



Illinois EPA PFAS Integrated Strategy

TABLE OF CONTENTS

ACRONYMS.....	3
1. SUMMARY	5
2. INTRODUCTION TO PFAS	6
PFAS LIFECYCLE	6
WHY ARE PFAS DIFFICULT TO CLEAN UP?	7
3. POLICY LANDSCAPE AND ILLINOIS EPA’S ROLE	8
4. ILLINOIS EPA’S PFAS STRATEGIC GOALS AND APPROACH.....	10
5. COMMUNICATION	11
KEY ACTIONS & MILESTONES	11
HEALTH ADVISORIES.....	11
RIGHT TO KNOW (RTK) PROGRAM.....	12
EDUCATION	13
STATUS	14
6. TOXICITY RISK ASSESSMENT	15
KEY ACTIONS & MILESTONES	15
PFAS IN WATER	16
PFAS IN AIR	16
PFAS ON LAND.....	16
PFAS IN ECOLOGICAL LIFE	17
CONSUMER PRODUCTS.....	18
STATUS	19
7. MEASUREMENT AND TESTING	20
KEY ACTIONS & MILESTONES	20
BASELINE DATA.....	20
LABORATORIES.....	21
SITE EVALUATIONS	21
STATUS	21
8. SOURCE REDUCTION	22
KEY ACTIONS & MILESTONES	22
LEGISLATIVE ACTIONS	22
INDUSTRIAL SOURCES AND TRANSPORTATION	22
AGRICULTURE AND PESTICIDES.....	23
FIREFIGHTING FOAM.....	23
POLLUTION PREVENTION.....	24

STATUS	24
9. DRINKING WATER AND GROUNDWATER	25
KEY ACTIONS & MILESTONES	25
MAXIMUM CONTAMINANT LEVELS	25
GROUNDWATER QUALITY STANDARDS	26
STATEWIDE DRINKING WATER INVESTIGATION	26
STAFF DEVELOPMENT	28
PRIVATE WELLS & SEPTIC SYSTEMS	28
STATUS	28
10. REMEDIATION	29
KEY ACTIONS & SITE HIGHLIGHTS	29
SITE REMEDIATION PROGRAM	29
FEDERAL LANDS AND MILITARY SITES	29
REMEDATION TECHNOLOGY	30
STATUS	30
11. WASTE AND WASTEWATER MANAGEMENT	31
KEY ACTIONS & MILESTONES	31
DISCHARGES AND BIOSOLIDS	31
LANDFILLS	32
UNDERGROUND INJECTION	32
STATUS	32
12. COMPLIANCE & ENFORCEMENT	33
ENFORCEMENT ACTIONS	33
CHEMTOOL	34
3M CORDOVA	34
13. WHAT'S NEXT	35
REFERENCES	36

ACRONYMS

AFFF	Aqueous Film-Forming Foam
ATSDR	Agency for Toxic Substances and Disease Registry
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
CWS	Community Water Supply
DoD	U.S. Department of Defense
U.S. EPA	United States Environmental Protection Agency
FCMP	Fish Contaminant Monitoring Program
FTS (6:2 FTS)	6:2 Fluorotelomer Sulfonate
GAC	Granular Activated Carbon
GQS	Groundwater Quality Standard
GWUDI	Ground Water Under the Direct Influence of Surface Water
HBGL	Health-Based Guidance Level
HFPO-DA	Hexafluoropropylene Oxide Dimer Acid (GenX)
HPV	Health Protection Value
IDNR	Illinois Department of Natural Resources
IDOA	Illinois Department of Agriculture
IDPH	Illinois Department of Public Health
IAC	Illinois Administrative Code
Illinois EPA	Illinois Environmental Protection Agency
IPCB	Illinois Pollution Control Board
MCL	Maximum Contaminant Level
MRL	Minimum Reporting Level
ng/g	Nanograms per gram
ng/kg/day	Nanograms per kilogram per day
ng/L	Nanograms per liter
NPDES	National Pollutant Discharge Elimination System
NTP	National Toxicology Program
PFOA	Perfluorooctanoic Acid
PFAS	Per- and Polyfluoroalkyl Substances
PFBA	Perfluorobutanoic Acid

PFBS	Perfluorobutanesulfonic Acid
PFHxA	Perfluorohexanoic Acid
PFHxS	Perfluorohexane Sulfonic Acid
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
PFUnA	Perfluoroundecanoic Acid
PPE	Personal Protective Equipment
PRI	Prairie Research Institute (University of Illinois)
ppb	Parts per billion
ppt	Parts per trillion
RCRA	Resource Conservation and Recovery Act
RO	Reverse Osmosis
RTK	Right to Know program
RTK3	Third-level Right-to-Know notice triggered by exceedance of standards
SIC	Standard Industrial Classification code
SRP	Site Remediation Program
UCMR5	Unregulated Contaminant Monitoring Rule, Fifth Cycle
UIC	Underground Injection Control
UIUC	University of Illinois, Urbana-Champaign

1. SUMMARY

PFAS refers to per and polyfluoroalkyl substances, a broad class of synthetic substances that have become widespread in the environment, including in air, soil, water, and in plants and animals¹. Their resistance to heat, oil, and water has made them useful in industrial processes, consumer products, agricultural chemicals, medical devices, and protective equipment. Because of this widespread use, PFAS can enter the body through drinking water, food, inhaling dust and vapors, or contact with PFAS containing materials. Certain PFAS have been linked to health concerns such as cancers, endocrine disorders, immune suppression, and developmental effects². Thousands of PFAS exist, and new variants continue to be incorporated into products, contributing to ongoing environmental presence and exposure. Their chemical structure prevents them from breaking down readily in nature, allowing PFAS to persist and bioaccumulate in plants, animals, and humans. Current testing methods detect only a portion of PFAS that may be present³, underscoring the need for continued monitoring and research to safeguard communities and the environment.

Efforts have expanded from both public and private entities to understand PFAS sources, track contamination, and prevent future releases. Illinois EPA (“the Agency”) likewise undertakes such work, including identifying known PFAS releases, locating potential point sources, and conducting sampling and laboratory testing where contamination is suspected or confirmed. The Agency also provides outreach and education to industries, municipalities, and the public to support pollution prevention and encourage practical steps that reduce PFAS at the source. Illinois EPA collaborates with other Illinois agencies, other states, academic partners, and research organizations to strengthen PFAS reduction efforts and share information as PFAS science and regulatory frameworks evolve.

Within this broader effort, Illinois EPA’s goals include:

- Identifying PFAS in the environment, including releases, pathways, and areas of highest concern
- Strengthening regulatory frameworks and technical capacity to monitor, assess, and manage PFAS; and
- Reducing the impact of PFAS on communities, water resources, and ecosystems through prevention and mitigation

Although important progress has been made⁴, PFAS remain a priority for continued attention. Cleanup and treatment technologies are advancing, and ongoing improvements in monitoring and data collection are helping to improve understanding of where PFAS are present. Long-term protection will require reducing nonessential PFAS uses, encouraging the development of safer alternatives, and strengthening Illinois EPA’s ability to address PFAS across sectors.

The State of Illinois has made significant strides to address PFAS pollution, but there is still considerable work ahead to understand the risks posed by different PFAS and to develop effective methods and technologies that protect Illinois communities and the environment. The Agency has been driving strategic collaboration with government agencies, research institutes, environmental associations, and commercial entities to share knowledge, inform policy, improve regulatory frameworks, and safeguard the public.

¹ U.S. Environmental Protection Agency. 2026. “Our Current Understanding of Human Health and Environmental Risks of PFAS.” Last updated July 14, 2026.

² Agency for Toxic Substances and Disease Registry. 2021. *Toxicological Profile for Perfluoroalkyls*. U.S. Department of Health and Human Services. Released May 2021.

³ Interstate Technology & Regulatory Council. 2026. *Per- and Polyfluoroalkyl Substances*. January 2026.

⁴ Environmental Council of the States. 2025. *ECOS Compendium of State PFAS Actions*. April 2025.

2. INTRODUCTION TO PFAS

PFAS began to enter the environment in the mid-1900s as industries expanded their use in consumer products, especially in firefighting foam used at airports and military bases. For decades, PFAS were released into air, soil, and water long before their persistence or health impacts were understood. By the early 2000s, PFAS were beginning to be identified in rivers, wildlife and in humans. While awareness and regulation have increased since then, there continues to be contamination from past uses as well as new PFAS being released through current industrial and residential uses^{5,6}.

PFAS LIFECYCLE

PFAS are used for their water-resistant and non-stick properties, and because they don't break down easily. However, that same durability means they linger and move through the environment long after products are manufactured, used, or disposed of. PFAS can enter soil, rivers, and lakes through many means, such as industrial and household discharges to wastewater treatment plants and firefighting activities using foam that contains PFAS^{3,5}. PFAS can even travel through the air: from factories, firefighting foam, or consumer products; attach to dust particles; and eventually fall back to the ground or into water bodies with rain or snowfall³.

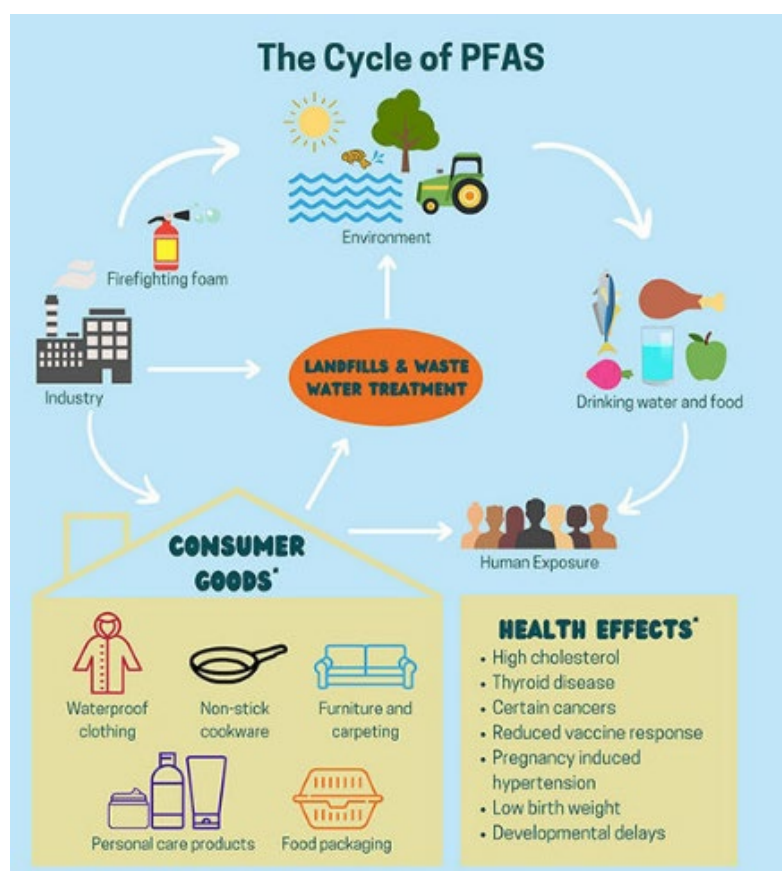


Figure 1: The PFAS Lifecycle

⁵ UL Research Institutes. 2024. *PFAS Basics*.

⁶ Michigan Department of Environment, Great Lakes, and Energy. 2026. *PFAS 101*.

Once PFAS are in the environment, they can cycle between air, land, and water over long distances³. Contaminated soil can release PFAS into nearby streams from erosion or runoff, while groundwater can transport these substances into drinking water supplies. PFAS in biosolids that are applied to agricultural fields, or that make their way into surface water, can be taken up by crops, fish, farm animals and wildlife, eventually entering the food chain. Because these chemicals move through different parts of the environment through many means and break down slowly, they can spread far from their original sources. This can make identification of their source and cleanup an ongoing challenge.

WHY ARE PFAS DIFFICULT TO CLEAN UP?

PFAS are made with extremely strong chemical bonds that do not break down easily in nature. Unlike many pollutants that degrade in the environment over time, PFAS remain intact for extremely long periods of time. They move readily in water and can travel long distances through lakes, rivers, and underground aquifers, making contamination difficult to contain. PFAS also move freely between air, soil, and water.

Common drinking water treatment methods, such as chlorine or biological processes, are not effective on PFAS³. Specialized filtration systems can remove PFAS from water, but the spent filters must then be handled or treated for PFAS. Advanced technologies⁷ are required to concentrate these substances and dismantle their chemical structure, and these methods are complex, expensive, and still developing. Research on PFAS remediation and destruction technologies continues, and Illinois EPA depends on ongoing external research and collaboration to develop these techniques.

⁷ Meegoda, Jay, et al. 2022. "A Review of PFAS Destruction Technologies." *International Journal of Environmental Research and Public Health* 19 (24): 16397. Published December 7.

3. POLICY LANDSCAPE AND ILLINOIS EPA'S ROLE

Under the Illinois Environmental Protection Act and Illinois Groundwater Protection Act, Illinois EPA is authorized to monitor PFAS in the environment, collect and publish data from PFAS testing, and develop Health-Based Guidance Levels (HBGLs) and remediation objectives for PFAS. Illinois EPA can also conduct risk assessments and perform environmental data collection.

The following includes noteworthy policies and regulations in Illinois:

- The **PFAS Reduction Act** ([Public Act 102-0290](#)), effective January 1, 2022, regulates the use of Class B firefighting foam to minimize PFAS exposure to humans and reduce PFAS releases to the environment.
- The **PFAS Incineration Ban** ([Public Act 102-1048](#)) amends the Environmental Protection Act to prohibit disposal of PFAS by incineration, effective June 2022.
- The **PFAS Personal Protective Equipment (PPE) Act** ([Public Act 104-0221](#)) requires written notification of intentionally added PFAS in firefighting clothing and personal protective equipment by January 2026, prohibits manufacture, sale, and distribution of firefighting personal protective clothing containing intentionally added PFAS in January 2027, and prohibits the manufacture, sale, and distribution of auxiliary personal protective equipment containing intentionally added PFAS beginning January 2030.
- As an amendment to the PFAS Reduction Act, the **PFAS Product Ban** ([Public Act 104-0231](#)) bans the sale of cosmetics, dental floss, juvenile products, menstrual products, and intimate apparel containing intentionally added PFAS, with several exemptions, beginning in January 2032.
- As an amendment to the PFAS Reduction Act, the **PFAS Disposal Program** ([Public Act 103-0351](#)) authorizes a take-back program for fire departments that use and store firefighting foam containing PFAS, subject to appropriation.
- In April 2024, the federal government (U.S. EPA) announced the final [PFAS National Primary Drinking Water Regulation](#) that included legally enforceable **drinking water Maximum Contaminant Levels (MCLs)** for five PFAS compounds plus hazard index mixtures, requiring public water systems to comply with the MCLs by April 2029.
- In March 2025, the Illinois Pollution Control Board **adopted groundwater quality standards (GQS)** ([R22-18](#)) for six PFAS.
- On January 22, 2026, the Illinois Pollution Control Board issued a final opinion and order for [identical-in-substance amendments](#) to Illinois drinking water regulations. The amendments add five PFAS individual U.S. EPA MCLs for PFOA, PFOS, PFHxS, PFNA, and HFPO-DA, and a target hazard index MCL for the mixture of two or more of PFHxS, PFNA, HFPO-DA, and PFBS to Illinois drinking water regulations. Illinois EPA published the amendments in the [Illinois Register](#) on February 27, 2026.
- On May 18, 2026, the federal government (U.S. EPA) [proposed a new strategy](#) that includes rescinding three of the five PFAS MCLs and the hazard index mixtures that had been previously adopted in April 2024, and extending the length of time drinking water systems had to comply with the two MCLs that remain in place. Because Illinois adopted the originally proposed identical-in-substance rules, all six drinking water requirements remain in place with the original 2029 compliance deadline for Illinois Community Water Supplies.

- In June 2026, [Public Act 104-0510](#) was signed. This law prohibits the Illinois Pollution Control Board from adopting any standards that are less stringent than those existing in Board regulations through expedited identical-in-substance rulemaking procedures. Because the May 2026 strategy proposed by the federal government is more narrow and less stringent than the Illinois standards adopted in January 2026, Illinois EPA will continue to apply the more-protective MCLs.
- In July 2026, [Public Act 104-0747](#) on **PFAS sampling in National Pollutant Discharge Elimination System (NPDES) Permits** was passed. Effective January 1, 2027, this law requires sampling for PFAS as part of certain NPDES permits issued by Illinois EPA.

4. ILLINOIS EPA'S PFAS STRATEGIC GOALS AND APPROACH

Illinois EPA uses a multi-pronged approach that integrates across the Agency as well as external collaborators to reduce PFAS exposure and manage environmental impacts. This approach addresses the complex and evolving challenges posed by these emerging contaminants.



Figure 2: Illinois EPA's PFAS Strategic Plan includes a multi-disciplinary approach

ILLINOIS EPA'S PFAS STRATEGIC GOALS	Goal 1	Goal 2	Goal 3
	Identify the prevalence of PFAS in the environment and sources of PFAS contamination	Strengthen regulatory frameworks and technical capacity	Reduce impact and protect health and the environment

Illinois EPA's PFAS strategic goals help advance understanding where PFAS are present in the environment, how they move through different pathways, and identifying areas that pose the greatest potential risk to communities and ecosystems. Strengthening regulatory and technical capacity is critical for ensuring that PFAS are consistently monitored, accurately assessed, and effectively managed. These goals support Illinois EPA's integrated, multipronged approach, which engages all bureaus and external collaborators through enforcement, compliance, policy development, technical evaluation, and clear communication. Together, these efforts help reduce exposure, guide prevention and clean up, and provide a strong foundation for long-term protection of public health and the environment amid complex and evolving PFAS challenges.

5. COMMUNICATION

Illinois EPA is committed to providing clear, timely communication to help Illinois communities understand PFAS risks and available actions. This includes issuing Health Advisories when PFAS are detected in drinking water sources, delivering required Right-to-Know (RTK) notifications when groundwater contamination may pose an exposure risk, and offering practical guidance on treatment options to reduce PFAS in household drinking water.

The Agency maintains accessible public information by regularly updating its PFAS website, sharing developments through public notices and outreach channels, responding directly to questions from residents and local officials, and hosting public meetings as needed. These efforts ensure communities, stakeholders, and lawmakers have reliable, up to date information as new data and regulatory standards emerge. Together, these communication activities support the public and help community water supplies (CWS) navigate evolving PFAS science and regulations.

KEY ACTIONS & MILESTONES

- Illinois EPA issued statewide PFAS Health Advisories to provide science-based, health-protective guidance, updating advisory levels as new toxicity data became available.
- Illinois EPA developed a Public Health Notice that accompanies each RTK letter to support the public's understanding, answering common PFAS questions and providing clear explanations during situations that can otherwise lead to uncertainty or concern.
- Illinois EPA maintains a regularly updated PFAS webpage that serves as a central source of reliable information for communities, media, and stakeholders. The site includes guidance on reducing PFAS exposure in daily life and information about effective home filtration technologies.
- Illinois EPA and Illinois Department of Public Health (IDPH) have also co-developed PFAS communication materials to promote consistent messaging across programs and ensure the public receives clear, unified information. Coordination with IDPH ensures the public has a clear and credible pathway for health-related questions, including a direct link for residents seeking medical guidance.

HEALTH ADVISORIES

From 2020-2021, Illinois EPA conducted a statewide investigation into the prevalence and occurrence of PFAS in treated water at CWS (see Section 9). The results showed that some CWS relying on groundwater had detectable levels of PFAS in their source water (see Section 9). In response, Illinois EPA conducted additional sampling of groundwater supply wells to determine PFAS concentrations.

State law authorizes Illinois EPA to issue Health Advisories when contaminants are found in sources of groundwater used for drinking water in a CWS and no numeric groundwater quality standard exists. A Health Advisory is a nonregulatory HBGL that indicates the concentration at which long-term exposure may pose a concern. While Health Advisories are not enforceable through legal action, they provide communities with early, science-based information to help reduce potential exposure before formal standards are in place.

Health Advisories differ from regulatory standards such as MCLs or numerical GQS, which are adopted through a formal rulemaking process and regulate groundwater and treated water distributed to the public. MCLs and GQS are legally enforceable, requiring community water supplies or other facilities to take specific actions if exceeded. In contrast, Health Advisories serve as an interim public health tool to guide decision-making until enforceable

standards are established. This means that, even before regulatory standards are in place for different PFAS, Illinois EPA can use HBGLs as an important tool to notify the public of potential exposure.

Under this authority, Illinois EPA issued Statewide Health Advisories recommending HBGLs for the following PFAS:

Table 1. Illinois Statewide Health Based Guidance Levels for specific PFAS chemicals

PFAS Name	PFAS Acronym	HBGL ng/L	Issue Date
Perfluorooctanoic Acid	PFOA	2	January 28, 2021
Perfluorohexanesulfonic Acid	PFHxS	140	January 28, 2021
Perfluorohexanoic acid	PFHxA	Initial: 560,000 Updated: 3,500 Updated: 1,900	January 28, 2021 April 26, 2023 April 11, 2025
Perfluorobutanesulfonic acid	PFBS	Initial: 140,000 Updated: 2,100	January 28, 2021 April 15, 2021
Perfluorooctanesulfonic acid	PFOS	14	April 15, 2021
Perfluorononanoic Acid	PFNA	21	July 27, 2021
Perfluorobutanoic Acid	PFBA	Initial: 7,000 Updated: 3,800	September 16, 2024 April 11, 2025
6:2 Fluorotelomer sulfonic acid	6:2 FTS	770	November 6, 2025

On March 28, 2025, the Illinois Pollution Control Board adopted updates to the numerical groundwater quality standards for potable water resources, including new regulatory standards for six PFAS: PFOA, PFHxS, PFBS, PFOS, PFNA, and HFPO-DA (also known as GenX substances) (see Section 9). These enforceable groundwater quality standards replace the earlier HBGLs for those specific PFAS, meaning the corresponding Health Advisories no longer apply.

Three PFAS Health Advisories remain in place for PFHxA, PFBA, and 6:2 FTS, because no groundwater quality standards have yet been adopted for these compounds. Illinois EPA continues to evaluate new groundwater data and emerging toxicity research to determine when additional statewide Health Advisories should be issued in the future. Illinois EPA continue to [issue HBGLs](#) for PFAS for which there are not yet Health Advisories or enforceable standards.

RIGHT TO KNOW (RTK) PROGRAM

RTK laws were enacted in 2002, 2006, and 2009 to inform the public when contamination poses a threat of exposure. The 2009 Right-to-Know law (RTK3) requires CWS owners and operators to notify all end users when groundwater contamination poses a threat of exposure above the Class I groundwater quality standards. In addition, Illinois EPA will send RTK3 notices to any CWS that uses the tested well as an emergency backup, and water supplies that purchase water from contaminated systems.

The RTK law establishes methods of notification and strict time frames for meeting the required notifications:

- Within two days after determining that groundwater contamination poses a threat of exposure to the public, the Illinois EPA must issue a press release.
- Within five days, the Illinois EPA must provide notice to the owner and operator of the CWS. Within five business days after receiving a notice from the Illinois EPA, the owner or operator of the CWS must notify its users and owners of premises connected to the affected system.

- Within seven days after issuing the notices, the owner or operator of the CWS must provide proof to the Illinois EPA that notices have been issued.

To date, Illinois EPA has issued several RTK notices for PFAS:

- April 2025: After the Illinois Pollution Control Board adopted groundwater standards for six PFAS, Illinois EPA notified 47 CWS of RTK3 Requirements.
- May 2025: Additional CWS testing of PFAS triggered 11 RTK3 notices when PFAS were identified.
- 2026: Based on additional CWS testing, Illinois EPA sent eight additional RTK3 notices from January through August 2026.

To see the most recent list of RTK3 notices visit the [website](#) or scan the QR code:



Moving forward, Illinois EPA's focus will be on maintaining a dynamic and responsive process that keeps the RTK program aligned with the most current scientific understanding and regulatory standards. As new research emerges and updated definitions or classifications are adopted by the Illinois Pollution Control Board, these changes will be incorporated under the RTK program.

Furthermore, the Agency has committed to communicating RTK notices in ways that are accessible to impacted individuals. RTK notices use plain language and include Frequently Asked Questions (FAQ) and FAQ fact sheets. They are designed to ensure language access, including Spanish translation for all materials and translation of other languages as needed. Furthermore, the Agency is available to answer residents' questions by phone, email, and public meetings, and provides technical support to CWS operators.

EDUCATION

Illinois EPA provides educational materials and guidance to communities if PFAS are detected in a CWS's finished water. These resources are aimed at helping residents and water system operators understand practical steps they can take to reduce or remove PFAS from drinking water. Guidance materials are also available on the Agency's PFAS [webpage](#) for easy public access.

A variety of treatment options exist to help limit exposure to PFAS in household drinking water. Technologies such as granular activated carbon (GAC), reverse osmosis (RO), and anion exchange can effectively reduce or remove PFAS when installed as under-sink point-of-use devices or countertop pitcher filters⁸.

Because treatment performance can vary, Illinois EPA recommends that residents select options based on the specific PFAS identified through approved laboratory testing, the sources used for drinking and cooking, and any connected appliances such as refrigerators or ice makers. Consumers are encouraged to look for certified treatment standards, including NSF/ANSI 53 for carbon filtration and NSF/ANSI 58 for RO systems. Installation

⁸ U.S. Environmental Protection Agency. n.d. "Fact Sheet: Reducing PFAS in Your Drinking Water with a Home Filter." Accessed August 2026. <https://www.epa.gov/system/files/documents/2024-04/water-filter-fact-sheet.pdf>.

costs can vary widely, from as low as \$20 to over \$1,000, depending on the system. All treatment options require ongoing maintenance and regular filter replacement to remain effective.

Private well owners may also consider certified whole home treatment systems that use these same approaches. The [Illinois Department of Public Health](#) (IDPH) may be contacted for help finding a laboratory for water testing, to provide a health interpretation of private well testing results, or to discuss treatment recommendations.

Bottled water can also contain elevated PFAS levels. The U.S. Food and Drug Administration (FDA) regulates food, which includes bottled water; however, the FDA has not established standards for PFAS in bottled water. Consumers who buy and drink bottled water should check to make sure they are obtaining bottled water from a supplier who is testing for PFAS in their water supply, or that bottled water is treated through a process to remove PFAS. Additional information on PFAS in bottled water is available on Illinois EPA's PFAS [webpage](#).

STATUS

Communication is already and will remain a central component of Illinois EPA's PFAS strategy. RTK notifications will inform end-users when PFAS detections are confirmed in drinking water supplies. Due to increased monitoring activity, there may be an increase in RTK notifications going forward. The Illinois EPA webpage resource portal will be updated as new information arises about exposure reduction approaches. The Agency continues to investigate new approaches to keep communities, water suppliers, and policy makers supported and informed.

6. TOXICITY RISK ASSESSMENT

Illinois EPA is committed to strengthening public protection by providing up to date information on PFAS health and exposure risks as new scientific findings become available. By sharing current, reliable data, the Agency helps ensure residents, stakeholders, and decision-makers have timely, reliable information to guide protective actions.

Toxicity data is developed through peer-reviewed studies conducted by federal agencies, academic researchers, and other scientific institutions that investigate how chemicals affect human health. Historically, foundational PFAS research has come from federal organizations such as the U.S. Environmental Protection Agency (U.S. EPA), the Agency for Toxic Substances and Disease Registry (ATSDR), the National Toxicology Program (NTP), in addition to several individual states. These studies assess how PFAS behave in the body, the levels at which they may cause adverse health effects, and potential impacts of long-term exposure on biological systems.

Illinois EPA uses this evolving body of scientific evidence, along with peer-reviewed assessments from federal and state agencies, universities, and health organizations, to develop health-based levels for soil, groundwater, and surface water. In recent years, shifts in federal priorities and deep cuts to, or in some cases the elimination of, scientific research funding have cut national capacity for PFAS investigation. These losses have harmed the scientific infrastructure that states depend on, leaving critical gaps in the foundational research Illinois EPA requires to regulate emerging contaminants such as PFAS.

To address some of these gaps, Illinois EPA is collaborating with other states in a combined effort to continue ongoing and future PFAS efforts. The Agency continues to review emerging toxicity data to develop HBGLs for soil, groundwater, and surface water that protect both human health and ecological systems. In coordination with IDNR and IDPH, the Agency is also working to expand wildlife monitoring to include deer and waterfowl as part of ongoing evaluation of consumption advisories.

Currently, there are only research methods available to test PFAS in air⁹, and no method has been fully validated to make it available for regulatory use. Furthermore, inhalation toxicity assessments have not yet been completed. As a result, HBGLs for air are not available. The Agency continues to monitor advancements in inhalation toxicity research.

KEY ACTIONS & MILESTONES

- Illinois EPA calculated risk-based human health levels for soil, groundwater, and surface water for the 17 PFAS with available toxicity data. Illinois EPA maintains and updates this information when new toxicity data become available.
- Illinois EPA is working toward submitting updates to 35 Ill. Adm. Code 302: Water Quality Standards and 35 Ill. Adm. Code 742: Tiered Approach to Corrective Action Objectives to add PFAS standards or remediation objectives for those PFAS with sufficient approved analytical methods and toxicity data to calculate health-based objectives and standards.

⁹Geer Wallace, M. Ariel, Marci G. Smeltz, James M. Mattila, Hannah K. Liberatore, Stephen R. Jackson, Erin P. Shields, Xhensila Xhani, Emily Y. Li, and Jana H. Johansson. 2024. "A Review of Sample Collection and Analytical Methods for Detecting Per- and Polyfluoroalkyl Substances in Indoor and Outdoor Air." *Chemosphere* 358: 142129.

PFAS IN WATER

Illinois EPA first analyzed PFAS contamination in drinking water in late 2020 as part of a statewide investigation into the prevalence and occurrence of PFAS in Illinois CWS (see Section 9). Illinois EPA utilized available toxicity data to develop HBGLs protective of the most sensitive individuals exposed to PFAS in drinking water. Data collected during the statewide investigation along with the development of HBGLs allowed Illinois EPA to notify water operators and consumers of exceedances in drinking water, encourage continued monitoring through quarterly sampling of both source water and treated water, and issue statewide health advisories for PFAS. More information on statewide health advisories is available in Section 5.

Illinois EPA also incorporates PFAS BMPs and monitoring requirements in NPDES permits to address discharges of PFAS to the environment. Additional information is available in Section 11.



Figure 3: Groundwater Testing for PFAS

PFAS IN AIR

PFAS in outdoor ambient air may be elevated near major sources such as manufacturing facilities that make or use PFAS, areas where Aqueous Film-Forming Foam (AFFF) containing fluorine are used, waste management facilities, and areas that produce or apply biosolids^{1,10}. PFAS may enter the atmosphere as dust, or particulate matter, or volatilize. Transport from air spaces near major sources can be short-range or long-range, depending on the PFAS, particle size, weather conditions, and release characteristics.

Currently, no federally approved analytical methods exist for measuring PFAS in ambient air, and peer-reviewed air toxicity values for individual PFAS compounds have not yet been developed. These gaps limit the ability to quantify PFAS concentrations in the air or estimate human health risks from inhalation. Without both a reliable method to measure PFAS in air and toxicity values to assess exposure, Illinois EPA cannot calculate pollution control standards for PFAS emissions. The Agency continues to follow national method development and emerging research so that scientific advancements can be incorporated once they become available.

PFAS ON LAND

PFAS can enter soils and be deposited on land surfaces through several pathways. Legacy contamination may result from practices such as application of biosolids, past use of PFAS-containing firefighting foam at fire training areas, or former industrial manufacturing processes involving PFAS-containing materials¹. Ongoing releases may stem from discharges or leaks from commercial and industrial facilities, continued land-application of biosolids containing PFAS, or active use of PFAS-containing products in certain sectors.

Because PFAS are highly persistent and do not readily break down, PFAS deposited or released onto soil can eventually move into groundwater or surface water³. Agricultural fields where biosolids are applied, areas near airports or fire training sites that have used PFAS-containing firefighting foam, and locations where PFAS-containing materials were manufactured are among the settings where PFAS in soil may be elevated.

Once in soil, PFAS can bind to soil particles, migrate with stormwater, or accumulate in plants and wildlife depending on the specific PFAS, soil conditions, and land use. Some PFAS may also be transported offsite through

¹⁰ Lee, J.R., et al. 2026. "Distribution and Concentration of Airborne Per- and Polyfluoroalkyl Substances in Indoor and Outdoor Environments: A Systematic Review." *Safety and Health at Work* 17 (1): 12–23.

erosion or dust, contributing to broader environmental distribution. Illinois EPA continues to review emerging scientific data on PFAS behavior in soils to help inform protective cleanup levels and guide decisions for site investigation, remediation, and post-remediation land use (See Section 7; Section 11 for additional information about Illinois EPA's efforts related to risk assessment for PFAS on land).

PFAS IN ECOLOGICAL LIFE

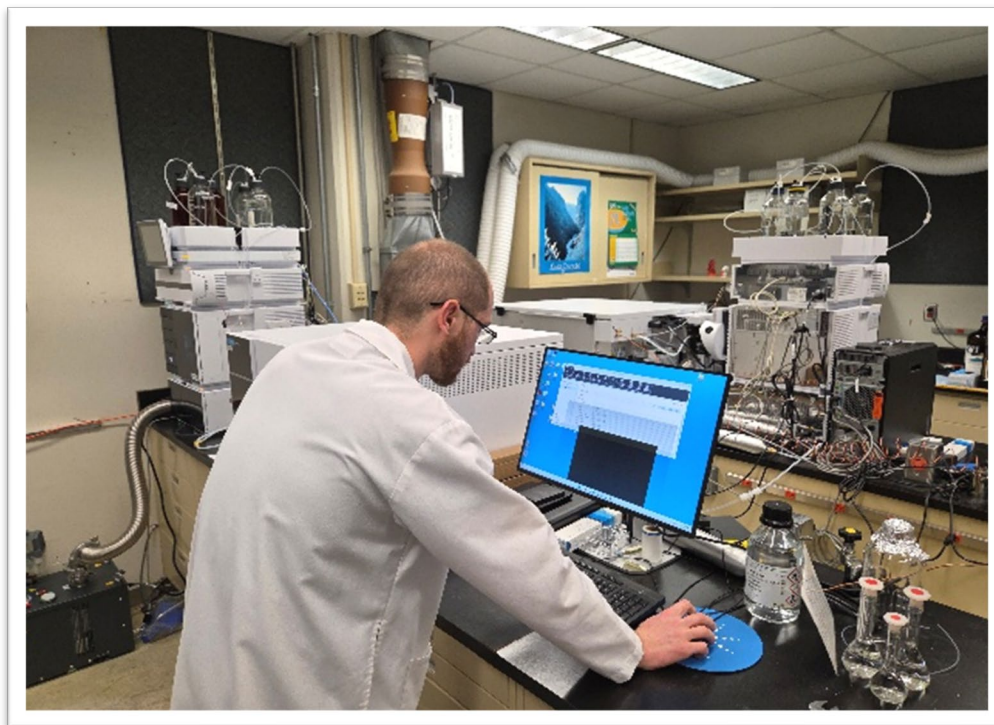


Figure 4: Laboratory analysis for the Fish Contaminant Monitoring Program

PFAS accumulate in fish tissue over time, often reaching concentrations much higher than those found in surrounding water. While fish serve as effective indicators of PFAS contamination in waterbodies, they also present potential human health risks when consumed. Beginning in 2022, the Agency supported the analysis of PFAS in 368 fish samples. Of these tested fish, 74 percent (272 samples) contained detectable PFAS. The most-commonly detected compounds, PFOS (72 percent of samples) and PFUnA (12 percent of samples), are also the PFAS for which Illinois has established fish consumption advisories. A fish-consumption advisory reflects concern for a specific species within a specific waterbody and may be driven by one or more contaminants.

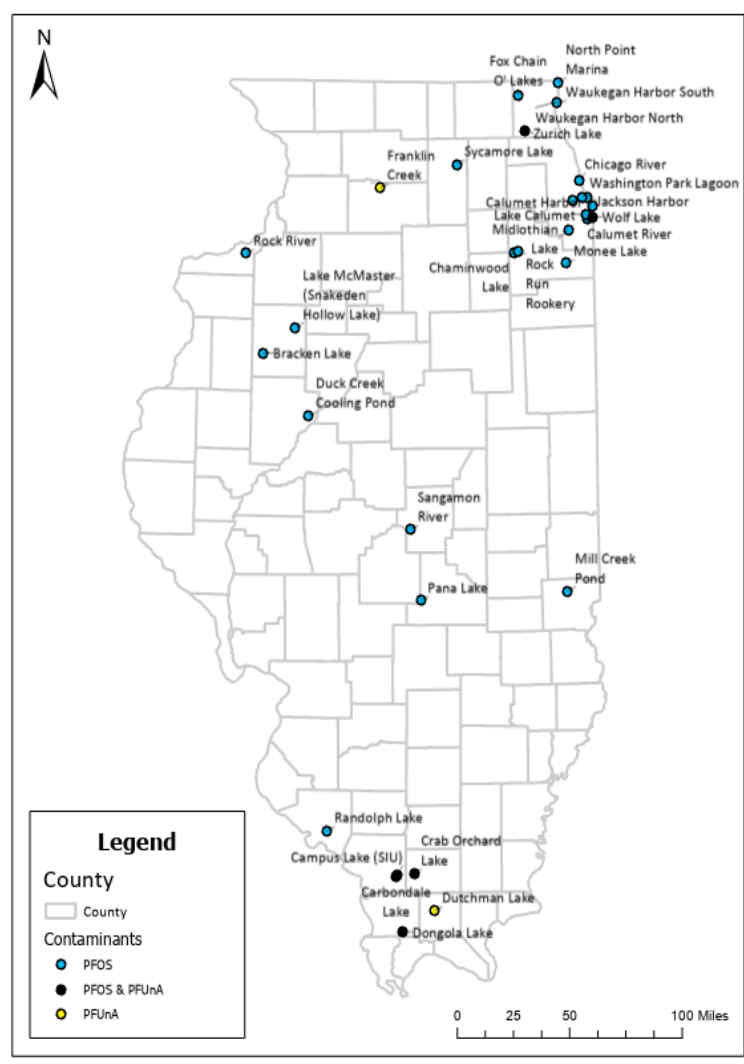


Figure 5: PFAS Fish Consumption Advisories in Illinois (April 2026)

In 2026, the [Fish Contaminant Monitoring Program \(FCMP\)](#), a cooperative effort between Illinois EPA, and the Illinois Departments of Agriculture, Natural Resources, and Public Health, adopted the Great Lakes Consortium for Fish Advisories' *Best Practice for Perfluorooctane Sulfonate (PFOS) Guidelines*¹¹. This update lowered the Health Protection Value (HPV) from 20 ng/kg/day to 1 ng/kg/day. The HPV is a health-protective benchmark specific to the fish consumption exposure pathway and incorporates both health risks and nutritional benefits. Under the new HPV, fish consumption advisories for PFOS now begin at a concentration of 2.5 ng/g (or ppb) in fish, requiring re-evaluation of previously tested waterbodies.

Also in 2026, IDPH issued 90 PFAS-related fish consumption advisories across 33 waterbodies: 71 for PFOS, 14 for PFUnA, and 5 for both PFOS and PFUnA. Of these advisories, 60 are in the 1 meal/week category, 21 are in the 1 meal/month category, and 9 are Do Not Eat advisories. Waterbodies with PFAS-related Do Not Eat advisories include Franklin Creek (PFUnA), Monee Reservoir (PFOS), and Southern Illinois University Carbondale Campus Lake (PFOS). PFOS has become the primary driver of most fish consumption advisories in Illinois. Based on the current schedule, initial FCMP sampling of public waterbodies for PFAS is expected to conclude in 2028, followed by long-term monitoring.

In addition to testing PFAS levels in fish, Illinois EPA is in discussions with IDNR and IDPH to develop methods for testing deer for PFAS and the feasibility of issuing regional consumption advisories in areas where PFAS-impacted deer are found to be present.

CONSUMER PRODUCTS

An amendment to the PFAS Reduction Act, the PFAS Product Ban (Public Act 104-0231), directs Illinois EPA to submit a report to the General Assembly by August 1, 2027, that considers the viability of operating a new program to review fluoropolymers used in certain consumer products (cosmetics, dental floss, juvenile products, menstrual products, and intimate apparel) and to determine their potential threat to human health and the environment. This report covers a specific subset of PFAS, the fluoropolymers consisting of polymeric substances for which the backbone of the polymer is either a perfluorinated or polyfluorinated carbon-only backbone or a perfluorinated polyether.

¹¹ Great Lakes Consortium for Fish Consumption Advisories. 2025. *Best Practice for Perfluorooctane Sulfonate (PFOS) Guidelines*. June 2025.

The report will focus on the broad status of current research and will consolidate findings in plain language for non-scientists. Among other things, the report will identify the uncertainties with assessing health threats from exposure to individual consumer products. These scientific limitations include:

- Toxicity data are available for fewer than 20 PFAS out of 12,000+.
- There are no accredited methods for sampling and analyzing consumer products to test for the presence of PFAS.
- There are no detection limits for PFAS in consumer products.
- There is no scientific consensus on how to quantify the risk from multiple PFAS contained in a single product.
- There is no scientific consensus on what assumptions a risk model would have to make to account for people's exposure to PFAS from all other sources when determining the health risk from a specific consumer product.

Illinois EPA has contracted with the University of Illinois Urbana-Champaign Prairie Research Institute (PRI) to develop the report. As part of the scope of work, Illinois EPA has tasked PRI to identify alternative programs for Illinois EPA to develop and implement that would be more effective at reducing PFAS exposure to the public. General factors under consideration include severity of potential harm, vulnerability of the affected population and environment, economic reasonableness, technical feasibility, and estimated time needed for program planning.

STATUS

Illinois EPA continues to advance its toxicity assessment work as new PFAS research becomes available. The Agency has already developed risk and exposure-based human health levels for soil, groundwater, and surface water for PFAS with sufficient toxicity data, and will continue updating these values as research evolves.

Ongoing efforts include expanding wildlife monitoring, reviewing emerging ecological and human health studies, and preparing updates to water quality standards and remediation objectives for PFAS with adequate scientific information. While a federally approved test method data on the quantity of PFAS emissions in the air remains unavailable, Illinois EPA is closely tracking developing research to determine when air-related measures may be possible. These steps help ensure Illinois remains prepared to incorporate new developments into future regulatory actions and community guidance.

7. MEASUREMENT AND TESTING

The Agency is focused on building the available statewide baseline information, improving laboratory capacity for evolving needs, and supporting reliable field sampling to address site investigations for known or suspected PFAS contamination. These efforts ensure Illinois EPA can generate consistent high-quality data, support program needs across the Agency, and respond quickly when new PFAS issues are identified. Continued improvements in laboratory capacity, along with development of baseline information such as background soil levels and support for reliable field sampling, will strengthen this work. Together, these efforts ensure Illinois EPA produces consistent, high-quality data, meets program needs across the Agency, and responds quickly as new PFAS issues emerge.

Illinois EPA analyzes environmental data to evaluate compliance, assess risk, and to analyze PFAS distribution in soil, water, and other media. Additional data are still required to understand the prevalence and distribution of PFAS the Illinois environment and the Agency is engaged in identifying opportunities to fill those data gaps.

KEY ACTIONS & MILESTONES

- Illinois EPA is engaged in feasibility analysis for a statewide background soil PFAS study (subject to available funding). Reviewing approaches used by other states to guide study design and leveraging expertise of Illinois EPA risk assessors and technical experts.
- Illinois EPA has updated laboratory capability assessment to document laboratories holding accreditation to analyze PFAS using various analytical methods.

BASELINE DATA

Illinois EPA has already taken important steps to understand the prevalence and distribution of PFAS across the state. The Agency completed a statewide community water supply sampling study (see Section 9) and works with state partners to evaluate PFAS levels in fish through the Fish Contaminant Monitoring Program (see Section 6). Illinois EPA has also collaborated on investigations at federal sites across the state (see Section 10) and uses lessons-learned to inform future approaches to baseline data collection and site-specific evaluations.

Looking ahead, Illinois EPA is preparing to expand this work. The Agency is developing a study design, methods, and resource needs for a future statewide soil baseline study to help identify background PFAS levels in Illinois soils, as funding becomes available. Illinois EPA is also working with other state agencies to broaden ecological monitoring beyond fish to additional species, such as deer, to gain a fuller picture of PFAS distribution in wildlife (see Section 6). In addition, the Agency is reviewing existing permit information and monitoring data to help identify areas where PFAS contamination is most likely to occur and to guide future inspection and enforcement activities. These efforts will help to ensure that Illinois EPA can make science-based decisions that protect communities across the state.

LABORATORIES

Illinois EPA's laboratory is accredited to test for PFAS in every environmental matrix where approved methods exist, including soil, sediment, surface water, drinking water, landfill leachate, and fish tissue. This capability strengthens the Agency's broader approach to addressing PFAS by providing dependable data that supports regulatory decision-making and enables faster turnaround when issues arise.

In addition to operating its own laboratory, Illinois EPA assesses statewide laboratory capabilities to perform PFAS analysis. The Agency tracks inventories that identify which laboratories are accredited for specific PFAS methods and matrices.

Maintaining this information ensures that analytical resources remain sufficient and that programs across the Agency have access to consistent high-quality data.



Figure 6: Illinois EPA laboratory testing of PFAS

SITE EVALUATIONS

Illinois EPA maintains the capability to conduct site-specific PFAS evaluations at locations of concern, which is a key part of the Agency's broader effort to understand and address PFAS across Illinois. The Agency retains trained staff, specialized sampling equipment, and the ability to perform laboratory analysis, allowing Illinois EPA to carry out field sampling and targeted investigations when needed. When project needs exceed internal capacity, contract support can be used to ensure that work continues without interruption. Illinois EPA regularly assesses its staffing, equipment, and contracting needs so that PFAS sampling and analytical support remain strong over time. This combination of internal expertise and flexible resources helps ensure that the Agency can respond quickly to emerging PFAS issues, generate reliable data for decision making, and support protection of both communities and the environment.

STATUS

Illinois EPA's PFAS measurement and testing work is ongoing, with efforts focused on strengthening laboratory capacity, expanding baseline environmental data, and supporting site-specific evaluations at locations of concern. Illinois EPA's laboratory is accredited to perform the testing required under recent legislation (see Sections 3 and 9). The Agency continues to assess statewide analytical capabilities, refine study plans for future baseline soil work, review existing monitoring data, and maintain readiness to conduct field sampling and targeted investigations.

8. SOURCE REDUCTION

PFAS are found in a wide range of everyday consumer products, such as cosmetics, menstrual and personal care items, outdoor clothing, and disposable food packaging; as well as industrial products, such as lubricants, firefighting foam, and agricultural pesticides¹. Avoiding PFAS can be a challenge because these products are so common, and few alternatives presently exist. Illinois is addressing PFAS at the source through legislation, product labeling requirements, encouraging changes in industrial practices, and increased engagement with stakeholders.

KEY ACTIONS & MILESTONES

- Illinois EPA works to stay abreast of PFAS in various industries and products, as well as the regulations and practices other states follow to regulate and limit the use of PFAS.
- Engagement is ongoing to understand health, environmental, operational, and economic impacts for stakeholders.

LEGISLATIVE ACTIONS

Illinois is making steady, meaningful progress in reducing PFAS exposure through a balanced, phased approach. The State has enacted restrictions on PFAS-containing firefighting foam, prohibited PFAS incineration, set timelines to phase PFAS out of firefighting protective gear, adopted a 2032 ban on PFAS in select consumer products, and has implemented new requirements in NPDES permits to better identify and control PFAS discharges (see Section 3).

At the same time, Illinois has taken a measured approach to avoid rapid shifts that could create substantial burdens for manufacturers, agriculture, wastewater utilities, and other sectors that need time to adjust processes, equipment, and supply chains. Illinois is charting a deliberate, pragmatic path: strong progress to protect the public and the environment yet paced to ensure that regulatory changes remain achievable and sustainable.

The Illinois EPA continues to evaluate new policies that limit the release of PFAS into Illinois water, soil, and air.

INDUSTRIAL SOURCES AND TRANSPORTATION

PFAS are used in certain industrial processes, such as oil and gas drilling and the production of high-performance lubricants, because they provide durability that other chemicals cannot match^{3,12}. The exceptionally strong carbon-fluorine bond allows PFAS-based fluids to withstand extreme heat, pressure, and mechanical stress without breaking down. In industries such as heavy manufacturing, mining, aviation, automotive engineering, and power generation, this stability helps prevent equipment failure, safety hazards, and costly service interruptions. Today, practical PFAS-free substitutes for these applications do not yet exist at the performance level needed to ensure safe and reliable operations⁷.

Illinois EPA is actively evaluating these uses to better understand uses where no viable alternative exists, where releases may occur, and where alternatives or improved practices may be feasible. The Agency is reviewing scientific literature, gathering information from industry on PFAS-containing fluids, and coordinating with state and federal partners to identify best management practices (BMPs) that reduce the potential for environmental exposure. Illinois EPA is also assessing opportunities to strengthen permitting and oversight of industrial

¹² Environmental Council of the States. 2023. *PFAS Industry Data*. www.ecos.org/pfas-industry-data/

processes that rely on PFAS, helping ensure protections for public health and the environment while recognizing the operational realities of key economic sectors.

AGRICULTURE AND PESTICIDES

PFAS in agricultural and pesticide products can enter soil and water directly through routine application on crops¹³. PFAS can also enter soil and water through biosolids application to agricultural fields (see Section 11). Agricultural use of pesticides is regulated by Illinois Department of Agriculture (IDOA), and Illinois EPA coordinates with IDOA when PFAS enters the environment.

Although U.S. EPA [removed several PFAS inert ingredients](#) from pesticide approvals in 2022, many PFAS-containing ingredients and related compounds remain in use and new PFAS have even been [recently approved](#) by the U.S. EPA. To better understand the scope of PFAS use in this sector, Illinois EPA is meeting with agricultural partners, reviewing available data, and coordinating with other states that are advancing similar efforts. This work includes identifying which PFAS are present in pesticide products, assessing potential environmental risks, and evaluating opportunities for policy, regulatory, or legislative action to limit PFAS where feasible. Illinois EPA is taking a science-based approach to understand risks and support long-term reductions in PFAS use.

FIREFIGHTING FOAM

AFFF is a specialized firefighting foam used to suppress high-intensity fuel fires, and it often contains high concentrations of PFAS that can migrate into soil, groundwater, and surface water when released. Because AFFF can be a significant source of PFAS contamination in the environment, its management and cleanup are a key focus of Illinois EPA's PFAS response efforts.

The [Illinois PFAS Reduction Act](#) prohibits the use of PFAS-containing AFFF for firefighter training and establishes requirements for notification, storage, and eventual phaseout of these foams.

The Agency has responded to AFFF-related incidents, overseen containment and sampling during emergency events, provided guidance to fire departments in partnership with the Office of the State Fire Marshal on reducing or eliminating the use of fluorinated foams, and promoted proper disposal to prevent future releases. These efforts help limit new PFAS inputs to the environment and ensure that legacy AFFF impacts are identified and addressed appropriately.



Figure 7: Aqueous Film-Forming Foam

Illinois EPA recognizes the importance of managing legacy stocks of PFAS-containing AFFF. A statewide AFFF take-back program has been authorized under [Public Act 103-0351](#). AFFF stocks are housed at fire stations or other facilities.

A key challenge to disposal of AFFF stocks is identifying safe and environmentally protective disposal methods. The PFAS Incineration Ban [Public Act 102-1048](#) prohibits the incineration of PFAS-containing materials in Illinois,

¹³ Biswas, B., et al. 2025. "Contamination of Per- and Polyfluoroalkyl Substances in Agricultural Soils: A Review." *Journal of Environmental Management* 380: 124993.

and other destruction technologies are still in development. Disposal options follow U.S. EPA interim guidance, which identifies permitted landfills or Underground Injection Control (UIC) wells as options.

Illinois EPA is actively monitoring new technologies, coordinating with academic and government partners, and exploring options for secure treatment or disposal. These efforts will help ensure feasibility and protectiveness of any future take-back program.

POLLUTION PREVENTION

Preventing PFAS pollution at its source is a central priority for Illinois EPA and is essential to reducing exposure statewide. The Agency is working to identify potential releases early, locate point sources, and require responsible parties to complete sampling and laboratory testing wherever PFAS contamination is known or suspected. Alongside this technical work, Illinois EPA is actively educating industries, local governments, and the public about common PFAS sources and practical steps to minimize releases before they occur. The Agency also collaborates with other states, research institutions, and technical experts to strengthen monitoring methods, share information, and improve the overall understanding of PFAS pathways in the environment.

Looking ahead, Illinois EPA is evaluating options to expand its prevention efforts, including taking steps to coordinate with industry, encouraging proactive PFAS reduction and removal, and pursuing additional funding to broaden environmental sampling. The Agency will continue integrating monitoring requirements and BMPs into high-priority sectors to support practical, science-based strategies that reduce PFAS impacts across Illinois. Illinois EPA also remains committed to leveraging expertise from other Illinois agencies, environmental agencies in other states, academia, industry partners, and the public to continuously improve PFAS oversight and response.

STATUS

Illinois EPA is taking a practical, science-based approach to addressing PFAS, recognizing that these chemicals are found in many everyday products and that alternatives are still limited for certain industrial and agricultural uses. The Agency has made significant progress through new legislation, targeted restrictions, NPDES monitoring, and early outreach to industries and partners. Current efforts focus on identifying where PFAS are used, where releases may occur, and how to reduce them without disrupting essential operations. Going forward, Illinois EPA aims to expand research, sampling, stakeholder engagement, and prevention programs to guide future policies and support long-term reductions in PFAS across the state.

9. DRINKING WATER AND GROUNDWATER

The State of Illinois and Illinois EPA have taken several steps to protect residents from PFAS in drinking water. In April 2025, six PFAS compounds were added to Illinois' Class I Groundwater Quality Standards, triggering RTK notification requirements for exceedances of the new PFAS standards. In February 2026, the Illinois Pollution Control Board adopted the federal PFAS MCLs in an identical-in-substance rulemaking, covering five PFAS plus a Hazard Index. Illinois water systems also completed the UCMR5 monitoring cycle (2023–2025), which required medium and large systems, in addition to selected small systems, to sample for 29 PFAS analytes, providing valuable data on compounds not included in federal MCLs or state groundwater standards.

KEY ACTIONS & MILESTONES

- Illinois EPA conducted a statewide CWS sampling effort for PFAS from 2020-2021
- 35 Illinois Administrative Code (IAC) Part 620 GQS for six PFAS compounds were published on April 11, 2025
- Illinois adopted identical-in substance federal MCLs in 35 IAC Part 611 and published on February 27, 2026
 - PFAS initial monitoring for all CWS to be completed by April 2027
 - Compliance monitoring begins on April 25, 2027
 - Compliance with PFAS MCLs begins on April 26, 2029

MAXIMUM CONTAMINANT LEVELS

On February 27, 2026, the Illinois Pollution Control Board published its adoption of the 2024 federal PFAS MCLs, enacting enforceable groundwater quality standards. These standards apply to five PFAS compounds (PFOA, PFOS, PFHxS, PFNA, HFPODA) as well as a Hazard Index that includes PFBS, which allows for risk assessments for combinations of PFAS. CWS must complete initial monitoring by April 2027, with sampling requirements based on system size and water source. Larger groundwater systems, along with all surface water, Ground Water Under the Direct Influence of Surface Water (GWUDI), and mixed source systems, must collect four quarterly samples within 12 months. Smaller groundwater systems must collect two samples 5 to 7 months apart. Previously collected data may be used to meet initial monitoring requirements if it meets federal criteria. CWS may move to reduced monitoring cadence of every three years if results are below trigger levels. Compliance monitoring begins April 25, 2027. By April 26, 2029, CWS must comply with PFAS MCLs or may be subject to enforcement actions. Illinois EPA will work directly with water systems on pilot testing and permitting for PFAS treatment technologies, and federal Emerging Contaminant funding is available to support installation of treatment systems¹⁴.

Table 2. Illinois MCLs for specific PFAS chemicals

Chemical	MCL
PFOA	4 ppt
PFOS	4 ppt
PFNA	10 ppt
PFHxS	10 ppt
HFPO-DA (GenX chemicals)	10 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1

¹⁴U.S. Environmental Protection Agency. 2026. "Clean Water State Revolving Fund Emerging Contaminants: Frequent Questions and Answers." Last updated March 5, 2026.

GROUNDWATER QUALITY STANDARDS

On April 11, 2025, amendments to Illinois' Class I GQS were officially published by the Illinois Pollution Control Board (IPCB), with an effective date of March 28, 2025. These amendments included changes to standards for 61 groundwater constituents and added 14 new constituents, including six newly added PFAS compounds (PFOA, PFOS, PFHxS, PFNA, HFPO-DA, and PFBS) (see Section 3).

Under Illinois' 2009 Right-to-Know law, Illinois EPA is required to notify CWS owners and operators when groundwater contamination could expose consumers to levels above standards, and new standards can result in additional notifications. Each impacted CWS must then inform its customers and any property owners connected to the affected system (see Section 5).

In April 2025, 47 community water systems received notices due to PFAS levels exceeding the new groundwater standards. An additional 10 systems were added in May 2025 because of emergency connections. Emergency connections are backup infrastructure used to maintain water supplies during events like equipment failures, fires, or other emergencies. While these connections are not used routinely, the Illinois EPA determined that if activated, customers downstream could be exposed to PFAS levels above the updated standards (see Section 5).

In 2026, sampling conducted under the UCMR5 program during the fourth quarter of 2025 identified two more PFAS exceedances affecting four additional systems. The Illinois EPA will continue to review all incoming detection reports and will take Right-to-Know actions whenever a new PFAS groundwater standard exceedance is identified.



Figure 8: PFAS Foam Identified in a Stream

STATEWIDE DRINKING WATER INVESTIGATION

In 2020-2021, Illinois EPA collected samples from 1,428 locations that supply drinking water to Illinois communities and tested for 18 different PFAS. All CWS were included in this testing. Results are available on the [Illinois EPA PFAS Investigation Network Interactive Dashboard and Map](#).

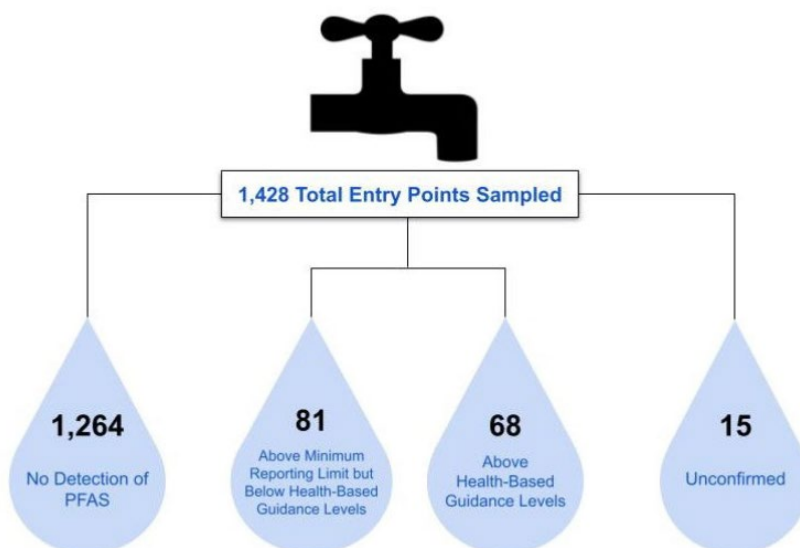


Figure 9: Results from 2000-2001 sampling of PFAS in Illinois Community Water Supplies

Of the 1,428 points sampled:

- 1,264 points sampled (88.5%) had no PFAS detected.
- 81 points sampled (5.7%) had a confirmed detection of PFAS at very low levels. The PFAS levels in these samples were below the level where action is recommended to protect against impacts to human health.
- 61 points sampled (4.8%) had PFAS detected at levels that could potentially cause adverse health effects.
- 15 points sampled (1.1%) had unconfirmed detections. Unconfirmed detections include samples where PFAS was initially detected in a first sample and were ruled out upon repeat testing, or sampling locations that were taken out of service before a confirmation test could occur.

Where PFAS were confirmed, Illinois EPA worked with each CWS to implement quarterly monitoring, inform consumers and share options for faucet filters, and explore treatment and protective measures, such as discontinuing the use of contaminated wells. Subsequently, Illinois EPA and the Illinois Pollution Control Board used the results of the investigation to set limits on PFAS in groundwater for six PFAS (35 IAC Part 620).

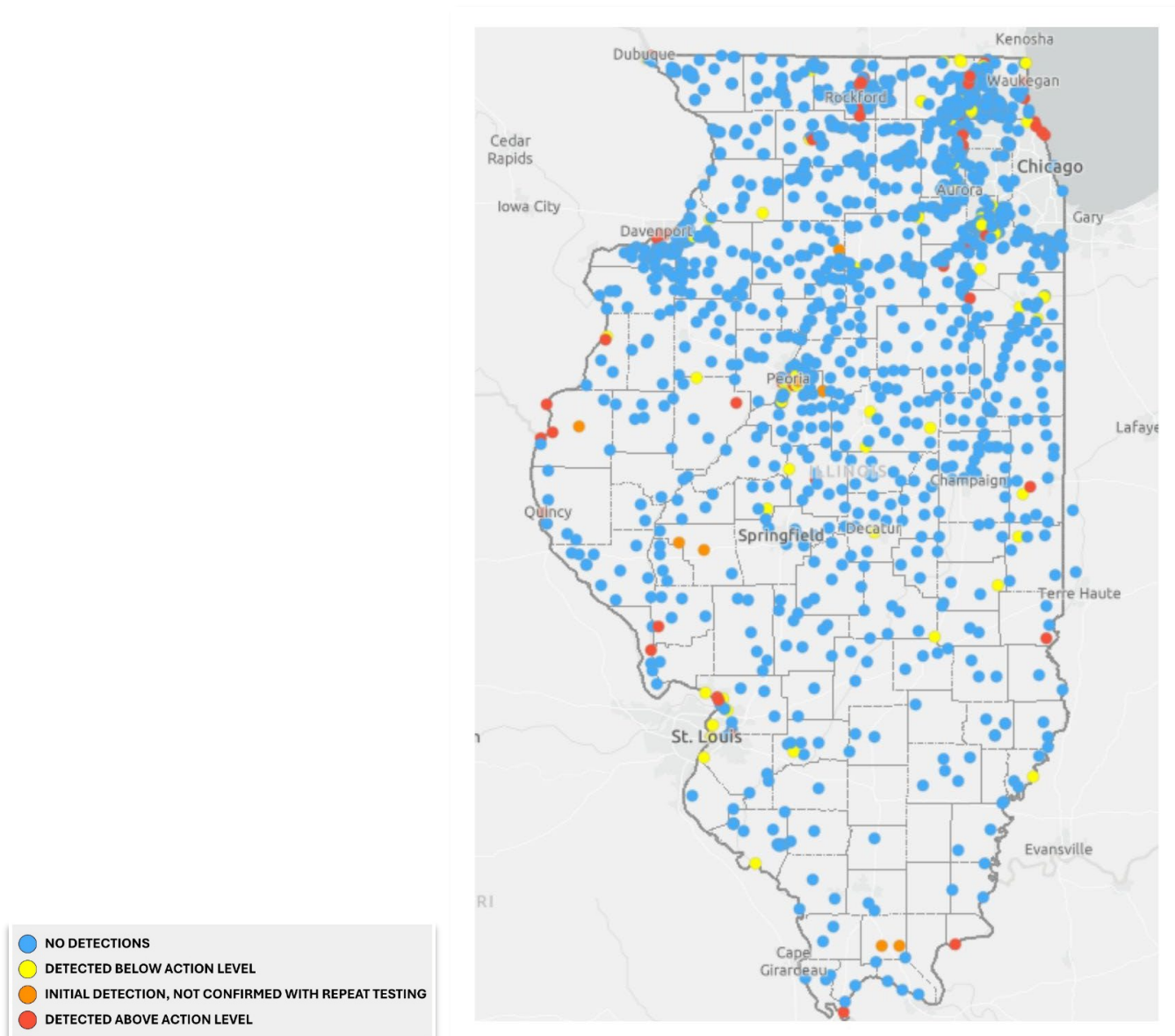


Figure 10: Results from 2000-2001 sampling of PFAS in Illinois Community Water Supplies

With the adoption of the PFAS MCLs, all CWS will be required to participate in both initial and compliance monitoring. An MCL is the maximum amount of a specific substance allowed in drinking water with no known or anticipated adverse effects on human health or a practical quantitation level for a substance. MCLs are enforceable standards that apply to community water systems. Illinois CWS must monitor these PFAS in drinking water and must be compliant with the MCLs by April 2029.

Initial monitoring began April 2026 and must be completed by April 2027. Previous PFAS data may be used. Systems using previously collected data to meet the initial monitoring requirements must complete the PFAS Initial Monitoring Compliance Worksheet for Previously Collected Data and include a copy of the lab results.

For previously collected data to qualify, the data must:

- Have been collected on or after January 1, 2019
- Analyzed using EPA Method 533 or EPA Method 537.1 version 2
- Be the most recently collected data
- Use results reported using minimum reporting levels (MRL) that are at or below the trigger levels ($\frac{1}{2}$ the MCL)

Compliance monitoring begins on April 25, 2027 and the sample frequency will be determined based on the initial monitoring results. Compliance with the PFAS MCLs begins on April 26, 2029.

STAFF DEVELOPMENT

In 2025, Illinois EPA's Division of Public Water Supplies staff completed PFAS regulatory training provided by U.S. EPA to understand federal requirements and available treatment technologies that water systems may need to adopt. Illinois EPA will continue participating in PFAS-focused training to ensure staff are ready to support public water systems as regulations evolve.

PRIVATE WELLS & SEPTIC SYSTEMS

Private wells and septic systems in Illinois are regulated by IDPH. However, Illinois EPA plays a role in assessment, guidance, and public protection. The Agency has incorporated PFAS into private well sampling efforts when investigating potential impacts near known PFAS releases and has provided technical assistance to local health departments and homeowners on interpreting results and identifying potential exposure pathways. For septic systems, Illinois EPA has reviewed how PFAS-containing household products and wastewater may enter subsurface systems and has developed outreach materials for residents describing that septic systems do not remove PFAS, reinforcing the importance of source reduction and proper disposal of PFAS containing products.

STATUS

Illinois is implementing new PFAS protections for drinking water and groundwater following the adoption of updated Class I GQS in 2025 and PFAS MCLs in 2026. CWS are working with Illinois EPA to complete required initial PFAS monitoring by April 2027, using previously collected data when eligible or conducting new sampling based on system size and source. Illinois EPA is supporting systems through pilot testing of new treatment installations, permitting treatment technologies, and access to Emerging Contaminant funding to help install PFAS removal systems. Groundwater teams continue to review new detections, issue Right-to-Know notifications for exceedances, and coordinate groundwater modeling efforts to better understand PFAS movement. Together, these efforts position the State to transition into full compliance monitoring in 2027 and enforceable PFAS MCLs beginning in 2029, while improving long-term protection of Illinois' drinking water and groundwater resources.

10. REMEDIATION

Illinois EPA is monitoring the progress of PFAS investigation and cleanup at sites across the state, including Department of Defense facilities, sites being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and airports and other industrial or commercial locations. The Agency reviews site investigation and remedial activities to ensure they operate effectively and comply with state requirements. Illinois EPA also provides technical support through the Federal Sites Remedial Section and the Site Remediation Program (SRP) to help parties evaluate PFAS contamination and implement protective cleanup actions. In addition, the Agency monitors ongoing developments in PFAS remediation technology to better understand emerging approaches and assess their potential application at regulated sites. This work supports consistent evaluation of PFAS impacts and helps Illinois EPA determine adequacy of cleanup actions.

KEY ACTIONS & SITE HIGHLIGHTS

- **Former Chanute Air Force Base:** The Illinois EPA is reviewing site investigation and remediation being performed by the Air Force. As a former firefighter training facility for the Air Force, as well as an airport, AFFF was used at the site for many years. The soil and groundwater contain PFAS.
- **Fort Sheridan:** The Illinois EPA is currently reviewing investigatory work at this site which includes sampling for PFAS contamination.
- **Former Savanna Army Depot:** Illinois EPA continues to work with the Army and U.S. EPA on investigating potential PFAS contamination. The Army has identified six areas at this site needing study, and Illinois EPA and U.S. EPA have proposed additional locations for evaluation.
- **Scott Air Force Base:** The Illinois EPA is reviewing investigation activities at this site which has PFAS contamination from AFFF. Groundwater sampling to date shows that PFAS contamination has affected two nearby residential properties, with one receiving a drinking water treatment system for an on-site well.
- **3M Cordova:** A facility that manufactured PFAS, this site is subject to U.S. EPA administrative orders issued under the Resource Conservation and Recovery Act (RCRA) and the Safe Drinking Water Act. The State has filed multiple legal complaints seeking cleanup of PFAS in soil and groundwater and is coordinating its efforts with U.S. EPA (see Section 12).

SITE REMEDIATION PROGRAM

Within Illinois EPA's Bureau of Land, the SRP provides Remediation Applicants with review of site investigation and remedial activities, technical assistance, and the opportunity to obtain No Further Remediation (NFR) determinations once remediation is complete. The scope and goals of cleanup activities are typically defined by the applicant, and PFAS is being added to the list of contaminants applicants address under this program. PFAS GQS adopted by the Pollution Control Board and PFAS cleanup objectives for soil developed by the Illinois EPA are used to guide remediation planning and ensure protective outcomes.

FEDERAL LANDS AND MILITARY SITES

Many military installations in Illinois historically used PFAS-containing firefighting foams, which can lead to contamination of soil and groundwater. Although the Department of Defense (DoD) is responsible for cleanup, Illinois EPA coordinates with federal partners to provide oversight and ensure that investigations, monitoring, and remediation meet applicable environmental standards. Illinois EPA's participation also allows the Agency to gain practical insights into PFAS investigation and remediation strategies, which can inform and strengthen PFAS responses across other sites in Illinois.

FEDERAL SITES INVESTIGATING PFAS:

Air National Guard – Springfield
 Air National Guard – Peoria
 Army National Guard – Decatur
 Army National Guard – Peoria
 Crab Orchard National Wildlife Refuge - Marion
 Former Chanute Air Force Base – Rantoul
 Former Fort Sheridan – Highwood
 Former Army Ammunition Plant - Joliet
 Former Naval Air Station – Glenview
 Former Savanna Army Depot - Savanna
 Midway Army Aviation Support – Chicago
 Naval Station Great Lakes – North Chicago
 Rock Island Arsenal- Rock Island
 Scott Air Force Base – Belleville

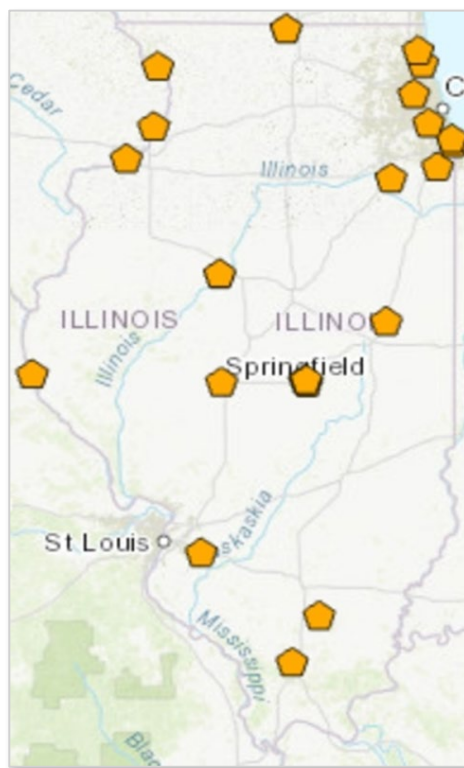


Figure 11: Locations of Federal Sites Investigating Environmental PFAS

REMEDIATION TECHNOLOGY

PFAS remediation technology is advancing quickly as researchers, industry, and government agencies work to develop more effective ways to remove these chemicals from soil and water. Waste management and treatment approaches such as activated carbon, reverse osmosis, ion exchange, and foam fractionation are already being used with growing success, and new methods aimed at fully breaking down PFAS, often called destruction or transformation technologies, are showing strong potential even though they are not yet widely available at full scale³. Illinois EPA takes actions to stay abreast of technology advancements and collaborates with organizations working to develop them. This focus on understanding developing technologies helps Illinois remain current with promising cleanup approaches and positions the State to make informed decisions as PFAS treatment methods continue to mature.

STATUS

Illinois EPA continues to work with the Department of Defense and the U.S. EPA on long-term environmental investigations to evaluate PFAS contamination at military installations. These investigations, conducted under federal CERCLA requirements, assess how PFAS move through soil and groundwater and help determine what actions are needed to protect surrounding communities.

In parallel, Illinois EPA is working with industrial facilities where PFAS releases have occurred to ensure they properly characterize contamination and implement appropriate cleanup measures. Several treatment systems, including granular activated carbon units and foam-based separation technologies, are currently in operation and are beginning to show reductions in PFAS concentrations.

Illinois EPA also continues to follow developments in PFAS remediation technology to better understand emerging approaches and evaluate their potential application at regulated sites.

11. WASTE AND WASTEWATER MANAGEMENT

Addressing waste and wastewater is a crucial part of reducing PFAS in the environment. By strengthening regulations and incorporating PFAS requirements into facility permits, Illinois can better control where these migrate and limit their pervasiveness. Directing landfill leachate and other PFAS-containing wastewater toward proven treatment or destruction technologies further reduces the risk of PFAS escaping into soil and water. Coordination on BMPs and improved landfill leachate and wastewater handling helps limit PFAS movement across wastes and wastewater systems. Illinois is also evaluating UIC strategies and other long-term options to ensure PFAS are contained and managed safely, protecting communities and natural resources.

KEY ACTIONS & MILESTONES

- Illinois EPA is implementing BMPs for wastewater treatment plants and industrial facilities, including monitoring influent, effluent, and biosolids and working with facilities to reduce PFAS at the source.
- A statewide AFFF takeback program has been authorized under Public Act 103-0351. Until safer destruction technologies are available, options for disposal are limited.
- Several landfill leachate PFAS treatment pilot projects have been approved, including foam-fractionation systems and a phyto-management project. These pilots will help evaluate technologies that can reduce PFAS in landfill leachate.
- Illinois EPA is developing a statewide strategy for PFAS management at UIC sites, including permit conditions, monitoring expectations, and a review of approaches used by other states and federal partners.

DISCHARGES AND BIOSOLIDS

NPDES permits under the Clean Water Act regulate the discharge of pollutants from wastewater treatment plants, industrial facilities, and other point sources into surface waters. Because PFAS can be present in industrial and municipal wastewater, and other regulated waste streams, NPDES permits are a critical tool for identifying and controlling PFAS discharges. Through monitoring requirements and BMPs, the NPDES program helps ensure that PFAS entering rivers, lakes, and streams is minimized and that facilities take appropriate steps to reduce releases and protect water quality.

The Illinois EPA has been incorporating PFAS BMPs into NPDES permits, including evaluation of PFAS pollution prevention and source reduction strategies. As of June 2026, PFAS monitoring requirements have been incorporated into 86 NPDES permits at facilities with the potential to discharge PFAS, either due to their classification as major NPDES dischargers or because they have a Standard Industrial Classification (SIC) code that has been identified by U.S. EPA as being associated with PFAS. These requirements include quarterly testing for the 40 PFAS which have accredited testing methods. The results of the testing are used to evaluate the effectiveness of industrial and municipal BMPs and alter operational processes accordingly.

[Public Act 104-0747](#), enacted in 2026, formalizes PFAS monitoring requirements Illinois EPA had already begun incorporating into NPDES BMPs. This law requires all major facilities with NPDES permits to conduct periodic PFAS sampling, including influent, effluent, and biosolids sampling at publicly owned treatment works, and periodic effluent sampling at other major facilities, using all accredited wastewater analytical methods available. It also requires any NPDES applicant whose discharge may contain PFAS to fully characterize those discharges through comprehensive sampling.

The law further includes provisions for biosolids and sludge management. It requires testing of sludge or biosolids for all PFAS with accredited analytical methods before any land application permit can be issued, and mandates ongoing periodic sampling as a condition of those permits.

These requirements will be incorporated into applicable NPDES permits moving forward. As permits are issued or renewed, Illinois EPA will include the new PFAS sampling, characterization, and biosolids testing provisions, at major facilities throughout the state. Facilities subject to the law will be required to meet these updated obligations as part of their routine compliance responsibilities, improving the State's ability to identify PFAS sources and reduce releases to surface waters and land-applied biosolids.

LANDFILLS

Many everyday products, industrial waste, and treatment residues that contain PFAS end up in landfills. These chemicals can build-up in landfill leachate¹⁵, so how leachate is collected, managed, and treated is important for keeping PFAS out of groundwater and surface waters.

Illinois EPA is actively addressing PFAS in the landfill sector through oversight, technical review, and ongoing engagement with facilities. Pursuant to the Pollution Control Board's adoption of groundwater quality standards for PFAS, the Agency has been incorporating requirements for PFAS analysis into leachate and groundwater monitoring requirements in landfill permits. It is also working to incorporate best management practices into permits and regulations as PFAS standards as well as detection and destruction technologies evolve. These efforts help ensure that landfills manage leachate in ways that protect nearby communities and water resources from contamination, and that proper action is taken should a release of contamination be discovered.

UNDERGROUND INJECTION

The UIC program regulates the injection of fluids into wells to protect underground sources of drinking water from contamination. Because PFAS-containing wastes can be persistent and mobile in groundwater, the UIC program plays a key role in ensuring that disposal or subsurface management of PFAS-impacted fluids does not endanger drinking water aquifers. Through permitting, monitoring, and technical review, the program helps prevent PFAS migration and supports safe management of these wastes.

To date, there are no UIC wells permitted by Illinois EPA or U.S. EPA to inject PFAS-containing materials in Illinois. The Agency continues to monitor activity, review federal guidance, and develop regulatory processes that continue to safeguard Illinois groundwater from PFAS contamination.

STATUS

Illinois EPA is steadily advancing PFAS management across the waste, wastewater, and landfill sectors through expanded monitoring, BMPs, and new statewide requirements. PFAS BMPs are now widely incorporated into new and reissued NPDES permits, and pilot treatment systems at landfills are moving forward to evaluate technologies that can reduce PFAS in leachate. The Agency is also developing a statewide strategy for UIC oversight and coordinating with research partners to guide future policy. Through these management goals, Illinois EPA will incorporate PFAS-focused BMPs into all applicable permits, ensuring consistent, enforceable protections that limit PFAS movement across wastewater streams and safeguard Illinois communities and water resources.

¹⁵ Lang, J.R., et al. 2017. "National Estimate of Per- and Polyfluoroalkyl Substance (PFAS) Release to U.S. Municipal Landfill Leachate." *Environmental Science & Technology* 51 (4): 2197–2205.

12. COMPLIANCE & ENFORCEMENT

The Illinois EPA addresses PFAS enforcement through a coordinated framework that integrates investigation, regulatory oversight, monitoring, and corrective action requirements. When PFAS contamination is identified from a source such as industrial operations, wastewater discharges, landfill leachate, or releases to soil or groundwater, Illinois EPA works to determine the extent, pathway, and potential impacts of the release. This process often involves site inspections, sampling activities, and reviews of permit conditions and facility practices.

Illinois EPA applies PFAS compliance and enforcement tools across multiple programs to ensure consistent and comprehensive oversight. In water programs, review of NPDES permits including effluent data are used to identify PFAS discharges from wastewater treatment plants or industrial facilities. Groundwater and drinking water monitoring help identify exceedances of regulatory limits. In land-based programs, including landfills and waste management facilities, PFAS evaluation may include leachate monitoring, groundwater monitoring, or corrective action.

Monitoring results are central to Illinois EPA's decision-making. Groundwater sampling, drinking water compliance monitoring, NPDES permit-required sampling, and permit-mandated landfill monitoring data all help Illinois EPA evaluate whether PFAS levels exceed regulatory thresholds. Monitoring also helps determine whether contamination is migrating off-site and whether operators are meeting reporting and sampling obligations. Rising concentrations, failures to monitor required locations, or incomplete or missing reports can all trigger compliance actions. These data provide the technical basis for Illinois EPA to determine whether additional investigation or enforcement is necessary.

Illinois EPA has several tools available to enforce PFAS regulations and address confirmed releases. These tools include compliance advisories, violation notices, mandatory investigation or corrective action directives, and when necessary, referrals to the Illinois Attorney General for formal enforcement. Under authorities provided by the Illinois Environmental Protection Act, GQS, NPDES permits, drinking water rules, and remediation statutes, Illinois EPA can require responsible parties to characterize PFAS contamination, implement interim controls, conduct cleanup, and prevent further PFAS migration. These mechanisms ensure that PFAS releases are systematically identified, addressed, and managed to protect groundwater, surface water, drinking water sources, and nearby communities.

ENFORCEMENT ACTIONS

Illinois EPA's enforcement work includes responding to confirmed PFAS releases and taking action when facilities fail to meet regulatory requirements, fail to prevent environmental impacts, or pose a threat to human health. Enforcement responses vary depending on the severity and scope of contamination, the source of the release, and Illinois EPA's authority under applicable statutes and permits. The examples below illustrate how Illinois EPA has applied these tools in real-world PFAS incidents.

CHEMTOOL

During the June 2021 fire at the Chemtool Incorporated facility in Rockton, Illinois EPA learned that a contractor had used PFAS-containing fluorinated AFFF as part of the firefighting effort. The Agency immediately intervened to halt continued use of the foam and required a switch to non-fluorinated alternatives.

Because PFAS-containing foam and runoff can migrate to surface water and groundwater, Illinois EPA and U.S. EPA oversaw containment measures, including trenches, booms, and vacuum removal of contaminated water and disposal of wastewater from the site. Illinois EPA conducted extensive PFAS sampling in the Rock River, stormwater runoff, sewer systems, onsite trenches, groundwater monitoring wells, and downstream areas affected by a reported foam backflow. Most samples were below health advisory levels. However, PFAS was detected above advisory levels at one downstream location, prompting additional containment and recovery actions. Illinois EPA continues to oversee PFAS-related investigation and follow-up monitoring to ensure that impacts from the AFFF used during the fire are identified and managed appropriately.



Figure 12: Groundwater Testing at the Chemtool facility.

3M CORDOVA

Illinois EPA has worked with U.S. EPA and the Office of the Illinois Attorney General on multiple legal actions related to the 3M Cordova Facility. 3M Company (“3M”) owns and operates a PFAS manufacturing facility known as 3M Cordova located in Cordova, Illinois. Extensive PFAS contamination has been documented in groundwater and 3M’s monitoring data show discharges of PFAS into the Mississippi River.

On November 3, 2022, U.S. EPA and 3M, with support from Illinois EPA, entered into an agreement under the Safe Drinking Water Act. This agreement requires 3M to sample and provide treatment where PFAS contamination is found in drinking water in the vicinity of the 3M Cordova Facility. On January 17, 2025, U.S. EPA and 3M reached another agreement under RCRA that requires 3M monitor, test, analyze and report PFAS in the soil and groundwater surrounding the 3M Cordova Facility.

In 2022 and 2023, the Office of the Illinois Attorney General filed three legal complaints in state court regarding the 3M Cordova Facility. One complaint related to environmental violations at 3M Cordova Facility remains in state court. The other two complaints, related to PFAS manufacturing more broadly, were moved to federal court and combined with a larger, nationwide PFAS case. While this litigation is still in progress, Illinois EPA has issued construction permits authorizing 3M to install wastewater controls to significantly reduce the amount of PFAS discharged from the facility.

Illinois EPA continues to work closely with the U.S. EPA and the Office of the Illinois Attorney General by providing technical expertise to support the legal actions that seek to require 3M to investigate the extent of the PFAS impacts, address ongoing discharges, and remediate contamination to protect surrounding communities and water resources.

13. WHAT'S NEXT

Illinois EPA's involvement in the State's PFAS assessment and response has evolved from early reconnaissance and policy development to a system focused on implementation, evaluation, and continuous improvement. The Agency remains committed to refining standards based on the best available science, expanding monitoring and public advisories, incorporating BMPs into permits, and advancing remediation of PFAS at contaminated sites. Despite this progress, continued work is needed across environmental and ecological sectors throughout the state.

Illinois EPA will continue advancing a comprehensive approach to preventing and mitigating PFAS pollution. This includes prioritizing safe drinking water for all residents, strengthening waste management practices, and reducing PFAS at the source through improved identification and investigation of contributing facilities and activities.

Ongoing collaboration with academic institutions, industry partners, and government agencies will remain essential to supporting effective and environmentally protective remediation methods and technologies as they develop.

Illinois EPA will also support the continued development of protective PFAS policies and regulations, grounded in current scientific research and responsive to emerging knowledge. Through these efforts, the Agency will ensure that regulatory frameworks remain protective of both communities and the environment as understanding of PFAS continues to evolve.

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