



# **The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5): Small Public Water Systems Implementation**

Held October 26 and 27, 2022  
USEPA, Office of Ground Water and Drinking Water

# The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5): Small Public Water Systems Implementation

Public Meeting by Webinar

October 26, 2022

October 27, 2022 – repeated

Office of Ground Water and Drinking Water, Standards and Risk Management Division,  
Unregulated Contaminant Monitoring Branch



Office of Water

## Welcome

Melissa Simic, U.S. EPA

Office of Ground Water and Drinking Water

Standards and Risk Management Division

Unregulated Contaminant Monitoring Branch



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Agenda (Eastern Time)		
October 26		Topics
8:45-9:00am	12:45-1:00pm	Log in to the Meeting
9:00-9:05am	1:00-1:05pm	Welcome, Logistics, Agenda
9:05-9:25am	1:05-1:25pm	Overview of the UCMR Program
9:25-10:05am	1:25-2:05pm	Overview of UCMR 5
10:05-10:30am	2:05-2:30pm	UCMR 5 Contaminants, Analytical Methods, and Public Access to UCMR Data
<b>10:30-10:45am</b>	<b>2:30-2:45pm</b>	<b>Break</b>
10:45-10:50am	2:45-2:50pm	Q&A Received Via Chat Box
10:50-11:20am	2:50-3:20pm	SDWARS and UCMR 5 Reporting Requirements
11:20-11:40am	3:20-3:40pm	UCMR 5 Small PWS Sampling Kits and Sample Collection
11:40am-12:00pm	3:40-4:00pm	Q&A Received Via Chat Box




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## Webinar Tips

- **Webinar Slides**
  - Located under “Handouts” in the right navigation bar on your screen
    - Slides were also emailed to all registered participants
  - Slides contain all content that will be discussed
- **Webinar Audio**
  - Webinar lines are muted to minimize background noise (listen-only mode)
- **Webinar Support**
  - Send email to [UCMRWebinar@cadmusgroup.com](mailto:UCMRWebinar@cadmusgroup.com)
    - e.g., “I can hear you speaking, but I cannot see the slides.”



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## Questions on the Presentation

- Click on “?” in the upper part of the control panel (Figure 1) to submit questions/comments
  - Type a question in the box; click send (Figure 2)
- Submit general clarifying questions throughout the webinar
  - Questions will be answered in the question box throughout the presentation
  - Common questions will be answered after the break and at the end

Figure 1

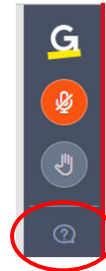
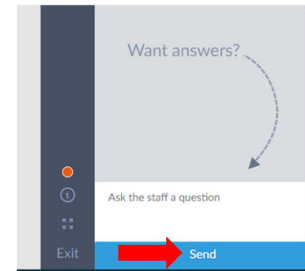


Figure 2



## PWS-Specific Questions about UCMR 5

- If you have detailed questions that apply to your PWS specifically, please email the appropriate inbox below
  - [UCMR5@glec.com](mailto:UCMR5@glec.com)
    - Schedule changes, sampling locations, applicability (e.g., PWS merged with another PWS(s), size category has changed, source water has changed), seasonal sample points
  - [UCMR@glec.com](mailto:UCMR@glec.com)
    - For immediate assistance on sampling, sampling kits, shipping

## General Meeting Information

- Purpose
  - Provide small public water systems (PWSs) (i.e., those serving 10,000 or fewer people) with the UCMR 5 requirements and the actions they must take to properly prepare for monitoring
    - Sampling schedules and locations
    - Contaminants, methods, and public access to UCMR data
    - Safe Drinking Water Accession and Review System (SDWARS)
    - UCMR 5 small PWS sampling kits and sample collection
- Q&A at the end of the webinar via the chat

## Overview of the Unregulated Contaminant Monitoring Rule Program

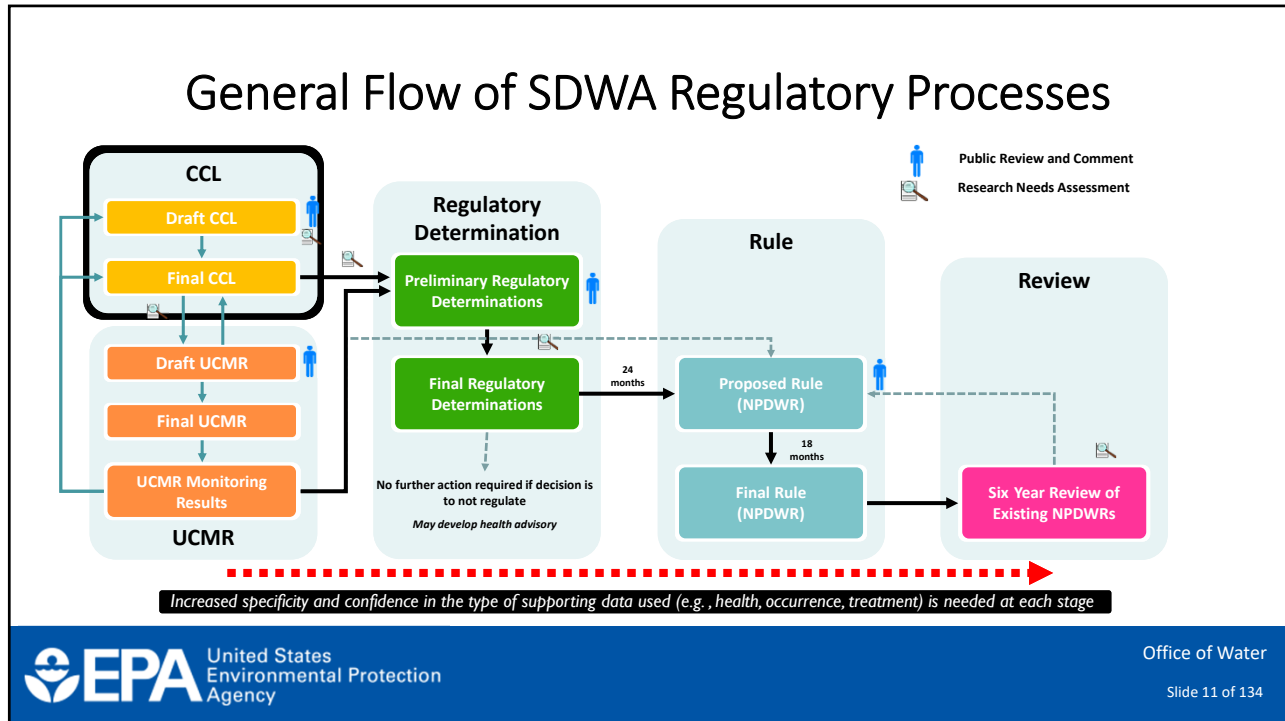
Kelsey Dailey, U.S. EPA  
Office of Ground Water and Drinking Water  
Standards and Risk Management Division  
Unregulated Contaminant Monitoring Branch

## Overview

- Regulatory background for UCMR, relationship to other Safe Drinking Water Act (SDWA) programs
  - Contaminant Candidate List (CCL)
  - The Unregulated Contaminant Monitoring Rule (UCMR)
    - UCMR objective
    - History of UCMR
  - Regulatory Determinations
  - National Primary Drinking Water Regulations (NPDWRs)
  - Six-Year Review

## The Safe Drinking Water Act (SDWA)

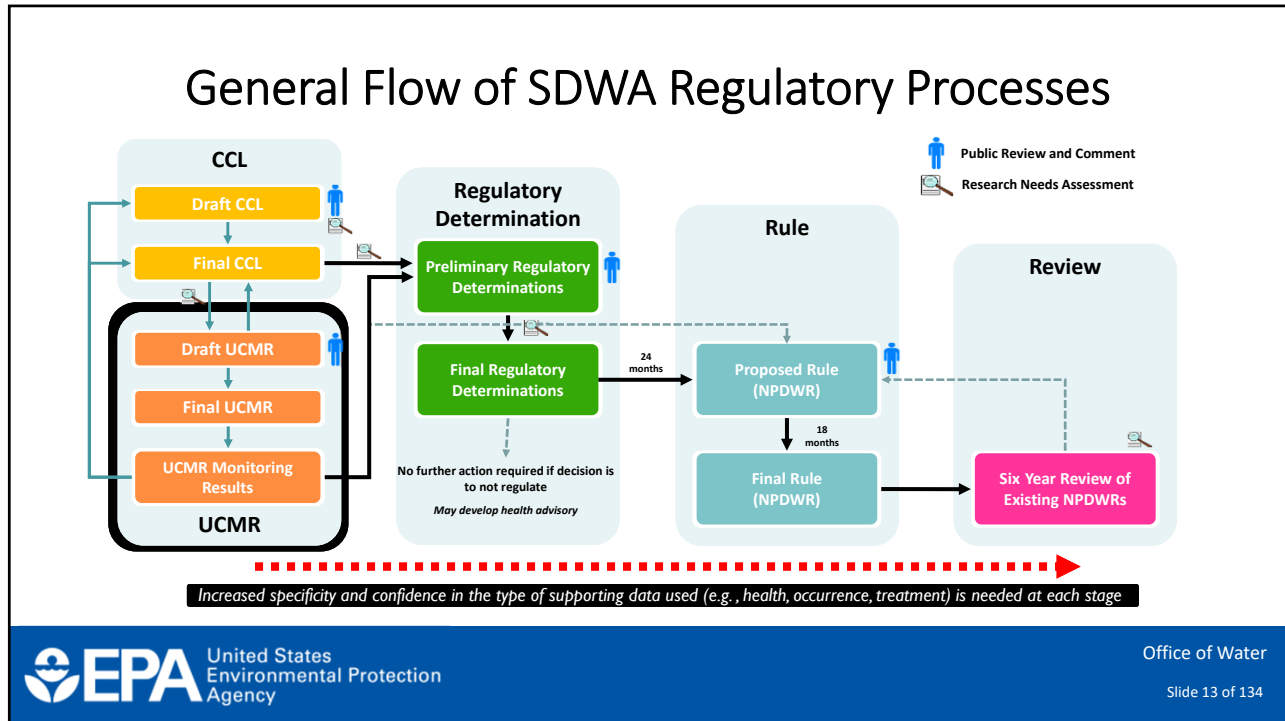
- Enacted in 1974, SDWA authorized the Environmental Protection Agency (EPA) to set enforceable health standards for contaminants in drinking water
  - National Primary Drinking Water Regulations (NPDWRs)
- The 1986 SDWA amendments were the basis for the original “UCM” program
  - State drinking water programs managed the original UCM program
  - Public water systems (PWSs) serving >500 people were required to monitor
- The 1996 SDWA amendments changed the process of developing and reviewing NPDWRs
  - CCL
  - UCMR (EPA-managed implementation)
  - Regulatory Determination
  - Six-Year Review



## The Contaminant Candidate List (CCL)

- SDWA 1412(b)(1)(B) required EPA to establish a listing of contaminants that are:
  - Not subject to any proposed or promulgated NPDWR
  - Known or anticipated to occur in PWSs
  - May require regulation under SDWA
- List must be published every 5 years

**The Final CCL 4 includes 97 chemicals or chemical groups and 12 microbes**



## The Unregulated Contaminant Monitoring Rule (UCMR)

- SDWA Section 1445(a)(2), as amended in 1996, established requirements for the UCMR Program:
  - Issue a list of no more than 30 priority unregulated contaminants in drinking water, once every 5 years
  - Require PWSs serving a population >10,000 people as well as a nationally representative sample of small PWSs serving ≤10,000 people to monitor
  - Make analytical results publicly available in the National Contaminant Occurrence Database (NCOD) for drinking water
  - EPA funds shipping and analytical costs for small PWSs
- EPA manages the program in partnership with States, Tribes, and Territories (hereafter referred to as “States”) that volunteer to assist



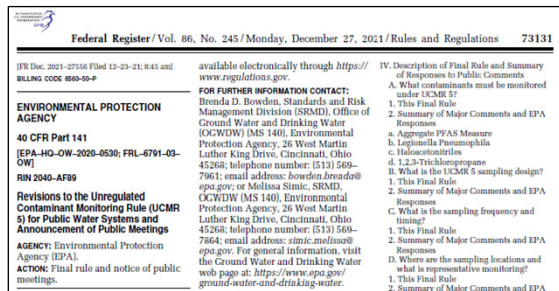
## Objective of the UCMR Program

- Collect nationally representative occurrence data for unregulated contaminants that may warrant regulation under SDWA
  - Consider data collected as part of future EPA decisions on actions to protect public health
  - Provide data to States, local governments, and to the public for their use in decisions regarding public health protection

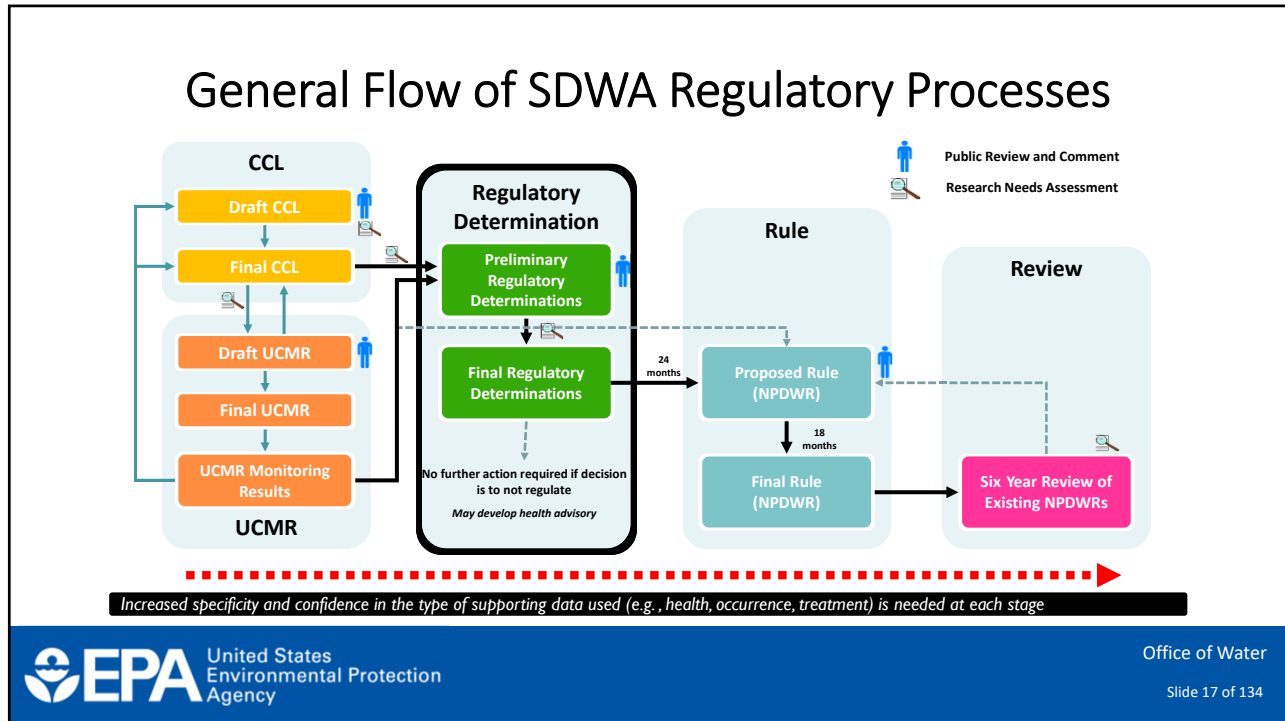
**National occurrence data publicly available:**  
<https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>

## History of UCMR

- UCMR 1 (2001-2005)
  - Published in Federal Register (FR) on September 17, 1999
- UCMR 2 (2007-2011)
  - Published in FR on January 4, 2007
- UCMR 3 (2012-2016)
  - Published in FR on April 16, 2012
- UCMR 4 (2017-2021)
  - Published in FR on December 20, 2016
  - PWSs collected samples 2018-2020
- UCMR 5 (2022-2026)
  - Published on December 27, 2021 (86 FR 73131)
  - PWSs will collect samples 2023-2025



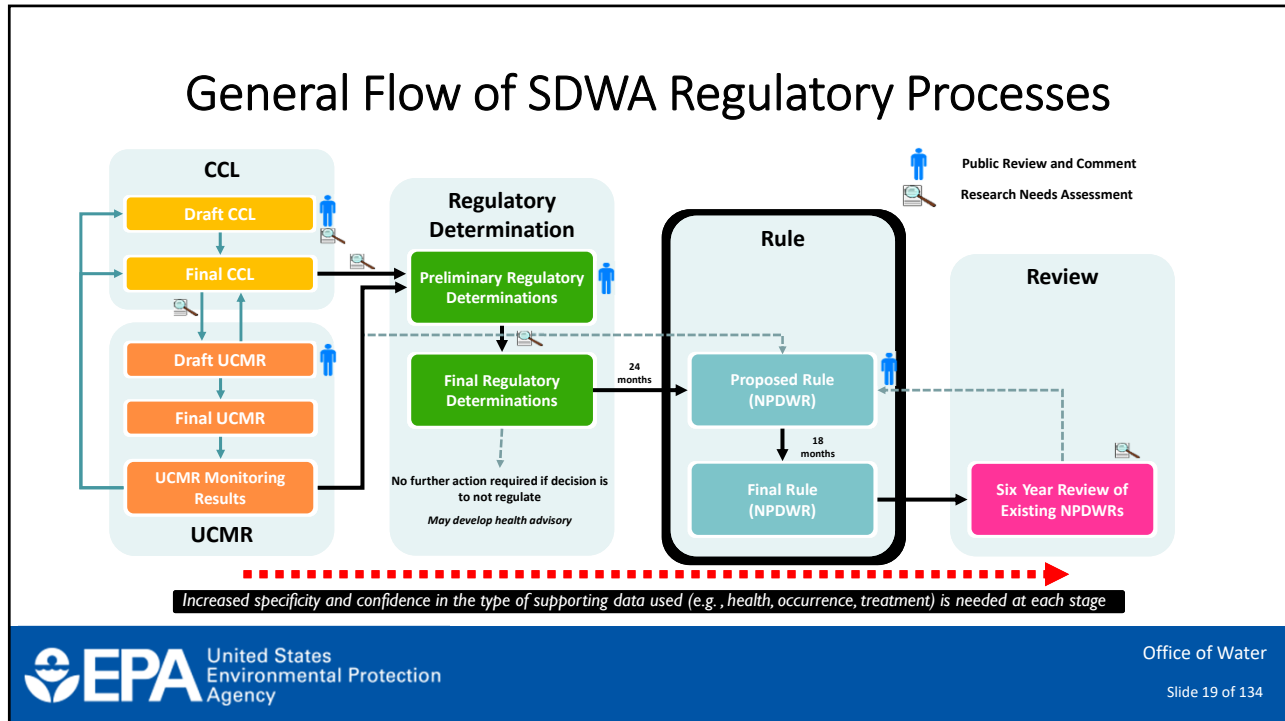
**Each new UCMR cycle is established via a revision to the rule for the ongoing/preceding cycle**



## Regulatory Determinations

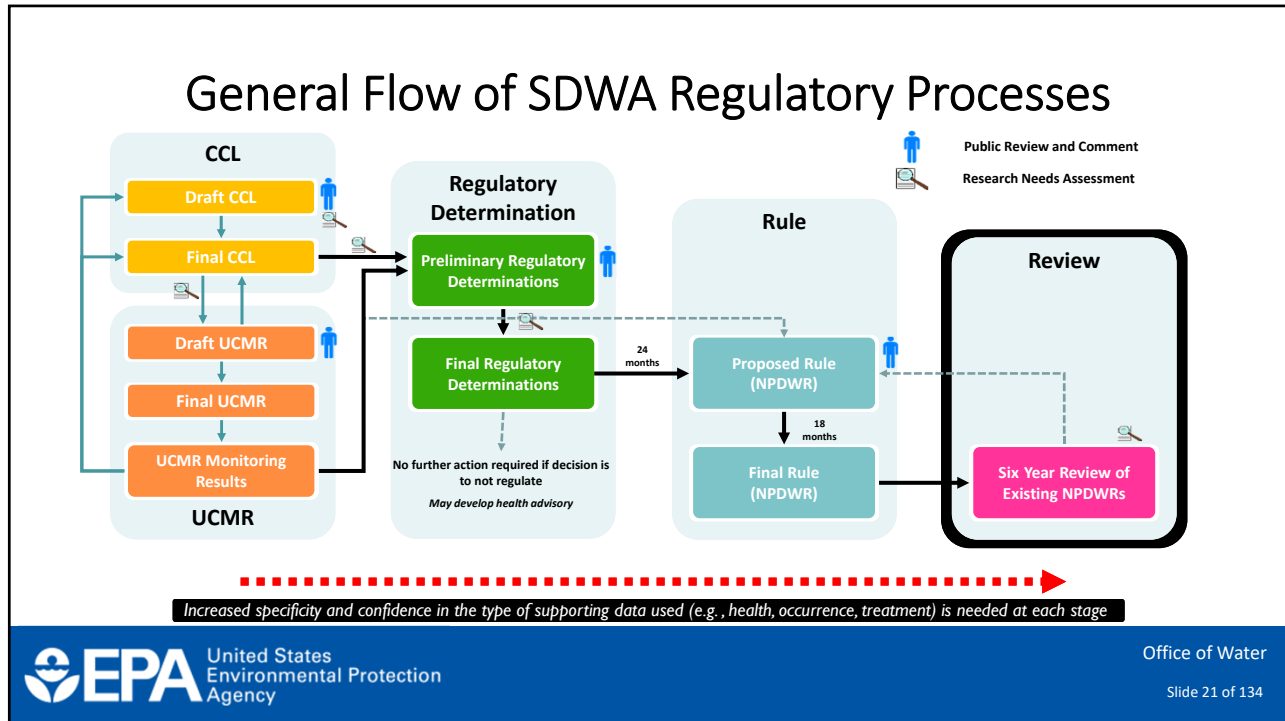
- Every five years, the Administrator shall, after notice of the preliminary determination and opportunity for public comment, for not fewer than five contaminants included on the CCL, make determinations on whether to regulate such contaminants
- SDWA requires EPA to publish a maximum contaminant level goal (MCLG) and promulgate an NPDWR for a contaminant if the Administrator determines that:
  1. The contaminant may have an **adverse effect** on the health of persons;
  2. The contaminant is **known to occur or there is a substantial likelihood** that the contaminant will occur in PWSs with a frequency and at levels of public health concern; **and**
  3. In the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by PWSs

– SDWA Section 1412(b)(1)



## National Primary Drinking Water Regulations (NPDWRs)

- For each contaminant that the Administrator determines to regulate, the Administrator shall publish MCLGs and promulgate, by rule, NPDWRs. The Administrator shall:
  - Propose the MCLG and NPDWR for a contaminant no later than 24 months after the determination to regulate
  - Publish an MCLG and promulgate an NPDWR within 18 months after the proposal thereof
- An NPDWR shall take effect three years after the date on which the regulation is promulgated. The Administrator, or a State, may allow this period to be extended up to two additional years if it determines that additional time is necessary for capital improvements



## Six-Year Review

- SDWA Section 1412(b)(9) requires review and revision, as appropriate, of each NPDWR no less often than every six years. The review includes:
  - Re-evaluation of health effects, occurrence, exposure, analytical methods, treatment feasibility, risk-balancing, and implementation issues
- Any revision of an NPDWR shall maintain, or provide for greater, protection of the health of people

## Overview of UCMR 5

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Unregulated Contaminant Monitoring Branch



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## Overview

- America's Water Infrastructure Act (AWIA)
- National Defense Authorization Act (NDAA)
- Sampling and statistical design
- PWS types
- UCMR monitoring tiers
- Notifications
- Sampling schedules
- Sampling frequency and locations
- Timeline of activities
- Implementation roles



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## America's Water Infrastructure Act (AWIA) of 2018

- SDWA was amended in 2018 by Public Law 115-270
  - AWIA Section 2021, enacted October 23, 2018
- Key changes to UCMR (SDWA Section 1445(j)):
  - Require PWSs serving 3,300 to 10,000 people to monitor
  - Ensure that only a representative sample of PWSs serving <3,300 people monitor
- Limitations:
  - Subject to the availability of appropriations and sufficient laboratory capacity
- Under the AWIA provisions, EPA continues to be responsible for all sample shipping and analytical costs associated with monitoring at PWSs serving ≤10,000 people

## National Defense Authorization Act (NDAA) for Fiscal Year 2020

- Section 7311 of the NDAA (Public Law 116-92) requires EPA to include all per- and polyfluoroalkyl substances (PFAS) in UCMR 5 for which a drinking water method has been validated by the Administrator and that are not subject to an NPDWR

## Sampling and Statistical Design

- Sampling design has been vetted with stakeholders and peer-reviewed
- Data Quality Objectives for the representative sample of PWSs
  - Provides occurrence data for unbiased national exposure estimates
  - The statistical design:
    - Stratifies by PWS size and source water type
    - Allocates PWSs across the strata proportional to population served with at least two PWSs allocated to each State

## Selection of Nationally Representative PWSs

The document “Selection of Nationally Representative Public Water Systems for the Unregulated Contaminant Monitoring Rule: 2021 Update” is available in the docket at:  
<https://www.regulations.gov/document/EPA-HQ-OW-2020-0530-0127>

- Updates the 2001 statistical design document
- Describes:
  - Refinement to the UCMR program monitoring tiers
  - Selection of representative PWSs for Assessment Monitoring and Screening Survey Monitoring
  - Changes in statistical design to address the AWIA requirements
  - Development of State Monitoring Plans that identify specific PWSs participating in UCMR and establish sampling schedules

## PWS Types

- **Public Water System (PWS):** provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year
  - **Community Water System (CWS):** PWS that supplies water to the same population year-round
  - **Non-Transient Non-Community Water System (NTNCWS):** PWS that supplies water to at least 25 of the same people at least six months per year but not year-round (e.g., schools)
  - **Transient Non-Community Water System (TNCWS)** (not generally included in UCMR sampling and not included in UCMR 5): PWS that provides water where people do not remain for long periods of time (e.g., gas stations, campgrounds)

## UCMR Monitoring Tiers

- UCMR approach relies on using one or more of 3 monitoring tiers:
  - Assessment Monitoring (primary approach to-date)
  - Screening Survey
  - Pre-Screen Testing
- Based on:
  - Availability and complexity of analytical methods
  - Laboratory capacity
  - Sampling frequency
  - Characteristics of PWSs performing the monitoring
  - Other considerations (e.g., cost/burden)
- Assessment Monitoring is the only tier under UCMR 5



## Assessment Monitoring

- Primary objective is to determine national contaminant occurrence in PWS-supplied drinking water for the purpose of estimating national population exposure
- Primary tier and largest in scope
- Generally relies on analytical methods that use more common techniques and are expected to be widely available
- Consistent with the AWIA provisions, monitoring for UCMR 5 includes:
  - Small
    - Nationally representative sample of 800 systems serving <3,300 people
    - Census of systems serving 3,300 to 10,000 people, if they are notified and confirmed by EPA
  - Large
    - Census of systems serving >10,000 people
- Sampling design is population weighted
- **Total number of systems: ~10,300**

## PWSs Expected to Participate in UCMR 5 Monitoring

System Size Category (Number of people served)	Monitoring Design (CWSs and NTNCWSs) <sup>2</sup>	Total Number of Systems per Size Category
<b>Small Systems<sup>1</sup></b> (fewer than 3,300)	Nationally representative sample	800
<b>Small Systems<sup>1</sup></b> (3,300 – 10,000)	All systems, if confirmed by EPA	5,147 <sup>3</sup>
<b>Large Systems</b> (10,001 and over)	All systems	4,364 <sup>3</sup>
<b>TOTAL</b>		<b>10,311</b>

<sup>1</sup> This requirement is based on the availability of appropriations and sufficient laboratory capacity. As EPA obtains appropriations, PWSs will be notified.

<sup>2</sup> Community Water Systems (CWSs), Non-Transient Non-Community Water Systems (NTNCWSs)

<sup>3</sup> Counts are approximate

## Frequently Asked Question



### **How does EPA determine if a PWS monitors under UCMR 5?**

The determination of whether a PWS is required to monitor under this rule is based on the type of system (e.g., community water system, non-transient non-community water system, etc.), and its retail population, as indicated by SDWIS/Fed on February 1, 2021, or subsequent corrections from the State.

## Frequently Asked Question



### **I purchase 100% of my water, am I subject to UCMR 5?**

Yes. Purchasing 100% of your water that is supplied to customers does not exclude a PWS from UCMR 5. 40 CFR 141.40(a)(2) specifies UCMR 5 applicability. PWSs that purchase any of their water supply (i.e., 0-100%) and serve more than 10,000 people are required to monitor. Systems that serve 3,300 to 10,000 people are required to monitor if appropriations are provided to EPA. Systems that have a retail population of <3,300 are only required to monitor if they are selected as part of the nationally representative sample and notified by EPA.

## All PWS Notifications

- Notifications sent to ALL PWSs subject to UCMR 5 (~10,300) informed PWSs of their UCMR requirements and included:
  - Instructions on how to access EPA's web-based data reporting system, the Safe Drinking Water Accession and Review System 5 (SDWARS 5)
  - Actions that ALL PWSs must take in SDWARS 5 to prepare for their monitoring
- Most PWSs received their notification through email from [UCMR@epacdx.net](mailto:UCMR@epacdx.net) during the week of January 18, 2022. Please check your junk/spam folders. Emails were sent to multiple contacts at each PWS, if available.
- PWSs without a valid email address were physically mailed a notification the week of February 22, 2022. The letter was addressed to the PWS, not a specific person.
- PWSs not yet registered for a SDWARS account were sent a reminder email(s) or physical notification the week of August 22, 2022
- If you have not received your notification, please contact EPA's contractor Great Lakes Environmental Center, Inc. (GLEC) at the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581

## Frequently Asked Question



### What does the notification email look like?

**From:** [ucmr@epacdx.net](mailto:ucmr@epacdx.net) <[ucmr@epacdx.net](mailto:ucmr@epacdx.net)>  
**Sent:** Sunday, January 23, 2022 10:57 AM  
**To:** [REDACTED]  
**Subject:** RE: Medium PWS Registration for U.S. EPA's Fifth Unregulated Contaminant Monitoring Rule

RE: Medium PWS Registration for U.S. EPA's Fifth Unregulated Contaminant Monitoring Rule  
[REDACTED]

Your CRK is: [REDACTED]

Dear Public Water System:

Our records indicate that your public water system (PWS) is subject to the requirements of the next [Unregulated Contaminants Monitoring Rule \(UCMR 5\)](#), published on December 27, 2021 (86 FR 73131). UCMR 5 requires certain PWSs to collect drinking water samples for 29 per- and polyfluoroalkyl substances (PFAS) and lithium analysis during a 12-month period between 2023 and 2025. This notification provides you with information to access the UCMR 5 internet-based reporting system, the Safe Drinking Water Accession and Review System (SDWARS 5), so that your account will be ready to support your pre-sampling and monitoring responsibilities.

The Safe Drinking Water Act (SDWA) requires the U.S. Environmental Protection Agency (EPA) to establish criteria for a program to monitor unregulated contaminants in drinking water and to identify contaminants to be monitored every five years. The UCMR dataset is one

## Small PWS Notifications

- As described in the final UCMR 5, EPA's ability to support monitoring at all small PWSs serving 3,300 to 10,000 people depends on additional appropriations in fiscal years 2024 and 2025
- EPA's current funding supports:
  - Monitoring at the representative national sample of 800 PWSs serving <3,300 people (PWSs notified of confirmed participation)
  - Monitoring at ~400 randomly selected PWSs serving 3,300 to 10,000 people (PWSs notified of confirmed participation)
    - Prioritizing these PWSs allows EPA to ensure a national random sample for small PWSs serving ≤10,000 people, irrespective of future appropriations
  - Monitoring at PWSs serving 3,300 to 10,000 people with sampling scheduled in 2023
    - These PWSs received the second notification either through SDWARS (if already registered), email, or physical mailing the week of June 20, 2022
    - The remaining PWSs will be notified approximately 6 months prior to their scheduled sampling year to confirm their participation (i.e., by July 1, 2023, for 2024 sampling and by July 1, 2024, for 2025 sampling)

## Frequently Asked Question



### **Do the small PWSs have to pay for the monitoring if EPA does not receive the necessary appropriations?**

No. If EPA does not receive appropriations to support the full scope of UCMR small system monitoring, EPA will reduce the scope of that monitoring for the PWSs serving 3,300 to 10,000 people.

## Sampling Schedules

- EPA developed schedules for all PWSs
- Partnering States had opportunity to review and modify schedules for PWSs during review of State Monitoring Plans
- Small PWSs may request that EPA modify their schedule by contacting EPA’s implementation contractor GLEC at the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581

## Sampling Frequency and Locations

- PWSs will be required to collect samples based on the traditional UCMR sampling frequency and timeframe
- UCMR 5 samples will be collected at non-emergency entry points to the distribution system (EP or EPTDS) for all contaminants (finished water)

Water Source	Timeframe	Frequency
Surface water, ground water under the direct influence of surface water, or mixed sources systems	Year-Round	Systems must monitor 4 times during a consecutive 12-month monitoring period. Sample events must occur 3 months apart.
Ground water systems	Year Round	Systems must monitor 2 times during a consecutive 12 month monitoring period. Sample events must occur 5 7 months apart.

## Frequently Asked Question



### I receive water from another water system via a consecutive connection. Where should I take my entry point to the distribution system (EPTDS) sample?

EPA advises samplers to collect from the closest location to the EPTDS that can be readily, safely, and consistently accessed. The PWSs should contact the UCMR Message Center ([UCMR5@glec.com](mailto:UCMR5@glec.com)) with additional questions/concerns.

## Timeline of Activities

The UCMR 5 Proposed Rule was published March 11, 2021 (86 FR 13846) and the Final Rule was published **December 27, 2021** (86 FR 73131)

2022	2023	2024	2025	2026
<p>Pre-sampling Activities by EPA, States</p> <p>Pre-sampling Activities by PWSs</p> <ul style="list-style-type: none"> <li>PWSs register for a SDWARS account to provide contact information, sampling location inventory, shipping address, Zip Code(s), and data element responses</li> </ul>	<p>← Sampling Period →</p> <p>EPA, State Implementation Activities</p> <p>PWS Sample Collection, Laboratory Analysis, Reporting (Approximately 1/3 of PWSs in each year)</p>			<p>Post-sampling Activities by PWSs, Laboratories</p> <ul style="list-style-type: none"> <li>PWSs complete resampling, as needed</li> <li>Laboratories conclude data reporting</li> </ul> <p>Post-sampling Activities by EPA</p> <ul style="list-style-type: none"> <li>Complete upload of UCMR 5 data to NCOD</li> </ul>

## EPA Implementation Roles

- **Small PWS support:**
  - Maintain laboratory and implementation contracts to support UCMR
  - Compile contact and inventory information
  - Manage sample kit distribution and tracking
  - Fund costs associated with shipping and analyses
  - Engage PWSs and, in some cases, partnering States to collect samples
  - Coordinate sample analyses with contracted laboratories
  - Examine sample results along with quality control (QC) data and make results available to the respective State and PWS via SDWARS
  - Report data to NCOD

## EPA Implementation Roles

- **State, PWS, and Laboratory support:**
  - Review and track rule applicability and PWS sampling progress
  - Coordinate Laboratory Approval Program
  - Provide technical support
  - Coordinate outreach
  - Lead compliance assistance

## Extended UCMR Implementation Team

- EPA Office of Ground Water and Drinking Water (OGWDW)
  - Lead organization for direct-implementation of rule
- EPA Regional Offices
  - Coordinate State Partnership Agreements
  - Assist States and PWSs with UCMR requirements, compliance assistance, and enforcement
- Partnering States
  - Support various aspects of implementation based on State-specific interest

## States' Role in the UCMR Program

- Participation by States is voluntary and documented via Partnership Agreements
- States help EPA implement the UCMR program and ensure high data quality
- Partnership Agreement activities can include any or all of the following:
  - Review and revise State Monitoring Plans
  - Provide inventory and contact information for small and large PWSs
  - Provide compliance assistance (e.g., notify and instruct systems)
  - Collect samples
  - Other

UCMR 5 is the highest “partnered” cycle. Thank you for the large amount of State-provided data.



## Small PWS Responsibilities

- Register for a SDWARS account
- Complete pre-sampling activities in SDWARS by December 31, 2022
- Collect and ship samples according to the monitoring schedule in SDWARS using the sampling kits and materials provided by EPA

## UCMR 5 Contaminants, Analytical Methods, and Public Access to UCMR Data

Elizabeth Hedrick, U.S. EPA  
Office of Ground Water and Drinking Water  
Standards and Risk Management Division  
Unregulated Contaminant Monitoring Branch

## Overview

- Contaminant Selection
  - “Information Compendium for Contaminants for the Final Unregulated Contaminant Monitoring Rule (UCMR 5)”
- UCMR 5 Contaminants
  - Analytical methods
  - Minimum reporting levels (MRLs)
  - Health information
- National Contaminant Occurrence Database (NCOD) and Data Summary
- Consumer Confidence Reports (CCRs)
- Public Notification Requirements

## Information Compendium for Contaminants

- Published December 2021 (EPA 815-B-21-009)
- Provided supporting information for the 30 UCMR 5 contaminants
- Used data sources from the Contaminant Candidate List (CCL) program to inform
  - Background and Use
  - Health Effects
  - Occurrence in Water
  - Production, Release, and Usage
  - Persistence and Mobility
- Outlined the contaminant prioritization process
- Summarized the data sources reviewed
- Included a comprehensive list of the other contaminants that were considered

The document “Information Compendium for Contaminants for the Final Unregulated Contaminant Monitoring Rule (UCMR 5)” is available in the docket at:

<https://www.regulations.gov/document/EPA-HQ-OW-2020-0530-0126>

## UCMR 5 Contaminants: 29 PFAS + Lithium

EPA Method 533 (PFAS monitored under UCMR 3 are in bold)			
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	Perfluorohexanoic acid (PFHxA)
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Hexafluoropropylene oxide dimer acid (HFPO-DA) ("GenX chemical")	<b>Perfluorohexanesulfonic acid (PFHxS)</b>
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	Perfluoroheptanesulfonic acid (PFHpS)	<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>Perfluorononanoic acid (PFNA)</b>
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorodecanoic acid (PFDA)	<b>Perfluorooctanesulfonic acid (PFOS)</b>
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	Perfluoropentanoic acid (PFPeA)	Perfluorododecanoic acid (PFDoA)	<b>Perfluorooctanoic acid (PFOA)</b>
Perfluoro-3-methoxypropanoic acid (PFMPA)	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<b>Perfluoroheptanoic acid (PFHpA)</b>	Perfluoroundecanoic acid (PFUnA)
Perfluoro-4-methoxybutanoic acid (PFMBA)			
PFAS Analytes Unique to EPA Method 537.1			
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)
EPA Method 200.7 or Alternate SM 3120 B or ASTM D1976 20			
Lithium			



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533<sup>1</sup> (SPE LC/MS/MS)

Location: EPTDS<sup>2</sup>

Analyte	CASRN <sup>3</sup>	MRL <sup>4</sup>	Health Information
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.005 µg/L	No EPA health assessment
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	0.005 µg/L	No EPA health assessment
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	0.003 µg/L	No EPA health assessment
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	0.005 µg/L	No EPA health assessment
4,8-dioxa-3H-perfluorononanoic acid (ADONA) <sup>5</sup>	919005-14-4	0.003 µg/L	No EPA health assessment

<sup>1</sup> Determination of PFAS in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry, November 2019

<sup>2</sup> Entry Point to the Distribution System

<sup>3</sup> Chemical Abstracts Service Registry Number

<sup>4</sup> Minimum Reporting Level

<sup>5</sup> 4,8-dioxa-3H-perfluorononanoic acid is the parent acid form of the ammonium salt



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533 (SPE LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.002 µg/L	No EPA health assessment
hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX chemicals)	13252-13-6	0.005 µg/L	EPA Lifetime Health Advisory (final) <sup>1</sup> : 0.01 µg/L EPA Toxicity Value <sup>2</sup> : Chronic Reference Dose (RfD) = 0.000003 mg/kg-day
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	0.02 µg/L	No EPA health assessment
perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	0.003 µg/L	No EPA health assessment

<sup>1</sup> [Drinking Water Health Advisory: Hexafluoropropylene Oxide \(HFPO\) Dimer Acid and HFPO Dimer Acid Ammonium Salt, Also Known as "GenX Chemicals"](#), June 2022

<sup>2</sup> [Final Human Health Toxicity Values for Hexafluoropropylene Oxide \(HFPO\) Dimer Acid and Its Ammonium Salt, Also Known As "GenX Chemicals"](#), 2021



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533 (SPE LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	0.004 µg/L	No EPA health assessment
perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	0.003 µg/L	No EPA health assessment
perfluorobutanesulfonic acid (PFBS)	375-73-5	0.003 µg/L	EPA Lifetime Health Advisory (final) <sup>1</sup> : 2 µg/L EPA Toxicity Value <sup>2</sup> : Chronic RfD = 0.0003 mg/kg-day (thyroid)
perfluorobutanoic acid (PFBA)	375-22-4	0.005 µg/L	EPA Integrated Risk Information System (IRIS) assessment in process <sup>3</sup>

<sup>1</sup> [Drinking Water Health Advisory: Perfluorobutane Sulfonic Acid and Related Compound Potassium Perfluorobutane Sulfonate](#), June 2022

<sup>2</sup> [Human Health Toxicity Values for Perfluorobutane Sulfonic Acid and Related Compound Potassium Perfluorobutane Sulfonate](#), October 2021

<sup>3</sup> [PFBA IRIS assessment in process](#)



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533 (SPE LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
perfluorodecanoic acid (PFDA)	335-76-2	0.003 µg/L	EPA IRIS assessment in process <sup>1</sup>
perfluorododecanoic acid (PFDoA)	307-55-1	0.003 µg/L	No EPA health assessment
perfluoroheptanesulfonic acid (PFHpS)	375-92-8	0.003 µg/L	No EPA health assessment
perfluoroheptanoic acid (PFHpA)	375-85-9	0.003 µg/L	No EPA health assessment
perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.003 µg/L	ATSDR <sup>2</sup> : Minimal Risk Level = 0.00002 mg/kg-day (intermediate duration); drinking water concentrations = 0.517 µg/L (adult) and 0.140 µg/L (child) EPA IRIS assessment in process <sup>3</sup>

<sup>1</sup> [PFDA IRIS assessment in process](#)

<sup>2</sup> Agency for Toxic Substances and Disease Registry (ATSDR), 2021: "Toxicological Profile for Perfluoroalkyls"

<sup>3</sup> [PFHxS IRIS assessment in process](#)



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533 (SPE LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
perfluorohexanoic acid (PFHxA)	307-24-4	0.003 µg/L	EPA IRIS assessment in process <sup>1</sup>
perfluorononanoic acid (PFNA)	375-95-1	0.004 µg/L	ATSDR <sup>2</sup> : Minimal Risk Level = 0.000003 mg/kg-day (intermediate duration); drinking water concentrations = 0.078 µg/L (adult) and 0.021 µg/L (child) EPA IRIS assessment in process <sup>3</sup>
perfluoropentanesulfonic acid (PFPeS)	2706-91-4	0.004 µg/L	No EPA health assessment
perfluoropentanoic acid (PFPeA)	2706-90-3	0.003 µg/L	No EPA health assessment
perfluoroundecanoic acid (PFUnA)	2058-94-8	0.002 µg/L	No EPA health assessment

<sup>1</sup> [PFHxA IRIS assessment in process](#)

<sup>2</sup> Agency for Toxic Substances and Disease Registry (ATSDR), 2021: "Toxicological Profile for Perfluoroalkyls"

<sup>3</sup> [PFNA IRIS assessment in process](#)



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## Per- and Polyfluoroalkyl Substances (PFAS)

### EPA Method 533 (SPE LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.004 µg/L	EPA Lifetime Health Advisory (interim) <sup>1</sup> : 0.00002 µg/L Draft Chronic RfD = 7.9 x 10 <sup>-9</sup> mg/kg-day Health Canada <sup>2</sup> : MAC = 0.6 µg/L ATSDR <sup>3</sup> : Minimal Risk Level = 0.000002 mg/kg-day (intermediate duration); drinking water concentrations = 0.052 µg/L (adult) and 0.014 µg/L (child)
perfluorooctanoic acid (PFOA)	335-67-1	0.004 µg/L	EPA Lifetime Health Advisory (interim) <sup>4</sup> : 0.000004 µg/L Draft Chronic RfD = 1.5 x 10 <sup>-9</sup> mg/kg-day Health Canada <sup>2</sup> : MAC = 0.2 µg/L ATSDR <sup>3</sup> : Minimal Risk Level = 0.000003 mg/kg-day (intermediate duration); drinking water concentrations = 0.078 µg/L (adult) and 0.021 µg/L (child)

<sup>1</sup> INTERIM Drinking Water Health Advisory: Perfluorooctane Sulfonic Acid (PFOS), June 2022; not federally enforceable; RfD subject to change based on current [EPA reevaluation](#) of toxicity information for PFOS

<sup>2</sup> Health Canada Guidelines for Canadian Drinking Water Quality, 2018, Maximum Acceptable Concentration (MAC); not federally enforceable

<sup>3</sup> Agency for Toxic Substances and Disease Registry (ATSDR), 2021: "Toxicological Profile for Perfluoroalkyls"

<sup>4</sup> INTERIM Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA), June 2022; not federally enforceable; RfD subject to change based on current [EPA reevaluation](#) of toxicity information for PFOA



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## Per- and Polyfluoroalkyl Substances (PFAS)

### Using EPA Method 537.1<sup>1</sup> (LC/MS/MS)

Location: EPTDS

Analyte	CASRN	MRL	Health Information
n-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	0.005 µg/L	No EPA health assessment
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	0.006 µg/L	No EPA health assessment
perfluorotetradecanoic acid (PFTA)	376-06-7	0.008 µg/L	No EPA health assessment
perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.007 µg/L	No EPA health assessment

<sup>1</sup> Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS), Version 2.0, March 2020



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## Lithium (Metal/Pharmaceutical)

EPA Method 200.7<sup>1</sup> (ICP-AES), SM 3120 B<sup>2</sup>, ASTM D1976-20<sup>3</sup>

Location: EPTDS

Analyte	CASRN	MRL	Health Information
lithium	7439-93-2	9 µg/L	EPA Draft CCL 5 Health Reference Level <sup>4</sup> = 10 µg/L EPA PPRTV <sup>5</sup> : p-RfD = 0.002 mg/kg-day (Chronic and Subchronic); lower bound of the therapeutic serum concentration range selected as basis

<sup>1</sup> Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry, Revision 4.4., 1994

<sup>2</sup> Standard Methods (SM) 3120 B (2017) or SM Online 3120 B-99 (1999 [Revised December 14, 2020])

<sup>3</sup> ASTM International (ASTM) D1976-20, 2020

<sup>4</sup> Draft CCL 5 Contaminant Information Sheets, 2021; non-cancer health value; not federally enforceable

<sup>5</sup> EPA Provisional Peer-Reviewed Toxicity Value (PPRTV), 2008



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## EPA Lifetime Health Advisories

- Identify levels to protect all people, including sensitive populations and life stages, from adverse health effects resulting from exposure throughout their lives to contaminants in drinking water
  - Calculated to offer a margin of protection against adverse health effects
  - Take into account other potential sources of exposure (e.g., food, air, consumer products)
- Non-enforceable and non-regulatory
  - Provide technical information for PWSs, States, and public officials on health effects, analytical methods, and treatment technologies
- For more information on EPA health advisories, visit:
  - <https://www.epa.gov/sdwa/drinking-water-health-advisories-has>



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## EPA Lifetime Health Advisories for PFAS

- For more information on PFAS: <https://www.epa.gov/pfas/pfas-explained>
- For questions and answers on the interim (PFOA, PFOS) and final (GenX chemicals, PFBS) EPA lifetime health advisories published in June 2022: <https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs>
  - Fact Sheet for PWSs: <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-water-system.pdf>
  - Fact Sheet for Communities: <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf>

## NCOD and Data Summary Document

- After UCMR 5 monitoring starts, EPA will update the NCOD and publish a “Data Summary” **approximately quarterly** at the link below
- The Data Summary will summarize the NCOD results at a national level (e.g., the number of PWSs with results above the MRL), provide data field definitions, and tabulate health-based information from EPA risk assessments for the UCMR 5 contaminants alongside MRLs to help inform interpretation of results
  - Health-based reference values (e.g., EPA lifetime health advisory values) are reported as concentrations in water, if available, or reference doses
  - MRLs are the lowest concentrations that laboratories can report for a UCMR 5 contaminant
- EPA will continue to look for ways to improve the document to make sure we are providing stakeholders with the most appropriate information

**National occurrence data publicly available:**

<https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>



## Public Access to UCMR Results

- Annual Consumer Confidence Reports (CCRs)
  - Required by 40 CFR §141.153(d)(7) **for community water systems (CWSs)**
    - **Detected unregulated contaminants**, for which monitoring is required: the table(s) must contain the average and range at which the contaminant was detected (i.e., measured  $\geq$  the UCMR MRL). The report may include a brief explanation of the reasons for monitoring for unregulated contaminants
    - **Example language:** Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted
  - For additional information: <https://www.epa.gov/ccr>

## Public Access to UCMR Results

- Public Notification
  - Required by §141.207 **for all PWSs** (CWSs and NTNCWSs subject to UCMR)
    - PWSs must notify persons served of the availability of the results no later than 12 months after monitoring results are known
    - Follows Tier 3 public notice §141.204(c), (d)(1), and (d)(3)
    - Special requirement notice must identify a person and the telephone number to contact for information on monitoring results
    - CWSs may include their public notice within their CCRs
    - For additional information: <https://www.epa.gov/dwreginfo/public-notification-rule>
  - PWSs should be aware that some States may have requirements for communicating **PFAS** monitoring results to consumers and/or reporting them to the State

## Frequently Asked Question



### Can a PWS use State-required PFAS monitoring results for UCMR 5?

PWSs may be able to conduct PFAS sampling that meets the needs of both State-required and UCMR 5 monitoring, with the understanding that UCMR 5 requirements must be met including:

- PFAS samples must be analyzed by an EPA-approved UCMR 5 laboratory using EPA Method 533 and Method 537.1 to conduct the analysis for the respective PFAS, as required under UCMR 5
- Sampling must take place during the 2023-2025 UCMR 5 monitoring period and follow UCMR 5 sampling frequency requirements
- State-required MRLs must be equal to or lower than the UCMR 5 MRLs

EPA offers flexibility for PWSs to reschedule their UCMR 5 monitoring, and PWSs may do so to coordinate it with their State-required monitoring. PWSs wishing to conduct “dual purpose” monitoring (i.e., concurrently meeting the State and UCMR 5 needs) may contact their State or EPA, as appropriate, if there are questions about whether both requirements are being met

Break  
(15 minutes)



## PWS-Specific Questions about UCMR 5

- If you have detailed questions that apply to your PWS specifically, please email the appropriate inbox below
  - [UCMR5@glec.com](mailto:UCMR5@glec.com)
    - Schedule changes, sampling locations, applicability (e.g., PWS merged with another PWS(s), size category has changed, source water has changed), seasonal sample points
  - [UCMR@glec.com](mailto:UCMR@glec.com)
    - For immediate assistance on sampling, sampling kits, shipping

## Questions on the Presentation

- Click on “?” in the upper part of the control panel (Figure 1) to submit questions/comments
  - Type a question in the box; click send (Figure 2)
- Submit general clarifying questions throughout the webinar
  - Questions will be answered in the question box throughout the presentation
  - Common questions will be answered after the break and at the end

Figure 1

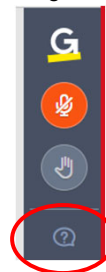
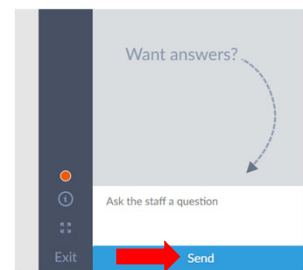


Figure 2



## Questions and Answers Received in Question Box



## SDWARS and UCMR 5 Reporting Requirements

Jillian Toothman, U.S. EPA  
Office of Ground Water and Drinking Water  
Standards and Risk Management Division  
Unregulated Contaminant Monitoring Branch

## Overview

- SDWARS 5
- Central Data Exchange (CDX) account
- Small PWS workflow
  - Notification letter
  - Updating contact/inventory/schedule/Zip Codes
- Reporting requirements and data elements
- Timing of reporting

## SDWARS 5

- Safe Drinking Water Accession and Review System (SDWARS) used by PWSs and EPA-approved UCMR 5 laboratories to report results
- Internet-based electronic reporting system that utilizes a secure access portal, the Central Data Exchange (CDX), to access
  - <https://cdx.epa.gov/>
  - <https://www.epa.gov/dwucmr/reporting-requirements-unregulated-contaminant-monitoring-rule-ucmr-5>

**All PWSs must log in to SDWARS 5.**

This is EPA's main way of communicating with PWSs regarding deadlines, inventory changes/corrections, sampling reminders, availability of analytical results, etc.

## SDWARS 5/CDX Registration

- To register to use the CDX:
  - Go to <https://cdx.epa.gov/preregistration/>
  - Enter the customer retrieval key (CRK) you received by email (sender [UCMR@epacdx.net](mailto:UCMR@epacdx.net)) or by physical mailing if no email address was available (refer to slide 35)
  - Follow the directions to complete registration
- **All PWSs** should have received a CRK
  - If you lost/did not receive a CRK, please contact EPA's implementation contractor GLEC at the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581
- **Please do this as soon as possible**
  - If you have CDX/SDWARS 5 registration issues after using your CRK , please contact the CDX Help Desk at [helpdesk@epacdx.net](mailto:helpdesk@epacdx.net) or call 1-888-890-1995

## SDWARS Workflow for Small PWSs – Overview

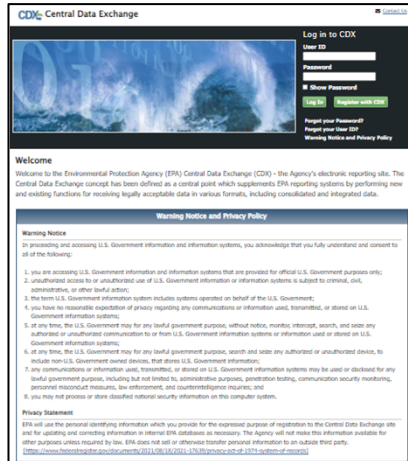
- Complete Pre-Sampling Activities Before **December 31, 2022**
  - **Step 1:** Log in to CDX
  - **Step 2:** Select SDWARS 5 and accept your PWS's UCMR 5 notification letter
  - **Step 3:** Review/edit sample locations
  - **Step 4:** Confirm/add physical shipping address for sampling kits (not a P.O. Box)
  - **Step 5:** Add/edit Zip Code(s) served
  - **Step 6:** Review sampling schedule
  - **Step 7:** Respond to specific UCMR 5 data elements
  - **Step 8** (optional): Nominate additional user(s) for your PWS

### SDWARS 5 Walkthrough Video for Small PWSs

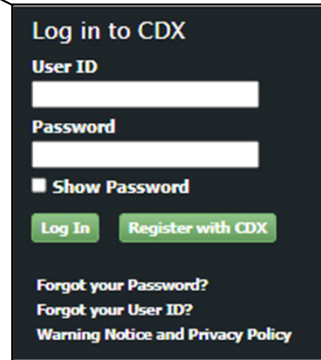
Includes additional information for completing your pre-sampling activities in SDWARS

<https://www.youtube.com/watch?v=2gacQ4Gle7I>

## 1. Log in to CDX



<https://cdx.epa.gov/>



## 2. Select SDWARS 5 and Accept Notification Letter

- To read and accept your notification letter, you must select SDWARS 5
  - Your PWS's notification letter should automatically open
  - Contains additional details about UCMR 5 monitoring and reporting requirements
- Status of acceptance of notification is tracked in SDWARS 5
  - You can download or print the letter to keep as a record

## 2a. Select SDWARS 5

The screenshot shows the EPA CDX Central Data Exchange interface. At the top, there is a navigation bar with links for Home, About, Recent Announcements, Terms and Conditions, FAQ, Help, and Virtual Assistant. Below this is the CDX logo and the text 'Central Data Exchange'. On the right, there is a 'Contact Us' link and a login status 'Logged in as JSHUTSON (Log out)'. Below the navigation bar are tabs for MyCDX, Inbox, My Profile, Reg Maint, Submission History, and Payment History. The main content area is divided into two sections. The left section is titled 'Services' and contains a table with columns for Status, Program Service Name, and Role. The table has two rows: 'UCMR4: Unregulated Contaminants Monitoring Rule 4' with role 'SDWARS4', and 'UCMR5: Unregulated Contaminants Monitoring Rule 5' with role 'SDWARS5'. The 'SDWARS5' role is highlighted with a red box, and a red arrow points to it. The right section is titled 'CDX Service Availability' and contains a link 'See the status for all program services'. Below this is a 'News and Updates' section with the text 'No news/updates.'

## 2b. Proceed to Notification Letter

The screenshot shows the EPA CDX Central Data Exchange interface with the 'Application Profile Settings' dialog box open. The dialog box has a title 'Application Profile Settings' and contains the following fields: 'Organization Name' (with a dropdown menu), 'PWS Name' (with a dropdown menu and highlighted in yellow), 'Program Client ID' (with a dropdown menu), and 'PWS Identification Number' (with a dropdown menu and highlighted in yellow). Below these fields is the 'Program' section, which shows 'UCMR5'. At the bottom of the dialog box are two buttons: 'Proceed' (highlighted with a red box and a red arrow) and 'Cancel'.

Once logged-in, your personal PWS Name and ID will appear in those sections, which are marked in yellow above. Click "Proceed" to view Notification Letter.



## 2c. Read and Accept Notification Letter

• For CDX/SDWARS 5 registration issues, please contact the UCMR5@glec.com  
 • For general questions about requirements or navigating the system, please contact the UCMR5@glec.com

Thank you in advance for your cooperation.

**Accept** **Cancel**

**Notification Letter**

> PWS Home / Notification Letter

A PWS user must accept the notification letter.

**NOTIFICATION LETTER**

RE: Large PWS Notification of the Fifth Unregulated Contaminant Monitoring Rule

Dear Public Water System:

The purpose of this letter is to notify you that your public water system (PWS) is subject to the requirements of the next Unregulated Contaminants Monitoring Rule (UCMR 5), as published on December 27, 2021 (86 FR 73131). UCMR 5 requires certain PWSs to collect drinking water samples for 29 polychlorinated biphenyls (PCBs) and tributyltin during a 12-month period between 2023 and 2025.

The Safe Drinking Water Act (SDWA), as amended in 1996, requires the U.S. Environmental Protection Agency (EPA) to establish criteria for a program to monitor unregulated contaminants in drinking water and to identify contaminants to be monitored every five years. This database is one of the primary sources of information on occurrence and population exposure EPA uses to develop regulatory decisions for contaminants in the public drinking water supply. Under UCMR 5, large community water systems and non-transient, non-community water systems (i.e., those serving more than 10,000 people as of February 1, 2021), including those that purchase all their water, are among the PWSs required to participate. Large PWSs are responsible for collecting drinking water samples, having them analyzed by a UCMR 5 approved laboratory, reporting the results to EPA using the Safe Drinking Water Accession and Review System (SDWARS 5), and notifying the public of the results.

**What must your PWS complete in SDWARS 5 before December 31, 2022?**

UCMR 5 requires you to take the following actions in SDWARS 5 prior to December 31, 2022 to prepare for sampling:

- Read and accept the UCMR 5 Notification Letter.
- Review and, if necessary, update your sample location inventory by adding missing locations, indicating ineligible locations or setting basic information about the locations.
- Add the zip code(s) associated with all customers in your service area.
- Review and, if you wish, revise your monitoring schedule assigned by the EPA.

**What must your PWS do during UCMR 5 sampling?**

Your PWS must ensure that samples are properly collected, packaged and shipped to a UCMR 5 EPA approved laboratory per your established schedule. Your PWS is also responsible for providing the data elements required for each sampling location (e.g., disinfection type, treatment information etc.) in SDWARS 5. Once your results are posted to SDWARS 5 by your EPA approved laboratory, your PWS will have 30 days to review and act upon these results. If you choose not to review these results in this time frame, they will be automatically approved for public release. After EPA review, UCMR 5 data reside in EPA's National Contaminant Occurrence Database (NOCOD). Community water systems must inform their consumers of UCMR 5 monitoring results in their Consumer Confidence Report (see 40 CFR 141.153(c)(7)). Non-transient, non-community water systems required to monitor for UCMR 5 must inform their consumers of the availability of monitoring results for Tier 3 Public Notice (see 40 CFR 141.207).

**Questions?**

- For more information about the program, please review the UCMR 5 Website.
- For CDX/SDWARS 5 registration issues, please contact the CDX Help Desk at [helpdesk@cedarcx.net](mailto:helpdesk@cedarcx.net) or call 1-888-855-1995.
- For general questions about requirements or navigating SDWARS, please contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581.

Thank you in advance for your cooperation.

**Accept** **Cancel**



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## 3. Review/Edit Inventory

**EPA INVENTORY SCHEDULE/DATA ELEMENTS REVIEW DATA SHIPPING ADDRESSES ZIP CODES**

**Inventory**

> PWS Home / Inventory

Please ensure all required sample locations for UCMR 5 are included in your inventory below. This includes all entry points to the distribution system.

In some cases, your State/Primacy Agency provided inventory on your behalf. Please review each sample location below. To edit facility and sample point name click the Pencil icon on the far-right side of the page. After reviewing your inventory, please select a response under the Correct? drop-down menu. If Active Location?, Fac ID, Fac Type, Water Type, SP ID and/or SP Type needs to be edited, please select No, it is not from the Correct? drop-down menu for a location and select Save. Please contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581 for assistance with completing your corrections and/or additions.

Important: If the sampling location information is correct, please select Yes, this is correct from the Correct? drop-down menu and select Save so EPA knows you have reviewed that location.

To sort inventory, use the individual headers by clicking on them (e.g., Active Location, Facility ID, Facility Name, etc.) or filter for inventory using the Filter search box. To filter, enter a specific identifier (e.g., sample point ID, Facility ID) in the Filter search box or enter a partial identifier (e.g., Searching "ABC" will return all values that contain ABC).

To download or print the inventory list, use the icons next to the Filter search box.

Filter:

Active Location?	Fac ID	Fac Name	Fac Type	Water Type	SP ID	SP Name	SP Type	Correct?
No	00001	EP/GW 001	TP	GW	SP00001	Sample Point for EP/GW 001	EP	<input type="text"/>
Yes	00002	EP/SW 002	SS	SW	SP00002	Sample Point for EP/SW 002	EP	<input type="text"/>

Showing 1 to 2 of 2 entries

- Identify/confirm all entry points to your distribution system (EP)
- Review your pre-populated EP locations using information provided by your State/Primacy Agency to EPA in late 2021
- Edit facility and sample point (SP) names, if necessary
- Using the fields provided, mark whether each location information is correct/incorrect
- If information is incorrect for a location, or your PWS does not have pre-populated locations, contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581 for assistance





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### 3. Review/Edit Inventory



• Review Inventory

Active Location?	Fac ID	Fac Name	Fac Type	Water Type	SP ID	SP Name	SP Type	Correct?	
No	00001	EP/GW 001	TP	GW	SP00001	Sample Point for EP/GW 001	EP	Yes, this is correct	
Yes	00002	EP/SW 002	SS	SW	SP00002	Sample Point for EP/SW 002	EP	No, this is not	

Showing 1 to 2 of 2 entries

**Save**

• Edit Inventory

Active Location?	Fac ID	Fac Name	Fac Type	Water Type	SP ID	SP Name	SP Type	Correct?	
No	00001	EP/GW 001	TP	GW	SP00001	Sample Point for EP/GW	EP	Yes, this is correct	
Yes	00002	EP/SW 002	SS	SW	SP00002	Sample Point for EP/SW 002	EP	No, this is not	

Showing 1 to 2 of 2 entries

**Save**

### 4. Confirm/Add Physical Shipping Address for Sampling Kits

#### Shipping Addresses

> PWS Home / Shipping Addresses

**i** Your PWS is required to provide a physical shipping address for the sampling kits (no P.O. Box). In some cases, your State/Primacy Agency provided a list of potential shipping address(es). Please select the correct shipping address below. If a shipping address is not provided below or none are correct, please click **Add Shipping Address**.

An EPA contractor will use the preferred shipping address to ship the sampling kits to you (typically a couple weeks prior to your scheduled sampling month).

To sort addresses, use the individual headers by clicking on them (e.g., Preferred, Attention, Street Line 1, etc) or filter for data using the Filter search box. To filter, enter a specific identifier (e.g., Street Line 1, Suite/Rm/Fir) in the Filter search box or enter a partial identifier (e.g., Searching "ABC" will return all values that contain ABC.)

Show  entries Filter:

Preferred?	Attention	Street, line 1	Suite/Rm/Fir	Street, line 2	City	State	Zip	Telephone
No data available in table								

Showing 0 to 0 of 0 entries Previous Next

**Add Shipping Address**

## 4. Confirm/Add Physical Shipping Address for Sampling Kits

- Do not use a P.O. Box

## 5. Add/Edit Zip Code(s) Served

- Add Zip Codes associated with all customers served by your PWS
- Click "Add Zip Codes" for pop-up window

## Frequently Asked Question



### **Why do I need to report Zip Codes for all areas being served water by my PWS?**

EPA will continue to collect U.S. Postal Service Zip Code(s) for UCMR 5, as collected under UCMR 3 and UCMR 4, to support potential assessments of whether or not certain communities are disproportionately impacted by particular drinking water contaminants. The specification for this one-time reporting requirement is established in 40 CFR 141.35(c)(1) and (d)(1) for large and small systems, respectively.

## 6. Review Sampling Schedule

- EPA initially drafts PWS schedule
- Partnered State had opportunity to review and modify
- Small PWSs must request EPA approval for any schedule changes
  - Please contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581 for assistance

## 6. Review Sampling Schedule

**Schedule**

> PWS Home / Schedule

**For surface water (SW), ground water under the direct influence of surface water (GU), and mixed locations (MX), sampling should take place for four consecutive quarters over the course of 12 months (for a total of 4 sampling events). These sampling events should occur three months apart. For ground water (GW) locations, sampling should take place twice over the course of 12 months (for a total of 2 sampling events). These sampling events should occur five to seven months apart.**

You must have EPA approval for any schedule changes, please contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581 for assistance.

You are required to respond to five (5) Data Elements. Please select the drop-down menu on the Month/Year schedule for Sampling Event 1 (SE 1) for each location and respond to each Data Element. To select the same response for other SEs for that location, select the Data Element for the SE you want to complete, and a question will prompt you to select a response from another SE. The exclamation point button next to the Filter search box will highlight the SEs where one or more Data Elements is missing.

To sort schedule, use the individual headers by clicking on them (e.g., Facility ID, Facility Name, Sample Point ID etc.) or filter for schedule using the Filter search box. To filter, enter a specific identifier (e.g., sample point ID, Facility ID) in the Filter search box or enter a partial identifier (e.g., Searching "ABC" will return all values that begin with ABC.)

To download or print the schedule, use the icons next to the Filter search box.

Filter:

Fac ID	Fac Name	Fac Type	Water Type	SP ID	SP Name	SP Type	SE1	SE2	SE3	SE4
00002	EP/SW 002	SS	SW	SP00002	Sample Point for EP/SW 002	EP	Nov 2020	Feb 2021	May 2021	Aug 2021

Showing 1 to 1 of 1 entries

## 7. Select Responses for UCMR 5 Data Elements

Filter:

Fac ID	Fac Name	Fac Type	Water Type	SP ID	SP Name	SP Type	SE1	SE2	SE3	SE4
00002	EP/SW 002	SS	SW	SP00002	Sample Point for EP/SW 002	EP	Nov 2020	Feb 2021	May 2021	Aug 2021

Showing 1 to 1 of 1 entries

SDWARS Version 5, release: 1.0.2 (SS-SPWS-1030)

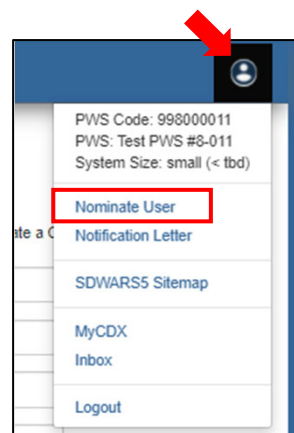
- Disinfectant Types
- Treatment Information
- Historical Information for PFAS
- Lithium Detections & Treatment
- Potential PFAS Sources

- Select appropriate responses for Disinfectant Type, Treatment Information, Historical Information for PFAS/Lithium Detections and Treatment, and Potential PFAS Sources

## 7. Select Responses for UCMR 5 Data Elements

## 8. Nominate User for Your PWS (optional)

- You may nominate other individuals to serve as representatives for your PWS using the **Nominate User** function by selecting your account/person icon in the upper right-hand corner
- A new letter will be generated, which you must provide to the nominee for use in establishing their own account



## 8. Nominate User for Your PWS (optional)

**Nominate a PWS User**

UCMR 5 User - Nominate a PWS User

Use the form below to nominate a CDX/CDXES User. You must complete every field marked with an \*. You must link Nominate to provide a CDX.

PWS Code\*

First Name\*

Last Name\*

Organization Name\*

Registrant's Work Mailing Address 1\*

Registrant's Work Mailing Address 2

City\*

State\*

Zip Code\*

Phone\*

Email\*

**Terms And Conditions**

By completing this interface, the nominator attests to the following:

- The nomination is for a user of the public water system (PWS) and nominating another individual to create, update or report Unregulated Contaminant Monitoring Rule (UCMR) data is required under the UCMR 5 provisions in the Central Data Exchange Act and specified in UCMR 5 (10/22).
- The nominee is a registered CDX/CDXES user.
- The nominee has the necessary business affiliation with the PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.
- The nominee is not a CDX/CDXES user in any other PWS.

**Privacy Statement**

We use your personal identifying information which you provide to the automated process of registration in the Central Data Exchange (CDX) and for updating and viewing UCMR 5 information in the CDX. We will use this information to provide you with the opportunity to report UCMR 5 information for other public water systems. We will not use this information for any other purpose. We will not use this information for any other purpose. We will not use this information for any other purpose. We will not use this information for any other purpose.

PWS Code\*

First Name\*

Last Name\*

Organization Name\*

Registrant's Work Mailing Address 1\*

Registrant's Work Mailing Address 2

City\*

State\*

Zip Code\*

Phone\*

Email\*



## 8. Nominate User for Your PWS (optional)

**Nominate a PWS User**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
(TO BE PROVIDED TO NOMINATED CDX USER ONLY)  
SENSITIVE

NOMINEE:  
January 26, 2022

Contact's Name

EPA - PWS - 998000019  Department - PWSID

Address

City, State, Zip

Contact's Name

[Nominator's Name] and U.S. Environmental Protection Agency (EPA) are providing you with the opportunity to report Unregulated Contaminant Monitoring Rule (UCMR) information for EPA and further nominate other individuals.

To obtain access to register on Central Data Exchange (CDX), you will need to enter the following unique customer retrieval key at the CDX registration site:

**830d77d4-4187-49dc-80e4-d8d6d4b471ac**



## PWS Home Page and Checklist

**PWS Home**

Use the tabs at the top of the page to access Inventory, Schedule/Data Elements, Shipping Address, and Zip Codes.

Use the person icon in the upper right corner to Nominate User, view the Notification Letter, view the SDWARS 5 Sitemap, go to MyCDX, go to Inbox or Logout.

Use the Completion Checklist to view your status on completing your reporting requirements. The buttons under Action will allow you to view your Signed Notification Letter, edit Inventory, review Shipping Address, add Zip Codes and input Data Elements.

**Notice!**  
Announcement for the role PWS: SPM GLEC

ICR#: 202111-2040-003  
 OMB#: 2040-0304

PWS ID: 990000011  
 PWS Name: Test PWS #S-011  
 System Size: < 10,000  
 Monitoring Requirements: AM

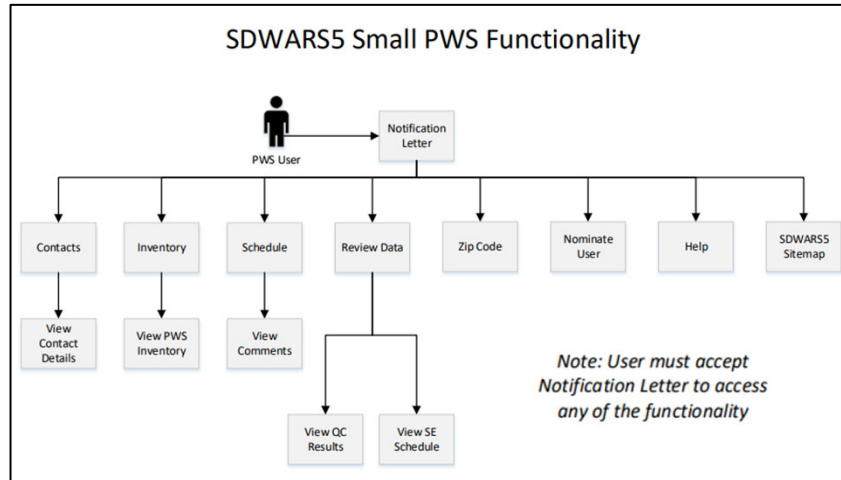
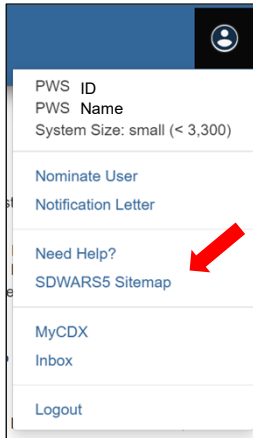
Dataset	Status	Action
Signed Notification Letter	Is Signed	<a href="#">View</a>
Inventory	Has Data	
Shipping Address	Has Data	
Zip Codes	MISSING	<a href="#">Enter</a>
Data Elements	MISSING	<a href="#">View</a>

## SDWARS Email Reminders

- CDX/SDWARS users will receive automated emails for their PWS for:
  - **Zip Code completion** (sent on a quarterly basis if incomplete)
  - **Sampling reminders** (sent the month before scheduled sample event date)
  - **Data element completion** (sent the month after sample event if incomplete)
    - Small PWSs who completed their data elements prior to their sampling year will receive a reminder to reconfirm or update responses



## SDWARS Sitemap



## Small System Reporting §141.35(d)

- Contact and Zip Code information
  - SDWARS by December 31, 2022
- Sampling location information
  - SDWARS by December 31, 2022
- Data elements
  - PWSs must report all data elements specified in §141.35(e) Table 1 in SDWARS
- Analytical results
  - Uploaded to SDWARS by EPA's contracted laboratory
  - Reviewed by EPA in SDWARS
  - Small PWSs and States will have access to results via SDWARS

## Reporting Data Elements §141.35(e)

Data Elements Reviewed by Small PWS Before Sampling Begins	Data Elements Confirmed by Small PWS at Each Sample Collection
1. Public Water System Identification (PWSID) Code	10. Disinfectant Type
2. Public Water System Name	11. Treatment Information
3. Public Water System Facility Identification Code	26. Historical Information for Contaminant Detections and Treatment
4. Public Water System Facility Name	27. Potential PFAS Sources*
5. Public Water System Facility Type	*EPA is not asking for a formal, in-depth, source water evaluation for Data Element 27. EPA recognizes that the response requires judgement and that some PWSs will have more complete information than others.
6. Water Source Type	
7. Sampling Point Identification Code	
8. Sampling Point Name	
9. Sampling Point Type Code	

- Data elements 12-25 are reported by the laboratory and are not shown in the table above
- PWSs will reconfirm or update responses to data elements 10, 11, 26, and 27 in SDWARS 5 at each sample collection
- If you have questions or need assistance providing the data elements listed above, please contact the UCMR Message Center at [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581

## Disinfectant Type - Data Element 10

All of the disinfectants/oxidants that have been added prior to and at the entry point to the distribution system.  
Please select all that apply.

**PEMB** = Permanganate

**HPXB** = Hydrogen peroxide

**CLGA** = Gaseous chlorine

**CLOF** = Offsite generated hypochlorite (stored as liquid form)

**CLON** = Onsite generated hypochlorite

**CAGC** = Chloramine (formed with gaseous chlorine)

**CAOF** = Chloramine (formed with offsite hypochlorite)

**CAON** = Chloramine (formed with onsite hypochlorite)

**CLDB** = Chlorine dioxide

**OZON** = Ozone

**ULVL** = Ultraviolet light

**OTHD** = All other types of disinfectant/oxidant

**NODU** = No disinfectant/oxidant used

## Treatment Information - Data Element 11

Treatment information associated with the sample point. **Please select all that apply.**

**CON** = Conventional (non-softening, consisting of at least coagulation/sedimentation basins and filtration)

**SFN** = Softening

**RBF** = River bank filtration

**PSD** = Pre-sedimentation

**INF** = In-line filtration

**DFL** = Direct filtration

**SSF** = Slow sand filtration

**BIO** = Biological filtration (operated with an intention of maintaining biological activity within filter)

**UTR** = Unfiltered treatment for surface water source

**GWD** = Groundwater system with disinfection only

**PAC** = Application of powder activated carbon

**GAC** = Granular activated carbon adsorption (not part of filters in CON, SFN, INF, DFL, or SSF)

**AIR** = Air stripping (packed towers, diffused gas contactors)

**POB** = Pre-oxidation with chlorine (applied before coagulation for CON or SFN plants or before filtration for other filtration plants)

**MFL** = Membrane filtration

**IEX** = Ionic exchange

**DAF** = Dissolved air floatation

**CWL** = Clear well/finished water storage without aeration

**CWA** = Clear well/finished water storage with aeration

**ADS** = Aeration in distribution system (localized treatment)

**OTH** = All other types of treatment

**NTU** = No treatment used

**DKN** = Do not know



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## Historical Information for Contaminant Detections and Treatment - Data Element 26

A yes or no answer provided by the PWS for each entry point to the distribution system

**Question:** Have you tested for the contaminant in your drinking water in the past? (finished water)

**YES** = If yes, did you modify your treatment and if so, what types of treatment did you implement? **Select all that apply.**

**PAC** = Application of powder activated carbon

**GAC** = Granular activated carbon adsorption (not part of filters in CON, SFN, INF, DFL, or SSF)

**IEX** = Ionic exchange

**NRO** = Nanofiltration and reverse osmosis

**OZN** = Ozone

**BAC** = Biologically active carbon

**MFL** = Membrane filtration

**UVL** = Ultraviolet light

**OTH** = Other

**NMT** = Not modified after testing

**NO** = Have never tested for the contaminant

**DK** = Do not know



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## Potential PFAS Sources - Data Element 27

A yes or no answer provided by the PWS for each entry point to the distribution system

**Question:** Are you aware of any potential current and/or historical sources of PFAS that may have impacted the drinking water sources at your water system?

**YES = If yes, select all that apply:**

**MB** = Military base  
**FT** = Firefighting training school  
**AO** = Airport operations  
**CW** = Car wash or industrial laundriers  
**PS** = Public safety activities (e.g., fire and rescue services)  
**WM** = Waste management  
**HW** = Hazardous waste collection, treatment, and disposal  
**UW** = Underground injection well  
**SC** = Solid waste collection, combustors, incinerators  
**MF** = Manufacturing  
**FP** = Food packaging  
**TA** = Textile and apparel (e.g., stain- and water-resistant, fiber/thread, carpet, house furnishings, leather)

**PP** = Paper  
**CC** = Chemical  
**PR** = Plastics and rubber products  
**MM** = Machinery  
**CE** = Computer and electronic products  
**FM** = Fabricated metal products (e.g., nonstick cookware)  
**PC** = Petroleum and coal products  
**FF** = Furniture  
**OG** = Oil and gas production  
**UT** = Utilities (e.g., sewage treatment facilities)  
**CT** = Construction (e.g., wood floor finishing, electrostatic painting)  
**OT** = Other

**NO** = Not aware of any potential current and/or historical sources

**DK** = Do not know



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## Timing of Reporting for Small PWSs

- Per contracts with EPA, laboratories supporting analysis of samples from small PWSs post results to SDWARS within 60 days of sample collection
- EPA will review, pay for, and approve the small PWS data
  - Viewable to PWS, State, and EPA in SDWARS
- SDWARS 5 PWS users will get a notification when analytical results are posted



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## View Small PWS Data in SDWARS

Review Data

> PWS Home / Review Data

To sort data, use the individual headers by clicking on them (e.g., Facility, Lab, Sample ID, etc) or filter for data using the Filter search box. To filter, enter a specific identifier (e.g., sample point ID, Facility ID) in the Filter search box or enter a partial identifier followed by the wildcard (%). (e.g., Searching "ABC%" will return all sample IDs that contain ABC.)

To download or print the data, use the icons next to the Filter search box.

Click on the analyte name in blue text to view Quality Control (QC) data.  
Click on the sample ID in blue text to view comments from your laboratory.

Show 50 entries Filter:

PWS ID	Facility	Sample Point	Sampling Event	Lab	Sample ID	Collection Date	Method	Analyte	Result Measure	Status
990000004	BFKBFK	SPBFKBFK	SE1	Test Lab #211	100067Q	5/1/22	533	11Cl-PF3OUdS	< MRL	PWS/EPA Approved
990000004	BFKBFK	SPBFKBFK	SE1	Test Lab #211	100067Q	5/1/22	533	4:2 FTS	< MRL	PWS/EPA Approved

## View Quality Control Data

Quality Control Results

Abbreviations in front of Analyte Names correspond to: IS - Internal Standard, Surr - Surrogate, IDA - Isotope Dilution Analogues.

Show 50 entries Filter:

QC Type	Analysis Date	Analyte Name	Recovery	Units	Acceptance Range (%)
CCCH	5/3/2022	11Cl-PF3OUdS	110	%	69.5-130.5
CCCL	5/3/2022	11Cl-PF3OUdS	105	%	49.5-150.5
CCCM	5/3/2022	11Cl-PF3OUdS	97	%	69.5-130.5
FRB	5/3/2022	11Cl-PF3OUdS	0.0006	µg/L	NA
LFB	5/3/2022	11Cl-PF3OUdS	105	%	49.5-150.5
LRB	5/3/2022	11Cl-PF3OUdS	<0.0017	µg/L	NA

Showing 1 to 6 of 6 entries Previous 1 Next

# UCMR 5 Small PWS Sampling Kits and Sample Collection

Paul Grimmett, U.S. EPA  
Office of Ground Water and Drinking Water  
Standards and Risk Management Division  
Unregulated Contaminant Monitoring Branch



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## Overview

- Sampling Kits and Additional Information
- Monitoring Review Sheets
- UCMR 5 Sampling Instructions and Video
  - Collection, packing, shipping, and Frequently Asked Questions (FAQs)
  - Tips for reducing cross-contamination
- Sample Tracking Forms



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## Sampling Kits and Additional Information

- EPA’s implementation contractor, GLEC, ships sampling kits using the PWS shipping address and inventory information provided or confirmed by the PWS in SDWARS, or obtained through Monitoring Review Sheets (MRSs)
- **Sampling kits include:**
  - Labeled sampling bottles in zip lock bags
  - Ice packs
  - Nitrile gloves
  - Prepaid shipping label
  - Sampling instructions and tips for reducing cross-contamination (See slides 110-116)
  - Sample Tracking Form to complete and ship with the samples (See slides 117-118)
- Sampling kit materials were tested during kit design to rule out PFAS contamination



## Monitoring Review Sheets

- In June and July 2022, GLEC mailed Monitoring Review Sheets (MRSs) to small PWSs scheduled to monitor in 2023 that still do not have a SDWARS account
  - MRSs allow GLEC to **confirm or obtain a shipping address and inventory information**
  - Please fill out the form in the enclosed envelope and return to GLEC or email the information to [MRS@GLEC.com](mailto:MRS@GLEC.com)

 **Monitoring Review Sheet**  
Unregulated Contaminant Monitoring Rule (UCMR5)

- Review the information below. Fill in any missing information using the examples and options listed on the instruction sheet. Cross out incorrect information and write the correct information near it.
- Return this Monitoring Review Sheet in the enclosed envelope or email to [MRS@GLEC.com](mailto:MRS@GLEC.com) by 5/27/2022

**Public Water System (PWS) Information** \_\_\_\_\_

PWS Name: \_\_\_\_\_  
 PWS ID: \_\_\_\_\_  
 Water Source: \_\_\_\_\_  
 Your PWS is scheduled to sample once in each of the following months of 2023: February and August


**Sampler Contact** (all fields required)

Name	_____
Address (no PO Boxes)	_____
City, State, Zip	_____
Phone	_____
Email	_____

**Sampling Locations** \_\_\_\_\_

Entry Point Name(s)	EP Type	Water Type

Print Name \_\_\_\_\_  
 Signature \_\_\_\_\_ Date \_\_\_\_\_

 Have questions about anything UCMR related? Contact Great Lakes Environmental Center (EPA's UCMR Contractor). We're here to help!  
 Email [MRS@GLEC.com](mailto:MRS@GLEC.com) anytime, or phone (231) 941-0216 9-5 EST, M-F.

## Sampling Instructions and Video

- **Please Note:** These instructions are specific to the UCMR 5 sampling kit for small PWSs and are **not Agency-wide PFAS sampling guidance**
- The instructions are printed out and placed in the sampling kits to assist samplers
  - Please follow the instructions included with each kit
- EPA is recording a YouTube training video that walks through sample collection
- For immediate assistance on sampling, sampling kits, and shipping, contact [UCMR@glec.com](mailto:UCMR@glec.com) or 231-525-0521



**DRAFT**



Freeze ice packs for at least 72 hours prior to sampling. Do not sample until ice packs are frozen solid.  
**Samples arriving at the lab too warm is the #1 reason for having to re-sample!**



Only sample on Monday, Tuesday or Wednesday.



Check the entry point to the distribution system sample location. Ensure that any supplies or tools needed to open and flush the tap are available.



Samples must be shipped the same day they are collected **unless they are refrigerated overnight.**  
 Arrange with FedEx to pick up your samples or plan to drop them off at a staffed FedEx Express location.

BEFORE SAMPLING



**Don't rinse out or overfill the bottles**

There are preservatives in the bottles that need to be dissolved into the sample (that's why they need to be shaken). Overfilling can dilute the preservative concentration in the bottle.



**Don't contaminate the bottles, lids, or samples**

Refer to the kit lid for additional precautions to minimize the possibility of contaminating your samples.

Do not touch the inside of the cap or bottle.

Do not touch the bottle to the faucet.

Do not place the lids in a pocket.

Set bottle lids face up on a clean surface while sampling.









**Date all sample bottles using the supplied pen**

The lab needs to know when the samples were collected so they are analyzed before they expire.

SAMPLING RULES





Put on supplied gloves (they are non-latex)

1. At the sampling location, remove bottles from bag **A**
2. Pour Reagent Water into Field Reagent Blank bottle, cap, and shake for 15 seconds.
3. Write date on bottles and place back in bag **A**


Repeat steps 1-3 with bottles in bag **B**

Dispose of gloves

Why am I doing this? The full bottle contains ultra-pure water and after transfer is referred to as a Field Reagent Blank. It will be used as a control during analysis to protect against false positives.

BAG A


BAG B






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1. If present, remove aerator, hose, tubing and/or Teflon tape from faucet.
2. Open and flush the valve for 2-5 minutes to obtain a sample representative of the water entering the distribution system. If previously calculated, a shorter period of flushing may be sufficient.
3. Reduce stream to pencil thickness.

PREPARE TO COLLECT SAMPLES

Put on a new pair of gloves


1. One at a time: uncap, fill to the shoulder, and recap bottles from bag **C**
2. Shake each bottle for 15 seconds
3. Write date on bottles and place back in bag **C**

Repeat steps 1-3 with bottles in bag **D**

Refrigerate all bottles if unable to pack and ship immediately

BAG C

BAG D




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DRAFT

Retrieve the four ice packs from your freezer and put them back in the kit. The two big ones go on the sides, and the two smaller ones go on top of the samples.






Sign and date the blue form and seal it in the ziplock bag.  
Place the ziplock bag on top of the foam box lid.  
Seal the box shut with supplied tape strips.



Find the FedEx label and stick it over the old label.  
Wait for FedEx Express to arrive if you scheduled a pickup, or drop off at a staffed FedEx location.  
This is a prepaid FedEx Priority Overnight label; you will incur no shipping expenses.

PACK & SHIP



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DRAFT

**Why must I collect these samples?**

This sampling is required by EPA for public water systems. It is not voluntary. If you are interested in learning more about the program, search for "UCMR5" online and visit EPA's UCMR homepage.

**What is being monitored for in the water samples?**

Your drinking water is being tested for PFAS compounds and lithium.

**I forgot/can't sample during my scheduled week. What should I do?**

Call Great Lakes Environmental Center at (231) 525-0521 or email UCMR@GLEC.com

**It's hot out. What should I do?**

Chill the samples in a refrigerator for a couple hours before putting them in the shipping container. Make sure the sample location on the bottles matches the sample location on the box and paperwork when you're packing the kits for shipment.


**How do I view my results?**

To view your analytical results, inventory and schedule, log into the Safe Drinking Water Accession and Review System (SDWARS) using the Central Data Exchange (cdx.epa.gov). If you do not have an account or are having trouble logging in, contact the CDX Help Desk at helpdesk@epacdx.net or call (888) 890-1995 from 8 AM to 6 PM (EST), Monday through Friday.

**If you have questions...**

Call Great Lakes Environmental Center at (231) 525-0521 or email UCMR@GLEC.com

FREQUENTLY ASKED QUESTIONS



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# Tips for Reducing Cross-Contamination

**DRAFT**

## Do not risk contaminating your samples with PFAS!

PFAS are found in thousands of products we use every day and contamination could be accidentally introduced into your samples during sampling. Follow the precautions listed below to minimize the possibility of contaminating your samples.

### Do Not


- Apply personal care products, sunscreen, or insect repellent prior to sample collection.
- Use anti-fog sprays or wipes prior to sample collection.
- Handle or use water, oil or stain resistant materials prior to sample collection (i.e., water-repellant face masks, food packaging and wrappers, Gore-Tex or Tyvek clothing, plastic clip boards).
- Use permanent markers (i.e., Sharpies) to label sample bottles.
- Touch the inside of the cap or bottle.
- Touch the bottle to the faucet.
- Place the lids in a pocket (set bottle lids face up on a clean surface while sampling).

- Please review prior to sample collection

### Do

- Adhere to the steps contained in the Sampling Instructions.
- Watch the UCMR 5 training video.
- If possible, wash your hands before handling sample bottles.
- Use only the materials provided in the UCMR 5 sampling kit.

Have questions about anything UCMR related? Contact Great Lakes Environmental Center. We're here to help! Email [UCMR@GLEC.com](mailto:UCMR@GLEC.com) anytime, or phone (231) 525-0521 M-F, 9-5


**SAMPLE TRACKING FORM**
KR ID: 123456P

Water System Name: **Central Waterworks, Inc.**  
 Collection Location: **EPTDS05 Treatment Plant**  
 Scheduled Collection Date: **January 9th, 10th, or 11th**

This is the first of two sample events for the above collection location; it has one more sample event in July of 2023.

► **Sampler Name (Print)** \_\_\_\_\_ **Date Sampled** \_\_\_\_\_

ARFA BELOW FOR LAB USE				
PFASID	SE1	Method	Bottles	Temp
PFASID: 00000000	SE1: 220301	533	4	
PFASID: 00001		537.1	4	
SPID: EP02		200.7	2	

FacName: EntryPoint1  
 SPName: EPTDS05 Treatment Plant

Received By: \_\_\_\_\_  
 Receipt Date @ Lab: \_\_\_\_\_

Have questions about anything UCMR related? Contact Great Lakes Environmental Center. We're here to help! Email [UCMR@GLEC.com](mailto:UCMR@GLEC.com) anytime, or phone (231) 525-0521 M-F, 9-5 EST.

## Sample Tracking Form (Primary Kit Example)

- Printed on **blue** paper
- Review sample point (SP) information
- Complete and ship with the samples

**EPA SAMPLE TRACKING FORM** Kit ID: 134567R

Water System Name: **Central Waterworks, Inc.**  
 Collection Location: **EPTDS05 Treatment Plant**  
 Collection Date: Monday or Tuesday **as soon as possible.**

**THIS IS A RESAMPLE KIT.**

Your previous samples were too warm when they arrived at the lab. Please take proactive measures to ensure your samples arrive within the acceptable temperature range (<45°F)

- Make sure freezer packs are frozen **solid** prior to collection (at least 72 hours in a freezer).
- Cool samples in a refrigerator prior to packing; overnight is preferable.
- Pack kit just prior to FedEx pickup and keep in a cool place.

► **Sampler Name (Print)** \_\_\_\_\_ **Date Sampled** \_\_\_\_\_

AREA BELOW FOR LAB USE			
PWSID:	SEI:	Method	Bottles Temp
0H0000000	220301	533	4
FacID: 20001			
SFD: EP001			
FacName: EntryPoint1			Received By
SFName: EPTDS05 Treatment Plant			Receipt Date @ Lab

Have questions about anything UCMR related? Contact Great Lakes Environmental Center. We're here to help! Email UCMR@GLEC.com anytime, or phone (231) 525-0521 M-F, 9-5 EST.

## Sample Tracking Form (Resample Kit Example)

- Printed on **pink** paper
- Follow noted proactive measures for resample collection and shipping
- Complete and ship with the resamples

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## Closing Remarks

Thank you for attending this UCMR 5 webinar

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## If You Have Questions Following This Presentation – References

- **Presentation slides** were sent to all registered participants
  - If you did not receive a copy, please email [UCMRwebinar@cadmusgroup.com](mailto:UCMRwebinar@cadmusgroup.com) and we will send you a copy
- **March 2022 Stakeholder Meeting Slides with Question and Answers**
  - <https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials>

### Question and Answers for This Presentation

Questions received during the presentation were similar to the questions received during the March 2022 webinar. Please refer to the March 2022 Stakeholder Meeting Slides (linked above) and note the last bookmarked section – Appendix 2: Supplemental Q&A

## If You Have Questions Following This Presentation – References

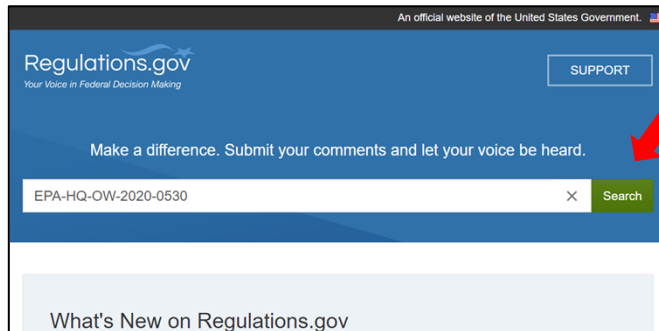
- **UCMR Homepage and Fact Sheet**
  - <https://www.epa.gov/dwucmr>
  - <https://www.epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf>
  - <https://www.epa.gov/system/files/documents/2022-08/Spanish-UCMR5-FactSheet-ProgramOverview.pdf> (Spanish Version)
- **SDWARS 5 Walkthrough Video for Small PWSs**
  - <https://youtu.be/2gacQ4Gle7I>
- **Safe Drinking Water Information**
  - <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information>

## If You Have Questions Following This Presentation – Contacts

- **UCMR Message Center**
  - For general questions about requirements (e.g., inventory, data elements, schedule) or navigating SDWARS, [UCMR5@glec.com](mailto:UCMR5@glec.com) or 1-800-949-1581
- **UCMR Small PWS Sampling Hotline**
  - For immediate assistance on sampling (e.g., sample kits, shipping), [UCMR@glec.com](mailto:UCMR@glec.com) or 231-525-0521
- **CDX Help Desk**
  - For CDX/SDWARS 5 registration issues, [helpdesk@epacdx.net](mailto:helpdesk@epacdx.net) or 1-888-890-1995
- **UCMR Sampling Coordinator**
  - [UCMR\\_Sampling\\_Coordinator@epa.gov](mailto:UCMR_Sampling_Coordinator@epa.gov)
- **Contacts**
  - Brenda Bowden: [bowden.brenda@epa.gov](mailto:bowden.brenda@epa.gov)
  - Melissa Simic: [simic.melissa@epa.gov](mailto:simic.melissa@epa.gov)

## Accessing the UCMR 5 Docket

Go to <https://www.regulations.gov> and enter **Docket ID EPA-HQ-OW-2020-0530**



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EPA-HQ-OW-2020-0530 × Search

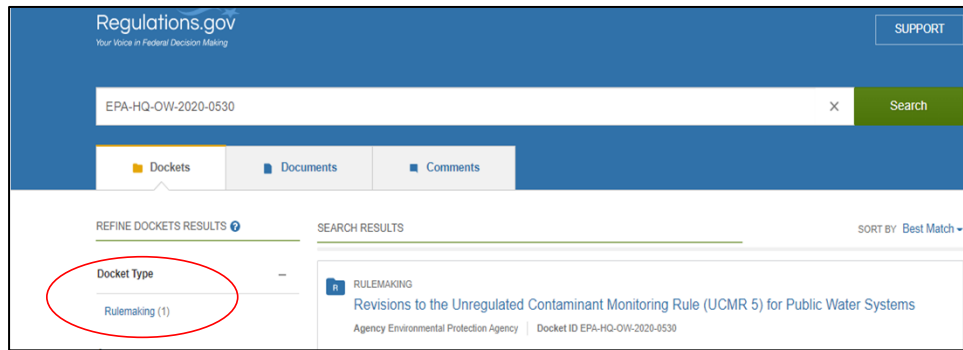
What's New on Regulations.gov

Click **Search**

Direct link to docket: <https://www.regulations.gov/docket/EPA-HQ-OW-2020-0530>

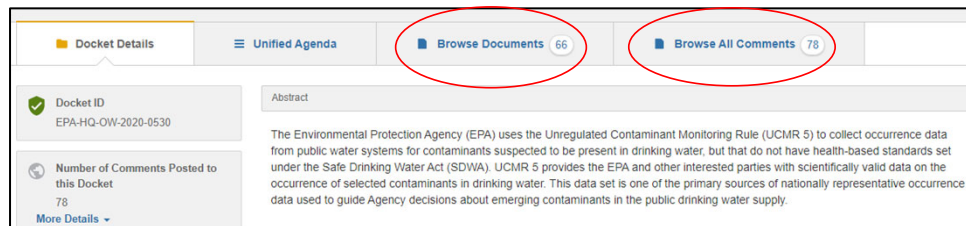
## Accessing the UCMR 5 Docket

The UCMR 5 docket should pop up on the next screen



## Accessing the UCMR 5 Docket

Browse documents and comments using the tabs



## Questions on the Presentation

- Click on “?” in the upper part of the control panel (Figure 1) to submit questions/comments
  - Type a question in the box; click send (Figure 2)
- Submit general clarifying questions throughout the webinar
  - Questions will be answered in the question box throughout the presentation
  - Common questions will be answered after the break and at the end

Figure 1

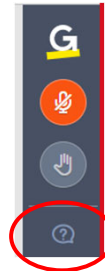
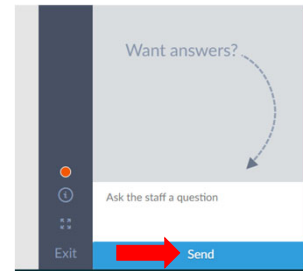


Figure 2



## Questions and Answers Received in Question Box





## Appendix 1: Abbreviations and Acronyms

## Abbreviations and Acronyms

- **µg** – Microgram
- **11Cl-PF3OUdS** – 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid
- **4:2 FTS** – 1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid
- **6:2 FTS** – 1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid
- **8:2 FTS** – 1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid
- **9Cl-PF3ONS** – 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid
- **ADONA** – 4,8-Dioxa-3H-Perfluorononanoic Acid
- **ATSDR** – Agency for Toxic Substances and Disease Registry
- **AWIA** – America’s Water Infrastructure Act of 2018
- **CASRN** – Chemical Abstracts Service Registry Number
- **CCL** – Contaminant Candidate List

## Abbreviations and Acronyms

- **CDX** – Central Data Exchange
- **CFR** – Code of Federal Regulations
- **CWS** – Community Water System
- **EPA** – Environmental Protection Agency
- **EP/EPTDS** – Entry Point to the Distribution System
- **FR** – Federal Register
- **GenX** – Trade Name for a Technology Used to Make High-Performance Fluoropolymers Without the Use of PFOA
- **Health Canada** – Health Canada Guidelines for Canadian Drinking Water Quality
- **HFPO-DA** – Hexafluoropropylene Oxide Dimer Acid
- **ICP-AES** – Inductively Coupled Plasma-Atomic Emission Spectrometry

## Abbreviations and Acronyms

- **IRIS** – Integrated Risk Information System
- **kg** – Kilogram
- **L** – Liter
- **LC/MS/MS** – Liquid Chromatography/Tandem Mass Spectrometry
- **MAC** – Maximum Acceptable Concentration
- **MCLG** – Maximum Contaminant Level Goal
- **mg** – Milligram
- **MRL** – Minimum Reporting Level
- **MRS** – Monitoring Review Sheet
- **NCOD** – National Contaminant Occurrence Database
- **NDA** – National Defense Authorization Act

## Abbreviations and Acronyms

- **NETFOSAA** – N-Ethyl Perfluorooctanesulfonamidoacetic Acid
- **NFDHA** – Nonafluoro-3,6-Dioxaheptanoic Acid
- **NMeFOSAA** – N-Methyl Perfluorooctanesulfonamidoacetic Acid
- **NPDWR** – National Primary Drinking Water Regulation
- **NTNCWS** – Non-Transient Non-Community Water System
- **OGWDW** – Office of Ground Water and Drinking Water
- **OW** – Office of Water
- **PFAS** – Per- and Polyfluoroalkyl Substance
- **PFBA** – Perfluorobutanoic Acid
- **PFBS** – Perfluorobutanesulfonic Acid
- **PFDA** – Perfluorodecanoic Acid

## Abbreviations and Acronyms

- **PFDoA** – Perfluorododecanoic Acid
- **PFEESA** – Perfluoro (2-Ethoxyethane) Sulfonic Acid
- **PFHpA** – Perfluoroheptanoic Acid
- **PFHpS** – Perfluoroheptanesulfonic Acid
- **PFHxA** – Perfluorohexanoic Acid
- **PFHxS** – Perfluorohexanesulfonic Acid
- **PFMBA** – Perfluoro-4-Methoxybutanoic Acid
- **PFMPA** – Perfluoro-3-Methoxypropanoic Acid
- **PFNA** – Perfluorononanoic Acid
- **PFOA** – Perfluorooctanoic Acid
- **PFOS** – Perfluorooctanesulfonic Acid

## Abbreviations and Acronyms

- **PFPeA** – Perfluoropentanoic Acid
- **PFPeS** – Perfluoropentanesulfonic Acid
- **PFTA** – Perfluorotetradecanoic Acid
- **PFTrDA** – Perfluorotridecanoic Acid
- **PFUnA** – Perfluoroundecanoic Acid
- **PPRTV** – Provisional Peer-Reviewed Toxicity Value
- **PWS** – Public Water System
- **PWSID** – Public Water System Identification Code
- **QA** – Quality Assurance
- **QC** – Quality Control
- **RfD** – Reference Dose

## Abbreviations and Acronyms

- **SDWA** – Safe Drinking Water Act
- **SDWARS** – Safe Drinking Water Accession and Review System
- **SDWIS/Fed** – Federal Safe Drinking Water Information System
- **SE** – Sample Event
- **SP** – Sample Point
- **SPE** – Solid Phase Extraction
- **TNCWS** – Transient Non-Community Water System
- **UCM** – Unregulated Contaminant Monitoring
- **UCMR** – Unregulated Contaminant Monitoring Rule



## The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5): Small and Large Public Water Systems Implementation Public Meetings by Webinar on October 26 & 27, 2022

### Biographies

**Brenda Bowden** has worked as an environmental scientist with the U.S. EPA's Office of Water, Office of Groundwater and Drinking Water, Standards and Risk Management Division, Unregulated Contaminant Monitoring Branch in Cincinnati, Ohio, for more than 15 years. She began her research on the first Unregulated Contaminant Monitoring Rule (UCMR 1) as an Oak Ridge Institute for Science and Education (ORISE) research fellow and has held various roles throughout every round of UCMR monitoring. She is currently the UCMR rule manager. Brenda holds a B.S. in Environmental Science and Toxicology from Ashland University and a M.En. in Environmental Science concentrated on Hazardous Waste and Toxicology from Miami University.

**Kelsey Dailey** is a physical scientist with the U.S. EPA's Office of Water, Office of Groundwater and Drinking Water, Standards and Risk Management Division, Unregulated Contaminant Monitoring Branch in Cincinnati, Ohio, working on UCMR 5 with a focus on small system implementation and assisting with rule development and outreach. She has participated in UCMR program activities since January 2021 when she first arrived at EPA as an Oak Ridge Institute for Science and Education (ORISE) research fellow. Kelsey holds a B.S. in Geological Sciences from The Ohio State University and an M.S. in Environmental Studies specializing in Hydrologic Sciences from the University of Colorado Boulder.

**Paul Grimmert** is a chemist with the U.S. EPA's Office of Water, Office of Ground Water and Drinking Water's Standards and Risk Management Division (SRMD), working in programs such as the Drinking Water Laboratory Certification Program and the Unregulated Contaminant Monitoring Rule (UCMR). Prior to joining SRMD in 2015, Paul served as a research chemist at EPA's Office of Research and Development for the previous nine years. His expertise is the research, development, and application of analytical chemistry methods for use in the environmental field. Prior to his time at EPA, Paul was a contract chemistry supervisor for an on-site EPA contractor. He received his Bachelors and Masters of Science degrees from Marshall University.

**Elizabeth Hedrick** is a chemist with the U.S. EPA's Office of Water, Office of Groundwater and Drinking Water, Standards and Risk Management Division, Unregulated Contaminant Monitoring Branch (UCMB) in Cincinnati, Ohio. The UCMB develops and implements the Unregulated Contaminant Monitoring Rule. Before joining the UCMB, she was a research chemist for 15 years in EPA's Office of Research and Development where she authored journal articles, analytical methods, and methods manuals for the analysis of contaminants in a variety of matrices. She later joined EPA's Office of Water, working in water security where she developed laboratory and field guidance for drinking water utilities to respond to contamination incidents. She has been in the UCMB for four years. Elizabeth has a BS in chemistry and an MS in environmental science.

**Derek Losh** has been an environmental engineer with the U.S. EPA's Office of Ground Water and Drinking Water since 2004. For several years he worked in Washington, DC, providing analysis to support regulatory decisions on drinking water contaminants. In 2007 he moved to U.S. EPA's Cincinnati office to provide nation-wide assistance to small drinking water utilities to optimize existing treatment processes. Now Derek works on the Unregulated Contaminants Monitoring Team, which is a program to monitor unregulated contaminants in public drinking water systems across the country. He holds an M.S. in environmental engineering from the University of Texas at Austin (2001) and became a licensed professional engineer in 2003.

**Melissa Simic** has been a physical scientist for the U.S. EPA for 12 years. She is the Branch Supervisor for the Unregulated Contaminant Monitoring Branch in the Office of Ground Water and Drinking Water. She manages the development and implementation of UCMR, a national drinking water occurrence study for contaminants of emerging concern. Melissa has a B.S. in Cell and Molecular Biology from Oklahoma State University and a M.S. in Environmental Epidemiology, Exposure & Risk from Harvard University.

**Jillian Toothman** is a chemist with the U.S. EPA's Office of Water, Office of Ground Water and Drinking Water, Standards and Risk Management Division, Unregulated Contaminant Monitoring Branch in Cincinnati, Ohio, and is the current database manager for UCMR. Since 2008, she has served in various technical capacities for the UCMR program including contract laboratory oversight, laboratory data submission support and laboratory audits. In her role as the UCMR database manager, she manages the overall design, development, implementation, maintenance and user support for the Safe Drinking Water Accession and Review System (SDWARS) which is the data portal for all UCMR results.