7%
Cigarette Butts	12%
Food Containers	14%
Derelict Fishing Gear	31%
Plastic Beverage Bottles	36%

2. What type of derelict fishing gear is most common in your home waters?

Other fishing gear items	1%
Netting and Trawls	15%
I have no idea	18%
Lines	29%
Traps or pots	37%

3. What solutions should we focus on in the Mid-Atlantic to address recovered or derelict fishing gear?

New technologies and devices	2%
Removal	2%
Collaborations across sectors	12%
Prevention and awareness	14%
All of the above	70%

4. Have you been involved with an outreach, engagement, communications, or behavior change campaign related to marine debris, or other environmental issues?

No, but planning or anticipating a future effort	3%
None of these	5%
Yes, in the past	30%
Yes, currently	63%

5. Does your organization have the expertise you need to effectively plan and run outreach campaigns?

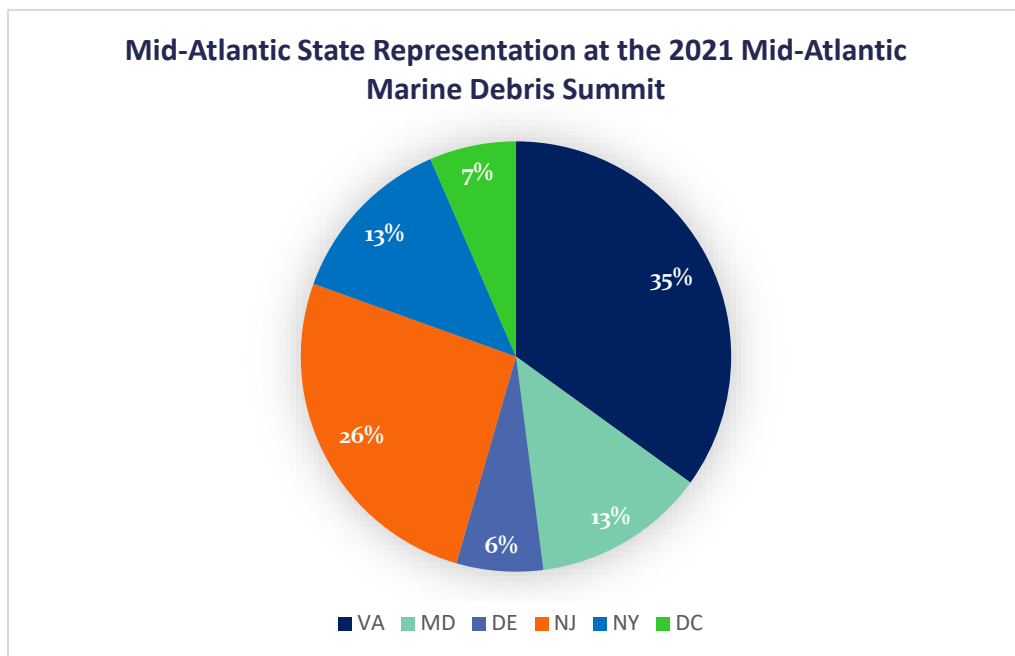
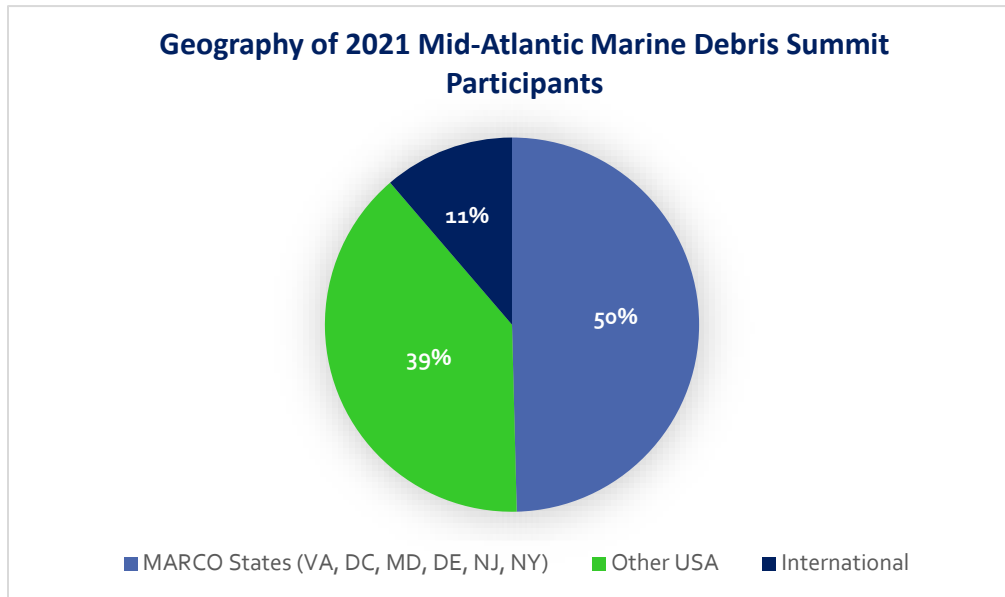
Yes, we have strong expertise in this area	14%
We have little or no capability in this area	22%
We have moderate capability in this area	65%

Feedback from Summit Participants

Many participants expressed support and gratitude for the topics covered during the Summit via the chat function of the webinar platform. Additionally, a survey was distributed to all registrants after the Summit was completed. Seven participants provided responses. Most stated that they learned of the Summit via a newsletter, email list serv, or through a colleague. Responses also indicated support for the topics covered, the use of the virtual platform, and the flow of the agenda (organized by marine debris type). One respondent also applauded the format and content of the breaks – that there was music and other informative material. All respondents indicated that they would join future Summits. The final three questions of the survey were open-ended, soliciting feedback on what they learned and what they would like to see covered in the future. Responses indicated that they would use the information for outreach activities, to highlight policy and success stories, and that they learned about the major impact of plastics and the need to reduce it. Most respondents said that they'd like more of the same content for future Summits, with one response specifying a desire to see more about community-based social marketing, as well as how to incorporate the science about microplastic pollution into behavioral science.

Registrants & Attendees

In total, 497 people registered for the event and 335 attended. Attendees tuned in from all over the world, including all five mid-Atlantic states (Virginia, Maryland, Delaware, New Jersey, and New York), at least 12 additional U.S. states, and 22 countries. Of the 335 participants over the three half-day Summit, fifty percent were from the five MARCO states plus DC.



Summit Agenda

July 20, 2021 (Day One)

12:30 - 1:40 PM

Welcome and Opening Remarks

Laura McKay

Manager, Virginia Coastal Zone Management Program
Chair, Mid-Atlantic Marine Debris Work Group

Alexandra Cousteau

Senior Advisor to Oceana

Matt Strickler

Secretary of Natural Resources and Chief Resilience Officer for the
Commonwealth of Virginia

Tommy Wells

Director, District of Columbia Department of Energy & Environment

Dr. Kelsey Leonard

Shinnecock Nation

1:40 - 1:50 PM

Break

1:50 - 2:30 PM

State-level new policies and initiatives

Donna Morrow

Program Manager, Chesapeake and Coastal Service, Maryland
Department of Natural Resources

Adam Schlachter

Environmental Program Manager, Delaware Department of Natural
Resources and Environmental Control

Amy Bloomfield

Environmental Program Specialist, Bureau of Waste Reduction &
Recycling, Division of Materials Management, NYS Department of
Environmental Conservation

Kayla Montanye

Environmental Program Specialist, Bureau of Waste Reduction &
Recycling, Division of Materials Management, NYS Department of
Environmental Conservation

2:40 - 3:00 PM

Break

3:00 - 4:30 PM

Federal and regional new initiatives

Christy Kehoe

Mid-Atlantic Regional Coordinator, NOAA Marine Debris Program

Avalon Bristow

Program Director, Mid-Atlantic Regional Council on the Ocean

Nancy Wallace

Director, NOAA Marine Debris Program

Gabrielle Neusner

ORISE Fellow, US Environmental Protection Agency

July 21, 2021 (Day Two)

12:30 -2:30 PM

Microplastics & Microfibers

Matt Robinson

Environmental Protection Specialist, Partnering & Environmental, Conservation Branch, Watershed Protection Division, DC Department of Energy and Environment

Dr. Sherri "Sam" Mason

Professor of Chemistry and Sustainability Coordinator, Pennsylvania State University

Bob Murphy

Tetra Tech, Member Chesapeake Bay Program Plastic Pollution Action Team

Chesapeake Bay Program Ecological Risks of Microplastics

Chris Burbage

Environmental Scientist, Hampton Roads Sanitation District

Rachael Z Miller

Founder/CEO, Rozalia Project for a Clean Ocean and Cora Ball

2:30 - 3:00 PM

Break

3:00 - 5:00 PM

Tackling Derelict Fishing Gear

Christy Kehoe

Mid-Atlantic Regional Coordinator, NOAA Marine Debris Program

Jaelyn McGarry

Program Manager, Global Ghost Gear Initiative, Ocean Conservancy

Dr. Susan Barco

Senior Scientist, Virginia Aquarium & Marine Science Center

Kate Fleming

Coastal Ecology Specialist, Delaware Sea Grant/University of Delaware

Sara Aubrey

Business and Project Development Coordinator, Net Your Problem

July 22, 2021 (Day Three)

12:45 - 2:30 PM

Taking on Single Use Plastics

Katie Register

Executive Director, Clean Virginia Waterways of Longwood University

Matt Gove

Mid-Atlantic Policy Manager, Surfrider

Dr. Cynthia 'Cindy' Smith

Associate Professor, Environmental Science & Policy, K12 Education
Director, Potomac Environmental Research & Education Center,
George Mason University

Ashley Munoz-Trujillo & Stephanie Ruiz Molina

Freedom High School, Woodbridge, VA

Britta Baechler

Senior Manager for Ocean Plastics Research, Trash Free Seas, Ocean
Conservancy

2:30 - 3:00 PM

Break

3:00 - 5:00 PM

Success Stories and What Can You Do?

Curtis Bennett

Director of Equity & Community Engagement, National Aquarium

Hilary Burgess

Marine Debris Monitoring Coordinator, NOAA Marine Debris Program

Christina Trapani

Owner, Eco Maniac Company

Steve Raabe

Owner, OpinionWorks

Post-Summit Survey Questions

1. **How did you learn about the Marine Debris Summit? (*Select one*)**
 - a. Newsletter
 - b. Colleague
 - c. Email (list serv)
 - d. Facebook
 - e. Twitter
 - f. Instagram
 - g. MARCO event page
 - h. Internet search
 - i. Eventbrite notification

2. **What did you like most about the summit? (*Select all that apply*)**
 - a. Topics covered
 - b. Layout of summit (sessions organized by marine debris type)
 - c. Virtual platform
 - d. Length of the summit
 - e. Success stories
 - f. Research presentations
 - g. Marine Debris Policy presentations
 - h. Other (please specify)

3. **Would you have attended the 2021 Marine Debris Summit in person? (*Select one*)**
 - a. one full day
 - b. two full days
 - c. no, in person would not have been possible

4. **Were the three half-days of sessions the right amount of time for you to participate? (*Select one*)**
 - a. Perfect
 - b. Too long
 - c. Too short

5. **Do you plan to attend this summit in the future? (*Select one*)**
 - a. Yes
 - b. No

6. **What did you learn from the Summit which will inform what you do next? (*Open-ended*)**

7. **What topics would you like to see covered at future summits? (*Open-ended*)**