

## DEPARTMENT OF HEALTH SERVICES (DHS)

### FY2024 Highlights

- The Groundwater and Drinking Water program updated the Private Well Toolkit for local health departments. This online resource consists of contaminants fact sheets and accompanying webpages, printable posters, and a treatment device guide.
- Multiple DHS programs, including the Groundwater program and the Site Evaluation program, provided technical assistance and health education related to more than a dozen groundwater contamination sites in Wisconsin. In FY2024, these programs addressed per and polyfluoroalkyl substances (PFAS) contaminants at public water systems whose test results were above DHS' health advisory levels, as well as PFAS contamination in and around the Town of Stella and other sites across Wisconsin.
- Wisconsin's Environmental Public Health Tracking program released a request for applications in FY2024 for local and tribal health departments (LTHDs). Funds are used by grantees to explore data from the County Environmental Health Profiles and the tracking data portal to identify an environmental health concern in their jurisdiction. Four LTHDs were funded through this mini-grant opportunity – one which focused on water quality. This water quality project aims to educate Green County residents on the importance of well water testing and conduct outreach to offer testing to people who have had contamination identified in their wells in the past seven years.
- In FY2024, the Climate and Health program (CHP) enhanced statewide capacity to prepare for and address public health impacts of climate change, especially related to heavy rainfall and flooding. Several resources, tools, and projects have been developed to improve understanding of flood risks and to identify how to increase community resilience. Additionally, three flood-related resources were promoted and evaluated by CHP to help partners better understand flood vulnerability across Wisconsin.
- The Environmental Radiation Monitoring (EM) Program collected samples for environmental radiation monitoring. These samples allow the EM program to assess potential health concerns from nuclear power generating facilities or radiological incidents.

### Overview

DHS serves as a primary resource for information about the health risks posed by drinking water contaminants and is charged with investigating suspected cases of waterborne illness. Toxicologists, public health educators, epidemiologists, and environmental health specialists employed in the DHS Division of Public Health work together to:

- Develop recommendations for groundwater standards for the protection of public health upon request by the DNR.

- Present information on water quality and human health implications of groundwater and drinking water contamination to the public through town meetings and conferences, as well as a wide variety of informational materials.
- Provide direct assistance to families via home visits, letters to well owners, and telephone consultations.
- Educate residents who have contaminated water supplies on the health effects of specific contaminants and recommend strategies for reducing exposure until a safe water supply can be established.
- Provide advice and assistance in cases of vapor intrusion when shallow groundwater is contaminated with volatile organic chemicals, such as benzene and vinyl chloride, which are released as vapors from groundwater directly into buildings through foundations.
- Improve understanding of current and potential groundwater and drinking water issues related to human health in Wisconsin through disease surveillance, health assessment, and capacity and vulnerability assessment. Information from these activities assists project development, focuses area prioritization, and supports academic research. This information also aids local and state agency work on groundwater-related public health issues.

## **Detail**

### **Working with Partners to Address Drinking Water Concerns**

DHS' Groundwater and Drinking Water program works with other DHS programs to support state, local, and community partners in response to groundwater contamination issues. In FY2024, DHS' Groundwater and Drinking water section worked with other DHS programs and the DNR programs to continue responding to a significant PFAS plume around the Town of Stella in Oneida County and other areas of PFAS groundwater contamination in the state.

DHS' Groundwater and Drinking Water program also updated the [Private Well Toolkit](#) for local health departments. This online resource consists of contaminants fact sheets and accompanying webpages, printable posters, and a treatment device guide. There are contaminant fact sheets for arsenic, atrazine, bacteria, fluoride, manganese, nitrate, PFAS, and strontium. Each describe when private well users should test, how to interpret results, and actions to take and is available in English, Spanish, and Hmong. There are printable posters for nitrate and lead. The nitrate poster describes how nitrate can affect everyone and the lead poster highlights actions to reduce exposure to lead from drinking water. Both posters can be printed on a standard printer and are available in English and Spanish. The toolkit also includes a Water Treatment Devices for Private Well Contaminants Guide, which describes how treatment devices work and includes a table indicating which treatment devices are best for which common contaminant and is available in English, Spanish, and Hmong.

DHS' Groundwater and Drinking Water program also worked with DNR's Drinking and Groundwater Communications Team to revise the [Tests for Private Well Users](#) fact sheet. This resource outlines the tests that all private well users should conduct each year and tests that users may want to consider conducting depending on where the well is located and how the land around the well is used.

The program regularly interacts directly with community members to address issues affecting their drinking water and increase public awareness of groundwater and drinking water health issues. In FY2024, the Groundwater and Drinking Water program presented on the impacts of nitrate on human health at the Health and Conservation Summit, gave an undergraduate lecture on Wisconsin's drinking water quality at the university of Madison – Wisconsin, and participated in a panel on PFAS Risk Communication Challenges at the Society of Toxicology's annual conference.

### **Environmental Cleanups**

Multiple DHS programs including the Groundwater program and the Site Evaluation program provided technical assistance and health education activities related to several groundwater contamination sites in Wisconsin.

In FY2024, PFAS contamination in groundwater was the foremost area of focus for these programs. DHS supported DNR through human health risk assessments and education at multiple sites of PFAS contamination around the state. These sites included public water systems with test results above DHS' Health Advisory Levels, as well as the PFAS contamination in and around the Town of Stella. At these sites and others, the team routinely provided technical assistance to concerned citizens, supported outreach to residents for impacted water systems, and conducted health assessments at contamination sites through the evaluation of multiple interconnected exposure pathways including groundwater, surface water, and biota (such as fish or deer consumption) in order to provide appropriate recommendations to reduce or halt exposure to reduce PFAS levels in the body.

Beyond PFAS, the Site Evaluation program has also worked to assess groundwater contamination at several other sites across the state. These assessments included evaluating exposure pathways, performing hazard assessments, and mitigating risks several hazardous substances including for polyaromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylene (BTEX) compounds, and chlorinated volatile organic compounds (VOCs) through risk communication. Examples included a response to elevated PCE detections in a municipal well, and multiple chlorinated solvent investigations around apartment buildings or residences with vapor intrusion risks.

### **Taking Action with Data: Use of the Environmental Public Health Data to Improve Environmental Health in a Community**

DHS continuously seeks to provide data and resources to local and tribal health departments (LTHDs) to assist them in making public health improvements in their communities. In FY2024, Wisconsin Tracking released a request for applications (RFA) to

LTHDs for the eighth round of funding for the *Taking Action with Data* mini-grants project. Four LTHDs were funded through this mini-grant opportunity, one of which focused on water quality. LTHDs often select private well water quality as a topic they wish to address within their jurisdictions, as this is a significant concern in Wisconsin. The water quality project is being implemented by Green County and has aimed to work with community partners to educate residents on the importance of well water testing and to promote the American Rescue Plan Act (ARPA) Well Compensation/Well Abandonment Grant Program. In addition, Green County will conduct individual outreach to people in residences that have had contaminated wells in the past seven years to offer retesting of their well water. To learn more about prior mini-grant LTHD success stories, please see our [Environmental Public Health Tracking webpage](#). Wisconsin Tracking released the RFA for our ninth round of funding in May 2024.

Wisconsin Tracking and other DHS staff provide ongoing support, technical assistance, and guidance to LTHDs on epidemiology, communications, and evaluation throughout the project period. LTHDs carry out their projects with support and assistance from the Tracking program as needed. Some examples of technical assistance we provide to LTHDs include sharing summaries of past projects that focused on water quality; reviewing and providing feedback on surveys and data visualization; connecting LTHD staff with subject matter experts at DHS; and assisting in their writing of project success stories.

One of the requirements of LTHDs in applying for mini-grant funding is to use data we have on our Environmental Public Health Tracking program's [public data portal](#) or in our County Environmental Health Profiles. The [2023 Profiles](#) were released in May 2023 and provide a county-specific sampling of data available on our data portal in a PDF document. Private well water quality (arsenic and nitrate) is included in the profiles. Wisconsin Tracking has been funded from the Centers for Disease Control and Prevention (CDC) since 2002.

### **Climate and Extreme Weather Vulnerability Assessment**

The DHS Climate and Health program (CHP), funded by the CDC, works to enhance statewide capacity to prepare for and respond to the public health impacts of climate change, including impacts to private wells from heavy rainfall and flooding events.

Gaps identified previously by the Wisconsin Climate and Health Profile Report have led to the development of several flood-related resources and tools over the past grant cycles. Projects have been developed with the goal of enhancing understanding of flood risks in watersheds and populations vulnerable to flooding events; and identifying how to increase community resilience in flood-prone areas. Flooding events can have negative effects on groundwater quality and public health. These effects can include well contamination and impacts to aquifers due to chemical releases and flood runoff that contains nutrients and other chemical pollutants from both urban and agricultural sources. These projects involve partnerships within DHS and with the University of Wisconsin Center for Climatic Research, Wisconsin Sea Grant, the Association of State Flood Plain Managers, Wisconsin

Emergency Management, and several LTHDs. The findings from these flood-related projects have helped inform LTHDs and local emergency management planning processes. The CHP is continuing to promote and evaluate flood-related tools to help LTHDs, local emergency management, tribal emergency management, and municipal government officials and planners better understand flood vulnerability in Wisconsin:

- A [Flood Resilience Scorecard](#) has been published as a document online and is currently available in an interactive format. The tool has been created to aid communities at the municipal and county level in flood vulnerability assessment. The scorecard identifies institutional/infrastructural, environmental, and social vulnerabilities that could hinder a jurisdiction's ability to prepare for and respond to flood events. The scorecard will provide recommendations for improvements that will ultimately reduce the negative health impacts from flooding events. CHP continues to conduct outreach and evaluate the scorecard.
- The [Wisconsin Flood Toolkit](#) includes specific considerations for priority populations—those who are particularly susceptible or vulnerable to flooding events. This toolkit supports municipalities in tailoring their response and messaging to those most in need during a flooding event. This tool has also been translated into [Spanish](#).
- The [Risk Assessment Flood Tool \(RAFT\)](#) provides an online customizable graphic interface for assessing a community's higher risk areas during flood events by overlaying critical infrastructure and vulnerability data with live river gage data from National Oceanic and Atmospheric Administration (NOAA). RAFT assists local emergency management, local emergency preparedness, Tribal health centers, and local public health agencies in planning and preparing for flooding events. It will also inform future outreach efforts targeted at private well owners in vulnerable areas.

### **Environmental Radiation Monitoring**

Wisconsin Stat. ch. 254 directs the DHS Environmental Monitoring (EM) program to collect various types of samples for environmental radiation monitoring, including surface and well water from selected locations at planned sampling intervals near operating and decommissioning nuclear power plants. The EM program provides an ongoing baseline of radioactivity measurements to assess any Wisconsin health concerns from the operation of nuclear power generating facilities in or near Wisconsin, or other radiological incidents that may occur within Wisconsin or worldwide. In addition, the EM program will monitor the decommissioning of Kewaunee Power Station for possible radioactive contaminants related to decommissioning.

DHS' ongoing EM program will provide assurances to the citizens of Wisconsin that the environment surrounding nuclear power facilities and other monitoring areas will continue to be evaluated.

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