The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5)

Public Meeting by Webinar

March 16, 2022

March 17, 2022 – repeated

Office of Ground Water and Drinking Water, Standards and Risk Management Division, Technical Support Center

United States Environmental Protection Agency

Office of Water

Overview of the Unregulated Contaminant Monitoring Rule Program

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2022 ASTSWMO CERCLA/Brownfields Symposium

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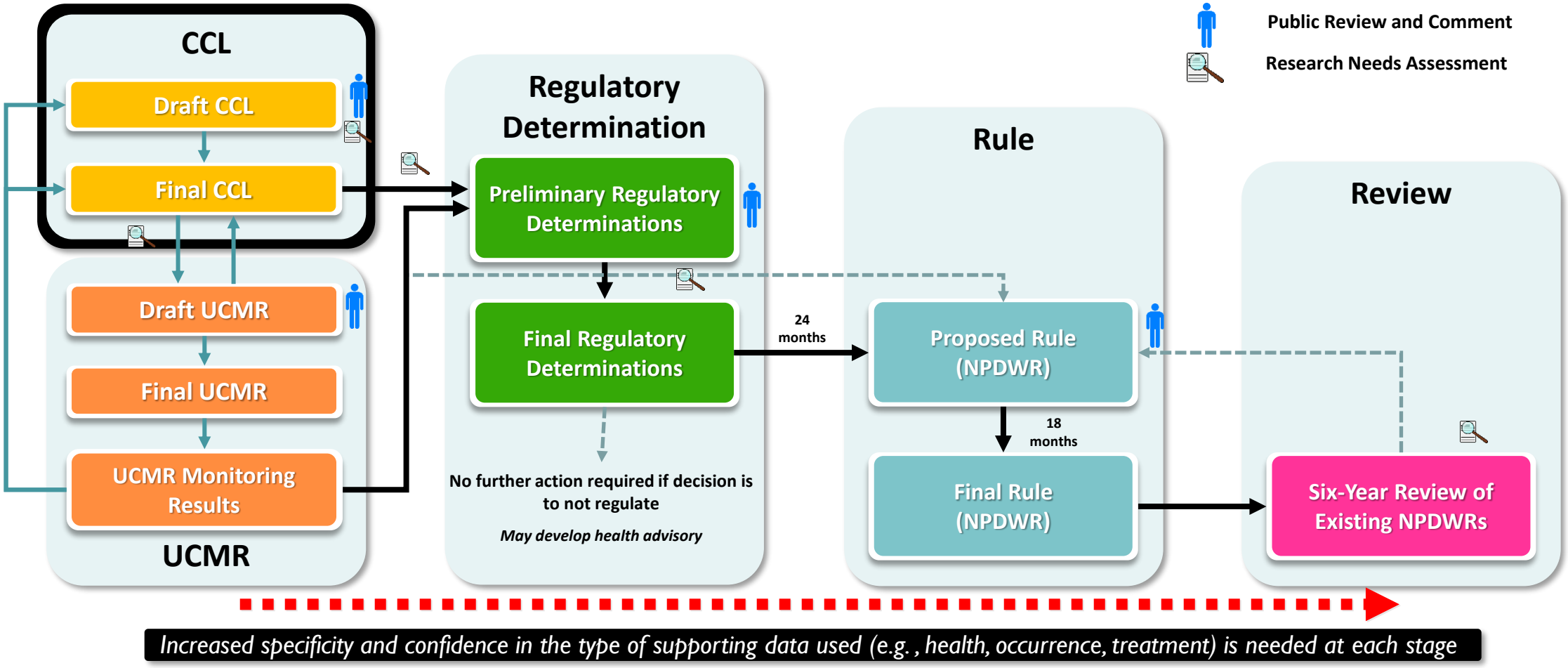
Overview

- 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

General Flow of SDWA Regulatory Processes



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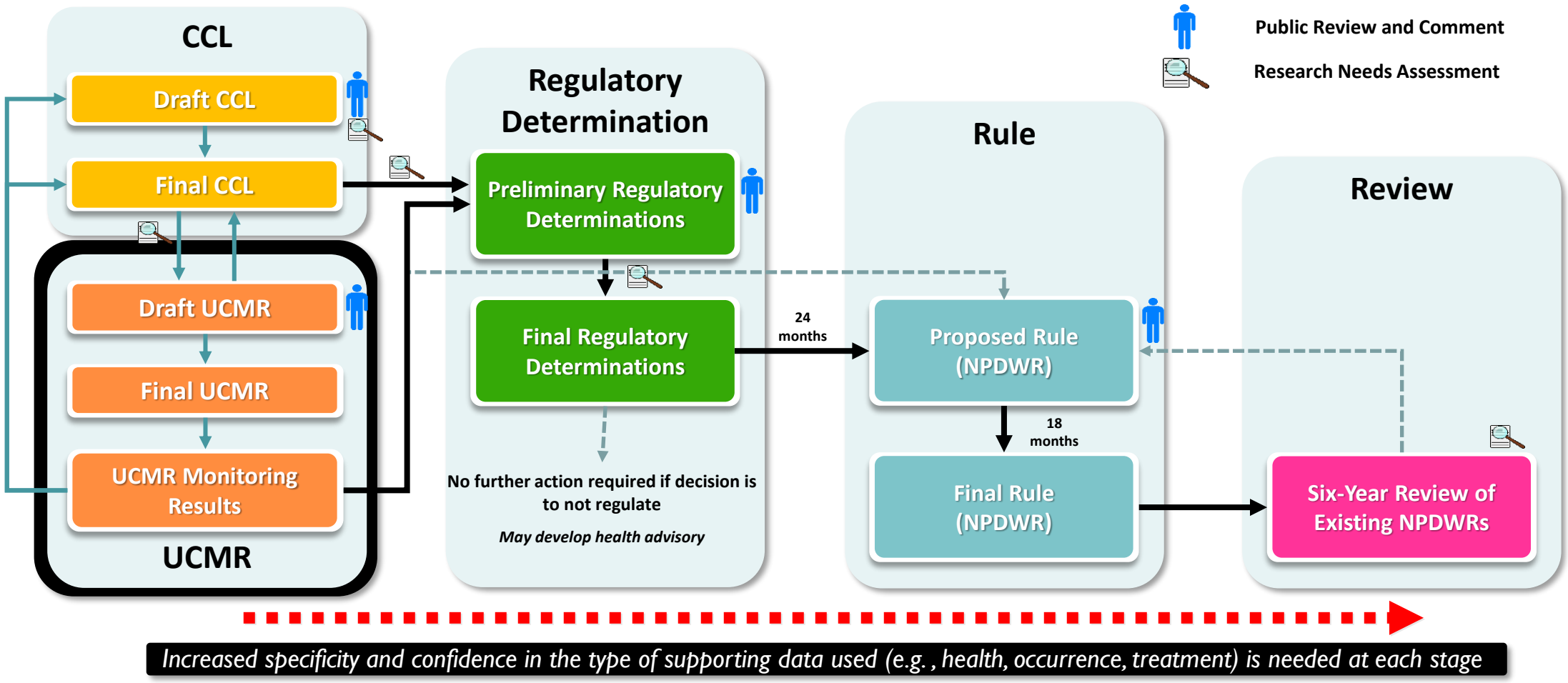


The Unregulated Contaminant Monitoring Rule (UCMR)

- 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 for Drinking Water (NCOD)
  - 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

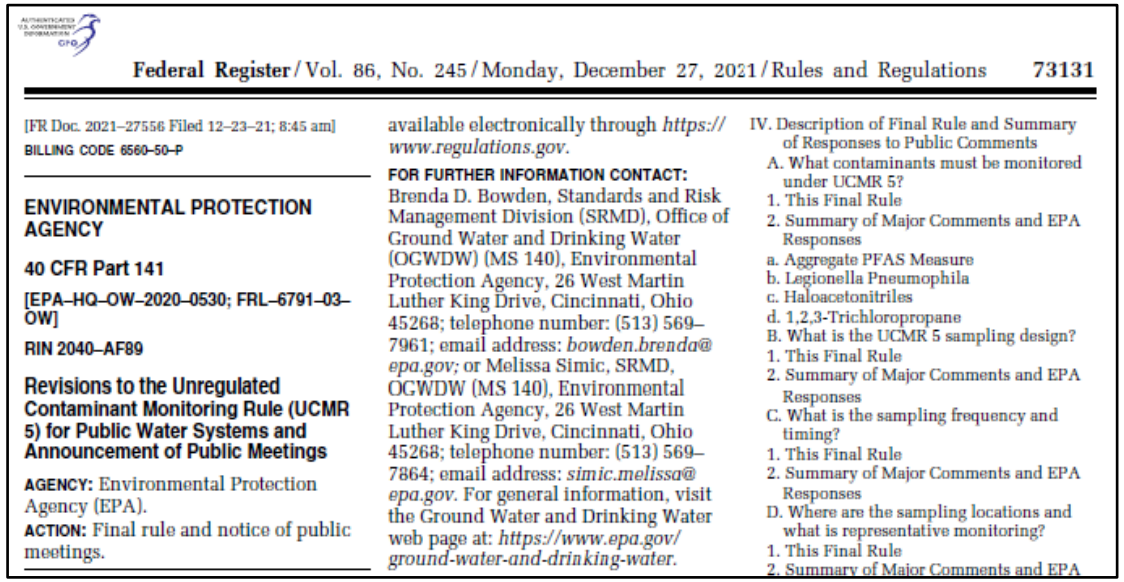
Objective of the UCMR Program

- 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



Federal Register / Vol. 86, No. 245 / Monday, December 27, 2021 / Rules and Regulations 73131

[FR Doc. 2021–27556 Filed 12–23–21; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 141

[EPA–HQ–OW–2020–0530; FRL–6791–03–OW]

RIN 2040–AF89

Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for Public Water Systems and Announcement of Public Meetings

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule and notice of public meetings.

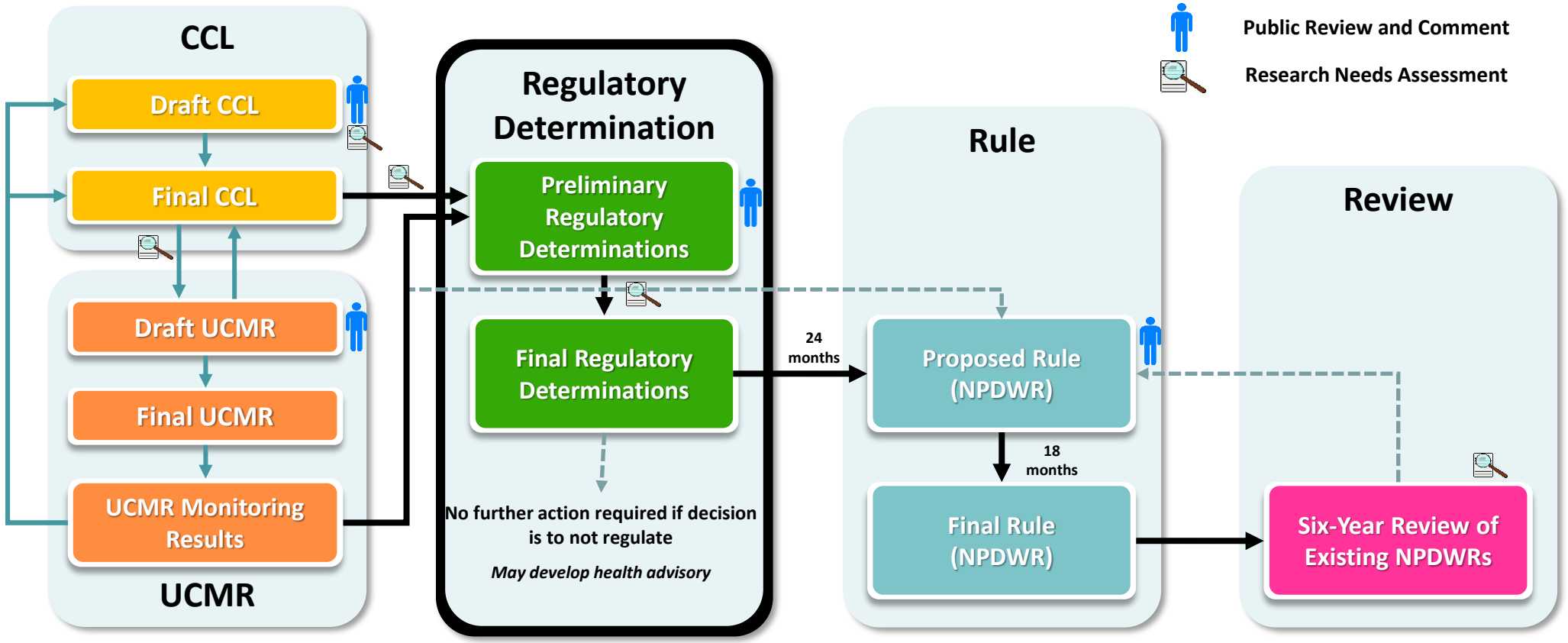
available electronically through *https://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Brenda D. Bowden, Standards and Risk Management Division (SRMD), Office of Ground Water and Drinking Water (OGWDW) (MS 140), Environmental Protection Agency, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268; telephone number: (513) 569–7961; email address: *bowden.brenda@epa.gov*; or Melissa Simic, SRMD, OGWDW (MS 140), Environmental Protection Agency, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268; telephone number: (513) 569–7864; email address: *simic.melissa@epa.gov*. For general information, visit the Ground Water and Drinking Water web page at: *https://www.epa.gov/ground-water-and-drinking-water*.

IV. Description of Final Rule and Summary of Responses to Public Comments
A. What contaminants must be monitored under UCMR 5?
1. This Final Rule
2. Summary of Major Comments and EPA Responses
a. Aggregate PFAS Measure
b. Legionella Pneumophila
c. Haloacetonitriles
d. 1,2,3-Trichloropropane
B. What is the UCMR 5 sampling design?
1. This Final Rule
2. Summary of Major Comments and EPA Responses
C. What is the sampling frequency and timing?
1. This Final Rule
2. Summary of Major Comments and EPA Responses
D. Where are the sampling locations and what is representative monitoring?
1. This Final Rule
2. Summary of Major Comments and EPA

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

General Flow of SDWA Regulatory Processes



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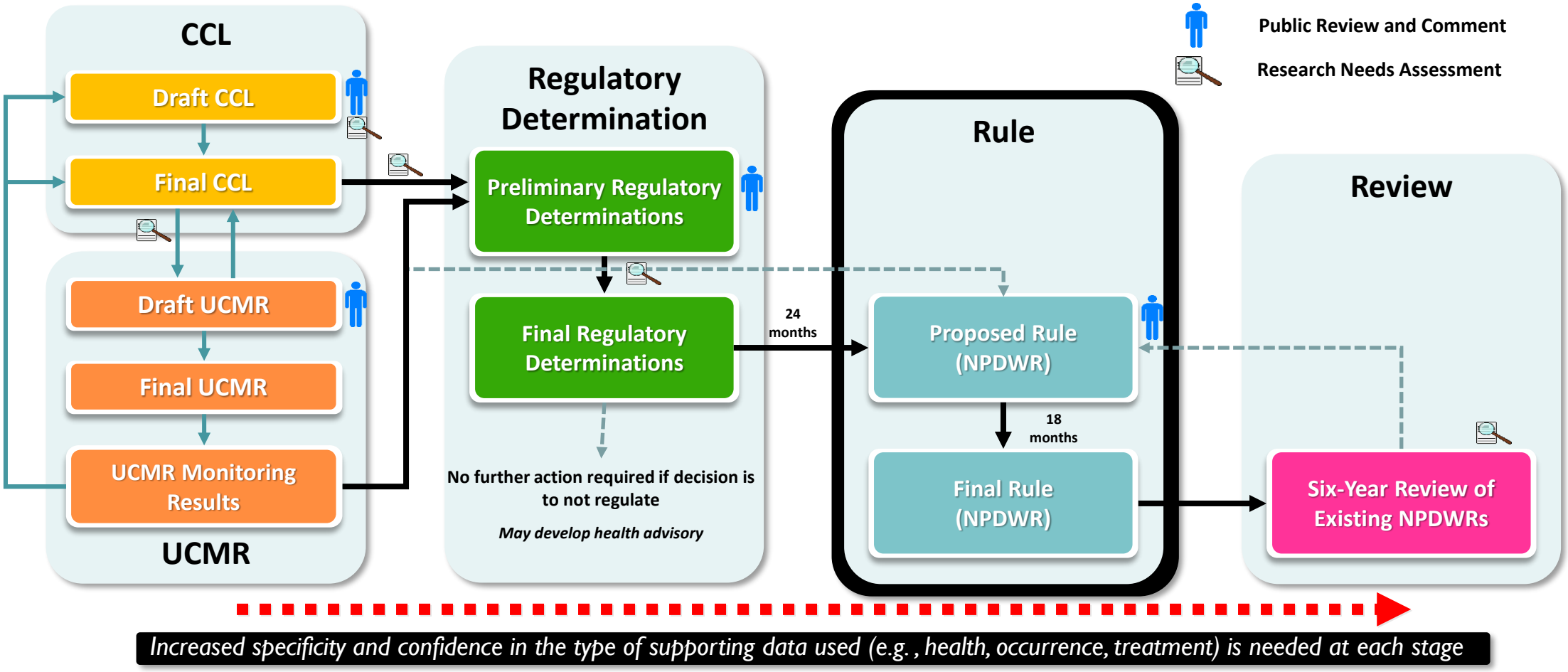

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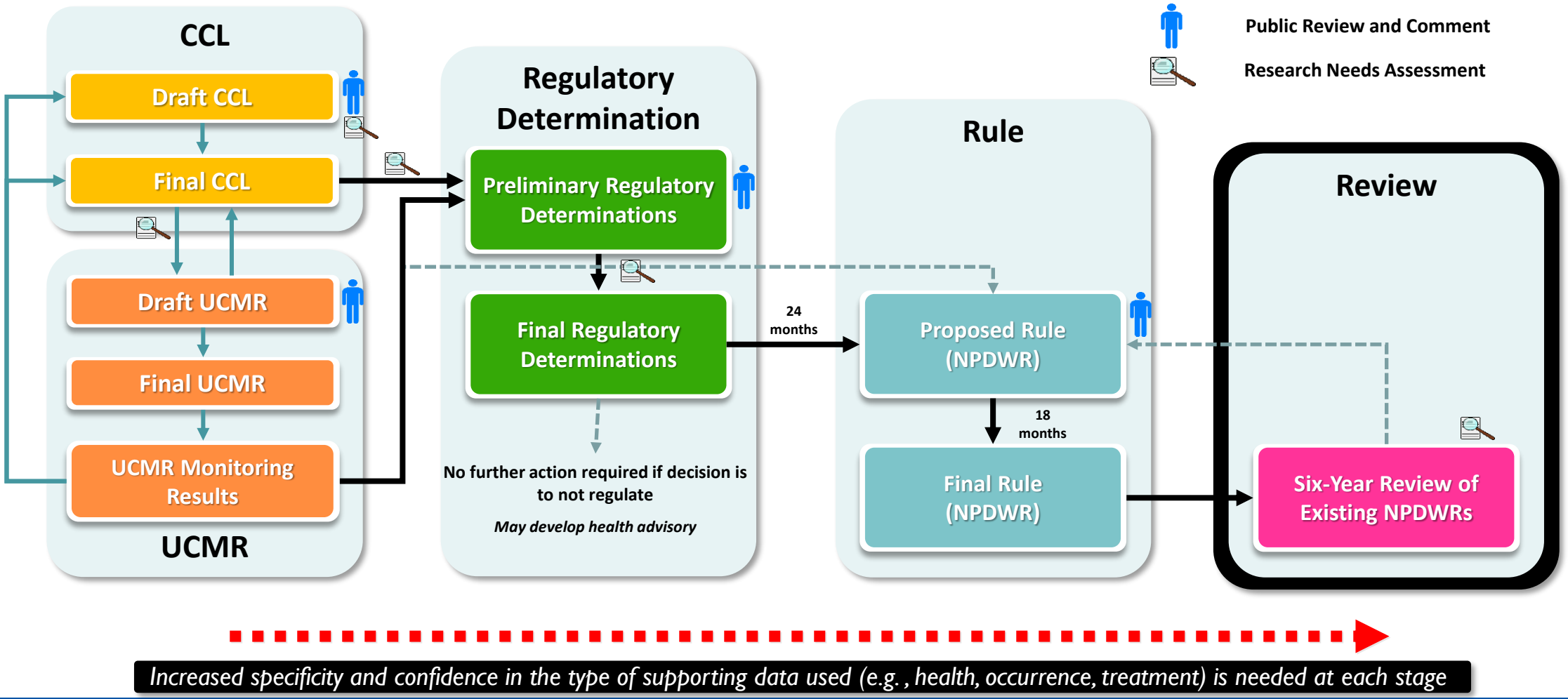

Increased specificity and confidence in the type of supporting data used (e.g., health, occurrence, treatment) is needed at each stage

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 between 3,300 and 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 systems 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

PWSs Expected to Participate in UCMR 5 Monitoring

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

[1] This requirement is based on the availability of appropriations and sufficient laboratory capacity
[2] Community Water Systems (CWSs), Non-Transient Non-Community Water Systems (NTNCWSs)
[3] Counts are approximate

PWS Notifications

- Notifications were sent to ALL PWSs subject to UCMR 5 (~10,300)
- Notifications 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 during the week of January 18th, 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.

Small PWS Notifications - Confirmed

- EPA has funding available to support monitoring at the representative national sample of 800 PWSs serving <3,300 people and has notified those systems that their participation is confirmed
- EPA also has funding available to support monitoring at ~400 randomly selected PWSs serving 3,300 to 10,000 people and has similarly notified those systems
- Prioritizing these systems allows EPA to ensure a national random sample for small PWSs serving ≤10,000 people, irrespective of participation by other small PWSs

Sampling Schedules

- EPA initially drafted schedules for large and small PWSs
- Partnered State had opportunity to review and modify schedules for large and small PWSs during review of State Monitoring Plan
- Large PWSs have opportunity to review and modify their schedule through December 31, 2022
  - Starting in 2023, large PWSs must contact EPA at UCMR_Sampling_Coordinator@epa.gov to request schedule changes and provide a reason
- Small PWSs may request that EPA modify their schedule

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 entry points to the distribution system (EPTDS) for all contaminants

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

Timeline of Activities

2022	2023	2024	2025	2026
Pre-sampling Activity by EPA, States	← Sampling Period →			Post-sampling Activity by PWSs, Laboratories
Pre-sampling Activity by PWSs	EPA, State Implementation Activities			Post-sampling Activity by EPA
	PWS Sample Collection, Laboratory Analysis, Reporting (~1/3 in each year)			

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)	**Perfluorohexanesulfonic acid (PFHxS)**
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	Perfluoroheptanesulfonic acid (PFHpS)	**Perfluorobutanesulfonic acid (PFBS)**	**Perfluorononanoic acid (PFNA)**
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorodecanoic acid (PFDA)	**Perfluorooctanesulfonic acid (PFOS)**
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	Perfluoropentanoic acid (PFPeA)	Perfluorododecanoic acid (PFDoA)	**Perfluorooctanoic acid (PFOA)**
Perfluoro-3-methoxypropanoic acid (PFMPA)	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	**Perfluoroheptanoic acid (PFHpA)**	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			

Information Compendium for Contaminants

- Provides 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
- Outlines the contaminant prioritization process
- Summarizes the data sources reviewed
- Includes 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

Frequently Asked Question

What is the approximate cost for a laboratory to analyze one UCMR 5 sample set?

Method Type	Average Analysis Cost per UCMR 5 Sample[1]
25 PFAS using EPA Method 533 (Solid Phase Extraction (SPE) Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS))	$376
4 PFAS using EPA Method 537.1 Solid Phase Extraction (SPE) Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS))	$302
1 Metal using EPA Method 200.7 (Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES)) or alternate SM[2] or ASTM[3]	$62
Total[4]	$740

[1] The average analytical cost was determined by averaging estimates provided by four drinking water laboratories. Data can be found in the "Information Collection Request."
[2] Standard Method (SM) 3120 B or SM 3120 B-99
[3] ASTM International (ASTM) D1976-19
[4] If a PFAS sample is positive, the Field Reagent Blank (FRB) must be analyzed, resulting in higher aggregate analytical costs per sample set. PWSs may incur a cost of up to $1,333, if the FRB for both EPA Method 533 and 537.1 must be analyzed.

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
- SDWARS 5 user instructions and trainings for laboratories, PWSs, and States will be made available

CDX Registration

- To register to use the CDX:
  - Go to https://cdx.epa.gov/preregistration/
  - Enter the customer retrieval key you received by email (Sender UCMR@epacdx.net) or by physical mailing if no email address was available
    - **All systems** should have received a key; if you lost/did not receive a key, please contact UCMR_Sampling_Coordinator@epa.gov
    - Laboratories will receive keys upon receiving EPA approval to support UCMR 5
  - Follow the directions to complete registration
- We recommend you do this as soon as possible
  - For CDX/SDWARS 5 registration issues, please contact the CDX Help Desk at helpdesk@epacdx.net or call 1-888-890-1995

SDWARS Workflow for PWSs – Overview

Before **December 31, 2022 – Pre-Sampling Activities**

- Log in to CDX and select SDWARS 5
- Select SDWARS 5 and accept your PWS' UCMR 5 notification letter
- Add/review/edit sample location inventory
- Confirm/add physical shipping address for sampling kits (not a P.O. Box)[1]
- Add Zip Code(s) served
- Respond to specific UCMR 5 data elements[1]
- Review sampling schedule
- Nominate additional user(s) for your PWS (optional)

[1] Applies to small PWSs only

If You Have Questions Following This Webinar

- **UCMR Homepage and Fact Sheet**
  - https://www.epa.gov/dwucmr
  - https://www.epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf
- **UCMR Message Center**
  - For general questions about requirements or navigating SDWARS, UCMR5@glec.com or 1-800-949-1581
- **CDX Help Desk**
  - For CDX/SDWARS 5 registration issues, helpdesk@epacdx.net or 1-888-890-1995
- **UCMR Sampling Coordinator**
  - UCMR_Sampling_Coordinator@epa.gov
- **Laboratory Approval Program**
  - UCMR_Lab_Approval@epa.gov
- **Meeting materials** were sent to all registered participants
  - If you did not receive a copy, please email UCMRwebinar@cadmusgroup.com and we will send you a copy
- **Contacts**
  - Brenda Bowden: bowden.brenda@epa.gov
  - Melissa Simic: simic.melissa@epa.gov

Region 7

Doug Brune: brune.doug@epa.gov

- **Safe Drinking Water Information**
  - https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information