

Honoring Our Past, Growing into the Future

CELEBRATING 35 YEARS



ABOUT NEWMOA

NEWMOA is a non-profit, non-partisan, interstate association whose membership is composed of the state environment agency programs that address pollution prevention, toxics use reduction, sustainability, materials management, hazardous waste, solid waste, emergency response, waste site cleanup, underground storage tanks, and related environmental challenges in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.



LETTER FROM NEWMOA'S 2021 CHAIR

Honoring Our Past, Growing into the Future

CELEBRATING 35 YEARS

We hope you and your family, friends, and colleagues are healthy and doing well as we continue to grapple with this pandemic. In the face of all of the challenges of the past two years (shutdowns, working from home, toilet paper hoarding, Zoom, cancelling venues, budgetary concerns, retirements, vaccinations, more vaccinations - you get the picture), I am frankly quite amazed at how well we not only adapted to deal with these challenges, but also the volume of work that we were still able to accomplish. A credit to you all. But we all know our work is never done, and I remain ever confident that we will continue to meet any challenge and advance our environmental cause.

I am also particularly excited to have the opportunity to celebrate the 35th anniversary of NEWMOA. Quite a milestone for our organization, and our staying power says much about our capability, relevancy, and successes over these many years. So much has changed since 1986 when NEWMOA was formally launched (and coincidentally when I started my career at NJDEP). At that time, there were severely contaminated sites throughout the northeast, including in Love Canal, New York and Woburn, Massachusetts that were profoundly affecting nearby communities and receiving widespread public attention. Federal laws, including the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (commonly called Superfund), and the analogous state laws were enacted in the 1980s to address these situations. State and federal officials were busy figuring out how to get the programs up and running and writing new rules and policies. Government officials were struggling with how to prevent new sites from occurring and to properly and safely clean up the growing

number of contaminated sites. By 2021, thousands of contaminated sites have been cleaned up, and the technologies for remediating sites has become more sophisticated and effective.

Nevertheless, we are still coping with some of the same notorious pollutants – lead in homes and businesses, PCBs in commercial and institutional buildings, pesticides, solvents, asbestos, volatile organic compounds, mercury, dioxin, and much more.

The solid waste industry was very different in the 1980s. Today, the industry is increasingly consolidated, and the technology to sort and bale recyclables is highly sophisticated. In the 1980s, state solid waste programs focused on permitting modern landfills or waste-to-energy incinerators; and recycling programs were in their infancy. Solid waste officials were struggling with how to get those kinds of programs up and running and to create a regulatory framework to support recycling. Today, we are scrambling to increase the markets for recycled materials and dealing with complex global

supply chains. Our concern is increasingly focused on plastic pollution, particularly micro-plastics and marine debris.

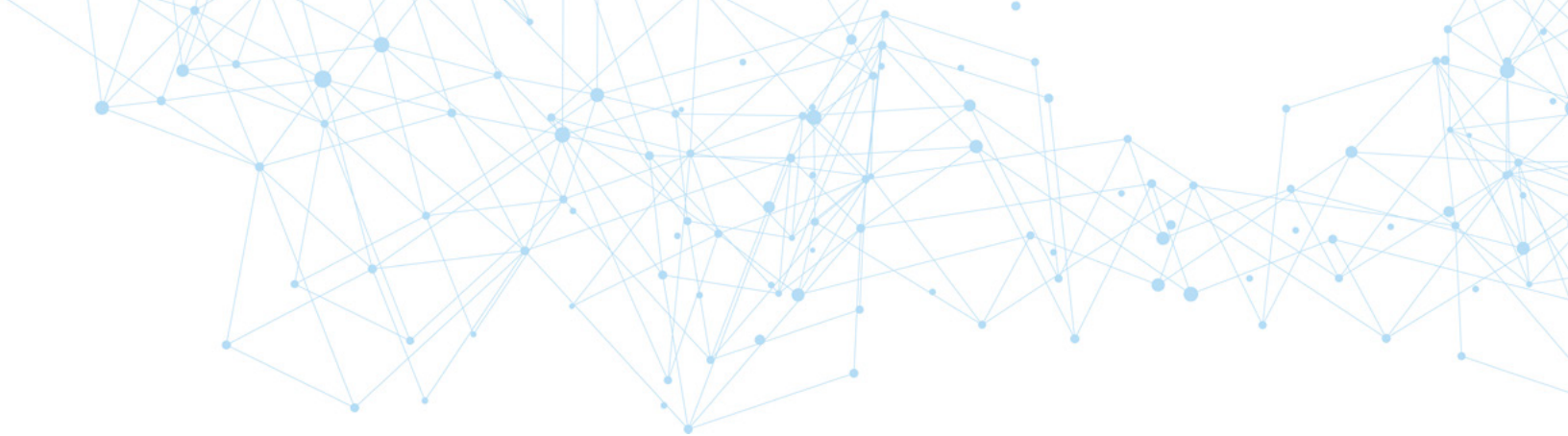
Even as we are still trying to solve some of these long-term problems, we face new and increasingly complex challenges, particularly with emerging contaminants, such as poly- and perfluoroalkyl substances (PFAS) and 1,4-Dioxane. For more than five years, state environmental authorities and EPA have focused considerable attention on PFOA or PFOS, which are perfluorooctanoic acid and perfluorooctane sulfonic acid, respectively, and other PFAS. Communities throughout the northeast have been finding their drinking water systems, wastewater, biosolids, groundwater, soils, wildlife, and farm operations to be impacted by PFAS. The state environmental agencies are extensively sampling drinking water, wastewater,



MIKE HASTRY

New Jersey
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Environmental
Protection

2021
NEWMOA Chair



landfill leachate, soils, biosolids, and other media to understand where PFAS are occurring and at what levels.

State authorities and EPA are also focusing greater attention now on the disproportionate pollution impacts experienced in certain areas, which are often designated as environmental justice communities. These are places that are disadvantaged and overburdened with environmental pollution and public health challenges.

The impacts of climate change are increasingly threatening and dangerous. Businesses, communities, and the public are being challenged by the impacts of climate change and have to adapt to the new realities. A changing climate poses risks for waste management on many levels. Waste facilities and state-regulated sites are affected by increasingly extreme weather events and sea level rise (depending on where they are located), forcing them to adapt and become more resilient to avoid severe weather-related accidents and releases to the environment.

NEWMOA anticipates that the region will face more climate and environmental justice challenges and emerging contaminants of concern over the next 35 years. The lessons we have learned from past crises and those we are learning from the current ones will help us face new ones in the future.

In addition to celebrating NEWMOA's 35th Anniversary, this Annual Report highlights the 10th anniversary of the Interstate Chemicals Clearinghouse (IC2) and the 20th anniversary of the Interstate Mercury Education and Reduction Clearinghouse (IMERC). Both of these national programs evolved out of NEWMOA's long term priorities to address chemicals of concern in products, materials, and waste.

Despite the pandemic, NEWMOA accomplished a number of important milestones in 2021. NEWMOA continued its robust and successful partnership with the Northeast Recycling Council (NERC), jointly holding 11 well-attended free public webinars on food waste recovery, recycling

markets, extended producer responsibility, recycled content mandates, lithium batteries, and environmental benefits calculators.

NEWMOA's IC2 and Clean Production Action (CPA) partnered for more than two years to accelerate chemical ingredient transparency through a multi-stakeholder process that produced a set of "Principles for Chemical Ingredient Disclosure." As of July 1, 2021, a coalition of over 112 businesses, governments, health care organizations, investors, and non-governmental organizations (NGOs) had endorsed the six Principles, which were designed to frame the necessary steps for increasing access to information about chemicals in products and their hazards.

Please check out the other examples of our work in FY 2021 by reviewing the rest of this Report. For a quick overview of our accomplishments, check out "NEWMOA-by-the-Numbers" and "Highlights."

As the NEWMOA Chair in 2021, I was able to see (as did we all) some significant changes not only to our daily way of life but also to the way we go about our work. Some of these are game-changers (e.g., Zoom, Teams, One Drive, and other cloud access data sharing programs) and without a doubt are here to stay and will enable us to research, share data, and discuss many issues in much broader circles. Aside from the obvious enhancement to our work practices, I am also hopeful this will help make up for the significant number of retirements that have occurred and continue to occur in our respective agencies. I also believe these new tools will be important to NEWMOA and will allow us to reach even more people and organizations to spread the word regarding the experience this organization has in so many areas and what we can bring to the table – whether it's assistance to states, the federal government, waste management, toxics use reduction, pollution prevention, materials management, emerging contaminants – wherever the future takes us. I am very much looking forward to the next 35 years!



2021 CHANGES IN NEWMOA'S LEADERSHIP

NEWMOA's Board lost four valuable members to retirements in FY 2021 – Chuck Schwer, Yvonne Bolton, David Burns, and Melissa Zych. Each of these Board members made many important contributions to NEWMOA. We miss their leadership, good humor, passion for the environment, insights, hard work, and dedication.

Chuck Schwer worked for the Vermont Department of Environmental Conservation for more than 30 years, including most recently 7 years as the Director of the Waste Management and Prevention Division. In that position, he oversaw assessment and cleanup of contaminated sites as well as the management of tanks, hazardous waste, and solid waste. Chuck's most recent and important contributions are related to the investigation and remediation of PFAS contamination in Vermont. Under his management, several sites were evaluated and thorough assessments were promptly conducted, all while DEC provided the public with excellent communications on the status of the contamination. Chuck became active in NEWMOA's programs starting in the 1990s. He joined the NEWMOA Board of Directors in 2015 and was the Board Chair in FY 2018.

Yvonne Bolton worked for the Connecticut Department of Energy and Environmental Protection for 36 years. Yvonne became Director of the Materials Management Bureau in 2006. Among many initiatives, she led efforts to improve emergency response to oil and chemical spills; update the state's Solid Waste Management Plan; and adopt and revise the state's first FEMA approved Disaster Debris Management Plan. Modernizing, streamlining, and enhancing Connecticut's environmental regulatory programs became her hallmarks. Knowing the importance of public outreach and stakeholder involvement to the success of any environmental initiative, Yvonne launched the Solid and Hazardous Waste Advisory Committees. She has successfully

supported many State and regional initiatives by reaching out to consult and coordinate across agencies and with federal partners. Yvonne joined the NEWMOA Board of Directors in 2006. She was instrumental in the development of NEWMOA's 2013 and 2018 Strategic Plans and formulating and advancing NEWMOA's priorities. She was the NEWMOA Chair in FY 2010.

Dave Burns worked for the Maine Department of Environmental Protection (DEP) for 38 years in a variety of positions. In 2016, David became the Director of the Bureau of Remediation and Waste Management, heading the Agency's largest Bureau and overseeing contaminated sites, response activities, materials management, petroleum management, and technical and engineering programs. As Director, he competently led the DEP through the first iterations of managing the emerging problem of PFAS by becoming an expert and encouraging DEP and other State agencies to begin to tackle the problem statewide. He joined the NEWMOA Board of Directors in 2016. He provided critical leadership within the organization on PFAS and solid waste issues. He was NEWMOA's Vice Chair in 2021.

Melissa Zych worked for the New Hampshire Department of Environmental Services for 11 years, most recently as the Pollution Prevention (P2) Section Administrator, overseeing both the P2 Program and the Household Hazardous Waste Program. Among many initiatives, she spearheaded a recognition program for the hospitality industry, called the New Hampshire Green Hospitality Program. Melissa was recognized for Outstanding Customer Service in 2016. She is well known for her creativity and her ability to convey important environmental messages through her use of video and graphics. Melissa joined the NEWMOA Board of Directors in 2019. She was the Chair of the P2 and Sustainability Program from 2018 to 2021.

NEWMOA BY THE NUMBERS



50 NEWMOA-SPONSORED TRAINING WEBINARS OR VIRTUAL ROUNDTABLES

involving more than **12,755 attendees**

284

NEWMOA WORKGROUP AND PROJECTS VIRTUAL MEETINGS

involving more than **2,250 participants**



4 ISSUES OF NEWS@NEWMOA

distributed to approximately **2,700 readers** each

2 ISSUES OF THE IC2 E-BULLETIN

distributed to approximately **280 readers** each



More than

300 COMPANIES

reporting on their mercury-added products through the Interstate Mercury Education and Reduction Clearinghouse (IMERC)

42

VIRTUAL MEETINGS, CONFERENCES, AND WEBINARS

sponsored by other groups in which NEWMOA staff participated

25

OTHER NEWMOA PUBLICATIONS OR DOCUMENTS

posted and distributed

8

NEWMOA MEMBER STATES



More than

82,000 USER SESSIONS

on 3 NEWMOA-supported websites and more than

156,000 page-views by those visitors



More than

190 COMPANIES

reporting on their use of high priority chemicals of concern in children's products through the IC2's High Priority Chemicals Data System (HPCDS)

39

WORKGROUPS OR COMMITTEES

involving approximately **868 members**

8

MEETINGS

of the NEWMOA Board of Directors and Executive Committee

For more information, visit www.newmoa.org

4

WEBSITES

supported by
NEWMOA, including
newmoa.org, theic2.org,
erpstates.org, and
greenlodgingcalculator.org



8 ONLINE DATABASES

and other downloadable
tools and resources
developed and/or maintained

13

IMERC MEMBER STATES

**3 IMERC Supporting
Members**

13

IC2 MEMBERS

including state and
local governments;
14 IC2 Supporting Members

6

NEWMOA STAFF

2021 NEWMOA HIGHLIGHTS

PFAS Webinars

Throughout 2021, NEWMOA held a series of 15 webinars on various PFAS topics for 5,810 attendees from all over North America. Topics covered the health effects, uses and alternatives, regulating PFAS as a class, treatment and remediation, air emissions and wastewater sources, and much more.

Principles for Chemical Use Disclosure

Committed to accelerating chemical ingredient transparency across supply chains to consumers, a coalition of over 112 businesses, governments, health care organizations, investors, and non-governmental organizations (NGOs) came together in 2021 and endorsed the Principles for Chemical Ingredient Disclosure. The six Principles frame the necessary steps for increasing access to information about chemicals in products and their hazards. They were developed by a multi-stakeholder coalition, which was led by NEWMOA's IC2 and Clean Production Action (CPA) over 18 months.

Solid Waste Webinars

NEWMOA and NERC jointly held 11 free public webinars/virtual workshop for more than 4,385 attendees on such topics as innovative food waste diversion strategies, properly managing lithium battery waste, extended producer responsibility for packaging, and recycled content mandates.

Environmental Justice

During 2021, state environmental agencies and EPA began to elevate their environmental justice (EJ) programs, in part, in response to the

tragic events that have occurred in some communities in recent years. State environmental agencies have launched many environmental justice initiatives that affect the ways in which agencies undertake their basic functions. Early in FY 2021, NEWMOA formed a regional EJ Workgroup to improve information sharing and coordination of waste management, cleanup, prevention, air, water, and toxics programs and to help agencies engage more effectively to achieve environmental justice and reduce disproportionate impacts.

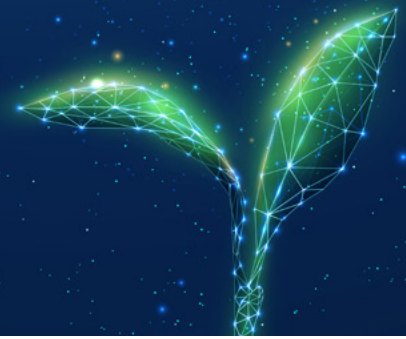
Solid Waste Disposal Capacity

In FY 2021, NEWMOA published a first-of-its kind Report to provide an overview of current and projected solid waste disposal capacity in the Region. In addition to a regional summary, the Report includes disposal quantity and capacity information for each state.

Online Mercury Reporting System Relunched

IMERC's online E-filing System went through critical and necessary updates over the past two years. NEWMOA relaunched the System in the spring 2021. Companies filed their 2018 Triennial Notification Forms through the System throughout the rest of the year. Reporting through the System enables companies to comply with the Mercury-added Product Notification requirements of Connecticut, Louisiana, Maine, Massachusetts, New Hampshire, New York, North Carolina (autos only), Rhode Island, and Vermont. Reporting is required for any company that sells or distributes mercury-added products into the listed states.

Solid Waste & Sustainable Materials Management (SMM) Programs



CHRIS NELSON

Connecticut
Department
of Energy &
Environmental
Protection
(CT DEEP)

2021 NEWMOA
Solid Waste & SMM
Program Chair

“Connecting with peers from the other states is invaluable.”

Overall, discussions among NEWMOA's solid waste program officials throughout FY 2021 focused on food waste recovery, extended producer responsibility programs, overcoming challenges in the markets for recycled materials, recycled content legislation, and EPA's National Recycling Strategy.

NEWMOA conducted a survey of state participants in FY 2021 Solid Waste and SMM activities, and 94 percent of the respondents stated that they use the information they learned from those activities. Respondents noted that they apply the knowledge they gained from NEWMOA's solid waste activities by:

- Integrating lessons learned and various approaches both regionally and from other states
- Understanding trends and problems in adjacent states informs our decision making
- Correcting data related to ...generated waste exports due to NEWMOA's information on MSW flow in the region

NEWMOA's Solid Waste and SMM Steering Committee, made up of 12 members, held 3 virtual meetings to share updates, discuss FY 2021 projects, and plan Board meeting discussions. EPA Region 1 helped NEWMOA and NERC hold a webinar for 34 members of their Boards, Steering Committee, and others on “Requirements on the Import and Export of Plastic Scrap”; presenters included Rich Picardi and Lia Yohannes, EPA Headquarters.

PARTNERSHIP WITH NERC

NEWMOA and NERC have developed a robust partnership over the past five years. During FY 2021, NEWMOA and NERC communicated frequently to collaborate on implementing the FY 2020-2022 Joint Strategic Action Plan and the joint FY 2021 Workplan. The organizations prepared and shared regular updates for their Boards on the status of the joint work and a 2021 Annual Report on joint accomplishments.

Webinar

NERC and NEWMOA held a joint webinar on “Environmental Benefits Calculators” for 529 attendees.

2021 SOLID WASTE & SMM PROGRAM AT-A-GLANCE

11 joint webinars with the Northeast Recycling Council (NERC) for approximately 4,385 attendees

covering food waste diversion, extended producer responsibility, scrap plastic exports, recycled content legislation, end-of-life management of lithium batteries, and environmental benefits calculators

1 joint virtual workshop with NERC for 90 attendees on the use of recycled content in roadway projects

17 new solid waste publications/documents posted, covering food waste, pharmaceutical waste, flow of solid waste for disposal, and solid waste disposal capacity

43 participants in a day-long virtual meeting of solid waste officials in EPA Region 2, including representatives from New Jersey, New York, Puerto Rico, the Virgin Islands, and EPA and two other shorter meetings for an average of 30 participants

5 joint NEWMOA – NERC Workgroups on food recovery, recycled content legislation, climate and materials management, and extended producer responsibility (EPR), involving 130 people

6 NEWMOA-only Workgroups focused on closed landfills, construction and demolition (C&D) materials, disaster debris, medical waste, measuring SMM, and solid waste metrics, involving 109 people

Presenters: Jarrod Bridge, EPA; Dana Gunders, ReFED; and Patricia Dillon, Global Electronics Council.

Recordings & slides: www.newmoa.org/events/event.cfm?m=483

FOOD RECOVERY

EPA estimates that about 20 percent of the municipal solid waste stream is food waste. EPA and the U.S. Department of Agriculture (USDA) have established a national goal to reduce this waste by 50 percent by 2030. NEWMOA and NERC support the actions needed to help achieve this goal in the northeast.

There are significant opportunities to promote reduction of wasted food and increase diversion of unwanted food from disposal, and many innovative initiatives are underway in the northeast. Some parts of the region have experienced significant increases in edible food rescued for donation due to implementation of enhanced environmental policies and actions. There are also significant efforts underway to expand capacities for composting food waste or converting it to energy through anaerobic digestion (AD). These operations are rapidly improving and becoming more cost-effective. State environmental agencies are permitting new AD and municipal and commercial composting operations as well as working with local governments and waste haulers to address challenges they have with food waste collection, storage, and transportation.

Joint Food Recovery Workgroup

The NEWMOA-NERC joint Food Recovery Workgroup is a forum for interstate collaboration and information sharing on methods for diverting wasted food from disposal, siting and permitting of composting and AD facilities, and new regulatory and policy initiatives. Throughout 2021, this joint Workgroup of 32, including staff from EPA Regions 1 and 2, met 3 times to share ideas, updates, and information. The Workgroup conducted a survey to assess priorities for wasted food webinars in 2021-2022. The group also held a special meeting of 13 state officials, who manage mandatory waste diversion programs, to

discuss program implementation challenges and strategies. Josh Kelly, Vermont DEC chaired the Workgroup in FY 2021.

NEWMOA staff also participated in three virtual meetings of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) Food Supply Chain Roundtable.

Joint Webinars

- “Strategies for Collecting Residential Food Waste” for 507 attendees
Presenters: Amy Donovan, Franklin County Solid Waste District; Bob Spencer, Windham Regional Solid Waste District; Conor Miller, Black Earth Compost
Recording & slides: www.newmoa.org/events/event.cfm?m=453
- “De-packaging and Commercial Composting” for 540 attendees
Presenters: Debra Darby, Tetra Tech; John Hanselman, Vanguard Energy; Brian Paganini, Quantum Power
Recording & slides: www.newmoa.org/events/event.cfm?m=452
- “ReCook Café” for 647 attendees
Presenters: Chefs Jim McCarthy, Peter Ricardo, Abigail Henson, and Morgan Waite
Recording & slides: www.newmoa.org/events/event.cfm?m=443
- “Growing the Upcycled Food Economy” for 360 attendees
Presenters: Leah Graham, Upcycled Food Association; Jonathan Deutsch, Drexel University; Anna Hammond, Matriark Foods
Recording & slides: www.newmoa.org/events/event.cfm?m=492

EXTENDED PRODUCER RESPONSIBILITY (EPR)

Product stewardship shifts end-of-life financial and management responsibility, with government involvement, upstream to the producer and away from the public sector. A form of product stewardship, called Extended Producer Responsibility (EPR), requires manufacturers to be financially responsible for the end-of-life management of the products that they produce. Northeast

states have enacted more than 30 EPR laws covering many different products, including electronics, paint, packaging, mattresses, mercury thermostats, mercury auto switches, fluorescent lamps, pharmaceuticals, and batteries. Additional legislative proposals are under consideration for other product categories, including household hazardous waste, solar panels, carpet, gas cylinders, tires, and medical sharps.

Joint EPR Network

Throughout FY 2021, NEWMOA and NERC supported a joint Northeast EPR Network that includes 48 state and local government officials as well as non-governmental organizations (NGOs) that are actively promoting EPR. This group convened virtually five times to share information, updates, and strategies and to discuss opportunities for regional coordination and collaboration with an average of about 20 participants per meeting. Tom Metzner, Connecticut DEEP chaired the Workgroup in FY 2021.

Webinar

NEWMOA partnered with NERC and the Product Stewardship Institute (PSI) to hold a webinar on “The Spectrum of Approaches to U.S. Packaging EPR: From Reimbursement to Full Responsibility” for 242 attendees. As EPR legislation for packaging and paper products gains momentum in the U.S., many different approaches have emerged. This webinar summarized the spectrum of EPR models, from “full EPR” systems run by producers to “municipal reimbursement” systems with more municipal control, and many hybrid structures.
Presenters: Scott Cassel and Sydney Harris, PSI; Dawn Timm, Niagara County; Jen Holliday, Chittenden Solid Waste District; Dani DiPietro, Maryland Delegate Brooke Lierman Legislative Director.
Recording & slides: www.newmoa.org/events/event.cfm?m=489

Coordination of State EPR Programs for Paint & Mattresses

In 2021, as part of two separate contracts with PaintCare and the Mattress Recycling



ENDING WASTE FOOD IN ONONDAGA COUNTY (SYRACUSE, NY AREA)

NEWMOA is collaborating with the Onondaga County Resource Recovery Agency (OCRRA) on a project to support low-income immigrant communities with reducing wasted food. During 2021, the project team developed a series of handouts that were translated into five of the languages spoken by the area's new residents (as recommended by school officials that the project team consulted): Spanish, Nepali, Arabic, Somali, and Swahili. NEWMOA and OCRRA are working with immigrant community groups to present and distribute the outreach materials at their meetings and community events throughout 2022.

Project materials in English:

- **Plan Ahead** - www.newmoa.org/solidwaste/projects/food/PlanAhead_English.pdf
- **Labels** - www.newmoa.org/solidwaste/projects/food/UnderstandDateLabels_English.pdf
- **Use Everything** - www.newmoa.org/solidwaste/projects/food/UseEverything_English.pdf
- **Eat Leftovers** - www.newmoa.org/solidwaste/projects/food/EatLeftovers_English.pdf

Check out the translated handouts: www.newmoa.org/solidwaste/projects/food/endingfoodwaste.cfm

This Project is funded by a grant from the New York State Department of Environmental Conservation (NYSDEC) to OCRRA.

REDUCING FOOD WASTE IN ERIE COUNTY (BUFFALO, NY AREA)

NEWMOA is collaborating with Erie County, NY to partner with five hospitals and help them reduce food waste from their cafeterias and patient meal preparation. The participating hospitals are utilizing Leanpath, a tool that measures and visually documents food waste generation. Baseline measurements were established in May, and NEWMOA reviewed the data. Unfortunately, due to COVID-19 related staffing shortages, the hospitals were unable to reliably collect data and by the end of the fiscal year, the main focus of the Project was put on hold until spring 2022.

This Project is funded by a grant from the New York State Department of Environmental Conservation (NYSDEC) to Erie County.

Council (MRC), NEWMOA reviewed the paint and mattress EPR laws and programs in Connecticut, Maine, New York, and Rhode Island to identify opportunities for interstate coordination activities that could support and enhance their programs. The Projects' goal is to develop options for possible interstate collaboration in support of state paint and mattress EPR programs in the northeast. During 2021, NEWMOA formed two small Workgroups and prepared summaries of state paint and mattress EPR laws to share with them. The Project will continue into FY 2022, and NEWMOA will consider options for how to move forward by the middle of the year.

RECYCLED CONTENT STANDARDS

There are growing calls to improve voluntary and mandatory standards for recycled content in packaging and products to help boost markets for recycled materials. Recycled material can be derived from two sources: post-industrial or post-consumer. Post-consumer recycled (PCR) refers to the materials collected through municipal or private residential and commercial recycling programs. The items collected commonly include plastic bottles, glass containers, paper and cardboard, and aluminum cans. Once collected, these materials are consolidated and hauled to recycling facilities where they are sorted into bales based on the material. The bales are then



End food waste publication.

purchased, melted, or ground into small pellets and then molded into new containers, packaging, and products. Brands then purchase the new product and customize it with their company's label so it can be purchased again. Post-industrial material is an additional source of recycled content. Essentially, it is the waste generated by the original manufacturing process that is used again in the production process.

Both post-industrial and post-consumer recycling are valuable and play an important role in promoting SMM. Using recycled content has many significant environmental advantages, including reducing energy consumption and the demand for finite resources. Further, using recycled content can be advantageous from a cost perspective. With increasing frequency, brands are publicly announcing goals for sourcing a percentage of their paper, glass, metal, and/or plastic from recycled material. This direction is a result of brand owners evaluating their sustainability efforts and reacting to pressure from stakeholders and consumers. There are also demands for states to act and develop recycled content mandates across the U.S.

Joint Recycled Content Workgroup

NEWMOA and NERC supported a Recycled Content Legislation Workgroup in FY 2021 to develop a model recycled content bill focused on plastic trash and carry-out bags and food, beverage, and household product containers. The Workgroup of 13 members met 11 times during the year to draft the model, which will be released for public comment in FY 2022. Cathy Jamieson, Vermont DEC chaired the Workgroup in FY 2021.

Webinar

The group held a free joint NEWMOA and NERC webinar on "Voluntary Approaches to Minimum Recycled Content" for 245 attendees.

Presenters: Steve Alexander, Association of Plastic Recyclers; Sarah Dearman, The Recycling Partnership; Pete DePasquale, Nestle Waters.

Recording & slides: www.newmoa.org/events/event.cfm?m=442

RECYCLING MARKETS

NEWMOA staff participated in monthly meetings of the joint Recycling Markets Committee throughout 2021. The Committee, which is led by NERC, has members from both state and local government as well as the private sector and provides an information-sharing forum on market conditions and projections for the materials collected by municipal recycling programs. The Committee also oversees a quarterly report on materials recovery facilities (MRFs) commodity values in the Northeast. Chaz Miller chaired the Workgroup in FY 2021. Most recent FY 2021 report: <https://nerc.org/documents/Report%20on%20Blended%20Value%20of%20a%20MRF%20Ton%20in%20the%20Northeast%20July%202021.pdf>

Use of Recycled Content in Roadway Projects

NEWMOA and NERC co-sponsored a workshop on "Using Recycled Content in Road and Infrastructure Projects: Glass, Plastic Drainage Pipes, Asphalt, and Crumb Rubber" and in partnership with the Northeast Resource Recovery Association (NRRRA), Maine Resource Recovery Association (MRRA), the Maine Departments of Environmental Protection and Transportation, the New Hampshire Departments of Environmental Services and Transportation, and the New Hampshire Technology Transfer Center for 90 attendees.

Slides: www.newmoa.org/events/event.cfm?m=447

CLIMATE & MATERIALS MANAGEMENT

Each stage of a product's life cycle – from raw materials extraction to manufacturing, transportation, use, and end-of-life management – consumes fossil fuels and results in greenhouse gas (GHG) emissions. Many traditional analyses of GHG sources include waste management impacts only. A full life cycle accounting of GHG emissions associated with the production and use of products and materials shows that they represent roughly 35 to 46

percent of the GHG emissions in the U.S. In particular, organic waste in landfills significantly contributes to generation of methane gas, which is a more potent GHG than carbon dioxide.

Climate & Materials Management Workgroup

NEWMOA and NERC support a joint regional Workgroup of 22 members that met three times in FY 2021 to share information on strategies for mitigating the climate impacts of materials. Starting in the summer of 2021, NEWMOA began to actively discuss a regional consumption-based emissions inventory project with volunteer state programs and EPA Regions 1 and 2. This project will get underway in FY 2022. Throughout FY 2021, NEWMOA enhanced its efforts by joining the monthly virtual meetings of the West Coast Climate and Materials Management Forum to share information, learn about their efforts, and discuss opportunities for collaboration.

HOUSEHOLD HAZARDOUS WASTE

Leftover household products that can catch fire, react, or explode under certain circumstances, or that are corrosive or toxic are household hazardous wastes (HHW). Products, such as oil-based paints, cleaners, oils, batteries, and pesticides can contain hazardous ingredients and require special care. Improper disposal of HHW can include placing them in the trash or pouring them down the drain, on the ground, and into storm sewers. If handled incorrectly, these wastes can pollute the environment and pose threats to human health. Certain types of HHW have the potential to cause physical injury to sanitation workers and contaminate septic tanks or wastewater treatment systems if poured down drains or toilets. They can also present hazards to children and pets if left around the house. State environmental agencies provide support for local programs that are designed to properly collect and manage HHW.

HHW Workgroup

At the request of state HHW program managers in the region, NEWMOA and NERC formed a regional Workgroup in FY 2021 to provide a forum for sharing information and strategies for addressing common issues. Emerging HHW issues that some states are facing include lithium ion (Li-ion) batteries, small gas cylinders, and vaping devices. The Workgroup of 14 members met 3 times in FY 2021. Mia Roethlein, Vermont DEC chaired the Workgroup in FY 2021.

Webinars

NEWMOA and NERC held the following webinars on lithium batteries for a total of 1,193 attendees:

- “Overview of Lithium Batteries, Their Uses, and Recycling”
Presenters: George Kerchner, The Rechargeable Battery Association (PRBA); Eric Fredrickson, Call2Recycle; Kirk Sander, National Waste and Recycling Association (NWRA)
Recording & slides: www.newmoa.org/events/event.cfm?m=478
- “Examples of Actions by Waste Haulers and Storage and Processing Facilities to Reduce the Risk of Fires Associated with Lithium Batteries”
Presenters: Kevin Roche, ecomaine; Marc Morgan, Solid Waste Manager, City of Lebanon; Marc Buckley, Republic Services
Recording & slides: www.newmoa.org/events/event.cfm?m=479
- “Lithium Battery Recycling” (co-sponsored by NEWMOA, NERC, and the New Jersey Institute of Technology)
Presenters: Yan Wang, Worcester Polytechnic Institute; Chao Yan, Princeton NuEnergy Inc.; and Wen Zhang, New Jersey Institute of Technology
Slides & recording: www.newmoa.org/events/event.cfm?m=493

SOLID WASTE DISPOSAL CAPACITY

Solid waste officials, researchers, advocates, industry members, and consultants have raised concerns about the downward

trend in available disposal capacity in the Northeast U.S. in recent years. In FY 2021, NEWMOA published a first-of-its kind Report that provides an overview of current solid waste disposal capacity in the region. The Report includes disposal quantity and capacity information for each state in an Appendix. Disposal facilities covered in this Report include waste-to-energy (WTE) that dispose of municipal solid waste (MSW) and landfills that dispose of MSW, WTE ash, construction and demolition (C&D) debris, and/or other bulky wastes, such as furniture and mattresses.

Report: www.newmoa.org/solidwaste/projects/disposalcapacity/

MUNICIPAL SOLID WASTE (MSW) INTERSTATE FLOW IN 2018

For over 20 years, NEWMOA has undertaken periodic analyses of the interstate flow of MSW destined for disposal among the Northeast states. The purpose of this effort is to improve the quality of the data and ensure that state agencies have adequate information to monitor trends in waste disposal and interstate flow in the region. NEWMOA supports a Solid Waste Metrics Workgroup of 14 members that focuses on conducting this analysis. This group met twice in FY 2021 to review data and discuss a new Report. NEWMOA's 2021 Report presents the results of its data collection and analysis effort through a series of figures that summarize both state-specific and region-wide 2018 MSW disposal data and covers trends from 2000 through 2018.

Report: www.newmoa.org/solidwaste/MSW2018DataReportFinal.pdf

DISASTER DEBRIS MANAGEMENT

Safe, proper, and timely management of debris generated during a disaster is an essential component of emergency response. Disaster debris must be properly managed to protect human health, comply with regulations, conserve disposal capacity, reduce injuries, reuse and recycle as much material as appropriate, and minimize or prevent environmental impacts. This requires advanced planning and coordination among individuals at various levels of government and the private sector. Communities often

need to designate areas to store, separate, or process the debris before sending it for reuse, recycling, composting, combustion, or disposal. A local disaster debris management plan can aid municipalities in supporting advanced coordination and can help to determine the appropriate management options in anticipation of a disaster and avoid rushed decisions. Many state agencies in the northeast are assisting local communities with development of these debris management plans.

Disaster Debris Workgroup

This past year NEWMOA's Disaster Debris Management Workgroup, which includes 32 representatives of state and federal environmental and state emergency management agencies, met once to share information, leverage resources, and promote strategies that work for local communities.

CONSTRUCTION & DEMOLITION (C&D) MATERIALS

Construction and demolition (C&D) materials makeup a large and diverse waste stream, and options for recovering and recycling these materials remain a significant challenge across the northeast. Historically, most C&D wastes were disposed of in landfills. However, landfill disposal capacity is shrinking in the northeast, management and disposal costs are rising, and there is significant public opposition to the siting of new landfills. Consequently, increases in C&D materials diversion and recycling throughout the region would be beneficial.

C&D Materials Workgroup

NEWMOA supported a Workgroup of 11 state agency members that met twice in FY 2021 to share information about state efforts to increase C&D materials diversion and recycling and to discuss improving regional options for gypsum wallboard waste management. The Workgroup discussed plans for a regional meeting to bring gypsum wallboard stakeholders together to develop strategies to increase diversion and recycling. Buzz Surwilo, Vermont DEC chaired the Workgroup in FY 2021.

SOLID WASTE LANDFILLS

There are thousands of inactive municipal solid waste landfills (MSWLFs) in the northeast. Many of these were municipally-owned, are unlined, and stopped receiving waste after state agencies imposed modern construction and operating requirements over 30 years ago. States have developed long-term requirements for the owners of these closed landfills, including maintaining the integrity of the landfill cap; repairing caps when necessary; monitoring water quality, settlement, and methane generation; and maintaining gas control, leachate collection, and storm water management systems. Overseeing the large universe of closed landfills presents a significant challenge for state programs.

Solid Waste Landfills Workgroup

NEWMOA's Solid Waste Landfills

Workgroup consists of 15 state members and met twice in FY 2021 to discuss landfill issues and share information and strategies. A special focus of the Workgroup in FY 2021 was on investigations related to potential PFAS contamination. The original focus of this Workgroup was on closed landfills, but in 2021 the group decided to expand its focus to all solid waste landfill issues (both open and closed), and it renamed itself the "Solid Waste Landfills Workgroup." Kasey Kathan, Vermont DEC chaired the Workgroup in FY 2021.

MEDICAL WASTE MANAGEMENT

Medical waste is a subset of solid wastes that are generated at health care facilities, such as hospitals, physicians' offices, dental practices, blood banks, and veterinary hospitals/clinics, as well as medical research facilities and laboratories. Medical waste may be contaminated by blood, bodily fluids, or other potentially infectious materials and is often referred to as regulated medical waste.

Medical Waste Workgroup

In part prompted by concerns about the management of medical waste associated with the pandemic, NEWMOA formed a regional Medical Waste Workgroup in FY 2020. NEWMOA's Workgroup of 22 members met once in FY 2021 to



INCREASE RECYCLING & WASTE REDUCTION IN THE PUBLIC SCHOOLS IN WAKEFIELD, MA

NEWMOA concluded an education and outreach initiative to increase waste reduction and recycling in the Wakefield Massachusetts Public Schools, in partnership with the School District, the Department of Public Works, and the local Environmental Sustainability Committee (ESC) in FY 2021.

The objectives of the Project were to transition the School District to an efficient and effective system for reducing waste generation and increasing recycling. The overall effort was successful at establishing a recycling, composting, and food rescue program at all of the elementary schools in the District. The environmental and social benefits are:

- Schools collect more than 20,000 food items annually, which are distributed to families in need through local food pantries
- Composting avoids an estimated 19,217 pounds of CO₂ emissions, which is equivalent to the GHG emissions from flying from Boston to London 17 times
- Clean recyclables, including water bottles and clamshells, are recovered and no longer part of the waste stream

PHARMACEUTICAL WASTE COLLECTION PROJECT

Environmental concerns about pharmaceuticals in the environment are growing as more are discovered in surface waters, groundwater, landfill leachate, and aquatic life. Without a convenient and visible location to take unused medications for proper disposal, people tend to accumulate them at home. When people clean out their medicine cabinets, they typically do not properly dispose of the leftover medications. They usually dispose of them in their sink drains, toilets, or trash, so they end up in the environment. Keeping pharmaceuticals out of septic systems, landfills, and wastewater treatment systems is the most effective way to prevent pollution of water supplies by medications and their associated negative impacts to wildlife and human health.

Many people, who misuse prescription medications, get them from a friend or relative, straight from their medicine cabinet, often without their knowledge. Ensuring that unused medications, including opioids and other controlled substances, do not get misused is critical.

In 2019, NEWMOA initiated a Project in northern New Hampshire and Vermont to increase access to proper disposal of unused pharmaceuticals in ways that prevent pollution of the environment, drug abuse, and accidental poisonings. The Project had three primary targets:

- Long-term care facilities (LTCFs)
- Home health care agencies
- Retail pharmacies

The initiative also focused on promoting proper collection and recycling of rechargeable and other batteries. The Project was heavily impacted by the pandemic since it mostly targeted medical facilities. Despite this challenge, NEWMOA was able to meet its overall goals and expanded access to proper medication management and battery recycling in the targeted areas.

NEWMOA assisted a 135-bed long-term care facility in northern New Hampshire with installing 4 Drug Enforcement Agency (DEA)-approved waste pharmaceutical collection kiosks for their internal use. To support the proper use of the kiosks, NEWMOA developed a handout for the facility staff: www.newmoa.org/solidwaste/projects/pharma/LTCF_CollectionKioskHandout.pdf.

NEWMOA helped to provide drug destruction options for the clients of home health care agencies in Berlin, NH and Newport, VT and developed handouts for their staffs and clients: www.newmoa.org/solidwaste/projects/pharma/. NEWMOA also purchased and distributed mail-back envelopes and Deterra Drug Destruction System pouches to the agencies.

NEWMOA also assisted Kinney Drugs with installing DEA-approved waste pharmaceutical collection kiosks for public use at three of their locations in northern Vermont. These kiosks significantly increase public access to convenient and free management options. NEWMOA developed a handout to publicize the kiosks: www.newmoa.org/solidwaste/projects/pharma/KinneyCollectionKiosks.pdf.

NEWMOA provided Call2Recycle battery recycling collection boxes to a New Hampshire LTCF and to the New Hampshire NH DES Pollution Prevention Division for them to provide to the small businesses they work with in the northern rural areas of the State. NEWMOA developed several battery collection handouts: www.newmoa.org/solidwaste/projects/pharma/.

share information and resources. Mark Dennen, Rhode Island DEM chaired the Workgroup in FY 2021.

SUSTAINABLE MATERIALS MANAGEMENT (SMM) MEASURES

The data that state solid waste programs collect and analyze on recycling and diversion from disposal varies widely across the region, with little consistency on the metrics and the sources of data.

SMM Measures Workgroup

NEWMOA supports a Workgroup focused on improving the measurement of SMM and shares information, best practices, and lessons learned. The 15-member Workgroup held 3 virtual meetings in FY 2021. They prepared and submitted a series of comment letters to EPA on the “Proposed U.S. National Recycling Goals;” “Proposed National Recycling Strategy and Framework;” and “Recycling Rate Measurement Methodology.”

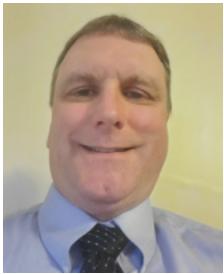
Documents: www.newmoa.org/publications/letters.cfm

COORDINATION OF PROGRAMS WITHIN EPA REGION 2

NEWMOA helped to facilitate three information-sharing virtual meetings with solid waste and SMM managers and staff from EPA Region 2 and the environmental agencies in New Jersey, New York, Puerto Rico, and the Virgin Islands. These meetings, one of which was full-day, provided an opportunity for in-depth updates and coordination on such topics as food waste, various EPA initiatives, disaster debris planning, and product stewardship. The meetings involved an average of 34 participants.

In summary, NEWMOA’s solid waste and SMM efforts throughout FY 2021 focused on a wide range of topics and reached a large audience with cutting edge information and resources. Through these efforts and those of our members, we are advancing SMM. Much more remains to be done, and NEWMOA will continue its many contributions to addressing these important and difficult waste issues and problems in the coming years.

Hazardous Waste Management Programs



TOM KILLEEN

New York State
Department of
Environmental
Conservation

2021 NEWMOA
Hazardous Waste
Program Chair

“The monthly call topics and annual training... have done a great job of meeting the training needs for our staff and maintaining communication and cooperation between states.”

Overall, discussions among NEWMOA's hazardous waste program officials throughout FY 2021 focused on training for new RCRA program staff on a wide range of topics.

NEWMOA conducted a survey of state participants in NEWMOA's FY 2021 Hazardous Waste activities, and 85 percent of the respondents stated that they use the information they learned from those activities in their work. Respondents noted that they apply the knowledge they gained from participating in NEWMOA's HW activities in the following ways:

- I'm a new hire, and everything I've learned has been helpful.
- Helps me to prepare and conduct RCRA inspections.
- Helps me in forming state interpretations/policy on hazardous waste matters, as well as how to handle inspections, enforcement, and permitting.

NEWMOA's Hazardous Waste Program Steering Committee of 15 members met 3 times in FY 2021 to oversee NEWMOA's HW activities and share program developments. The group also conducted several topical surveys covering:

- State Universal Waste regulations
- The status of state used oil regulations
- State only hazardous waste codes

These materials were shared with NEWMOA's membership or posted online: www.newmoa.org/hazardouswaste/NewEnglandStateWasteCodes.pdf.

TRAINING

NEWMOA's Hazardous Waste Training Workgroup of 21 members met 3 times in FY 2021 planning virtual training sessions for HW program staff. To select its priority training topics, NEWMOA conducted a survey of the Workgroup members. Mark Dennen, Rhode Island DEM chaired the Workgroup in FY 2021.

Throughout FY 2021, NEWMOA conducted virtual training through regular information-sharing roundtables and presentations focused on:

- Landlord tenant responsibility for hazardous waste with for 36 attendees

- Used oil management for 117 attendees
- Liability insurance for Treatment, Storage, and Disposal Facilities (TSDFs) for 73 attendees; presenter: Kevin Schanilec, EPA Region 10
- How states deal with receiving waste from other states that are regulated differently for 75 attendees
- Generator Improvement Rule for 90 attendees; presenters: Kathy Lett and Mary Beth Sheridan, EPA Headquarters
- States and EPA experience with offsite compliance monitoring inspections for 94 attendees
- Economic benefits assessment for states' HW enforcement cases for 67 attendees; presenter: David Smith-Watts, EPA Headquarters

2021 HAZARDOUS WASTE (HW) PROGRAM AT-A-GLANCE

15 training and information-sharing webinars or virtual meetings on key hazardous waste topics, involving more than 1,295 attendees.

21 members in NEWMOA's Hazardous Waste Training Workgroup; the group met 3 times to plan the training events.

13 members in NEWMOA's Hazardous Waste Permit Writers Workgroup; the group met once to share information.

17 members of NEWMOA's Hazardous Waste Regulatory Adoption and Authorization Workgroup; the group met 4 times to share information and resources.

- Results of VT's Safety-Kleen HW enforcement case for 141 attendees; presenter: Steve Simoes, Vermont DEC
- HW contingency plans for 91 attendees; presenter: Tim Prospert, New Hampshire DES
- Requirements for HW container storage areas for 105 attendees; presenter: Stephen Szardenings, New Jersey DEP
- Requirements for HW tanks for 79 attendees; presenter: Jeff Gaines EPA Headquarters
- Requirements for the management of Universal Waste for 87 attendees; presenter: Jim Paterson, Massachusetts DEP
- Personnel training at HW generators and TSDFs for 79 attendees; presenter: Tim Prospert, New Hampshire DES
- How states and EPA Regions target facilities for inspections with 71 attendees
- Lithium-ion battery recycling for 90 attendees; presenters: Tom Killeen and Matt Gillette, New York State DEC

These training events were for state and EPA officials.

HW REGULATION ADOPTION & AUTHORIZATION WORKGROUP

Early in FY 2021, NEWMOA decided to form a new Workgroup focused on sharing information and lessons learned among state hazardous waste program staff involved in drafting regulations for adoption and authorization. The Workgroup of 17 members includes state regulatory staff only; they met 4 times.

PERMIT WRITERS WORKGROUP

As a result of a regional meeting on compliance at Treatment, Storage, and Disposal Facilities (TSDFs) in FY 2018, NEWMOA formed a HW Permit Writers Workgroup in FY 2019. This Workgroup of 13 state and EPA members provides permit writers with a regional forum to share information and discuss ways to address challenges. Most state agencies have only a few staff that are involved in writing RCRA TSDF permits, and the members of the Workgroup learn

from each other. In FY 2021, NEWMOA convened the Workgroup for one meeting, and the participants shared information on the status of their various TSDF permits and the challenges they are facing with finalizing some of the more complex ones.

In summary, throughout FY 2021 NEWMOA's hazardous waste program helped state programs with training new staff and adapting to the changes brought on by the pandemic.

CONTINUOUS IMPROVEMENT

Process improvement approaches, such as Lean, help organizations identify and eliminate unnecessary and non-value-added process steps and activities that have built up over time. These approaches were developed originally for use in the private sector for manufacturing processes, but they have been adapted for use in the public sector for program and administrative processes. All the state and federal environmental agencies in the northeast are using Lean or other similar continuous improvement methods to reduce the time needed in their permitting, enforcement, data gathering and management, administrative reviews, grants and contracts, and other activities.

In FY 2021, NEWMOA convened its Continuous Improvement Workgroup (formerly called the Lean Practitioners Workgroup) of about 28 members from the northeast states and EPA twice to help them learn from each other and exchange resources. A Workgroup member reported on NEWMOA's annual survey that, "I get a lot out of participating and learning what other [Continuous Improvement] Workgroup members are doing. I hope that the Workgroup's meetings continue going forward."

ENVIRONMENTAL JUSTICE

Environmental justice efforts by state agencies are not new but starting in 2020 they began to receive increased attention. The tragic events over the past few years have focused greater attention on the serious impacts of inequality and environmental injustice. State agencies have launched new environmental justice (EJ) initiatives that affect the ways in which they undertake many of their basic functions. In June 2020, NEWMOA decided to form a Workgroup to help state and federal programs work together more effectively to create environmental justice at every level.

NEWMOA's Workgroup, called the Environmental Justice Workgroup, started meeting late in calendar year 2020. Its mission is to support state efforts to develop and implement a variety of EJ initiatives and strategies. In addition to state officials, who are actively involved in EJ, the group includes representatives of EPA Regions 1 and 2, the Northeast States for Coordinated Air Use Management (NESCAUM), the New England Interstate Water Pollution Control Commission (NEIWPCC), and NERC. The Workgroup of 29 members met 4 times in FY 2021 and conducted a survey on "State Definitions of Environmental Justice Populations and Communities." The Workgroup also conducted a survey of its members on training priorities to inform future efforts. A Workgroup member reported in NEWMOA's annual survey that, "the [Environmental Justice Workgroup] meetings are helpful in terms of hearing about what other states are doing and connecting with colleagues from other states."

Waste Site Cleanup Challenges



TRISH COPPOLINO

Vermont
Department of
Environmental
Conservation

2021 Waste Site
Cleanup Program
Chair

Overall, discussions among waste site cleanup program officials in the region in FY 2021 focused on impacts of the retirements of long-term waste site cleanup program staff and PFAS and other emerging contaminants.

NEWMOA conducted a survey of state participants in NEWMOA's FY 2021 Waste Site Cleanup (WSC) activities, and 100 percent of the respondents indicated that they use the information they learned from those activities. Respondents stated that they apply the knowledge they gained from participating in NEWMOA's WSC activities in the following ways:

- Use information gathered from other states and try to apply it.
- Having the training online was extremely useful during COVID.
- Virtual meetings have been a great way of staying in touch with colleagues. ...found the [training programs] useful in trying to keep up with technical advances.

TRAINING

Due to COVID-19, NEWMOA did not conduct any in-person workshops in 2021. Instead, NEWMOA held 18 webinars focused on PFAS and other important topics.

PFAS ACTIVITIES

PFAS are a large class of chemicals that have been used in numerous consumer products and industrial processes due to their oil and water-resistant properties and their exceptional stability. These products include carpet and fabric protection, food packaging, aqueous film-forming foams (AFFF) used for firefighting, personal care products, and many more. The same properties that make PFAS so useful in consumer and other products and for firefighting make them challenging to remove from soil and water. Many communities in the northeast have drinking water systems that are impacted by PFAS. Understanding fate and transport and remediation and treatment options to meet state and federal drinking water guidelines is challenging.

States/EPA Working Group

To support state efforts to understand and address this important issue, NEWMOA has facilitated virtual meetings of a PFAS States and EPA Working Group since 2016. The Working Group includes approximately 85 members from state agencies and EPA Regional offices. In FY 2021, the group held 11 information-sharing virtual meetings with 20-30 participants each. The meetings provide a forum for members to share updates on efforts to understand the sources of PFAS in the environment, to control them, and to cleanup areas that are contaminated. Participants in Working Group, who responded to NEWMOA's 2021 annual survey, reported that they

2021 WASTE SITE CLEANUP (WSC) PROGRAM AT-A-GLANCE

19 webinars on PFAS and other waste site cleanup topics for more than 6,630 attendees

11 monthly information-sharing virtual meetings of the PFAS Working Group of 85 members; averaging 26 participants from state agencies and EPA per meeting

25 members of the Science of PFAS Conference Planning Committee

19 members of the Cross Program – WSC and Solid Waste – Soil Reuse Workgroup

11 members of the Brownfields Workgroup and one annual meeting involving 40 participants

apply the knowledge they gained in the following ways:

- The information provided in the PFAS Working Group meetings is valuable in forming policy and considering actions to reduce PFAS in drinking water.
- Understanding biosolids management regulation and policy.
- Working on public health risk assessment.

In addition to the meetings of the Working Group, NEWMOA held three virtual information-sharing meetings of a smaller states-only group that focused on protection of groundwater from leaching of PFAS from soil/biosolids.

PFAS Webinars

In FY 2021, NEWMOA held 12 public webinars on PFAS topics attended by over 5,635 people from all over North America on the following topics.

- “Health Effects of Exposure to PFAS” for 565 attendees
Presenters: Angela Perez, Center for Toxicology and Environmental Health and Carmen Messerlian, Harvard University School of Public Health
Slides: www.newmoa.org/events/event.cfm?m=458
- “Health Effects of PFAS Mixtures” for 432 attendees
Presenters: Jennifer Schlezinger and Greylin Nielsen, Boston University School of Public Health
Slides: www.newmoa.org/events/event.cfm?m=459
- “Perspectives on a Class Approach to PFAS” for 496 attendees
Presenters: David Andrews, Environmental Working Group and Simona Balan, California Department of Toxic Substances Control (DTSC)
Slides: www.newmoa.org/events/event.cfm?m=454
- “Wastewater as a Source of PFAS” for 600 attendees
Presenters: Justin Pimpare, EPA Region 1 and Farshad Ebrahimi, Temple University
Slides: www.newmoa.org/events/event.cfm?m=464

- “PFAS in Surface Water, Fish and Shellfish” for 518 attendees
Presenters: Ronald MacGillivray, Delaware River Basic Commission and Michael Murphy, Wood
Slides: www.newmoa.org/events/event.cfm?m=471
- “PFAS Uses and Alternatives” for 385 attendees
Presenters: Liz Harriman, Massachusetts Toxics Use Reduction Institute and Mike Schade, Safer Chemicals, Healthy Families and Mind the Store Campaign
Slides: www.newmoa.org/events/event.cfm?m=466
- “PFAS: Aqueous Film Forming Foam (AFFF) and Alternatives” for 384 attendees
Presenters: Raj Singh, Clarkson University; Kate Winnebeck, New York Pollution Prevention Institute; and Nick Child, Massachusetts DEP
Slides: www.newmoa.org/events/event.cfm?m=467
- “Understanding Usability of PFAS Data” for 405 attendees
Presenters: Nancy Rothman, New Environmental Horizons, Inc. and Elizabeth Denly, TRC
Slides: www.newmoa.org/events/event.cfm?m=463
- “In-situ Treatment of PFAS in Groundwater” for 453 attendees
Presenters: Fiona Laramay, AECOM and Maureen Dooley, Regenisis
Slides: www.newmoa.org/events/event.cfm?m=470
- “Destroying PFAS in Groundwater and Landfill Leachate” for 500 attendees
Presenters: Rebecca Mora and Shangtao Liang, AECOM and Ivan Cooper, Civil and Environmental Consultants
Slides: www.newmoa.org/events/event.cfm?m=469
- “PFAS in Water: Removal, Treatment, and Destruction” for 516 attendees
Presenters: Charles Schaefer, CDM Smith and Michelle Crimi, Clarkson University
Slides: www.newmoa.org/events/event.cfm?m=468

“...finds [NEWMOA’s technical training] extremely helpful. ...helps to hear how other states are addressing issues in ways that we may want to consider trying.”

- “PFAS Air Emissions: Impacts to Groundwater and Stack Testing” for 365 attendees
Presenters: Catherine Beahm, New Hampshire DES and Wesley Fritz, Weston Solutions
Slides: www.newmoa.org/events/event.cfm?m=481
In addition, at the request of the States/EPA Working Group, NEWMOA organized three webinars for government officials:
- “PFAS: A Case Study in Maine – Including Plant Uptake in Corn and Hay” for 105 state and EPA officials
Presenters: Andy Smith and Tom Simones, Maine Department of Public Health and Human Services
Slides: www.newmoa.org/events/event.cfm?m=475
- “PFAS: NCASI Analysis and Report – Pesticide Root Zone Model” for 25 state and EPA officials
Presenters: Derek Sain, National Council for Air and Stream Improvement (NCASI) and Marco Propato and Michael Winchell, Stone Environmental
Slides: www.newmoa.org/events/event.cfm?m=496
- “PFAS: Norlite Environmental Sampling” for 41 state and EPA officials
Presenter: Donald Ward, New York State DEC
Slides: www.newmoa.org/events/event.cfm?m=502

PFAS Conference

NEWMOA has partnered with NEIWPC, NESCAUM, NERC, and others to organize a “Northeast Conference on the Science of PFAS: Public Health and the Environment.”

The goals of the Conference are to:

- Ensure that local, state, and federal action to address PFAS contamination is informed by the most current and reliable science
- Facilitate networking and information-sharing among key stakeholders on PFAS topics
- Identify important gaps in the science and policy to help inform future research

The Conference was scheduled to take place March 31 to April 1, 2020 but had to be postponed because of the pandemic. The Conference is now scheduled for April 5-6, 2022 at the Best Western Royal Plaza Hotel and Trade Center in Marlborough, MA. In FY 2021, NEWMOA staff reconvened its 25-member Conference Planning Committee and started revising the agenda.

The Conference will have over 115 presentations in 5 concurrent tracks covering:

- Environmental behavior
- Sampling and analysis
- Toxicology and environmental health
- Treatment and remediation
- Uses and alternatives

In addition, there will be many sponsors, exhibitors, and poster presentations. NEWMOA expects more than 500 people to attend.

More information: www.newmoa.org/pfascienceconference

“The Brownfields States/EPA meeting keeps our state program up-to-date on a lot of issues and provides a great opportunity to hear how other states are addressing similar issues, and we bring ideas back to our own programs.”

Annual Conference at UMass

NEWMOA staff organized and facilitated a session on PFAS at the Annual Association for Environmental Health and Sciences (AEHS) Foundation “International Conference on Soil, Water, Energy, and Air” held virtually in October 2020. This session involved presenters from six state programs and was attended by about 65 people.

BROWNFIELDS

Cleaning up and redeveloping brownfields facilitates job growth, increases local tax bases, utilizes existing infrastructure, and improves the environment – a win, win, win, win.

Regional Summit

In FY 2019, NEWMOA began actively organizing a “Revitalizing New England:



SOIL REUSE

Construction, utility, brownfields, and waste site cleanup projects can generate significant quantities of excess soil that cannot be reused at the project site and can contain detectable levels of contaminants that are below the standards for hazardous waste but may pose groundwater or human contact risks. The management of these mildly contaminated soils can significantly increase the costs of construction or remediation projects, thereby impacting economic development.

NEWMOA’s Waste Site Cleanup Program partners with its Solid Waste Program to improve the management and reuse of excess soil. In FY 2021, the 19 member Soils Reuse Workgroup held 2 meetings to share program updates and to review NEWMOA’s “Soil Reuse: State Information Resource” webpage (www.newmoa.org/cleanup/projects/soil-info.cfm). A member of the Workgroup reported on NEWMOA’s annual survey that “networking with and updates from other states in periodic meetings is extremely valuable.”

Brownfields Summit 2020” to bring together key stakeholders in the region to help advance the understanding of state and federal brownfield programs and opportunities. NEWMOA has been working with the Technical Assistance to Brownfields Programs at the New Jersey Institute of Technology [now at the University of Connecticut], state and federal partners, and sponsoring companies to organize the regional Summit. The goals of the Summit are to:

- Share information about the financial incentives, liability protections, and technical and other assistance available for brownfields development from federal and state governments
 - Promote best practices and lessons learned across states and programs
 - Provide an opportunity to increase networking in the region and information-sharing among key stakeholders
- The Summit was planned for October

2020 at the Devens Common Center in Devens, MA. Due to the pandemic, it is now scheduled to take place May 18-19, 2022 at the same location. The two-day Summit will include plenary and breakout sessions and exhibits. In FY 2021, NEWMOA reconvened its Summit Planning Committee of 15 members to update the agenda. NEWMOA expects approximately 300 people to attend.

More information: www.newmoa.org/brownfields2022

Annual Brownfields Meetings

For more than 15 years, NEWMOA has supported a Brownfields Workgroup, which plans an annual States/EPA Brownfields Programs in-person meeting. In October 2020, 40 officials from EPA Region 1 and the New England states met virtually to share program updates and discuss program challenges. Nick Hodgkins, Maine DEP chaired the Workgroup in FY 2021.

Brownfields Webinar

NEWMOA held a Brownfields webinar on “PCBs in Building Products: Implications for Brownfields” for 196 attendees.

Presenters: Steve Zemba, Sanborn Head and Associates and Craig Miner, Weston and Sampson.

Recording & slides: www.newmoa.org/events/event.cfm?m=439

ADDITIONAL WASTE SITE CLEANUP WEBINARS

In addition to the webinars listed above, NEWMOA offered more in FY 2021 covering:

- “Understanding TSCA for Sites with PCBs” for 296 attendees
Presenters: Kim Tisa, EPA Region 1 and Dave Sullivan, TRC Companies
Recording & slides: www.newmoa.org/events/event.cfm?m=440
- “Using EPA’s Regional Screening Levels Calculator Tool” for 327 attendees
Presenter: Frederick Dolislager, University of Tennessee and Oak Ridge National Laboratory
Recording & slides: www.newmoa.org/events/event.cfm?m=444

In summary, NEWMOA’s FY 2021 Waste Site Cleanup Program provided virtual information-sharing and training programs in response to state needs. By bringing together different perspectives and a broad range of experiences, NEWMOA was able to facilitate an effective exchange of information among states, the consulting community, and others. Through its activities, the Association enables its members to learn about emerging issues and develop responses more efficiently than they would operating separately.



Promotional emails for the Brownfields Summit and the PFAS Conference.

Celebrating the 10th Anniversary of the Interstate Chemicals Clearinghouse (IC2)



**PAM
HADAD-HURST**

New York State
Department of
Environmental
Conservation

2021 IC2
Board Chair

“The knowledge gained from IC2 participation directly assists our agency in the development of regulations and chemical policy programs.”

In October 2008, 21 people met for two days at the University of Massachusetts Lowell to draft a prospectus for an Interstate Chemicals Clearinghouse (IC2). The participants included ten people representing state government agencies from nine states, five representatives from non-governmental organizations (NGOs), and six others from NEWMOA, the Lowell Center for Sustainable Production, and the Massachusetts Toxics Use Reduction Institute (TURI). For three years after this meeting, this group met regularly to plan for the formal launch of the IC2 in January of 2011, under the auspices of NEWMOA. Ken Geiser led many of these initial meetings. The original state Members included California, Connecticut, Maine, Massachusetts, Metro (Portland, OR), Michigan, Minnesota, New York, New Jersey, Oregon, Vermont, and Washington. IC2 has been successfully implementing the vision of this group of founders since its launch ten years ago.

In FY 2021, the IC2 supported a major data system while continuing to facilitate its Workgroups, Board, and Council; conducted an alternatives assessment (AA) evaluation related to fluorine free aqueous film forming foams (AFFF); supported a peer review of an AA for PFAS-free food packaging products; maintained and updated its other databases; and held webinars.

NEWMOA conducted a survey of IC2’s members on FY 2021 activities, and 80 percent of the respondents indicated that they use the information they learned from those activities. Respondents reported that they apply the knowledge they gained from participating in IC2’s activities in the following ways:

- Share information with coworkers for consideration in our agency’s programs. The information from other states can be used to assist in policy decisions.
- To influence our policy decisions.
- Benefit from the knowledge sharing between members and the opportunity to coordinate approaches to increase equity and the use of alternatives assessment.

IC2’s Executive Committee met virtually 18 times in FY 2021. The Committee planned and held four virtual Board meetings and organized and held three IC2 All Member (Council) virtual meetings. During these meeting, the IC2 membership oversaw the work of the Clearinghouse and shared updates and information.

HIGH PRIORITY CHEMICAL DATA SYSTEM

In 2021, the IC2 supported its High Priority Chemical Data System (HPCDS), which provides an online portal for manufacturers to report on the presence of high priority chemicals in products. The HPCDS facilitates greater efficiency

2021 IC2 PROGRAM AT-A-GLANCE

13 state and local government Members; 14 Supporting Members

3 active online databases

190 companies using the High Priority Chemicals Data System (HPCDS) to report to Oregon and Washington on children’s products

2 webinars involving more than 200 people

2 IC2 e-Bulletins shared with 280 people, each

7 active Workgroups focused on training, databases, PFAS, equity, alternatives assessment, procurement, and governance involving about 90 people

4 IC2 Board and 3 All-Member virtual meetings

and cost effectiveness for Oregon and Washington to fulfill the requirements under their children's products disclosure laws. It reduces reporting burdens and provides better service for manufacturers; increases opportunities for interstate involvement in data analysis and presentation; improves access to data for federal, state, and non-governmental stakeholders; and enhances the sharing of reported information with the public.

The HPCDS has set the standard for reporting chemicals-in-products data and has created a framework for additional states to implement similar reporting programs at a greatly reduced cost. Product manufacturers and distributors are benefiting from a reduced burden through "one-stop" reporting that satisfies multiple state requirements.

Ultimately, the HPCDS provides public access to ingredient data through a flexible, online search interface, enabling enhanced perspectives on the presence of chemicals of concern in products nationally. Analyses of this data can lead to reductions in exposures to chemicals of concern, with resultant benefits to human and ecological health, including reduced potential risk, health care costs, and preservation of valuable ecosystem services.

Throughout 2021, the IC2 administered and maintained the HPCDS. As part of these efforts, the IC2 provided ongoing technical support to manufacturers and state agency HPCDS users. To facilitate the use of the System in the future by the Vermont Department of Health, IC2 documented Vermont's requirements for HPCDS enhancements. This effort was on hold for much of the year due to the COVID response needs at the Department. IC2's information technology contractor, Eastern Research Group (ERG), has provided support for the HPCDS under the supervision of IC2 staff and members.

The IC2 staff organized and/or participated in 30 IC2/states meetings focused on HPCDS operations in FY 2021. IC2 staff also met numerous times with the San Francisco Department of the Environment

ASSESSMENT OF AFFF ALTERNATIVES

Starting in FY 2020 IC2 partnered with Supporting Members – the University of Massachusetts Lowell Center for Sustainable Product (LCSP) and the Toxics Use Reduction Institute (TURI) – on a Project to develop guidance materials and conduct research related to barriers and accelerators of alternatives to AFFF that contain PFAS. The focus of IC2's contributions have been to coordinate the involvement of state, local, and tribal agencies and interviews with users and experts in AFFF for firefighting applications. The Project was funded by the Department of Defense.

IC2 staff participated in 26 meetings in FY 2021 to assist the LCSP team with the formation and facilitation of a Project Support Committee. The staff also participated in two Strategic Environmental Research and Development Program (SERDP) Annual Symposium presentations for background and research on alternatives to AFFF and firefighting foam applications. The staff coordinated development of Project case studies, conducted a literature review, helped with creation of an interview guide, conducted over 12 interviews on user experience with AFFF and non-AFFF firefighting foam use, and drafted a research report on the findings. The Project will be completed in FY 2022 with the publication of a final report.

to develop requirements and a contract scope for using HPCDS for product registration under an ordinance regarding flame retardants in furniture with electronics.

Database Workgroup

IC2's Database Workgroup includes members from the Oregon Health Authority, Washington Department of Ecology, Vermont Department of Health, and others. The Workgroup of 22 members met 8 times during the year to discuss the HPCDS and the IC2's other online Databases, including the States' Chemicals of Concern Database (<http://theic2.org/chemicals-concern>), the Chemical Hazard Assessments Database (<http://theic2.org/hazard-assessment>), and the Alternatives Assessment library (http://theic2.org/aa_library). After conducting a survey of the IC2 members on their priorities for IC2's Databases, the Workgroup decided to archive the U.S. State Chemical Policy Database and no longer update and maintain it. Nancy Rice, Minnesota DoH chaired the Workgroup in FY 2021.

CHEMICAL INGREDIENT TRANSPARENCY

Businesses, governments, investors, institutional purchasers, and consumers want a marketplace of products made from safe and healthy chemical ingredients. These stakeholders have a fundamental right to know the chemicals in products and the functions of those chemicals. Yet across product life cycles interested parties struggle to even know the chemicals in the products they sell, purchase, recycle, or compost. The lack of chemical ingredient and hazard disclosure along supply chains is a significant barrier to innovation and the effective functioning of markets. Chemical ingredient transparency frequently is a catalyst for companies to avoid toxic chemicals from the start and to work on developing safer alternatives. It provides NGOs, researchers, and governments with knowledge about where toxic chemicals are used.

There is a diversity of chemical transparency mandates at the state level that has been steadily increasing for the past ten years. NGOs are advocating for greater disclosure across supply chains. Retailers, including Walmart, have established requirements for ingredient disclosure by their suppliers. Ecolabels, such as EPA's

Safer Choice, require chemical ingredient transparency to meet their criteria. The Health Product Declaration is a system for support chemical ingredient disclosure for building products. These transparency initiatives confront challenges within and across product categories and sectors.

Ingredient Transparency Partnership

In FY 2019, the IC2 and Clean Production Action (CPA) partnered to launch an initiative to find common ground among key stakeholders on chemical ingredient transparency principles. The Chemical Ingredient Disclosure Principles were designed by a multi-stakeholder coalition who met regularly over the prior 18 months. NEWMOA and CPA released them in June 2021. At that time a coalition of over 112 businesses, governments, health care organizations, investors, and NGOs endorsed the following Principles:

1. Disclose all intentionally added chemical ingredients.
2. Disclose nonfunctional constituents (i.e., incidental components, breakdown products, and byproducts) that are identified on specified lists of chemicals of concern. This is a general principle to which Signatories agree, though they may hold differing positions on the thresholds for disclosure.
3. Proactively engage supply chains and interested stakeholders to increase full chemical ingredient information disclosure. Manufacturers and retailers need reliable documentation to trace chemical information along supply chains.
4. Advocate for filling data gaps to characterize the hazards of chemicals.
5. Make accurate chemical ingredient information easily accessible to consumers, government agencies, manufacturers, brands, retailers, and others in the supply chain.
6. Support public policies and industry standards that advance the above Principles.

Endorsers of the Principles plan to use them to:

- Drive avoidance of chemicals of concern
- Build trust among users and producers
- Use chemicals with the most comprehensive chemical hazard profiles
- Work to reduce hazardous chemicals and their uses in products, across supply chains, and throughout product lifecycles

More information: <https://www.bizngo.org/public-policies/principles-for-chemical-ingredient-disclosure> or <https://theic2.org/>

Webinar on the Principles for Chemical Ingredient Disclosure

A joint (CPA and IC2) public webinar involving 208 attendees covered the Principles for Chemical Ingredient Disclosure and why organizations developed and endorsed them.

Presenters: Terri Goldberg, IC2/NEWMOA and Mark Rossi, CPA as well as:

- Bobbi Wilding, Clean and Healthy New York
- Hal Ambuter, Reckitt Benckiser
- Karl Palmer, California DTSC
- Jane Abernathy, Humanscale
- Martin Wolf, Seventh Generation

Recording & slides: www.cleanproduction.org/resources/entry/webinar-principles-for-chemical-ingredient-disclosure

SUPPORT FOR NEW YORK STATE'S CHEMICALS POLICY PROGRAMS

IC2 staff participated in five virtual meetings with NYSDEC staff to support the Agency's efforts related to chemicals in product reporting for cleansing chemicals, children's products, and products containing 1,4-dioxane.

The IC2 also supported NYS' efforts to develop a Chemicals of Concern list under their Toxic Chemicals in Children's Products Program. IC2 performed a cross-walk of NYS' draft authoritative lists of chemicals of concern against IC2's to inform what other lists NYS might consider. IC2 conducted research on individual chemicals identified in statute and provided

recommendations and documentation to support decision making regarding their listing. Finally, IC2 staff provided DEC with information on other states' chemical in products reporting rules and regulations.

TRAINING

Training IC2's members on recent technical, policy, and programmatic issues in alternatives assessment, green chemistry, ingredient disclosure, and toxics use reduction policy is an IC2 priority. The Clearinghouse offers topical webinars several times per year. It also convenes roundtables, which provide an opportunity for each jurisdiction or organization to share updates on new policies, activities, tools, and research.

Training Workgroup

IC2's Training Workgroup of five members met five times throughout FY 2021 to plan webinars and Roundtables. Kevin Masterson, Oregon DEQ chaired the Workgroup in FY 2021.

Webinars

The IC2 held two webinars in FY 2021.

- "Introduction to ChemFORWARD" for IC2 members only for 17 attendees.
Presenter: Lauren Heine, ChemFORWARD (no public access link)
- "2021 Update to the Toxics in Packaging Clearinghouse (TPCH) Model Legislation" for 178 attendees (open to the public).
Presenter: John Gilkeson, MN Pollution Control Agency
Recording: <https://www.youtube.com/watch?v=XHosL5CZbmM>

REDUCING TOXICS THROUGH ENHANCED GOVERNMENT PROCUREMENT

State and local governments procure significant quantities of goods and services. Environmental and public health agencies have been working with their counterparts in purchasing offices to ensure that state and local contracts specify toxics free alternatives where available and cost effective. Informing the development of environmentally

preferable specifications and contract language is key to the success of these efforts.

Procurement Workgroup

IC2's Procurement Workgroup supports members' advancement of low-toxicity product procurement. Specific areas of interest include how patterns of chemical use inform environmentally preferable procurement, facilitating state and municipal cooperation to enhance the market for less-toxic products, identifying product categories that are good targets for action, sharing specification language and informing individual or joint procurement, and working with large vendors to harmonize green product claims with state requirements. The Workgroup of 24 members held 4 virtual meetings during FY 2021 to share information and strategies. Beth Meer, New York State DEC chaired the Workgroup in FY 2021.

ALTERNATIVES ASSESSMENT (AA)

Many state and local environmental agencies want to minimize the negative effects associated with toxic chemicals use while encouraging the viability and growth of the companies that employ their citizens and support the health of their economies. Finding safer alternatives that companies can adopt (i.e., that satisfy their functional needs and performance requirements and are cost effective) is a highly efficient way to achieve this.

The overall process of assessing alternatives involves identifying potential alternatives and then determining whether they are:

- Safer
- Functionally equivalent
- Economically feasible

Individual states and local agencies have their own policy, regulatory, and/or technical assistance response to the information obtained from an AA. However, the goal is to have a consistent process that allows programs to use each other's studies to minimize duplication and maximize dissemination of valuable information on safer alternatives to chemicals of concern.

PEER REVIEW OF AA FOR PFAS-FREE FOOD PACKAGING

In 2018, Washington State passed a law to prohibit all PFAS in plant fiber-based food packaging. The ban takes effect following the identification of safer alternatives by the Department of Ecology (Ecology). The assessment of alternative products must follow the IC2 Alternatives Assessment Guide (v 1.1) and consider chemical hazard, exposure, performance, cost, and availability. The findings of the AA must be supported by an external peer review. Ecology contracted with IC2 in FY 2021 to support this review of the 2021 AA. Under this Project IC2:

- Identified and recruit peer reviewers from within the IC2 or A4 communities to review the Ecology's AA. The recruitment focused on reviewers with expertise in food packaging, PFAS, or alternatives assessments.
- Facilitated a peer review of Ecology's AA to help determine whether Ecology's findings of safer alternatives are supported by Ecology's process, the collected data, and the best practices associated with AAs.
- Acted as a go-between for peer reviewers and Ecology while the AA was under review.
- Organized and facilitated meetings between Ecology and peer reviewers to provide opportunities ask clarifying questions about the AA or peer reviewer comments.

AA Workgroup

IC2's AA Workgroup of 32 members met 4 times in FY 2021 to share successes and challenges. Pam Eliason, Massachusetts Toxics Use Reduction Institute (TURI) chaired the Workgroup in FY 2021. The group supports the IC2 Chemical Hazard Assessment Database (CHAD), to which IC2 added 14 new GreenScreen assessments in FY 2021 (visit <https://theic2.org/hazard-assessment#gsc.tab=0>).

The IC2 supported the Association for the Advancement of Alternatives Assessment (A4) in 2021, a professional association dedicated to advancing the science, practice, and policy of alternatives assessment and informed substitution.

PFAS

State and local health and environmental programs around the U.S. are focused on reducing contamination of drinking water, groundwater, and other environmental media by PFAS. IC2 is particularly interested in reducing the sources of PFAS, including consumer products and packaging and AFFF.

PFAS Workgroup

IC2's PFAS Workgroup provides a forum to discuss and collaborate on PFAS reduction, with the goal of learning from and not replicating work being done around the country. The Workgroup focuses on prevention and safer alternatives for current uses of PFAS in products. The Workgroup of 42 members met 7 times in FY 2021. Holly Davies, Washington DoH chaired the Workgroup in FY 2021.

EQUITY

In FY 2020, Oregon Metro conducted a virtual presentation for the IC2 on the results of its study on toxics reduction and equity (<https://www.youtube.com/watch?v=mwJDPIIDNmGY>). This presentation helped to spur a robust conversation within IC2 on this important topic. It also complimented IC2's 2020-2022 strategic framework, which identified "advancing health and environmental equity" as one of its five strategic priorities. In FY 2021, IC2 decided that forming an Equity Workgroup would help advance this strategic priority and explore and

identify ways to address equity through IC2's work.

Equity Workgroup

The IC2 formed its Equity Workgroup in January 2021 and began working to identify common goals and strategies to address chemical-related environmental and health disparities. The Workgroup focused on collaborating with tribal governments, organizations representing communities of color, and other historically marginalized groups. The group of 15 members met 9 times during FY 2021 and created their first annual workplan and a detailed survey on equity to gather feedback from IC2's members. Farrah Fatemi, Portland Metro chaired the Workgroup in FY 2021.

GOVERNANCE, OUTREACH, & RECRUITMENT (GOR)

The IC2 published two e-Bulletins in 2021 (<http://theic2.org/publications>) each of which was distributed to more than 280 IC2 Members, Supporting Members, and others.

GOR Workgroup

IC2's Government, Outreach, and Recruitment (GOR) Workgroup of six members met three times during FY 2021 and focused on vetting two new IC2 Supporting Members that were welcomed to the organization: Healthy Babies Bright Futures and the Pacific Northwest Pollution Prevention Resource Center. Ken Zarker, WA Ecology chaired the Workgroup in FY 2021.

In summary, the IC2 provided connections and information sharing that enabled members and supporting members to promote the use of safer chemicals and products. Meetings and webinars with staff representing state, local, and tribal governments, industry, and NGOs facilitated the sharing of diverse perspectives that inform the implementation of regulatory work, enhance public education, and encourage a market for safer chemicals and products.

For more information, visit: <http://theic2.org/>.

Celebrating the 20th Anniversary of the Interstate Mercury Education & Reduction Clearinghouse (IMERC)



TOM METZNER

Connecticut
Department
of Energy &
Environmental
Protection (CT
DEEP)

2021 IMERC Chair

"This is a very professional program and very valuable."

In the late 1990s, regional studies had found solid waste incineration to be a significant source of mercury releases to the environment in the northeast. At that time, there were advisories warning people not to consume certain types of freshwater fish because of high levels of mercury in all of the northeast states. Exposure to mercury poses public health threats – especially to small children and the unborn. In 1998, the Governors of the Northeast States and the Eastern Canadian Premiers committed to “virtually eliminate the discharge of anthropogenic mercury to the environment” and subsequently endorsed a Mercury Action Plan to accomplish this goal.

A key element of the Plan was development of draft model legislation that would provide a comprehensive framework to help states develop more consistent approaches to managing mercury-containing wastes. Starting in fiscal year 1999, NEWMOA took the lead in drafting model legislation, including providing opportunities for stakeholder input. The Conference of the New England Governors and the Eastern Canadian Premiers approved the resulting Mercury Education and Reduction Model Legislation in fiscal 2000. In 2001, NEWMOA launched the Interstate Mercury Education and Reduction Clearinghouse (IMERC) after several states successfully enacted major provisions of the model legislation. Now, 20 years later, the U.S. has achieved significant reductions in mercury use, and with 13 states involved, IMERC continues to support implementation of their laws and pushes for achievement of the virtual elimination goal.

In 2021, IMERC focused on relaunching its online reporting system, reviewing applications for alternative product and packaging labeling, reviewing phase-out exemption applications, and much more.

NEWMOA conducted a survey of state participants in IMERC's Workgroups in 2021, and 80 percent of the respondents stated that they use the information they learned from Workgroup activities. Respondents noted that they apply the knowledge they gained from participating in IMERC activities in the following ways:

- It is useful to hear what other states are doing to educate the public about mercury; label products; and manage, collect, and dispose of mercury.
- Ideas for new projects. Connections.

IMERC'S STEERING COMMITTEE

IMERC Steering Committee of 20 members met 3 times in FY 2021 to oversee IMERC's activities, discuss improvements in IMERC's review processes, and share program developments.

IMERC E-FILING SYSTEM RELAUNCHED

Reporting through IMERC's E-filing System enables companies to comply with the Mercury-added Product Notification requirements of Connecticut, Louisiana, Maine, Massachusetts, New Hampshire, New York, North Carolina (autos only), Rhode Island, and Vermont. Reporting is required for any company that sold or distributed mercury-added products into these states.

IMERC's online E-filing System went through critical and necessary updates over the past two years. A key goal of this effort was to align the states' and EPA's mercury-added products data reporting requirements and make upgrades and improvements to the current System. IMERC

MASSACHUSETTS LAMP SALES & COLLECTION RESEARCH PROJECT

NEWMOA assisted MassDEP with evaluating the current state of mercury lamp collection in the State, including programs to educate the public on proper handling. Throughout the Project, NEWMOA met regularly with MassDEP to discuss interim findings and research objectives. NEWMOA staff reviewed municipal waste combustor plans and their annual reports to assess their current efforts and results and solicited and analyzed collection data from municipal waste combustors and mercury reclamation facilities to compare collection rates across municipalities and coverage areas. NEWMOA performed outreach to high-performing municipalities to better understand their programs. NEWMOA summarized its research findings in a final report to MassDEP.

relaunched the System in May 2021. Over the summer and into the fall, companies began to file their 2018 Triennial Notification Forms through the System - <https://imerc.newmoa.org/Public/EnSuite/Shared/Pages/Main/Login.aspx>.

IMERC and its information technology (IT) contractor, enfoTech, also updated the System User Guide and training materials and posted them online. IMERC hosted an E-filing System demonstration webinar for 34 attendees. The demonstration highlighted the changes to the reporting system, covered its basic functionality and features, and included a walk-through of new features companies can use to submit their Phase-out Exemption Applications and Alternative Labeling Plans.

Recording: www.newmoa.org/prevention/mercury/imerc/efiling.cfm

IMERC issued an *IMERC Alert* for 256 people to announce the E-filing System re-release - <https://conta.cc/3bVXhmW>.

WORKGROUPS

IMERC serves as the contact point for regulated companies for notification on their mercury-added products, and submission of applications for alternative labeling and exemptions to phase-out requirements. IMERC also collaborates with state and federal agencies, NGOs, and other groups to advance mercury education and reduction efforts. Through IMERC, members share responsibilities in implementing their laws.

Notification Workgroup

IMERC's Notification Workgroup of seven members met twice to discuss new models for reviewing notifications, alternative labeling plans, and phase-outs. The Group decided that small committees will handle the technical review of each notification or plan and report back to the full group with recommendations. The Notification Workgroup met toward the end of the year to begin reviewing 2018 triennial filings. Tom Metzner, Connecticut DEEP chaired the Workgroup in FY 2021.

IMERC staff performed administrative reviews on 12 submitted notifications and followed up with reporting companies. They also responded to more than 50 requests for technical support from users.

Labeling Workgroup

Some IMERC-member states also require product and point-of-sale labeling of mercury-added products to alert potential customers that the product contains mercury and inform them about how to properly dispose of it. Companies that cannot comply with the "standard" labeling criteria required by the states, must apply for approval of an alternative labeling plan - www.newmoa.org/prevention/mercury/imerc/labelinginfo.cfm. IMERC's Labeling Workgroup of eight members reviews these requests and works with the manufacturers and distributors of these products to ensure that they comply with the labeling laws.

2021 IMERC AT-A-GLANCE

13 state government Members;
3 Supporting Members

300 companies reporting to the
IMERC E-Filing System

1 webinar for 34 people

1 IMERC Alert shared with
256 people

4 active Workgroups focused on
Notification, Labeling, Phase-out,
and Education and Outreach with
about 20 members

3 All-IMERC virtual meetings

In FY 2021, the Labeling Workgroup reviewed and approved alternative label plans from four companies. The Workgroup discussed a Federal Trade Commission (FTC) label and how to integrate it into IMERCs revised online guidance. IMERC sent letters of approval for alternative label renewals to two companies. IMERC also maintained a spreadsheet for tracking companies that have Alternative Labeling plans and their expiration dates. John Gilkeson, Minnesota PCA chaired the Workgroup in FY 2021.

Phase-Out Workgroup

A number of mercury-added products are banned for sale in a subset of IMERC-member states. In some instances, individual states allow companies to apply for phase-out exemptions – www.newmoa.org/prevention/mercury/imerc/banphaseout.cfm. If a company has a valid reason to continue selling a product that contains mercury, they must apply to the state(s) for a phase-out exemption. Approvals must be issued by the individual states; however, IMERC’s Phase-out Workgroup coordinates reviews of the applications and facilitates information sharing on decisions. In FY 2021, the Workgroup of eight members held a meeting with three companies that make pressure transducers to better understand their need to continue to manufacture products with mercury and coordinate follow-up. IMERC staff researched five other pressure transducer manufacturers that do not have exemptions (and have not notified) and drafted and sent out a letter about what these firms needed to do to comply with the states’ laws. The Workgroup held a meeting to discuss next steps on the letter. IMERC also maintained a spreadsheet for tracking companies that have Phase-out Exemptions and their expiration dates. Peter Van Erp, New York State DEC chaired the Workgroup in FY 2021.

Without IMERC, states would not have the resources to properly administer their vital mercury product laws. IMERC has served as a model of how states can work together to tackle large projects of mutual

concern starting with a model bill. States outside the northeast have also participated in IMERC as a means of implementing similar aspects of their mercury products law. In addition, IMERC facilitates manufacturer compliance by serving as a one-stop resource for those companies that are held responsible under the laws.

SAFER CLEANING & DISINFECTING FOR JANITORIAL STAFF

Some cleaners and disinfectants can be hazardous to worker health and indoor air quality. However, these hazards can be controlled or even eliminated. The most effective method of control is to substitute a less hazardous material for a hazardous one. This strategy has been effectively used in many industries and operations and is a cornerstone of pollution prevention (P2).

The Rhode Island Department of Environmental Management (RIDEM), with funding from EPA and in partnership with NEWMOA and the Rhode Island Committee on Occupational Safety and Health (RICOSH) embarked on a P2 Project in 2019 to encourage prevention throughout the janitorial and housekeeping community and schools in the State and Southeastern New England. RIDEM’s project focused on reducing the use of the Toxic Substances Control Act (TSCA) Priority Action Plan Chemical: Nonylphenol Ethoxylates (NPE). NPE can be found in both commercial and industrial cleaners.

NEWMOA staff supported this Project by:

- Helping to plan the collaboration and devising a strategy for sector segmentation and targeting
- Developing a training module on green cleaning for use with hospitality staff enrolled in English as a second language and General Educational Development test programs
- Developing an e-learning training module for RI school facilities personnel on safer cleaning and disinfecting in the time of COVID
- Exploring educational opportunities for state agency purchasers on the use of state procurement contracts for green cleaning
- Converting the training to an e-learning module for deployment through the RI Learning Center, the State’s Learning Management System



NEWMOA Funding

NEWMOA relied on dues, grants, contracts, and special contributions for funding in FY 2021. A foundational source of funding was state dues. The New England states requested that EPA Region 1 make a portion of their RCRA hazardous waste program assistance funds available as dues and general support in the form of a grant to NEWMOA. The NEWMOA Board of Directors determined the amount in consultation with EPA Region 1. New York and New Jersey paid their annual dues directly to NEWMOA. IMERC and IC2 members and Supporting Members also paid annual dues directly to NEWMOA to fund those activities.

Federal competitive grants supported pollution prevention and sustainable materials management projects. Grants for these activities were awarded by a combination of EPA Region 1 and the U.S. Department of Agriculture (USDA).

Contributions from member states in the form of contracts made up another important source of funding. Several states contribute directly to fund projects as well as to support NEWMOA's IMERC, IC2, and Brownfields programs. Registration fees for waste site cleanup webinars also provided support for those activities.

NEWMOA'S FY 2021 FINANCIAL ACTIVITY

October 1, 2020 to September 30, 2021

Revenues

State Dues, Contracts, Fees, & Contributions	\$ 769,092
Federal Grants	223,293
Miscellaneous	99,394
Total Revenue	\$ 1,091,779

Expenditures

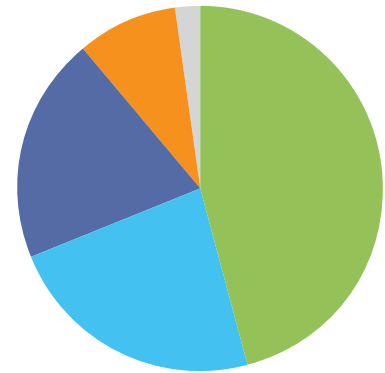
Staff Salaries & Benefits	\$ 494,692
Travel & Meetings	2,854
Other Direct Program Expenses	25,685
General & Administrative	178,930
Contracts	273,608
Total Expenditures	\$ 975,769

Net Assets

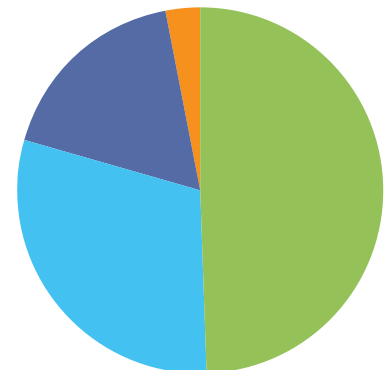
Net Change in Assets*	\$ 116,010
Net Assets at Beginning of Year	\$ 157,132
Net Assets at End of Year	\$ 273,142

* In the face of the serious financial uncertainties caused by COVID-19 in FY 2020, NEWMOA applied for and received a Payroll Protection Plan (PPP) loan for \$98,700. This loan was forgiven in FY 2021. A second PPP Loan was received in FY 2021 for \$98,700, which was forgiven in the beginning of FY 2022. These funds enabled NEWMOA to retain all of its existing staff throughout these years.

2021 NEWMOA REVENUES



2021 NEWMOA EXPENSES



Thank You

THANK YOU JON WRIGHT LONG-TIME NEWMOA BOOKKEEPER / ACCOUNTANT

Non-profit organizations like NEWMOA rely on effective administrative systems. Often, however, the people who are involved in these activities are invisible outside of the organization staff and do not receive the appreciation and recognition that they deserve. NEWMOA's long-serving part-time bookkeeper / accountant, Jon Wright started working for the organization in 2004. He worked one day a week making sure that all of the bills were paid, invoices issued and tracked, spending reports prepared, financial reports completed, indirect cost rate proposals submitted, materials prepared for the annual audit, payroll and benefits managed, Board reports issued, and so much more. Jon's diligence and quiet perseverance were essential to NEWMOA's smooth operations for more than 15 years. In 2021, he left NEWMOA to work full-time for another non-profit group. We greatly appreciate his many years of service and wish him well.

NEWMOA welcomed a new bookkeeping/accounting team, called Brennan and Fournier, in 2021, and they are doing an excellent job taking over from Jon.

NEWMOA greatly appreciates the financial support provided by the following agencies and organizations in FY 2021:

California Department of Toxic Substances Control (CA DTSC)
Connecticut Department of Energy and Environmental Protection (CT DEEP)
King County Local Hazardous Waste Management Program
Louisiana Department of Environmental Quality (LA DEQ)
Maine Department of Environmental Protection (ME DEP)
Massachusetts Department of Environmental Protection (MassDEP)
Metro (Portland, Oregon)
Michigan Department of Environment, Great Lakes, and Energy (MI EGLE)
Minnesota Department of Health (MN DoH)
Minnesota Pollution Control Agency (MPCA)
New Hampshire Department of Environmental Services (NH DES)
New Jersey Department of Environmental Protection (NJ DEP)
New York State Department of Environmental Conservation (NYSDEC)
North Carolina Department of Environment and Natural Resources (NC DENR)
Oregon Department of Environmental Quality (OR DEQ)
Oregon Health Authority (OHA)
Rhode Island Department of Environmental Management (RIDEM)
San Francisco Department of the Environment (SF DoE)
U.S. Environmental Protection Agency (EPA) Region 1
U.S. Department of Agriculture (USDA)
Vermont Department of Environmental Conservation (VT DEC)
Vermont Department of Health (VT DoH)
Washington Department of Ecology (WA Ecology)

IC2 SUPPORTING MEMBERS:

Center for Environmental Health
ChemFORWARD
Citizens' Environmental Coalition
Clean and Healthy New York
Clean Production Action
Clean Water Action Minnesota
Clean Water Fund
Defend Our Health (formerly Environmental Health Strategy Center)
Green Chemistry in Commerce Council (GC3)
Healthy Babies Bright Futures
Lowell Center for Sustainable Production at University of Mass Lowell
Maureen Gorsen
National Tribal Toxics Council (NTTC)
New York State Pollution Prevention Institute
North Carolina Conservation Network
Northwest Green Chemistry
Pacific Northwest Pollution Prevention Resource Center
Oregon Environmental Council

IMERC SUPPORTING MEMBERS:

Clean Water Fund – Massachusetts Chapter
Consumers for Dental Choice
Mercury Policy Project

**FISCAL YEAR 2021
NEWMOA STAFF**

- Terri Goldberg
Executive Director
- Andy Bray
Project Manager
- Melissa Lavoie
Project Manager
- Jennifer Griffith
Project Manager
- Krishana Abraham-Petrie
Project Staff
- Lois Makina
Office Manager
- Rachel Moore
Intern

**NEWMOA 2021 BOARD
OF DIRECTORS,
OFFICERS, & CHAIRS**

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Bureau of Materials
Management & Compliance
Assurance, CT DEEP*
- Nicole Lugli
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Planning & Program
Development, CT DEEP*
- Dave Burns
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Waste Management, ME DEP*
- Diane Baxter
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Programs, Bureau of Waste
Site Cleanup, MassDEP*
- Greg Cooper
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Business Compliance
Division, Bureau of Air &
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MA OTA*
- Michael Wimsatt
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Waste Management Division,
NH DES*

- MaryJo Aiello
*Director
Division of Solid &
Hazardous Waste, NJ DEP*
- Mike Hastry
*Director (Chair)
Division of Solid & Hazardous
Waste, NJ DEP*
- John Vana
*Director
Bureau of Waste Reduction &
Recycling, NYSDEC*
- Michael Ryan
*Director
Division of Environmental
Remediation, NYSDEC*
- Ronald Gagnon
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Office of Technical &
Customer Assistance, RIDEM*
- Leo Hellested
*Chief
Waste Management Division,
RIDEM*
- Chuck Schwer
*Director
Waste Management Division,
VT DEC*
- Cathy Jamieson
*Acting Director
Waste Management Division,
VT DEC*

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NYSDEC
- Solid Waste & SMM**
Chris Nelson
CT DEEP
- IC2**
Pam Hadad-Hurst
NYSDEC (Program Chair)
Sasha Van Bergen
WA Ecology (Vice-Chair)
Carl Grimm
Portland Metro (Treasurer)
Jen Jackson
*San Francisco Environment
(Secretary)*
- IMERC**
Tom Metzner
CT DEEP
- Waste Site Cleanup**
Trish Coppolino
VT DEC
- Pollution Prevention
& Sustainability**
Cynthia Nelson
NH DES



NEWMOA newsletters.

MISSION

NEWMOA provides a strategic forum for effectively solving environmental problems through collaborative regional initiatives that advance pollution prevention and sustainability, promote safer alternatives to toxic materials in products, identify and assess emerging contaminants, facilitate adaption to climate change, mitigate greenhouse gas sources, promote reuse and recycling of wastes and diversion of organics; support proper management of hazardous and solid wastes, and facilitate clean-up of contaminant releases to the environment.

Goals

NEWMOA's long-term goals are to:

- Support and strengthen state efforts to implement policies, regulations, and programs
- Promote interstate coordination and develop innovative strategies to solve critical and emerging environmental problems
- Develop and enhance the capabilities and knowledge of state officials so that they are well trained, able to adjust to rapid changes in technology, and respond effectively to emerging environmental challenges
- Articulate state program views on federal policy developments, programs, and rulemakings
- Cultivate and enhance relationships among member states, federal agencies, colleges and universities, and stakeholders
- Engage with and educate the regulated community and the public

Challenges

NEWMOA's 2018-2022 priorities are:

- Identifying and assessing emerging contaminants
- Anticipating and mitigating the impacts of climate change
- Building the technical capacity of and ensuring adequate resources for programs

Core Programs

- Hazardous Waste
- Solid Waste and Sustainable Materials Management
- Waste Site Cleanup
- Interstate Mercury Education and Reduction Clearinghouse (IMERC)
- Interstate Chemicals Clearinghouse (IC2)
- Pollution Prevention and Sustainability
- Cross Program Initiatives

NEWMOA is an equal opportunity employer and provider.





Northeast Waste Management Officials' Association

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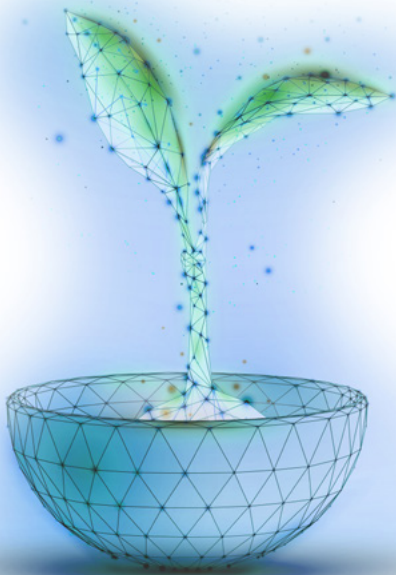
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