POLYFLUOROALKYL SUBSTANCES (PFAS): REGULATING TOXIC COMPOUNDS

LEGISLATIVE OVERVIEW SERIES: 2021 PUBLIC HEALTH SPOTLIGHT

Introduction

Polyfluoroalkyl substances (PFAS) are synthetic chemicals used in products such as nonstick cookware, water-repellent clothing, stain resistant fabrics, cosmetics, and firefighting foam.[1] During production and use, PFAS can migrate into soil, water, and air, where they do not break down.

Because they remain in the environment, PFAS are often found in the blood of people and animals and are present at low levels in many food products. Over time, repeated exposure can cause some of these chemicals to build up in people and animals, and there is evidence that exposure to PFAS may cause harmful health effects.[2]

Legislative Trends

State legislation has taken a variety of approaches to address PFAS contamination, including requiring jurisdictions to assess or monitor the presence of PFAS and health effects; setting or updating drinking water and groundwater quality standards; restricting the use, sale, or distribution of products containing PFAS; and establishing PFAS remediation and response activities.

ASSESSMENT AND MONITORING

In 2019, several states enacted laws to monitor and assess PFAS in the environment. A law in California allows the state to order public water systems to monitor for PFAS, and a new Vermont law directs all water systems to monitor PFAS. New Hampshire established a commission to study the environmental and public health impacts of PFAS exposure in specified communities and report its findings and recommendations to the legislature and governor.

National Baseline

EPA's drinking water health advisory for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) stands at a combined concentration of 70 parts per trillion, which EPA considers to be adequate in providing the "most sensitive populations with a margin of protection from a lifetime of exposure to PFOA and PFOS."[3]

WATER QUALITY STANDARDS

As the federal government continues to consider national water quality standards for PFAS, states are developing and implementing their own standards. In Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, and Wisconsin, drinking water standards for PFAS are being or have been established through agency rulemaking. New Virginia laws direct the commissioner of health to convene a work group to study the occurrence of PFAS and other substances in drinking water and instruct the board of health to adopt regulations establishing maximum containment levels for PFAS and other substances in all water supplies.

REMEDIATION AND RESPONSE

In 2019, Pennsylvania enacted legislation establishing the Per- and Polyfluoroalkyl Substances Remediation Program to address the presence of these substances in drinking water. In addition, Michigan considered legislation to establish a response team to research, identify, recommend, and implement PFAS response actions. In 2020, New Hampshire enacted legislation appropriating funds to the Department of Environmental Services to remediate PFAS in drinking water sources and wastewater residuals. New York also enacted legislation prohibiting the use of PFAS in food packaging.

PFAS **RISKS**:

Some chemicals prevalent in industrial and consumer goods production may:

- **Decrease vaccine response in children.**
- **Decrease infant birth weights.**
- **Cause changes in liver enzymes.**
- **Increase cholesterol levels.**
- **Increase risk of high blood pressure or pre-eclampsia in pregnant women.**
- **Increase risk of kidney or testicular cancer.[4]**

FIREFIGHTING RESTRICTIONS

In 2019, Colorado, Georgia, Kentucky, Minnesota, New Hampshire, and Virginia enacted legislation regulating PFAS in firefighting foam and equipment. In 2020, Colorado enacted legislation that eliminates the use of PFAS in firefighting foam testing, directs the Colorado Solid and Hazardous Waste Commission to establish a certificate for facilities that use or store PFAS, and prohibits the use of firefighting foam containing PFAS in aircraft hangars beginning in 2023. Washington also eliminated the exemptions from restrictions on the use of PFAS in firefighting foam.

Looking Ahead

ASTHO expects additional states to adopt laws aimed at reducing the risks associated with PFAS exposure. Future state legislative action may:

- **Investigating the use of PFAS chemicals in food and product packaging.**
- **Requests for guidance from federal agencies to standardize assessments, conduct research, and set environmental limits for PFAS.**
- **Advance research and assessments to better understand the health effects of PFAS contamination.**
- **Request public education about PFAS exposure risks and mitigation.**
- **Create partnerships between state health departments and other agencies to provide education on PFAS exposure risks and mitigation.**

1. Agency for Toxic Substances and Disease Registry. "What are PFAS?" Available at https://www.atsdr.cdc.gov/pfas/health-effects/overview.html. Accessed 03-23-2021.
2. Agency for Toxic Substances and Disease Registry. "How can I be exposed to PFAS?" Available at https://www.atsdr.cdc.gov/pfas/pfas-exposure.html. Accessed 12-4-2020.
3. EPA. "Drinking Water Health Advisories for PFOA and PFOS." Available at https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos. Accessed 12-17-2020.
4. Agency for Toxic Substances and Disease Registry. "What are the health effects?" Available at https://www.atsdr.cdc.gov/pfas/health-effects.html. Accessed 12-4-2020.

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ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS

Headquarters:
2231 Crystal Drive, Suite 450
Arlington, VA 22202

Regional Office:
600 Peachtree Street NE, Suite 1000
Atlanta, GA 30308

(202) 371-9090
@StatePublicHealth
@ASTHO
@ASTHO