Illinois EPA Division of Public Water Supplies Update

September 9, 2025

PFAS & Drinking Water in Illinois

2021 PFAS Statewide Investigation Network - Monitoring

- September 2020 – December 2021: GWS completed a statewide investigation into the prevalence and occurrence of 18 PFAS in finished drinking water
  - 1,428 entry points to the distribution system
  - 1,017 CWS across IL

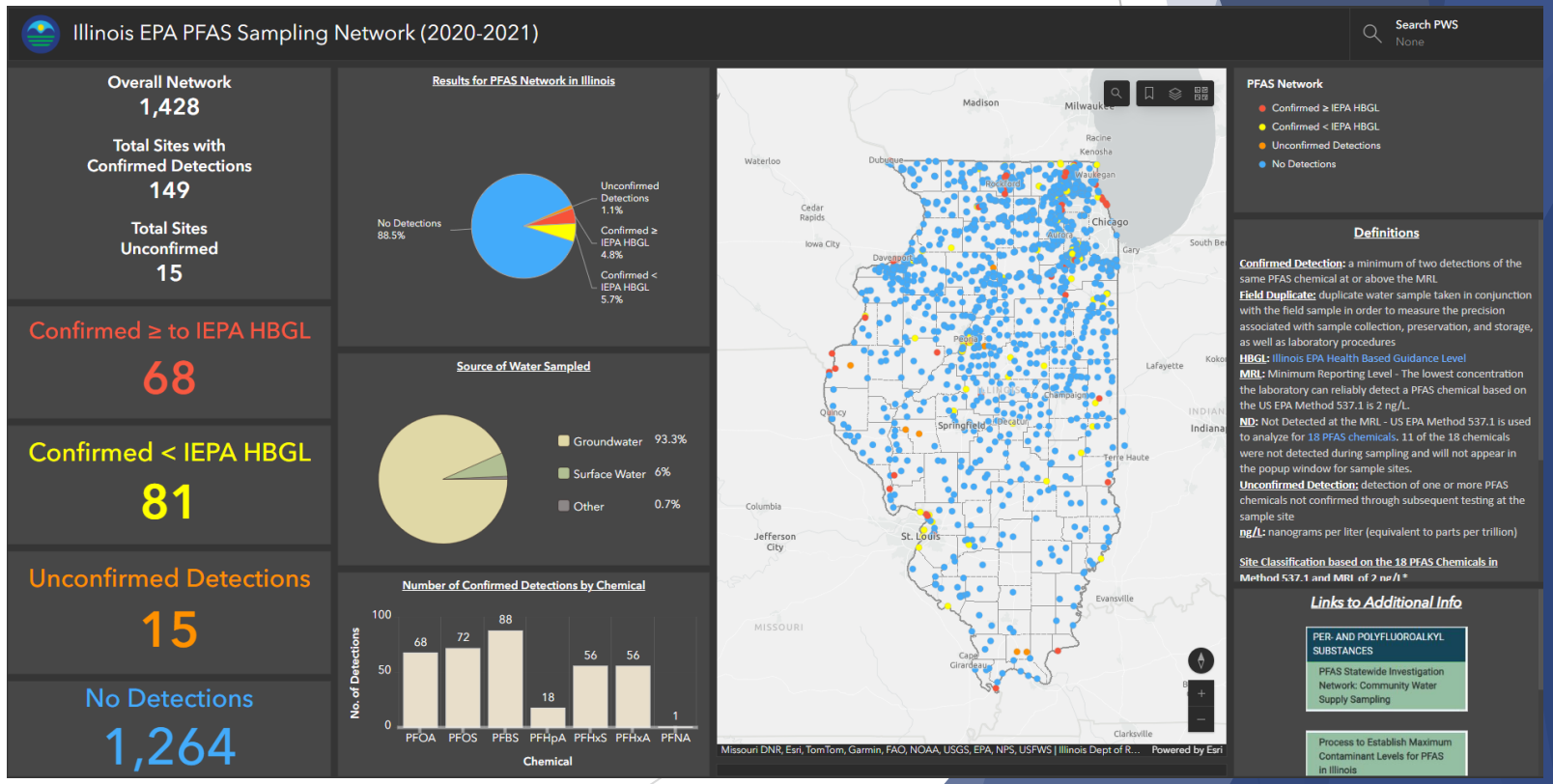
- 7 PFAS detected above MRL of 2 ng/L in 149 of 1,428 entry points (~10%)

2021 PFAS Statewide Investigation Network - Response

- Illinois EPA provided all CWS owners/operators with the PFAS monitoring results collected from their system.
- If PFAS were identified and confirmed in finished drinking water during the PFAS Statewide Sampling Investigation, the Illinois EPA requested the CWS to inform their consumers of the sample results through direct mailing, distribution of notices directly to customers, posting on the CWS website or other means.
- Illinois EPA requested the CWS monitor quarterly for PFAS analytes in both finished and raw water and made recommendations for additional system specific efforts.
  - 47 CWS have continued to monitor into 2024.

Interactive Dashboard

- https://epa.illinois.gov/topics/water-quality/pfas/pfas-statewide-investigation-network.html



Fifth Unregulated Contaminant Monitoring Rule (UCMR5)

- Current UCMR Cycle: 470 CWS and 8 NTNCWS participating
- 30 compounds (29 PFAS, lithium)
- Administered by U.S. EPA

Part 620 Updates and Right-to-Know

Part 620 Updates

- Initially expected to be published on April 4, 2025
- Officially published on April 11, 2025

- Adjustments to 61 constituents in Class 1 GW quality standards
  - Newly added – 14 constituents
  - GQS lowered – 47 constituents

Right-to-Know Laws

- 2002 Right-to-Know Law
  - IEPA to notify IDPH when any VOC is detected at a concentration above the Class I groundwater quality standard
  - IDPH to notify private water well users within the potentially affected area
- 2009 Right-to-Know Law
  - IEPA to notify CWS owners and operators when groundwater contamination poses a threat of exposure above the Class I groundwater quality standards
  - CWS owners and operators to notify all end users

2009 Right-to-Know Timeline

- 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.

Analytes Detected

- 1,4-dioxane (exceeding 0.78 ppb) = 1 system

- PFOA (exceeding 4 ppt) = 22 systems (11 parent/11 purchased)
- PFOS (exceeding 4 ppt) = 26 systems (11 parent/15 purchased)
- PFHxS (exceeding 10 ppt) = 13 systems (8 parent/5 purchased)
  - Total Systems Affected by PFAS = 47 systems

New PFAS Rule

- On April 26, 2024, U.S. EPA published the National Primary Drinking Water Regulation for six PFAS.
  - Expect IPCB to adopt by October 2025

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Trigger Level	Practical Quantitation Level (PQL)
PFOA	0	4.0 ppt	2.0 ppt	4.0 ppt
PFOS	0	4.0 ppt	2.0 ppt	4.0 ppt
PFHxS	10 ppt	10 ppt	5 ppt	4.0 ppt
HFPO-DA (GenX Chemicals)	10 ppt	10 ppt	5 ppt	5.0 ppt
PFNA	10 ppt	10 ppt	5 ppt	4.0 ppt
Mixture of 2 or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1	Hazard Index of 0.5	PQLs are listed above. PQL is 3.0 ppt for PFBS.

$$\text{Hazard Index} = \left(\frac{[\text{GenX}_{\text{water}}]}{[10\text{ ppt}]}\right) + \left(\frac{[\text{PFBS}_{\text{water}}]}{[2000\text{ ppt}]}\right) + \left(\frac{[\text{PFNA}_{\text{water}}]}{[10\text{ ppt}]}\right) + \left(\frac{[\text{PFHxS}_{\text{water}}]}{[10\text{ ppt}]}\right)$$

PFAS – Initial Monitoring

- Initial monitoring must be completed by 4/2027
- Samples taken at entry point

Water Source	System Size	Sampling Frequency
Surface water, GWUDI, or mixed (GW & SW) EPTDS	All	Four (quarterly) samples 2 to 4 months apart in a consecutive 12-month period at the entry point to the distribution system (EPTDS).
Groundwater EPTDS	Large (>10,000 served)	Four (quarterly) samples 2 to 4 months apart in a consecutive 12-month period at EPTDS.
Groundwater EPTDS	Small (≤10,000 served)	Two (semiannual) samples in a consecutive 12-month period and must collect the samples 5 to 7 months apart at EPTDS.

PFAS – Initial Monitoring

- CWS can request to use previously collected data to meet initial monitoring requirements IF:
  - Data was collected 2019 or later
  - Analyzed using 533 or 537.1
  - Analyzed using reporting limits <= the MCLs
    - MRL must be <= the trigger level to qualify for reduced monitoring

- 184 CWS currently meet the initial monitoring requirements through UCMR5 sampling

- If **all** initial monitoring results are < the trigger level, the CWS qualifies for reduced (triennial) monitoring.
  - If not - quarterly

Compliance Monitoring

- Compliance monitoring begins April 25, 2027
- Compliance with the MCLs begins April 26, 2029
- Water systems will be required to issue public notification for violations and report these violations in their Consumer Confidence Reports
- Returning to compliance with the MCLs may include:
  - Removing wells from service
  - Purchasing water from another system
  - Providing treatment for PFAS removal (permits required)
- 45 single sample exceedances from PFAS Monitoring Network data

U.S. EPA Best Available Technologies for PFAS in Drinking Water

- Granular activated carbon
- Anion exchange
- Reverse osmosis & nanofiltration

- Other non-treatment options to return to compliance with the MCL:
  - Interconnection with another system
  - Source relocation

Sanitary Surveys

Conduct sanitary surveys on a three-year cycle

Significant deficiencies/violations will appear in attachment A of the sanitary survey report (now called Notice of Significant Deficiencies)

System response is required within 30 days

IEPA will approve of facility's corrective action plan with compliance deadlines or issue formal Violation Notice

Lead and Copper

Lead Service Lines in IL CWS

- ~3.8 million total service lines
- 2024 **reported** service line info:
  - 406,078 reported lead
  - 52,652 reported galvanized requiring replacement
  - 940,160 unknown

Lead Service Line Replacement and Notification Act

- 2022: Lead Service Line Replacement and Notification Act (415 ILCS 5/17.12) repealed and replaced 415 ILCS 5/17.11
  - Requires:
    - Detailed service line inventory
    - Lead service line replacement plans
    - **Mandatory replacement**
    - Customer Notification
    - Creation of a Lead Service Line Advisory Board

Lead Service Line Replacement and Notification Act

- Under State Law, CWS were required to submit detailed service line inventories by 4/15/2024
  - IL developed a template synthesizing inventory requirements under this law and the LCRR
  - Initial and updated inventories were required to be submitted 4/15/2022 and 4/15/2023
- Initial service line replacement plans were due 4/15/2024
  - Subsequent annual submissions until final replacement plans due 4/15/2027
- CWS must provide notice:
  - within 15 days of Identification of a lead service line.
  - at least 45 days prior to any planned lead service line replacement work.
  - when replacing or repairing any lead service line.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Required Replacement under State Law

- Mandatory replacement begins 4/15/2027
- Rates determined by number of confirmed lead service lines

Lead Service Lines	Annual Replacement Rate	Timeline for Completion
1,200 or less	7%	15 Years
1,201 – 4,999	6%	17 Years
5,000 – 9,999	5%	20 Years
10,000 – 99,999	3%	34 Years
100,000 or more	2%	50 Years

LCRR Adoption

- In November 2023, the Illinois Pollution Control Board adopted the Revised Lead and Copper Rule in its entirety, identical-in-substance, effective 10/16/2024 (35 Ill. Adm. Code 611 Subpart G)
- Illinois state law predates the LCRR and has not yet been amended to reflect some of the more stringent standards required by the federal rule
- Where the Act and regulations differ, CWS must meet the more stringent requirement
- CWS are required to follow the lead service line replacement rates and deadlines in Section 17.12 of the Act, unless they receive a Lead Action Level Exceedance (ALE)
  - <u>If a CWS receives a lead ALE, Section 611.354 requires that the CWS replace three percent of its reported lead service lines from that year's Lead Service Line Inventory</u>

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Operator Certification

Illinois EPA Operator Certification Program

- DPWS CAS administers Operator Certification Programs for Community Water Supply operators and Wastewater Treatment Works Operators
- Includes every step from initial examination through certificate renewal
- Every wastewater treatment facility must employ a Chief Wastewater Operator (CWO) at or above the level of their facility
  - Industrial certificates are site specific
- CWO is jointly responsible with the owner of the facility for the proper operation of the facility
- Operators can be employed on contract

Domestic/Municipal Wastewater Treatment Works Classification

- **Group 1:**
  - All wastewater treatment works having a **1.0 MGD DAF or greater**, excluding lagoon systems and primary treatment systems.
- **Group 2:**
  - Activated sludge systems having a DAF of less than 1.0 MGD.
- **Group 3:**
  - Fixed film processes, recirculating sand filter systems and Imhoff tank systems having a DAF of less than 1.0 MGD, and all primary treatment systems.
- **Group 4:**
  - Lagoon treatment systems and septic tank systems permitted by the Agency.

Industrial Wastewater Treatment Works Classification

- **Group K:**
  - Industrial wastewater treatment works, pretreatment works, and domestic wastewater treatment works owned and operated by industries that are not included in Group R.
- **Group R:**
  - Industrial wastewater treatment works, pretreatment works, and domestic wastewater treatment works owned and operated by industries that treat surface or groundwater for contamination resulting from gasoline, diesel fuel, kerosene, jet fuel or heating oil.

Wastewater Operator Certification Regulatory Revisions

- Revisions to the Wastewater Operator Certification regulations (35 Ill. Adm. Code 380) went into effect July 1, 2019
- Establishes certificate expiration process and renewal credit requirements
- Operator in Training Program established

Industrial Wastewater Certification Requirements

- Must be employed at a Class K/Class R facility
- Class K certificates are site-specific
  - If the operator leaves the facility → certificate becomes invalid
  - If the facility has a significant process control change → the operator must re-test
- Certificate is valid for 5 years
  - No renewal – operator must re-test

How many certified wastewater operators are in Illinois?

- Class 1: 806
- Class 2: 196
- Class 3: 282
- Class 4: 534
- Collections: 667
- Industrial (Class K and R): 945 certificates – 898 operators

Questions?

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