

Ohio's PFAS Action Plan for Drinking Water

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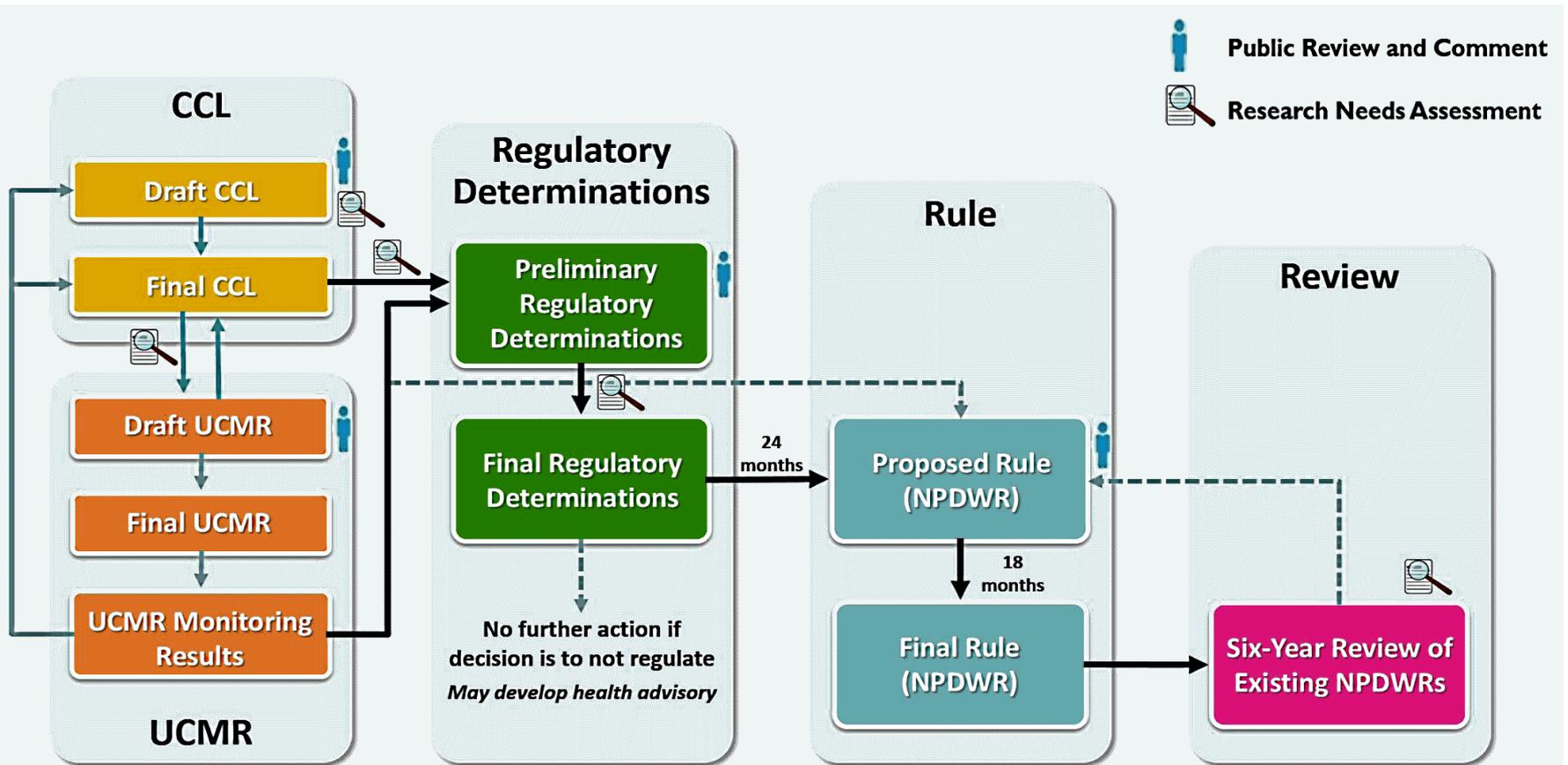
Outline

- Overview of sampling process
- Result notification
- Response to detections
- PWS expectations
- Resources

PFAS 101

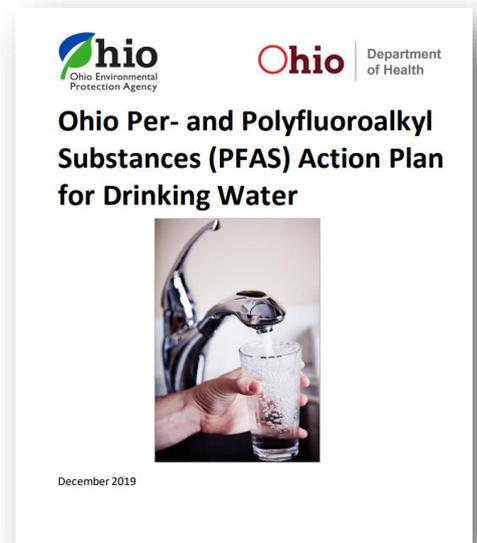
- Per- and Polyfluoroalkyl Substances (PFAS)
- Synthetic organic chemicals initially developed in the 1940s; 1000s of compounds
- Unique properties, persistent
- Used in commercial products; industrial, and fire-fighting foam
- Limited toxicity data, most studies on PFOA/PFOS
- Currently no MCLs, only one Health Advisory (lifetime) for combined PFOA/PFAS

US EPA Rule Process



Ohio Action Plan for PFAS in Drinking Water

- Focused on protecting drinking water
- Highlights
 - Gather sampling data on statewide occurrence in drinking water
 - Establish action levels for PFAS in drinking water
 - Develop public education materials to increase awareness and understanding of PFAS and relative risk of exposure through drinking water and other pathways



pfas.ohio.gov



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Per- and Polyfluoroalkyl Substances (PFAS)

On Sept. 27, 2019, Ohio Governor Mike DeWine directed Ohio EPA and Ohio Department of Health (ODH) to analyze the prevalence of per- and polyfluoroalkyl substances (PFAS) in Ohio's drinking water.

[FAQs](#) | [Current Activities](#) | [Health](#) | [Public Drinking Water](#) | [Private Drinking Water](#) | [Data](#)

Other Resources

- ▶ [What are PFAS?](#)
- ▶ [How can PFAS get into drinking water?](#)
- ▶ [Where does my drinking water come from?](#)
- ▶ [How do I know if I have PFAS in my drinking water?](#)
- ▶ [What are the health effects of exposure to PFAS?](#)
- ▶ [How can I limit my potential exposure to PFAS?](#)
- ▶ [Why develop a state action plan?](#)
- ▶ [How long has Ohio been working on PFAS?](#)



PFAS in Ohio

Per- and polyfluoroalkyl substances (PFAS) are a group of emerging contaminants. In this video, the Ohio Department of Health discusses what PFAS are, how they enter the environment, how they may impact human health, and how you can help protect yourself and your family from them.

QUICK LINKS

- ▶ [Action Plan for Drinking Water](#)
Statewide plan to address potential threats to public and private drinking water systems
- ▶ [PFAS in Drinking Water](#)
Fact sheet with information about how PFAS gets into drinking water, health effects, and testing/treatment options
- ▶ [How to Reduce Your Exposure to PFAS](#)



Who will be sampled

- All community PWS
 - Approximately 970 water systems
 - Excluding purchased or consecutive water systems
- All non-transient, non-community PWS
 - Approximately 610 systems
 - Nearly 250 systems serve schools and daycares



When are we sampling

- All sampling completed by the end of 2020
- Sampling started February 11, 2020
- Schools and daycares serving as PWS will be tested first
- Expect to increase number of sites/week throughout the first quarter as process is refined
- Community PWS and remainder of NTNC water systems will then be tested

Where are we sampling

- Finished water sample will be collected at Entry Point (EP) location
 - If PWS has multiple Entry Points, each site will be sampled (facility)
- Raw water sample will be collected if an appropriate port is accessible
 - Individual wells will not be separately sampled

What are we testing

Samples will be analyzed via U.S. EPA Method 537.1 for the following PFAS:

PFAS Compound	PFOA	PFOS	GenX	PFBS	PFHxS	PFNA
Action Level in parts per trillion (ppt)	>70 single or combined with PFOS	>70 single or combined with PFOA	> 700	>140,000	> 140	> 21

Reporting level is 5 ppt for all but GenX (25ppt).

Sample Collection

- Ohio EPA Contractors:
 - Brownfields Restoration Group, Mannik Smith Group, and Tetra Tech
 - Under existing ‘Level of Effort’ state contract
- Received training on project sampling SOP
- Oversight by Ohio EPA Contract Manager, Ohio EPA Project QA Manager and field auditing team

Laboratories



- Ohio EPA contract laboratories will analyze initial samples and report to Ohio EPA and contractors
- NELAC certified or Ohio EPA-approved for PFAS analysis
- Ohio EPA laboratory will conduct confirmation analysis

Quality Control Measures

- Quality Assurance Project Plan (QAPP)
- Sample collection protocol (SOP) and Ohio EPA field audits
- QAPP and Sampling SOP will be online soon
- Results go through multiple levels of review and verification
 - Laboratory, contractor, Ohio EPA QA review

Sampling Event Scheduling

1. Ohio EPA will email your system and *may* call
2. Contractor will contact PWS directly to schedule sampling
3. Contractor will conduct sampling event
 - OEPA may be present during some events

Pre-sampling Preparation

- Identify Entry Point and Raw water sample taps
 - Ensure taps in working order and have at least 9 inches of clearance
- Remove any PFAS containing supplies or equipment at least 30 feet from taps if possible
- Identify ways to purge the system; will be asked to run for at least 20 min
 - If the PWS has been producing water for at least 20 min, be prepared to run taps for at least 2 minutes prior to sample collection

Results Timeframe



- Results will be provided to Ohio EPA approximately 4 weeks after sampling
- If preliminary finished water result is $\geq 50\%$ of Action Level, then Ohio EPA will receive advanced notification by the lab
- All other results will be shared with PWS by Ohio EPA after data review and verification is complete
- PWS will receive all results prior to posting on public webpage

All Finished Water Results Below Reporting Limit

Verified data submitted by contractor to Ohio EPA



Ohio EPA notifies PWS of result via phone or email



Ohio EPA sends PWS letter



Results then loaded to public website



No further response

Detection in Finished Water less than 50% of PFAS Action Level

Verified data submitted by contractor to Ohio EPA



Ohio EPA notifies PWS of result via phone and email



Ohio EPA sends PWS letter



ODH/local health dept (LHD) notified



Results then loaded to public
website

Detection in Finished Water ≥ 50% of any PFAS Action Level

Lab will contact Ohio EPA if preliminary results are > 50% of any Action Level



Ohio EPA mobilize agency sampling crew to collect confirmation sample
PWS notified: review contingency plan and consider alternate water/treatment options



ODH and LHD notified



PWS/ODH/LHD/Ohio EPA begin developing
public messaging and outreach strategy

Ohio EPA Confirmation Sampling

- For all finished water results ≥ 50 % of any PFAS Action Level, Ohio EPA will immediately mobilize sampling crew
- Ohio EPA sampling crew will deliver samples directly to agency lab
- Results expected in approximately 1 week
- Additional sampling may occur
 - May include raw sources or treatment train

Action Level Exceedance

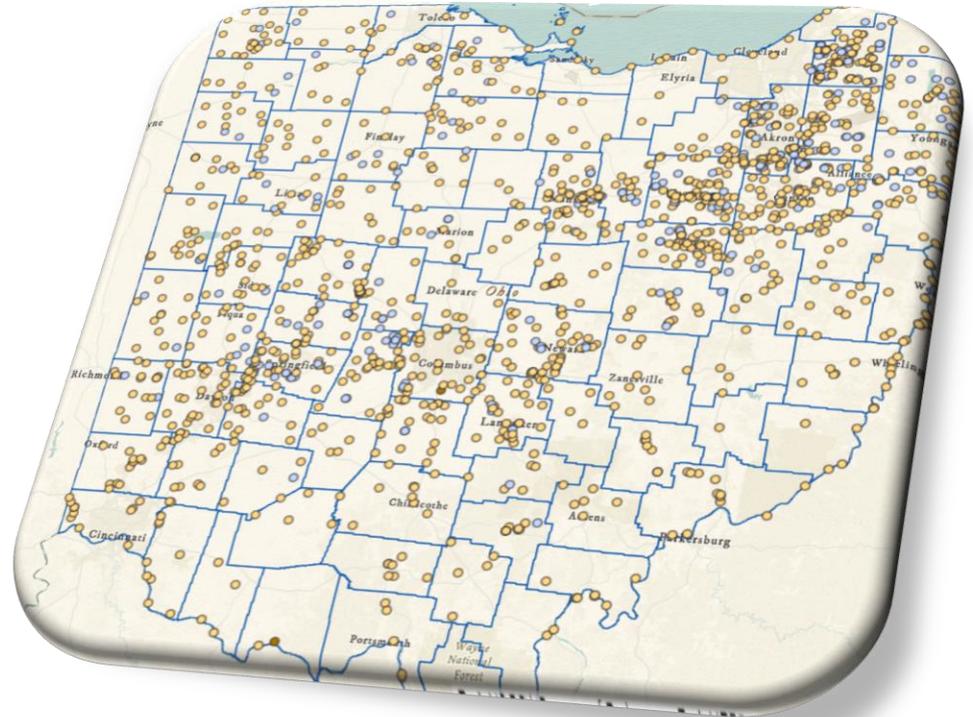
- Pending Ohio EPA confirmatory sampling
- PWS, ODH, LHD notified of result
- PWS/Ohio EPA develop Response Action Plan
- PWS/Ohio EPA/ODH/LHD develop Communication and Outreach Plan

Action Level Exceedance

- PWS expected to:
 - Implement action plan to reduce levels
 - Notify customers
 - Implement Contingency Plan
 - Work closely with state and local agencies to ensure timely and consistent public messaging

OHIO PFAS RESULTS MAP

- Updated daily
pfas.ohio.gov
- Includes all PWS to be sampled
- PFAS results after they are approved by Ohio EPA and provided to PWS



PFAS Testing of Ohio Public Water Systems

Use Chrome or Firefox Web Browsers for Viewing the Maps



About

Sampling Status of the Public Water Systems

Test Results

PFAS Public Water System Sampling

Filter by County Not Filtered

Filter by Water Treatment Plant Name Not Filtered

Water Treatment Plants by Sampling Status



Sampling Status Chart/Filter

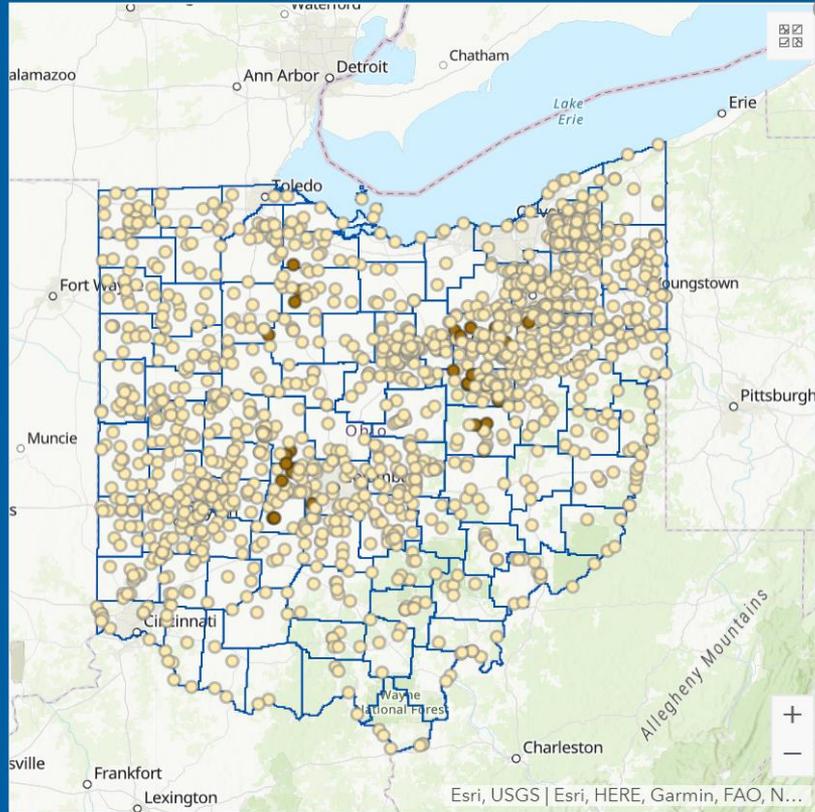
Details

Water Treatment Plants by System Type



System Type Chart/Filter

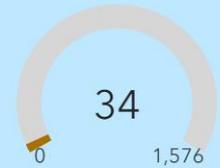
Details



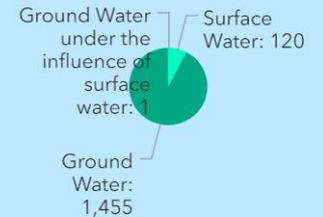
Ohio Water Treatment Plants: PFAS Sampling Status

- Not Tested (Yellow circle)
- Tested (Brown circle)

Water Treatment Plants Tested



Water Treatment Plants by Type of Source



Type of Source Chart/Filter

Details

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About

Sampling Status of the Public Water Systems

Test Results

PFAS Sampling Results for Ohio's Public Water Systems

[Click for More Information About PFAS](#) [Click to Download Data](#)



Legend & Filter

Legend

Water Treatment Plants Sampled for PFAS

- Detection Above Action Level
- Detection Below Action Level
- Sampled: No Detection

Filter

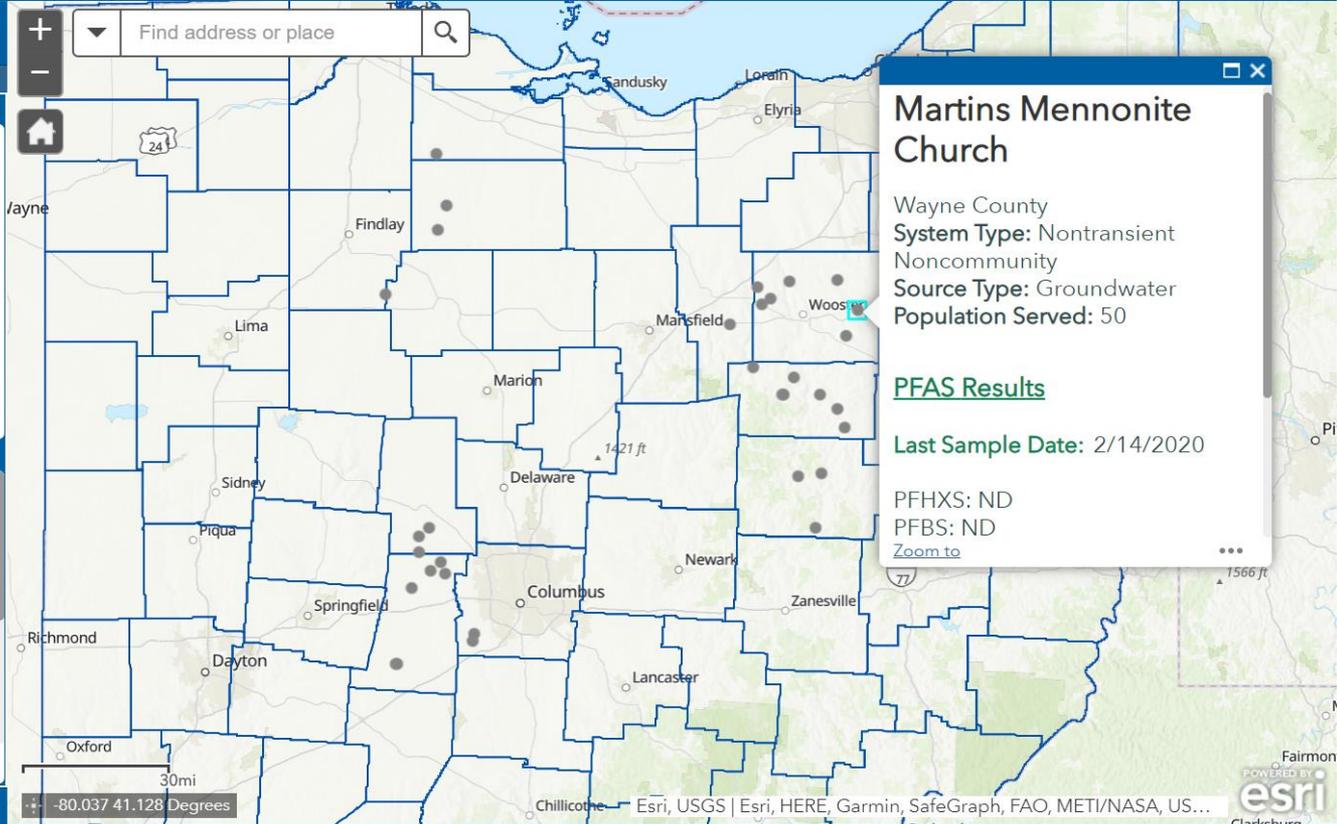
County

COUNTY is

- empty -

PFAS Results

PFAS Result is



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Follow-up Sampling

- Finished water detections above the reporting limit
 - quarterly monitoring for at least 1 year
- Confirmed finished water detections above the Action Level
 - monthly monitoring for at least 1 year
- Ohio EPA is planning to conduct follow-up monitoring pending funding approval

Consumer Confidence Report (CCR)

- PFAS detections are required to be reported the system's next CCR
- OEPA will provide template language and specific instructions on how/where to place it in your CCR
- Purchased water systems who are notified by their wholesaler will need to include PFAS detections in the CCR

Acceptance Criteria for Alternate Data

- Recognize that some PWS are voluntarily testing their source and finished waters for PFAS
- Do not want to duplicate efforts if equivalent data are available
- Data can be accepted in the following criteria are met

Method 537 rev. 1.1 \neq Method 537.1

Acceptance Criteria for Alternate Data

Collection procedures equivalent to Ohio EPA Sampling SOP

USEPA Method 537.1 by a NELAC-certified lab or Ohio EPA approved lab

Data sheets can be provided to Ohio EPA and meets QA evaluation

Reported parameters include (at least) the same 6 parameters identified in Ohio's PFAS Action Plan

PWS allows Ohio EPA to report results on the Ohio PFAS webpage

PWS Toolkit



- Pfas.ohio.gov
 - “Public Drinking Water” tab
- Currently
 - Template letters (PWS to customers):
pre-sampling notification, results
- Developing
 - FAQ
 - Treatment white paper and other info



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PFAS Funding



- PFAS Remediation 0% loans now available
 - Structured like existing HAB loan program
 - Submit anytime
 - Treatment and source water protection measures eligible

PFAS Treatment

- Ohio EPA developing treatment factsheet and plan review requirements
- Includes short- and long-term options
- GAC and PAC
- AIX
- NF and RO
- US EPA Treatability Database
- Water Research Foundation

Resources

- The best source of information regarding the sampling effort is pfas.ohio.gov
 - Current activities, results, PWS toolkit, other resources
 - List of Ohio EPA approved labs
 - Fact Sheets (others TBD)
 - PFAS in Drinking Water
 - How to reduce your exposure to PFAS
 - PFAS and sensitive populations
 - Home treatment options
 - Overview of physicians

Contact Ohio EPA

- **DDAGW Central Office**
 - 614-644-2752
- **Your DDAGW District Inspector**
 - CDO: 614-728-3778
 - NEDO: 330-963-1200
 - NWDO: 419-352-8461
 - SEDO: 740-385-8501
 - SWDO: 937-285-6357
- **Sampling schedule and contractors**
 - Mike Proffitt, Project Contract Manager
 - 937-285-6603
mike.proffitt@epa.ohio.gov
- **PFAS treatment**
 - Ohio EPA Engineering Section
 - 614-644-2752
judy.Stottsberry@epa.ohio.gov
- **School and Daycare Administrators**
 - Bonnie Buthker 937-285-6468
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Questions?

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