

# How Wisconsin Uses a One Health Approach to Address PFAS

# What is One Health?

The One Health approach recognizes that the health of people is connected to the health of animals and our shared environment. With the interconnections of our world also comes shared exposures. These can come in the form of ingesting contaminated food or water, consuming meat or fish that has been contaminated, or being exposed to contaminants directly through air or other media. As a result, the cooperation of multiple partners and professionals in different areas of expertise is crucial in addressing the "one health" of humans, animals, and the environment.





To illustrate how state agencies may use the One Health approach, ECOS worked with staff from the Wisconsin Department of Natural Resources (DNR) to understand the state's work to address per- and polyfluoroalkyl substances (PFAS).

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#### PFAS

PFAS are a group of human-made chemicals that have been widely used in industrial processes and consumer products since the 1940s. They have been used in a variety of products including non-stick pans, stain resistant carpet, firefighting foam, and food packaging. During production and use, PFAS may end up contaminating soil, air, and water where they do not readily break down. As a result of exposure, PFAS has been found in the blood of humans and animals around the world. And due to their persistence, they are known to bioaccumulate.

In recent years, scientists have concluded that some PFAS can pose risks to human health and the environment. While there is still much to be learned about the specific effects of individual PFAS, research has found that human exposure to PFAS may cause reproductive effects, developmental delays, increased risk of some cancers, interference with a body's natural hormones, immune system effects, increased cholesterol, and increased risk of obesity. In animals, PFAS exposure has been linked to tumors, reproductive issues, and liver, kidney, and immunological effects.

As a result of its prevalence in the environment and effects on human and animal health, Wisconsin and other states are addressing PFAS using a One Health approach.

### Working Across State Government

As part of a 2019 <u>Executive Order</u> to address PFAS, Governor Tony Evers directed DNR to create a PFAS Coordinating Council that became known as the <u>Wisconsin PFAS Action Council</u>, or WisPAC.

Wisconsin PFAS Action Council Representatives
Department of Natural Resources
Department of Health Services
• Department of Agriculture, Trade, and Consumer Protection
Department of Administration
Department of Military Affairs

- Public Service Commission
- Other parts of the state's executive branch

This group developed a <u>Wisconsin PFAS Action Plan</u> that includes 25 action items, for which a lead agency as well as supporting agencies and other partners were identified. For example, one action tasks DNR to expand a database of known PFAS sources and impacted areas through sampling efforts while working with Department of Military Affairs, Public Service Commission, and other agencies. Similarly, in one action item tied to human health, the Department of Safety and Professional Services is identified as the lead agency to work with the Wisconsin Department of Health Services (DHS), the Department of Administration, and others to develop exposure reduction recommendations for public service employees.

Another example of interagency collaboration includes actions to protect groundwater from PFAS contamination. To better understand the need for groundwater standards for PFAS, DNR asked DHS to determine if there was information based on scientific literature to recommend

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groundwater standards. After reviewing toxicological information on 36 PFAS, DHS recommended health-based groundwater standards for 18 PFAS compounds.

As a result of the interagency work on PFAS, there are multiple cases where agencies help connect their stakeholders to other agencies with relevant PFAS information. For instance, DHS developed a public information webpage on PFAS that offers various resources and links back to information from DNR's Division of Fish, Wildlife, and Parks (DFWP) on fish consumption advisories and to DNR's Environmental Management Division's (EMD) drinking water standards. Similarly, DFWP's webpage on a deer consumption advisory links to PFAS information from DHS and EMD. DNR also launched an interactive data viewer that incorporates several agency databases and relevant health guidance into a GIS-based tool. Additionally, the Wisconsin State Laboratory of Hygiene, an entity of the University of Wisconsin, conducts some of the PFAS sampling and analysis work to help inform guidance and policy development.

In January 2023, Governor Evers recommitted to interagency coordination on PFAS. One of the first initiatives of 2023 was a collaboration led by Wisconsin Emergency Management (WEM), DHS and DNR to incorporate multi-agency PFAS response efforts into the state's Emergency Operations Plan. This work also supported the development and release of a <u>community toolkit</u> for local leaders.

#### Did you know?

Several academic partnerships have helped strengthen the understanding of PFAS in Wisconsin. The Sea Grant Program at the University of Wisconsin has developed an online tool that allows homeowners with their own drinking water wells to interpret the PFAS drinking water results. The Freshwater Collaborative recently invested several hundred thousand dollars in PFAS studies. The University of Wisconsin Extension, through a Dean's Initiative, has also worked to hire an outreach position to work specifically on contaminants of emerging concern including PFAS.

# **Challenges and Opportunities**

Wisconsin has limited financial and staffing resources available to address PFAS. The absence of coordination across federal agencies and lack of national standards and guidance continues to pose a challenge for in-state coordination. This challenge is heightened at agencies that lack authority or capacity to take state-specific actions.

As Wisconsin continues to identify and address PFAS in communities, local, state and federal governments will have the opportunity to implement and refine coordination processes.

# **Other Opportunities for One Health Collaboration**

Given increasing concerns about impacts of PFAS on agriculture, the food system, and consumer products, DNR indicated that a continued and deeper collaboration with the state's Department of Agriculture, Trade, and Consumer Protection would enhance its understanding of the topic and extend the state's One Health approach in a meaningful way. Beyond PFAS, other potential topics for a One Health collaboration include impacts of manure on aquatic and human health and recreation, and of wildfire smoke on natural resources preservation and human health.

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