

# 2024 Update

# Drinking and Ground Waters

Amy Klei, Chief

OTCO Water Workshop/Webinar



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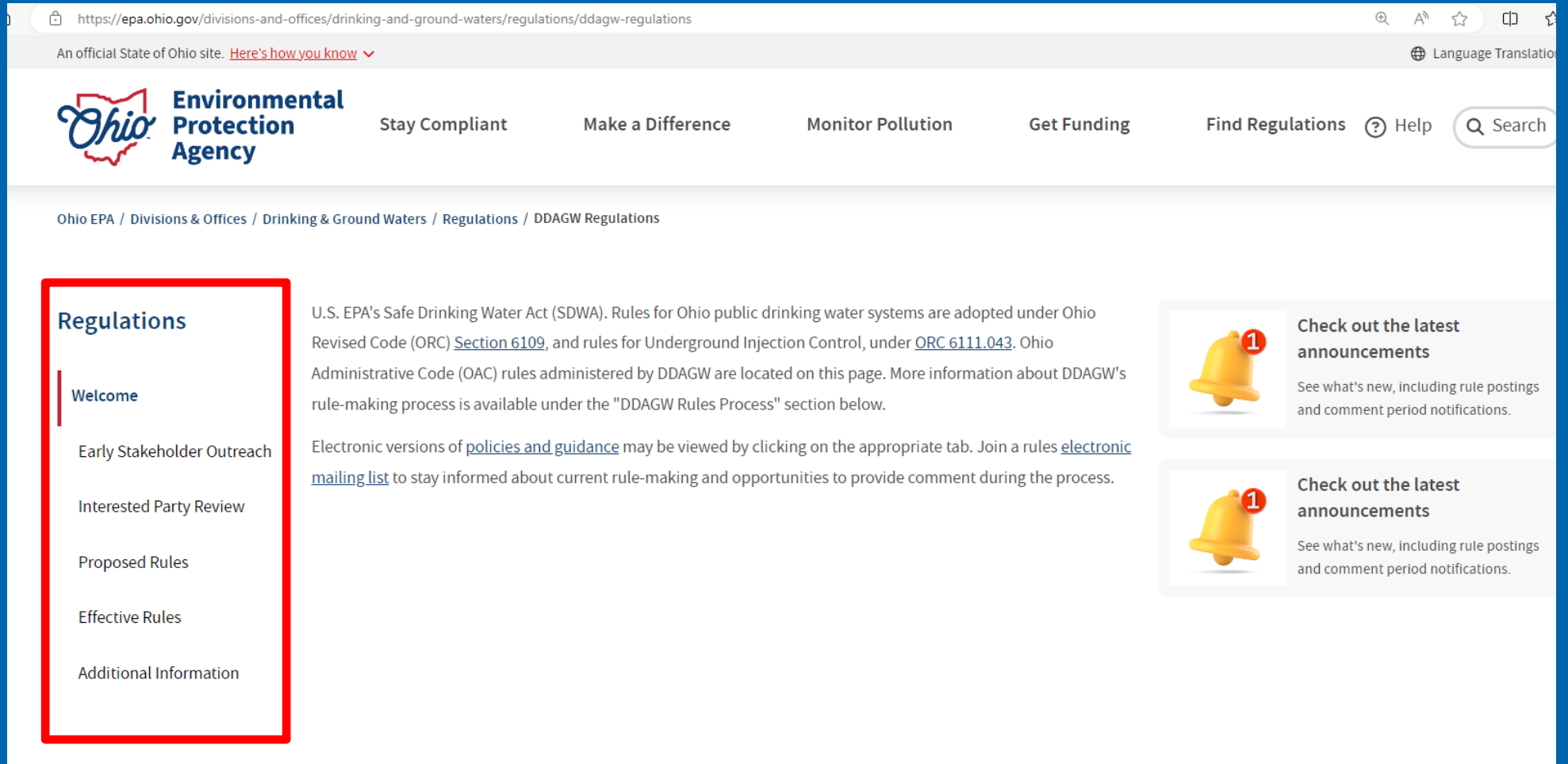
# DDAGW Big Picture

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- Looking forward to 2024
- Rule Updates
- Lead and Copper
- PFAS
- Resources/Funding



# Rule Updates Online



https://epa.ohio.gov/divisions-and-offices/drinking-and-ground-waters/regulations/ddagw-regulations

An official State of Ohio site. [Here's how you know](#)

Language Translation

**Ohio Environmental Protection Agency**

Stay Compliant    Make a Difference    Monitor Pollution    Get Funding    Find Regulations    Help    Search

Ohio EPA / Divisions & Offices / Drinking & Ground Waters / Regulations / DDAGW Regulations

## Regulations

- Welcome
- Early Stakeholder Outreach
- Interested Party Review
- Proposed Rules
- Effective Rules
- Additional Information

U.S. EPA's Safe Drinking Water Act (SDWA). Rules for Ohio public drinking water systems are adopted under Ohio Revised Code (ORC) [Section 6109](#), and rules for Underground Injection Control, under [ORC 6111.043](#). Ohio Administrative Code (OAC) rules administered by DDAGW are located on this page. More information about DDAGW's rule-making process is available under the "DDAGW Rules Process" section below.

Electronic versions of [policies and guidance](#) may be viewed by clicking on the appropriate tab. Join a rules [electronic mailing list](#) to stay informed about current rule-making and opportunities to provide comment during the process.

**Check out the latest announcements**  
See what's new, including rule postings and comment period notifications.

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Visit the Resource Hub - FAQs, Ask an Expert, and more.

Go Now

# Rule Updates

## Early Stakeholder Outreach (ESO)

- **Maximum Contaminant Levels and Point of Entry Devices (81-10, 81-11, 81-15, 81-19)**
  - Released for ESO on Feb 22, 2024, comments due March 22, 2024
- **Asset Management (87-01, 87-02, 87-03, 87-04, and 87-05)**
  - Internal drafting rule language for IPR based on comments
  - Removal of Transient Non-Community requirements
  - Clarification for Non-Transient Non-Community emergency preparedness efforts
  - Clarification on review of supporting documents



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# Rule Updates

## Interested Party Review (IPR)

- **Water Distribution System Disruption of Service (83-02)**
  - IPR started 2/22/24 and comments are due March 22, 2024.
  - Define Major event (replace Type 3 and 4)
    - Repair not expected to be completed in 24 hrs
    - Anticipate affect area will be without water for more than 24 hrs
    - >250 service connections or > 25% or customers
- **Operator Certification**
  - Draft rule language for 3745-7-01 through 3745-7-21
  - Released for IPR on March 1, comments Due April 1



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# Operator Certification Key Changes Proposed

Changing “wastewater treatment” with the term “water reclamation”

Holiday and other staffing flexibility

New “facility-specific” classification

Reducing required operating experience time for Class II, III and IV

Adding operator in training (OIT) status for Class III and increase OIT time

Adding flexibility to review reciprocity



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# Rule – Original and Final File

- **Public Water System Licenses (81-02, -03, -29, and -07)**
  - Original File package in internal review
- **Administrative Penalties (81-04)**
  - Original Filed 2/28, public hearing scheduled for 4/5/2024
  - Changes include the removal of the lead and copper consumer and public notice administrative penalty calculations to align with amendments to 6109.121
- **Monitoring requirements for disinfectant residuals (81-70)**
  - Final filed and became effective on 3/4/24



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# Lead and Copper Rule Timeline

- Lead and Copper Rule – 1991
- Lead and Copper Rule Revision (LCRR) - 2021
  - Final December 2021, Compliance October 16, 2024
  - Initial Inventories
- Lead and Copper Rule Improvements (LCRI) - DRAFT
  - Draft issued November 2023
  - LSL Replacement Plans
  - Action/Trigger levels
  - EJ/Underserved Communities
  - Compliance Sampling
  - Expected to be promulgated prior to October 2024



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# LCRR Highlights

## Trigger Level

$10 \mu\text{g/L} < \text{P90} \leq 15 \mu\text{g/L}$

## Sample changes

5<sup>th</sup> liter

## Environmental Justice

Sampling Schools and Childcare Facilities

## Tier Changes

3 tiers to 5 tiers

## Small System Flexibility

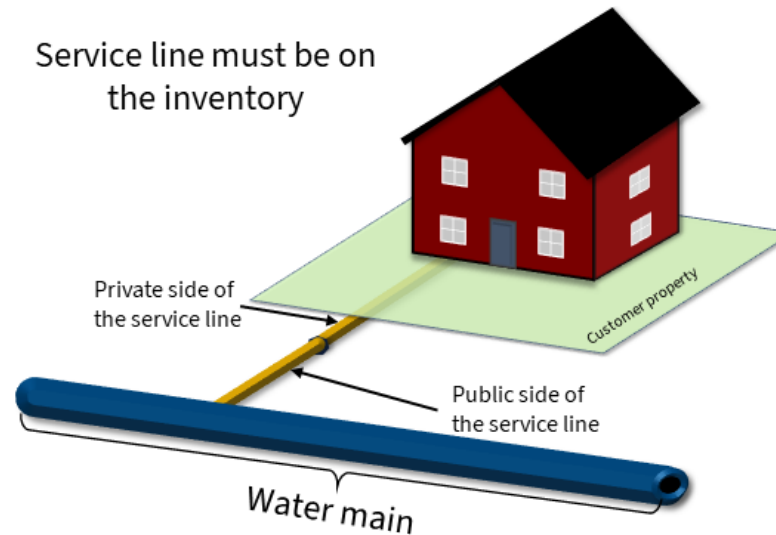
Going for the lead not CC

## Service Line Inventory

Oct 16, 2024

Considered under LCRI

Service line must be on the inventory



Inventory template can be found here:



# Service Line Inventory

## Required information for the Initial Inventory by 10/16/24:

- Ohio EPA Service Line Inventory template
- Location identification
- Material classification for service line for public and private sides
  - Classified as: Lead (LSL), galvanized requiring replacement (GRR), non-lead, or lead status unknown (unknown)
- Must be publicly available and online if 50k+

## Methods of identification:

- Previous materials evaluation
- Construction/plumbing codes and records
- Water system records
- Local ordinances
- Distribution system inspections
- For more, see Exhibit 4-1 in U.S. EPA's Service Line Inventory Guidance
- Statistical modeling

*Ohio EPA is not approving any one type of method. All methods will require physical verification for unknown and non-lead according to final LCRI*



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# Completing the Inventory

For detailed instructions [CLICK HERE!](#)

PWS Name: **Anywhere City**  
PWS ID: **OH1234567**

**Purpose of this worksheet:** To provide a customizable format water systems can use to track materials for each service line in their distribution system.

**General Instructions:** Each row in this worksheet represents one service line connecting the water main to the customer's plumbing. The worksheet includes required and recommended elements; the columns with **A** are included in rows 14 & 15. This template is formatted for approximately 10,000 rows. The +/- button in the lefthand margin can be used to hide and unhide the PWS Information Box.

Press the +/- button to display or hide the PWS Information box


## Location Information

Unique Service Line ID	Site Name	Street Number	Street Name	City	Zip Code	County	Latitude	Longitude	In Asset Management	Asset Status	Asset Start Date	A
A Unique ID by the public water system for each service line.		Water systems must track addresses of all service lines in their internal inventory. For the publicly accessible version, location identifiers are required for lead and galvanized requiring replacement. If they do not use addresses for their location identifier, other options could include GPS coordinates, landmark, intersection, block, or other details to specify service line locations.										
<i>Example 1 (DO NOT DELETE)</i>	<i>Site Name</i>	<i>1234</i>	<i>Test St</i>	<i>Test City</i>	<i>88888</i>	<i>Test County</i>	<i>##.#####</i>	<i>-##.#####</i>	<i>Yes, No, Unknown</i>	<i>Active, Inactive, Not Applicable</i>	<i>mm/dd/yyyy</i>	
<i>Example 2 (DO NOT DELETE)</i>	<i>House 1</i>	<i>1502</i>	<i>Main St</i>	<i>Braceville</i>	<i>44444</i>	<i>Adams</i>	<i>41.2566</i>	<i>-80.9806</i>	<i>No</i>	<i>Active</i>	<i>1/1/2022</i>	
<i>Example 3 (DO NOT DELETE)</i>	<i>Business 1</i>	<i>1268</i>	<i>Main St</i>	<i>Braceville</i>	<i>44444</i>	<i>Adams</i>	<i>41.2560</i>	<i>-80.9820</i>	<i>Yes</i>	<i>Inactive</i>	<i>1/15/2016</i>	
<b>1</b>		<b>50</b>	<b>W Town St</b>	<b>Columbus</b>	<b>43215</b>	<b>Franklin</b>	<b>39.9589</b>	<b>-83.0012</b>				

# Submitting the Inventory

- Recommended file name:
  - Inventory\_OHxxxxxxx\_Date\_Initial/Update/etc.
    - Inventory\_OH1234567\_3.5.24\_Initial
- Complete the Microsoft form linked in the instructions
  - You will receive a confirmation email with your responses and the email address for submittal



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## Service Line Inventory Submittal and Verification

The Lead and Copper Rule Revisions require water systems to use or record specific information. This online form serves as verification these requirements were followed. A new form must be filled out for each PWS ID.

Please answer the questions below. At the end you will be provided an email to send your inventory file(s).

All fields are required and a copy of your answers will be emailed to the address you provide below for your records.

Contacts: <https://epa.ohio.gov/divisions-and-offices/drinking-and-ground-waters/about-ddagw/ddagw-contacts> or call 614-644-2752.

\* Required

1. Enter your email \*

# LCRI Highlights

## Proposed Rule (Nov. 2023)

- Comment period ended 02/05/2024
- Approximate 2027 compliance date

## Baseline Inventory

- Update to Initial Inventory (with annual notification)
- Needs connector material

## Validation

- 7 years from compliance date of non-lead service lines
- 2 points on service line visually inspected

## Action Level

- 10 µg/L
- No more trigger level

## Monitoring Changes

- More 6 month monitoring
- Annual -> standard number sampling

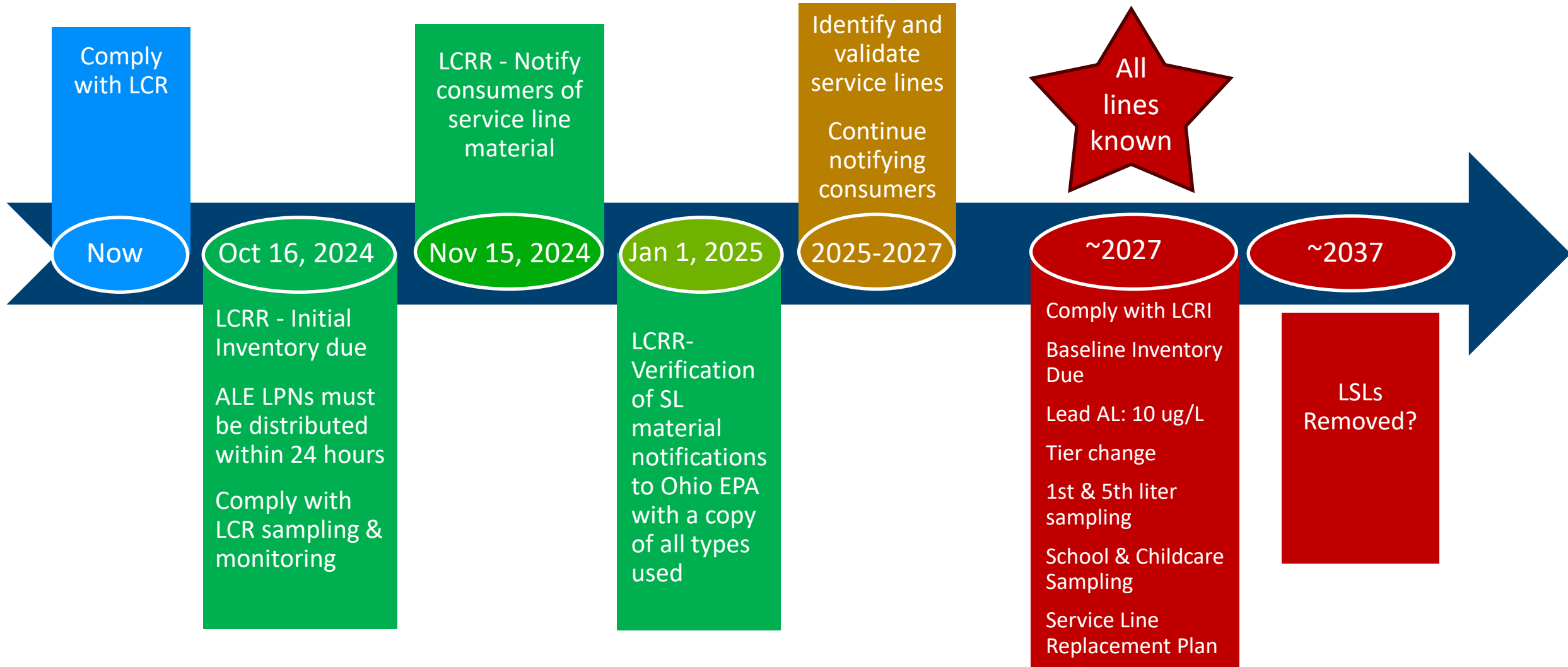
## Service Line Replacements

- 2027 Service Line Replacement Plans
- Mandatory 10 yr replacements after compliance date

# Service Line Replacement Plans

- Sections:
  1. Strategies for identifying
  2. Standard Operating Procedure for full service line replacements
  3. Customer Outreach
    - Flushing procedure
  4. Prioritization plan
    - Environmental Justice (sensitive populations or populations disproportionately effected by lead, LSL, GRR)
  5. Funding
    - Is the customer charged for their side? Assistance for those who can't pay
  6. Limitations of accessibility
- Requirements:
  - Must be submitted for any system with at least one lead, GRR, or unknown service line.
  - Detailed
  - Publicly available
  - 50k+ public online

# Timeline





Proposal to serve

## Ohio Environmental Protection Agency

Consulting Services for Developing Ohio Strategy to Address Lead in Drinking Water

RFP Number: SRC0000005032  
Index Number: EPA021  
UNSPSC Category: 77101500

Technical Proposal

Submitted by:  
KPMG LLP

October 05, 2022  
kpmg.com



# Ohio Lead Strategy Project

- Project Kickoff in January
- Contract with KPMG
  - Rasor Marketing Communications
- 12-month ambitious effort



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# Lead Strategy Project Objectives

1. Facilitate Stakeholder Outreach Sessions, Summarize, and Evaluate Input – **completed**
2. Evaluate Ohio EPA's Lead and Copper Rule Program - **completed**
3. Develop Draft Strategy - **underway**
4. Develop Local Engagement Toolkit for PWS and Communities to Promote and Facilitate Removal of Lead Service Lines - **underway**
5. Recommend Statewide Education and Outreach Campaign – **underway**



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# Lead Resources

## DDAGW Team

General questions: [DDAGWLeadCopper@epa.ohio.gov](mailto:DDAGWLeadCopper@epa.ohio.gov)

**Heather Jackson, Supervisor**

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**Alexandra Haritos, Lead and Copper Compliance**

614-644-2915

[Alexandra.Haritos@epa.ohio.gov](mailto:Alexandra.Haritos@epa.ohio.gov)

## Funding

- Ohio EPA free Technical Assistance coming soon
- LSL Replacement funding available now

Scan me for  
the funding  
webinar



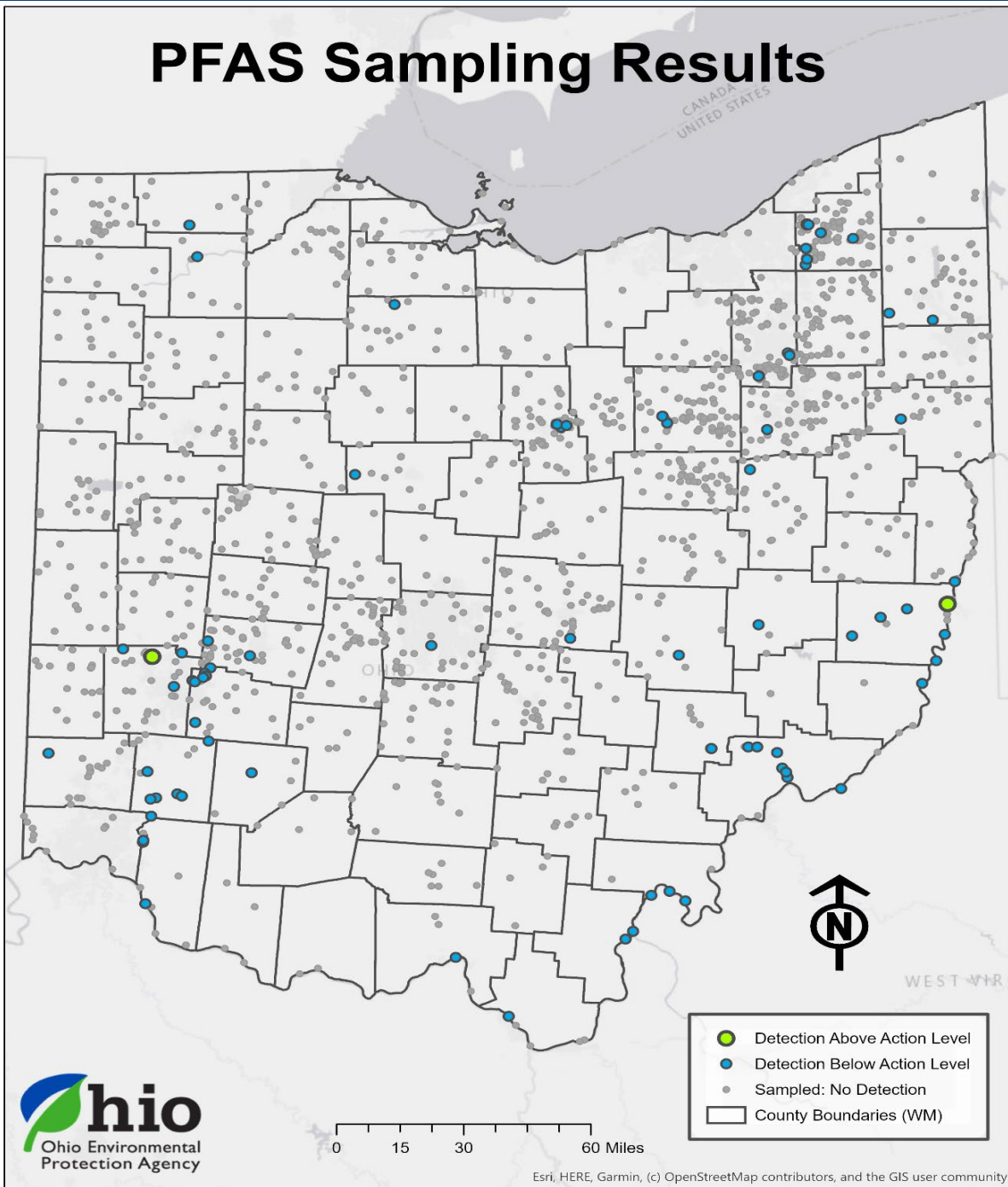
# PFAS

*Ubiquitous in the environment, as far as Canadian Arctic*



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# PFAS Sampling Results

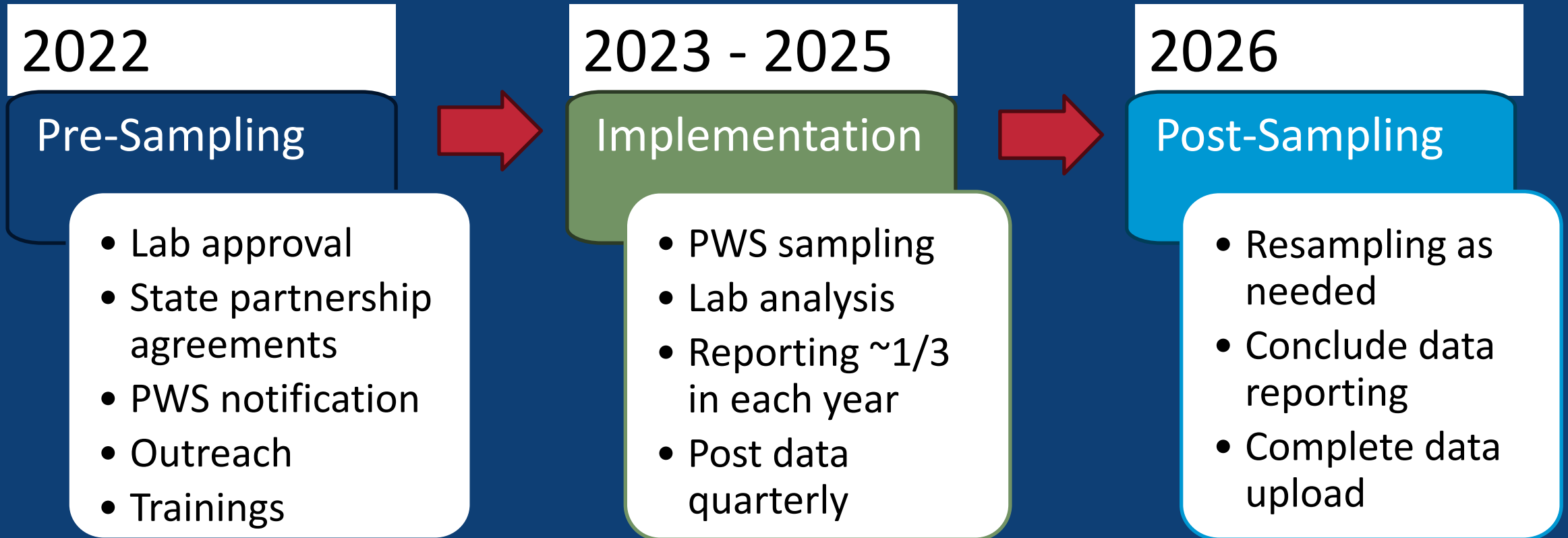


# 2020 Statewide PFAS Study at Ohio PWS



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# Unregulated Contaminant Rule (UCMR 5) Timeline



# UCMR 5 Monitoring



- Contaminants: 29 PFAS, Lithium
- PWS Participation:

PWS Size	PWS Count, National	PWS Count, Ohio
Small (< 3,300)	800	21
Small (3,300 – 10,000)	5,147	156
Large ( $\geq$ 10,001)	4,364	161
<b>TOTAL</b>	<b>10,311</b>	<b>338</b>

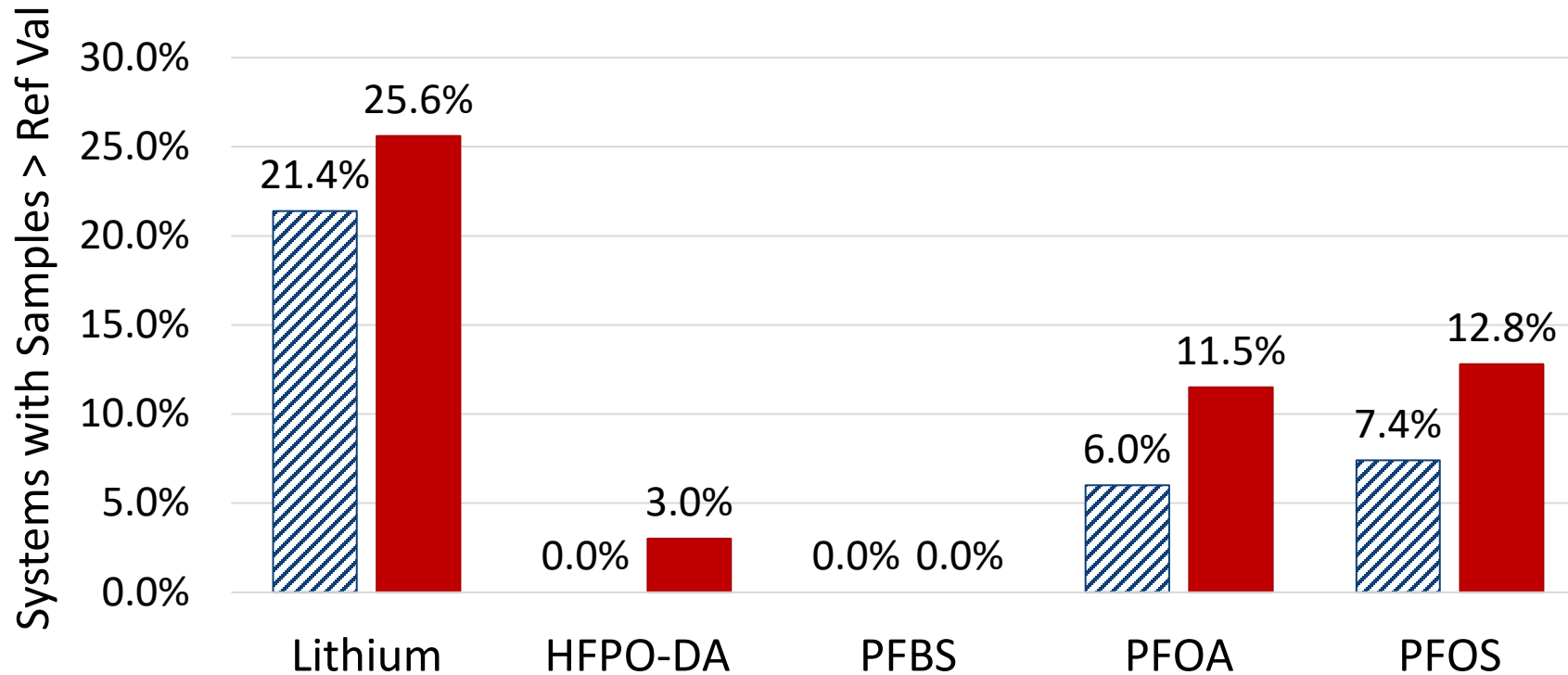
- Soon-to-be Regulated Compounds (occurrence vs “safe”)

# Ohio Quick Stats



## UCMR 5: Summary of Current Data

▨ Ohio ■ U.S.



### Notes

- Data: ≤ Jan 11, 2024
- Ref Vals (µg/L):
  - Li Screening HRV = 10
  - PFAS = HALs
    - HFPO-DA: 0.01
    - PFBS: 2
    - PFOS: 0.00002
    - PFOA: 0.000004
- MRLs (µg/L):
  - Li: 9
  - HFPO-DA: 0.005
  - PFBS: 0.003
  - PFOS, PFOA: 0.004

Represents ~33% of Ohio data and ~24% of U.S. data to be collected

# PFAS

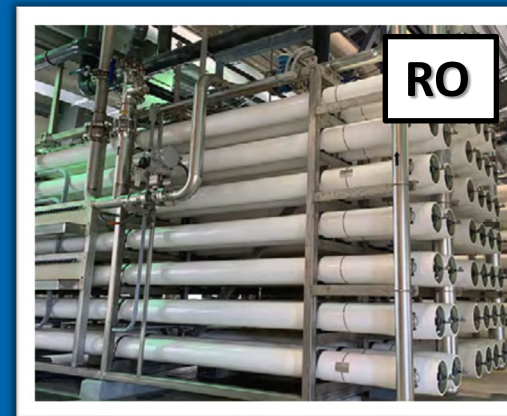
- Building on statewide PWS testing results
- 80+ systems had at least one PFAS detected; 20+ additional systems had at least a raw detection (over 60 PWS likely > MCL)
- Expect to have more clarity in next few months on regulatory future
- Recognize challenges designing and true costing treatment and source alternatives



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# Treatment in Drinking Water

- Best Available Technology (BAT):
  - Granular Activated Carbon (GAC)
  - High Pressure Membrane Filtration (HPMF)
    - Reverse Osmosis (RO), Nanofiltration (NF)
  - Anion Exchange (AX)
- Important Considerations:
  - Influent water characteristics
    - Competitive sorption, pH, TOC, etc.
  - Waste streams generated (disposal)



# Drinking Water Treatment Guidance

- DDAGW has drafted a PFAS Treatment Guidance in collaboration with AWWA and USEPA ORD
- Includes treatment options, demonstration studies and other considerations including waste streams and corrosion
- Available soon for external review/comments via normal list serves and consultants who have submitted PFAS plans
- Final version will consider all comments and be available this year



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# Drinking Water Regulation: Proposed

*May Apply to Community and NTNC Water*

Compound	MCL	MRL (ppt)
PFOA	4 ppt	4
PFOS	4 ppt	4
HFPO-DA	HI > 1.0	5
PFBS		3
PFHxS		3
PFNA		4



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$$\text{Hazard Index} = \left( \frac{[\text{GenX}_{\text{water}}]}{[10 \text{ ppt}]} \right) + \left( \frac{[\text{PFBS}_{\text{water}}]}{[2000 \text{ ppt}]} \right) + \left( \frac{[\text{PFNA}_{\text{water}}]}{[10 \text{ ppt}]} \right) + \left( \frac{[\text{PFHxS}_{\text{water}}]}{[9.0 \text{ ppt}]} \right)$$

# Proposed PFAS Monitoring



System Size	Initial 12-month Monitoring Period
GW $\leq$ 10,000	1 sample every 6 months
SW $\leq$ 10,000	1 sample every quarter
GW or SW $>$ 10,000	1 sample every quarter

System Size	Below Rule Trigger Level	Above Rule Trigger Level
$\leq$ 3,300	Once every 3 years	Quarterly
$>$ 3,300	Twice every 3 years, in 2 consecutive quarters	Quarterly

# Proposed Drinking Water Regulation: Compliance

- Compliance
  - Based on running annual averages (HI and PFOA/PFOS MCLs)
- Determination
  - Not in violation until 1 year of sampling completed
  - BUT if quarterly result > 4x MCL, out of compliance immediately



*Reminder: DRAFT not final yet*

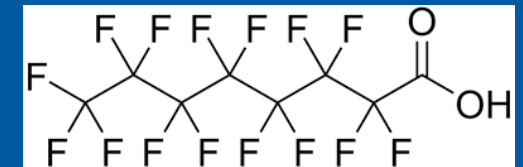
# PFAS Next Steps

- PFAS in drinking water supplies
  - Evaluate treatment and alternative source options
  - Get more data if needed (test all wells)
  - Funding available
- If unknown, then do more testing
- PFAS Action Plan 2
- Chemours/Dupont Settlement
- Ongoing lawsuits
- Source investigations

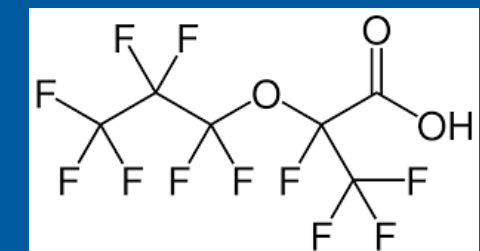
**PFOS**



**PFOA**



**GenX (HFPO-DA)**



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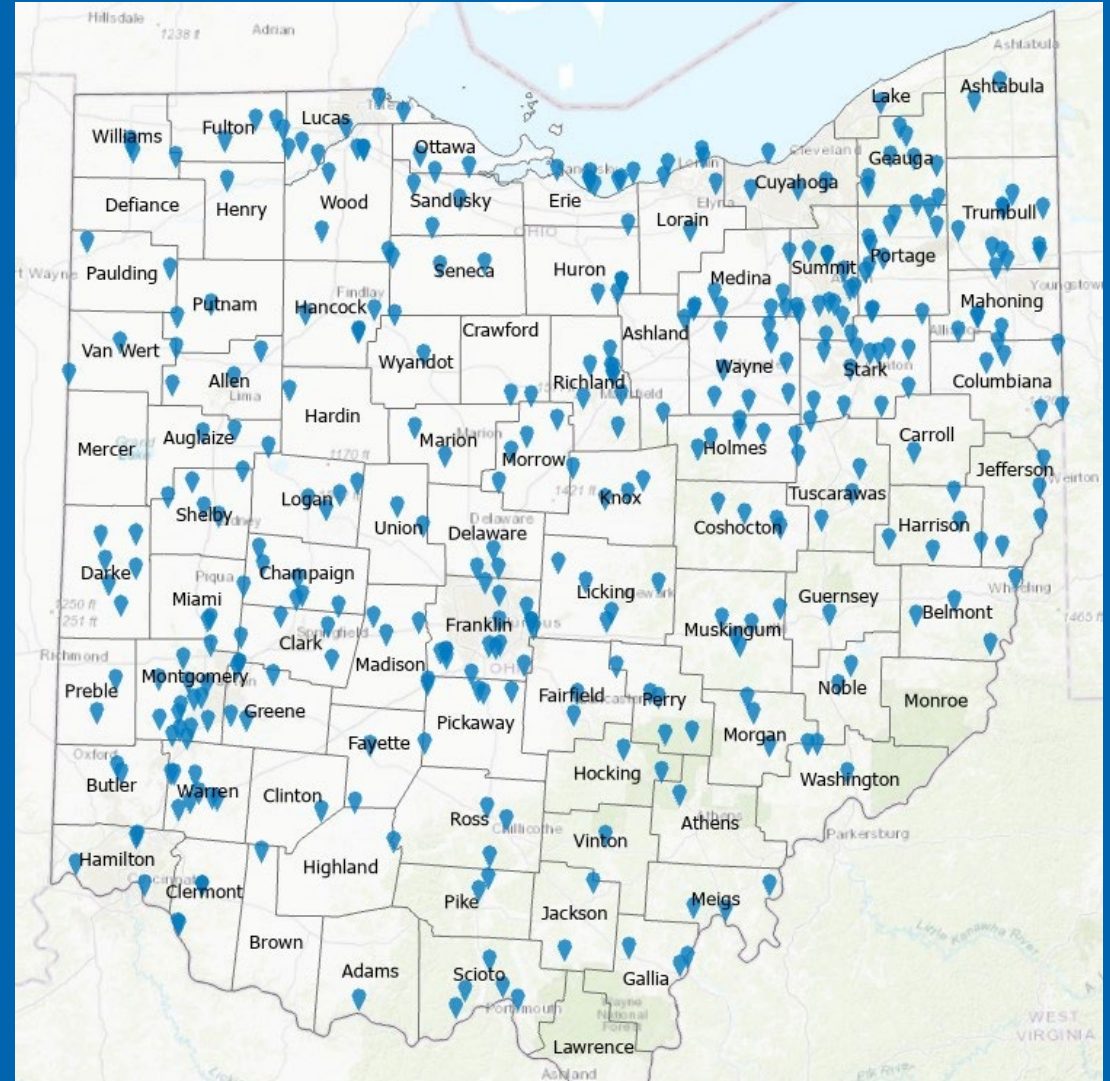
# Distribution Equipment Grants

- Two rounds
- 350 grants
- \$3.2 million



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H2Ohio



# Additional Grants

- Funds from drinking water SRF set asides
- Closed on February 23<sup>rd</sup>, Ohio EPA is reviewing applications
- SWAP-Protective Strategy Grant (24 applications)
  - Support the implementation of specific and protective strategies to help protect source water
- Well Abandonment Grant (14 applications)
  - Provides resources for the planning and proper plugging of abandoned drinking water wells
- Asset Management Program Grants (55 applications)



# Service Line Inventory

## Direct Assistance Contract

- \$18M RFP just closed on March 6
- Contracting with multiple vendors to meet the needs of Ohio's PWS
- Ohio EPA's goal is to be in contract by May
- PWS will request assistance
- Contractor will be sent out to provide assistance - No charge
- Assistance includes inventory development, identification, replacement plans
- All community and not for profit NTNC's can receive assistance



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Coming soon!

# How to Participate and Stay Engaged

- Update contact information with inspectors
- Follow Ohio EPA on social media
- Follow WSRLA program announcements
- Questions: [infrastructurefunding@epa.ohio.gov](mailto:infrastructurefunding@epa.ohio.gov)



WSRLA



DDAGW Grants



# Also on the Radar

- Cybersecurity
- Workforce Development
- Contingency Planning
- Emergency Response coordination
- Water reuse and planning
- Efficiencies and customer service



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# Takeaways



Energized federal regulatory environment



Regulatory changes coming... we are all on notice and need to start working now



Ohio EPA fully committed to (continue and expand) our partnership with the water industry

# Thank You

**Amy J. Klei, Chief**

Division of Drinking and Ground  
Waters

614.644.2752

[Amy.Klei@epa.ohio.gov](mailto:Amy.Klei@epa.ohio.gov)

<http://epa.ohio.gov/ddagw/>

Follow Ohio EPA on



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# Drinking Water Regulation: Current

- Currently not regulated by U.S. EPA or Ohio EPA, however...
- 2022 Lifetime HALs:
  - PFOA: 0.004 ppt
  - PFOS: 0.02 ppt
  - GenX: 10 ppt
  - PFBS: 2,000 ppt



Handy conversions: 1 ppt = 1 ng/L = 0.001  $\mu$ g/L = 0.001 ppb

Handier conversion: 1 ppt = 1 drop of water in 20 Olympic-sized pools

# Proposed Drinking Water Regulation: Example

- Hypothetical Sample:

GenX: 12 ppt

PFBS: 20 ppt

PFNA: <MRL

PFHxS:<MRL

Would this be an exceedance?  
(HI > 1)

HI = 1.21 | YES!

$$\text{Hazard Index} = \left( \frac{[12 \text{ ppt}]}{[10 \text{ ppt}]} \right) + \left( \frac{[20 \text{ ppt}]}{[2000 \text{ ppt}]} \right) + \left( \frac{[\text{PFNA}_{\text{water}}]}{[10 \text{ ppt}]} \right) + \left( \frac{[\text{PFHxS}_{\text{water}}]}{[9.0 \text{ ppt}]} \right)$$

# Service Line Inventory – Public Notice

## Inventory Notice

- Service line materials statement - lead, GRR, or unknown
- Health effects of lead – see 40 CFR §141.85(a)(1)(ii)25 for required language
- Steps to minimize exposure
- Additional required content:
  - Confirmed LSLs - opportunities to replace the LSL, including financial programs and a statement that if property owners replace, PWS must replace associated portion
  - Confirmed GRR - opportunities for replacement
  - Lead status unknown – confirm that material is unknown and could be lead (opportunities to verify type of line)

## First Notice by approximately Nov. 15, 2024

- Verify to Ohio EPA by Jan 1, 2025



### East Palestine Monitoring Wells

286 views • 5 months ago



Installing groundwater monitoring wells is essential to

CC



Ohio EPA

10,616 followers

8mo •

Our drinking water team was happy to help out with today's open house at East Palestine Municipal Water Plant. Thanks to all who came out! In addition to weekly drinking water testing, we've installed 4 early detection monitoring wells between the derailment site & village well field.



## Ohio EPA shows how they determine if water is safe to drink in East Palestine



By Katie Tercek  
Published: Feb. 21, 2023 at 4:46 PM EST



CLEVELAND, Ohio (WOIO) - Even after officials say drinking water in East Palestine is safe, residents question whether or not it really is.

## East Palestine Water Treatment Plant Open House - March 4, 2023