

SOLUTIONS TO PFAS

CHALLENGES

Per- and polyfluoroalkyl substances (PFAS) are a large class of chemicals that have been used in numerous products and industrial processes due to their oil and water-resistant properties and their stability. These products include carpet and fabric protection, food packaging, aqueous film-forming foams (AFFF) used for firefighting, personal care products, and many more.

PFAS are long lasting chemicals, components of which do not break down over time and are commonly called, “forever chemicals.” According to EPA, PFAS are found world-wide in the environment, wildlife, and humans. Because of their widespread use and their persistence, many PFAS are present at low levels in a variety of food products. PFAS are found in water, air, fish, and soil at locations across the nation. Numerous communities in the Northeast have drinking water systems that are impacted by PFAS. These compounds:

- Are very persistent in the environment
- Are found both in the environment and in the blood of the U.S. population and animals
- Remain in people for a very long time
- Can cause adverse health effects
- Are bioaccumulative in wildlife and humans

According to the Agency for Toxic Substances and Disease Registry (ATSDR), many studies have examined the relationship between levels of PFAS in blood and harmful health effects in people. Research involving humans suggests that high levels of certain PFAS may lead to:

- Increased cholesterol levels
- Decreased vaccine response in children
- Changes in liver enzymes
- Increased risk of high blood pressure or pre-eclampsia in pregnant women
- Small decreases in infant birth weights
- Increased risk of kidney or testicular cancer

NEWMOA's Actions to Address PFAS

NEWMOA has actively worked to address PFAS problems in the Northeast since 2015, including organizing a Science of PFAS Conference, providing training, holding meetings, facilitating Workgroups, and supporting research.

Conference

Northeast Science of PFAS Public Health and the Environment in 2022 included more than 110 presentations covering:

- Environmental behavior
- Health impacts and toxicology
- Treatment, remediation, and disposal
- PFAS uses and alternatives
- Environmental sampling and analysis

The unique gathering involved more than 500 people, 32 exhibits, and 16 posters, including:

- Local, state, and federal government officials
- Academic researchers and students
- Consultants and vendors
- Others

Visit: <https://www.newmoa.org/pfasscienceconference/>.

Training

NEWMOA has sponsored numerous training webinars covering a wide range of PFAS-related topics, including uses and alternatives, regulating PFAS as a class, remediation, sampling and analysis, fate and transport, air deposition, biosolids, soil deposition, toxicology, regulatory topics, drinking water standards, and much more.

Visit: <https://www.newmoa.org/cleanup/workshops.cfm>.

Workgroups

NEWMOA supports a Workgroup of government officials in the Northeast that convenes monthly to share PFAS information, tools, and strategies. This group is only open to state and federal agency staff.

NEWMOA's Interstate Chemicals Clearinghouse (IC2) supports a Workgroup that provides a forum for discussing

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and collaborating on PFAS reduction, with the goal of learning from but not replicating work being done around the country. The Workgroup focuses on prevention and safer alternatives for replacements for products in current use. This Workgroup involves IC2's Members and Supporting Members. Visit: www.theIC2.org.

NEWMOA's Toxics in Packaging Clearinghouse (TPCH) program supports model legislation that addresses toxic chemicals in packaging. In February 2021, the TPCH announced the organization's 2021 update to their Model Toxics in Packaging Legislation, which includes the addition of the class of PFAS as well as new processes and criteria for identifying and regulating additional chemicals of high concern in packaging. TPCH supports member states with implementing the model legislation. Visit: <https://toxicsinpackaging.org/>.

Alternatives Assessment (AA) for Aqueous Film Forming Foams (AFFF)

In 2020 and 2021, the IC2 collaborated with researchers at the Lowell Center for Sustainable Production (LCSP) and the Toxics Use Reduction Institute (TURI) on a research project to strengthen and build consistency in the methodologies used to identify, evaluate, and compare alternatives to PFAS-containing AFFF fire-fighting foams with the goal of minimizing regrettable substitutions when switching away from a specific substance/material of concern. IC2 assisted the Project with a focus on understanding lessons learned from development, commercialization, and adoption of safer alternatives to AFFF, including barriers and enabling factors. This Project was funded by the Department of Defense (DOD). The IC2's *Alternative Assessment (AA) Guide (v 1.1)* helped to inform the work on the Project. A final project report and supporting materials should become available in 2022.

AA for PFAS Use in Food Packaging

In 2018, Washington State passed a law prohibiting all PFAS in plant fiber-based food packaging. The ban takes effect following the identification of safer alternatives by the Washington Department of Ecology (Ecology). The assessment of alternative products must follow the IC2's *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. IC2 staff assisted Ecology with the peer review of its 2021 AA, including:

- Identifying and recruiting peer reviewers to review Ecology's AA
- Facilitating the peer review process to determine whether Ecology's findings of safer alternatives are supported by Ecology's process, the collected data, and the best practices associated with AAs
- Acting as a go-between for peer reviewers and Ecology while the AA was under review
- Organizing and facilitating meetings between Ecology and peer reviewers to provide opportunities to ask clarifying questions about the AA or peer reviewer comments

Reporting on PFAS

In 2021, Maine enacted a law that requires manufacturers and brands that sell products that contain PFAS in the State to report certain information on the use of the chemicals in those products. The Maine Department of Environmental Protection (ME DEP) plans to utilize the IC2's High Priority Chemicals Data System (HPCDS) to support online reporting and data access for the Agency and public. NEWMOA's IC2 program will develop the online reporting and data system with ME DEP starting in 2022.



NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION

Leading the Northeast to a Sustainable, Waste-Free Future

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.

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 adaptation 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.

NEWMOA achieves its goals by:

- Fostering Collaboration and Information Sharing
- Training Environmental Professionals
- Managing and Analyzing Data
- Conducting Research
- Identifying and Assessing Emerging Contaminants
- Facilitating State and Federal Agency Interaction and Harmonizing Policy
- Supporting Local Initiatives