The EPA Acting Administrator, Jane Nishida, signed the following proposed rule on 2/22/2021, and EPA is submitting it for publication in the Federal Register (FR). While we have taken steps to ensure the accuracy of this Internet version of the proposed rule, it is not the official version of the proposed rule. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDsys website (https:// www.gpo.gov/fdsys/). It will also appear on Regulations.gov (https://www.regulations.gov/) in Docket No. EPAHQ-OW-2020-0530. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 141

[EPA-HQ-OW-2020-0530; FRL 10019-46-OW]

[RIN 2040-AF89]

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

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule and notice of public meeting.

SUMMARY: The U.S. Environmental Protection Agency (EPA or Agency) is proposing a Safe Drinking Water Act (SDWA) rule that would require public water systems to collect national occurrence data for 29 per- and polyfluoroalkyl substances (PFAS) and lithium. This proposed rule would require all community and non-transient non community water systems serving 3,300 or more people, and a representative sample of smaller water systems, to conduct monitoring. PFAS and lithium are not currently subject to national primary drinking water regulations, and EPA is proposing to require the collection of drinking water occurrence data to inform EPA decisions. This proposal fulfills a key commitment in "EPA's 2019 Per- and Polyfluoroalkyl Substances (PFAS) Action Plan" (https://www.epa.gov/pfas/epas-pfas-action-plan) by proposing the collection of more drinking water occurrence data for a broader group of PFAS. EPA is also

announcing two public meetings (via webinar) to discuss this proposal of the fifth Unregulated Contaminant Monitoring Rule (UCMR 5).

DATES: Comments must be received on or before **[insert date 60 days after publication in the Federal Register]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[insert date 30 days after date of publication in the Federal Register]**.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OW-2020-0530, by any of the following methods:

- Federal eRulemaking Portal: https://www.regulations.gov/ (our preferred method). Follow the online instructions for submitting comments.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Water Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.
- Hand Delivery or Courier (by scheduled appointment only): EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. 20004. The Docket Center's hours of operations are 8:30 a.m. – 4:30 p.m., Monday – Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. EPA-HQ-OW-2020-0530 for this rulemaking. Comments received may be posted without change to https://www.regulations.gov/, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform.

We encourage the public to submit comments via https://www.regulations.gov/ or email, as there may be a delay in processing mail and faxes. Hand deliveries and couriers may be received by scheduled appointment only. For further information on EPA Docket Center services and the current status, please visit us online at https://www.epa.gov/dockets.

EPA is offering a virtual meeting twice during the public comment period. For more details on the meeting (including dates and times) and to register, please visit https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials. Refer to the **SUPPLEMENTARY INFORMATION** section of this document for additional information.

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 Safe Drinking Water Information webpage on the Internet at: https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information.

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I. Summary Information

A. Purpose of the Regulatory Action

1. What action is EPA taking?

EPA is proposing a SDWA rule that would require public water systems to collect national occurrence data for 29 PFAS and lithium. This proposed rule would require all community and non-transient non community water systems serving 3,300 or more people, and a representative sample of smaller water systems, to conduct monitoring. PFAS and lithium are not currently subject to national primary drinking water regulations, and EPA is proposing to require collection of the data to inform EPA decisions. This proposal fulfills a key commitment in "EPA's 2019 Per- and Polyfluoroalkyl Substances (PFAS) Action Plan" (USEPA, 2019a) by proposing the collection of more drinking water occurrence data for a broader group of PFAS.

This proposal identifies three analytical methods to support water system monitoring for a total of 30 contaminants, consisting of 29 PFAS and lithium. This document also describes EPA's evaluation of other candidate contaminants, including *Legionella pneumophila*; four haloacetonitriles (dichloroacetonitrile, dibromoacetonitrile, trichloroacetonitrile, and bromochloroacetonitrile); 1,2,3-trichloropropane; and "total organic fluorine" (TOF), and invites public comment.

2. Does this action apply to me?

This proposed rule applies to public water systems (PWSs) described in this section. PWSs are systems that provide water for human consumption through pipes, or constructed conveyances, to at least 15 service connections or that regularly serve an average of at least 25 individuals daily at least 60 days out of the year. A community water system (CWS) is a PWS that has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. A non-transient non-community water system (NTNCWS) is a PWS that is not a CWS and that regularly serves at least 25 of the same people over 6 months per year. Under this proposal, all large CWSs and NTNCWSs serving more than 10,000 people would be required to monitor. In addition, all small CWSs and NTNCWs serving between 3,300 and 10,000 people would be required to monitor, subject to the availability of appropriations and appropriate laboratory capacity (see discussion of America's Water Infrastructure Act of 2018 in sections I.A. and I.B of this document). A nationally representative sample of CWSs and NTNCWSs serving fewer than 3,300 people would also be required to monitor (see "Selection of Nationally Representative Public Water Systems for the Unregulated Contaminant Monitoring Rule: 2020 Update" for a description of the statistical approach for the nationally representative sample (USEPA, 2020a)). As is generally the case for UCMR sampling, transient non-community water systems (TNCWSs) (i.e., non-community water systems that do not regularly serve at least 25 of the same people over 6 months per year) would not be required to monitor under UCMR 5. States, territories, and tribes with primary enforcement responsibility (primacy) to administer the regulatory program for PWSs under SDWA (sometimes collectively referred to in this notice as "states"), can participate in the implementation of UCMR 5 through voluntary Partnership Agreements (see discussion of Partnership Agreements in section III.N in this document). Primacy agencies with Partnership Agreements can choose to be involved in various

aspects of the UCMR 5 monitoring for PWSs they oversee; however, the PWS remains responsible for all compliance activities. Potentially regulated categories and entities are identified in the following table.

Category	Examples of potentially regulated entities	NAICS[a]
State, local, & tribal governments	State, local, and tribal governments that analyze water samples on behalf of PWSs required to conduct such analysis; state, local, and tribal governments that directly operate CWSs and NTNCWSs required to monitor.	924110
Industry	Private operators of CWSs and NTNCWSs required to monitor.	221310
Municipalities	Municipal operators of CWSs and NTNCWSs required to monitor.	924110

[a] NAICS = North American Industry Classification System

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your entity is regulated by this action, you should carefully examine the definition of PWS found in §§141.2 and 141.3, and the applicability criteria found in §141.40(a)(1) and (2) of Title 40 in the Code of Federal Regulations (CFR). If you have questions regarding the applicability of this action to a particular entity, please consult the contacts listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this document.

3. What is EPA's authority for taking this action?

As part of its responsibilities under the SDWA, EPA implements §1445(a)(2), Monitoring Program for Unregulated Contaminants. This section, as amended in 1996, requires that once every five years, beginning in August 1999, EPA issues a list of not more than 30

unregulated contaminants to be monitored by PWSs. The SDWA requires that EPA enters the monitoring data into the Agency's publicly available National Contaminant Occurrence Database (NCOD) at https://www.epa.gov/sdwa/national-contaminant-occurrence-database-ncod.

EPA must vary the frequency and schedule for monitoring based on the number of persons served, the source of supply, and the contaminants likely to be found. EPA is using the SDWA §1445(a)(2) authority as the basis for monitoring the unregulated contaminants proposed under this rule.

The SDWA, as amended by Section 2021 of America's Water Infrastructure Act of 2018 (AWIA) (Public Law 115-270), specifies that, subject to the availability of EPA appropriations for such purpose and appropriate laboratory capacity, EPA's UCMR program must require all systems serving between 3,300 and 10,000 persons to monitor for the contaminants in a particular UCMR cycle, and ensure that only a nationally representative sample of systems serving fewer than 3,300 persons are required to monitor for those contaminants. The program would continue to ensure that systems serving a population larger than 10,000 people are required to monitor for the contaminants in a particular UCMR cycle. This AWIA provision becomes effective October 23, 2021 (i.e., prior to the start of UCMR 5 sample collection).

The SDWA, as amended by Section 7311 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) (Public Law 116-92), specifies that EPA shall include all PFAS in UCMR 5 for which a drinking water method has been validated by the Administrator, and that are not subject to a national primary drinking water regulation. The NDAA specifies that unregulated PFAS included in UCMR 5 shall not count towards the traditional SDWA limit of not more than 30 unregulated contaminants being included in the UCMR (§1445(a)(2)(B)(i)).

B. Summary of the Regulatory Action

EPA is proposing to require PWSs to collect occurrence data for 29PFAS and lithium. These contaminants may be present in drinking water, but are not subject to national primary drinking water regulations. This proposal fulfills a key commitment in EPA's 2019 PFAS Action Plan (USEPA, 2019a) by proposing the collection of more drinking water occurrence data for a broader group of PFAS. More specifically, the UCMR 5 proposal identifies the following: analytical methods to measure the UCMR contaminants; monitoring time frame; sampling locations; data elements (i.e., information required to be collected along with the occurrence data); data reporting timeframes; and conforming and editorial changes, such as those necessary to remove requirements solely related to UCMR 4.

This proposal includes monitoring for lithium based on anticipated national occurrence in PWS-supplied drinking water and available health-effects information that indicates adverse human health effects in several organs and systems (USEPA, 2008). Nationally representative occurrence data from EPA's National Inorganics and Radionuclides Survey, 1984-1986, shows lithium was detected at levels between 5 and 7,929 μg/L (microgram per liter) in the finished drinking water of approximately 55% of PWSs (ground water systems only) (USEPA, 2009). In more recent literature, lithium was detected in 56% of treated drinking water samples from 25 PWSs at a median concentration of 10.8 μg/L (Glassmeyer et al., 2017). EPA has determined that monitoring for lithium under the UCMR is needed to assess the occurrence of this contaminant nationally.

This proposed action would provide EPA, states, and communities with scientifically valid data on the national occurrence of these contaminants in drinking water. The data represent one of the primary sources of national occurrence data in drinking water that EPA uses to inform

regulatory and other risk management decisions for drinking water contaminant candidates. This proposal identifies three analytical methods to be used by laboratories analyzing UCMR samples for the unregulated contaminants. In addition, EPA describes how it evaluated other candidate contaminants, including *Legionella pneumophila*; four haloacetonitriles (dichloroacetonitrile, dibromoacetonitrile, trichloroacetonitrile, and bromochloroacetonitrile); 1, 2, 3-trichloropropane; and "total organic fluorine" (TOF). In section III.F, EPA describes why it has not proposed these particular contaminants for UCMR 5. The UCMR 5 proposal reflects a consideration of the utility of the information to be collected. Due to ongoing regulatory evaluations, described in the following sections, data collection for *Legionella pneumophila* and the four haloacetonitriles would not be sufficiently timely to be useful.

This proposed rule reflects the monitoring approach defined in the AWIA and thus describes the UCMR 5 scope as including all systems serving 3,300 or more people (as opposed to a representative sample of those systems serving 3,300 to 10,000), and a representative sample of systems serving fewer than 3,300 people. EPA has the statutory obligation under the SDWA to pay the "reasonable cost of such testing and laboratory analysis" for all applicable PWS serving 10,000 or fewer individuals. Accordingly, the AWIA conditioned the inclusion of all systems serving 3,300 to 10,000 persons in UCMR 5 on the availability of appropriations. AWIA also conditioned the inclusion of all systems serving 3,300 to 10,000 persons in UCMR 5 on a determination by the Administrator of sufficient laboratory capacity to analyze the samples.

Based on EPA's experience over the first four cycles of UCMR implementation, and informed by our ongoing engagement with the laboratory community, EPA anticipates that sufficient laboratory capacity will exist to support the expanded UCMR scope. Regarding EPA's resources, however, if EPA concludes that it will not have the resources necessary to support the

expanded monitoring described by the AWIA, the Agency will not promulgate a final rule that requires all water systems serving between 3,300 and 10,000 persons to monitor as presented in this proposed rule. Accordingly, this proposal also describes EPA's alternative plan (i.e., in the absence of adequate funds) that would involve selecting a representative sample of small PWSs consistent with the approach established under the original (pre-AWIA) UCMR program (i.e., that used for UCMR 4 and for prior cycles) which includes 800 representative water systems serving fewer than or equal to 10,000 in the UCMR program. See "Selection of Nationally Representative Public Water Systems for the Unregulated Contaminant Monitoring Rule: 2020 Update" for further details about the nationally representative sample (USEPA, 2020a)).

This proposed rule also addresses the requirements of the NDAA by including all 29 PFAS that are within the scope of EPA Methods 533 and 537.1. Both of these methods have been validated by EPA for drinking water analysis.

C. Economic Analysis

1. What is the estimated cost of this proposed action?

EPA estimates the total average national cost of this proposed action will be $21 million per year over the five-year effective period of the rule (2022-2026). Costs fall upon large PWSs (for sampling and analysis); small PWS (for sampling); state regulatory agencies (i.e., those who volunteer to assist EPA with oversight and implementation support); and EPA (for regulatory support and oversight activities, and analytical and shipping costs for small PWSs). These costs are summarized in Exhibit 1. EPA has further documented the assumptions and data sources used in the preparation of this estimate in the "Draft Information Collection Request for the Unregulated Contaminant Monitoring Rule (UCMR 5)" (USEPA, 2020b).

Costs for a particular UCMR cycle are heavily influenced by the selection of contaminants and associated analytical methods. EPA proposes three EPA-developed analytical methods (and, in the case of lithium, multiple optional alternative methods) to analyze samples for the UCMR 5 chemical contaminants. EPA's estimate of the analytical cost for the UCMR 5 contaminants is $950 per sample set (i.e., $950 to analyze a set of samples from one sample point and one sample event for all of the UCMR 5 contaminants). EPA calculated these costs by summing the laboratory unit cost of each method. Exhibit 1 presents a breakdown of EPA-estimated annual average national costs. Estimated PWS- (*i.e.*, large and very large) and EPA costs reflect the analytical cost (*i.e.*, non-labor) for all the UCMR 5 methods. EPA pays for the analytical costs for all systems serving a population of 10,000 or fewer people. Laboratory analysis and sample shipping account for approximately 82% of the total national cost for the implementation of UCMR 5. EPA estimated laboratory unit costs based on consultations with multiple commercial drinking water testing laboratories and, in the case of new methods, a review of the costs of analytical methods similar to those proposed in this action. The cost of the laboratory methods includes shipping along with the cost for the analysis.

EPA expects that states may incur modest labor costs associated with voluntary assistance with the implementation of UCMR 5. EPA estimated state costs using the relevant assumptions from the State Resource Model developed by the Association of State Drinking Water Administrators (ASDWA) (ASDWA, 2013) to help states forecast resource needs. Model estimates were adjusted to account for actual levels of state participation under UCMR 4. State assistance with EPA's implementation of UCMR 5 is voluntary; thus, the level of effort is expected to vary among states and would depend on their individual agreements with EPA.

EPA assumes that one-third of the systems would monitor during each of the three sample-collection years from January 2023 through December 2025. The total estimated annual costs (labor and non-labor) including the additional small systems included according to the AWIA mandate would be incurred as follows:

Exhibit 1: Estimated Average Annual Costs of the Proposed UCMR 5[1]

Entity	**Avg. Annual Cost (Million) (2022-2026)** [2]
Small Systems (25-10,000), including labor[3] only (non-labor costs[4] paid for by EPA)	$0.3
Large Systems (10,001-100,000), including labor and non-labor costs	$7.2
Very Large Systems (100,001 and greater), including labor and non-labor costs	$2.3
States, including labor costs related to implementation coordination	$0.8
EPA, including labor for implementation and non-labor for small system testing	$10.5[5]
AVERAGE ANNUAL NATIONAL TOTAL	**$21.1**

[1] Based on the scope of small-system monitoring described in AWIA.
[2] Totals may not equal the sum of components due to rounding.
[3] Labor costs pertain to systems, states, and EPA. Costs include activities such as reading the rule, notifying systems selected to participate, sample collection, data review, reporting, and record keeping.
[4] Non-labor costs will be incurred primarily by EPA and by large and very large PWSs. They include the cost of shipping samples to laboratories for testing and the cost of the laboratory analyses.
[5] EPA estimates an average annual cost to the Agency of $17M/year (over a five-year cycle) for a typical UCMR program that involves the expanded scope prescribed by AWIA ($2M/year for the representative sample of 800 PWSs serving < 3,300 and $15M/year for all PWSs serving between 3,300 and 10,000); EPA projects an average annual cost of $10.5M for UCMR 5, as proposed, based on the relatively lower than typical unit analytical costs associated with the proposed UCMR 5 contaminants.

Additional details regarding EPA's cost assumptions and estimates can be found in the Draft Information Collection Request (ICR) (USEPA, 2020b), ICR Number 2040-NEW, which presents estimated cost and labor hours for the 5-year UCMR 5 period of 2022-2026. Copies of the Draft ICR may be obtained from the EPA public docket for this proposed rule, under Docket ID No. EPA-HQ-OW-2020-0530. See also section III.G of this document for a discussion of cost scenarios based on potential changes between the publication of this proposed rule and the final rule.

2. Benefits of the proposed action

The public benefits from the information about whether or not unregulated contaminants are present in their drinking water. If contaminants are not found, consumer confidence in their drinking water will improve. If contaminants are found, related health effects may be avoided

when subsequent actions, such as regulations, reduce or eliminate those contaminants.

II. Public Participation

A. Written Comments

Submit your comments, identified by Docket ID No. EPA-HQ-OW-2020-0530, at https://www.regulations.gov or other methods identified in the **ADDRESSES** section of this document. Once submitted, comments cannot be edited or removed from the docket. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Contact EPA if you want to submit CBI; see **FOR FURTHER INFORMATION CONTACT** section of this document. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

EPA is temporarily suspending its Docket Center and Reading Room for public visitors, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the public to submit comments via https://www.regulations.gov/ as there may be a delay in processing mail and faxes. Hand deliveries or couriers will be received by scheduled appointment only. For further information and updates on EPA Docket Center services, please visit us online at https://www.epa.gov/dockets.

EPA continues to carefully and continuously monitor information from the Centers for Disease Control and Prevention (CDC), local area health departments, and our Federal partners so that we can respond rapidly as conditions change regarding COVID-19.

B. What stakeholder meetings have been held in preparation for UCMR 5?

EPA incorporates stakeholder involvement into each UCMR cycle. Specific to the development of UCMR 5, EPA held two public stakeholder meetings and is announcing two additional public meetings via webinars in this proposal (see section II.C of this document). EPA held a meeting focused on drinking water methods for unregulated contaminants on June 6, 2018, in Cincinnati, Ohio. Representatives from state agencies, laboratories, PWSs, environmental organizations, and drinking water associations joined the meeting via webinar and in person. Meeting topics included an overview of regulatory process elements (including the Contaminant Candidate List (CCL), UCMR, and Regulatory Determination), and drinking water methods under development (see USEPA, 2018a for presentation materials). EPA held a second stakeholder meeting on July 16, 2019, in Cincinnati, Ohio. Participants representing state agencies, tribes, laboratories, PWSs, environmental organizations, and drinking water associations participated in the meeting via webinar and in person. Meeting topics included the impacts of the AWIA, analytical methods and contaminants being considered by EPA, potential sampling design, and other possible aspects of the UCMR 5 approach (see USEPA, 2019b for meeting materials).

This proposal fulfills a commitment made in EPA's PFAS Action Plan found on EPA's website at https://www.epa.gov/pfas/epas-pfas-action-plan. EPA conducted extensive public outreach in the development of the PFAS Action Plan (USEPA, 2019a), including gathering diverse perspectives through the May 2018 "National Leadership Summit," direct engagement

with the public in impacted communities in five states, engagement with tribal partners, and roundtables conducted with community leaders near impacted sites. EPA reviewed approximately 120,000 comments in the public docket that was specifically established to gather input for the PFAS Action Plan (USEPA, 2019a). Through this outreach, EPA heard significant concerns from the public on the challenges these contaminants pose for communities nationwide, and the need for improved understanding of the frequency and concentration of PFAS occurrence in finished U.S. drinking water.

C. How do I participate in the upcoming stakeholder meeting?

EPA will hold two virtual stakeholder meetings during the public comment period. Topics will include the proposed UCMR 5 monitoring requirements, analyte selection and rationale, analytical methods, the laboratory approval process, and ground water representative monitoring plans (GWRMPs). If stakeholder interest results in exceeding the maximum number of available connections for participants in the first two webinar offerings, EPA may schedule additional webinars, with dates and times posted on EPA's Unregulated Contaminant Monitoring Program Meetings and Materials webpage at https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials.

Please note that EPA is deviating from its typical approach because the President has declared a national emergency. Because of current CDC recommendations, as well as state and local orders for social distancing to limit the spread of COVID-19, EPA cannot hold in-person public meetings at this time.

1. Meeting participation

Those who wish to participate in the initial public meeting or repeat subsequent webinar offerings can find information on how to register, including dates and times, at

https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials. To ensure adequate time for public statements, individuals or organizations interested in making a statement should identify their interest when they register. We ask that only one person present on behalf of a group or organization, and that the presentation be limited to ten minutes. Any additional statements from participants will be taken during the meeting if time permits. Formal comments must be submitted to the docket. The number of webinar connections available for the meeting is limited and will be available on a first-come, first-served basis. Further details about registration and participation can be found on EPA's Unregulated Contaminant Monitoring Program Meetings and Materials webpage at https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials.

2. Meeting materials

EPA expects to send meeting materials by email to all registered participants prior to the meeting. The materials will be posted on EPA's website at https://www.epa.gov/dwucmr/unregulated-contaminant-monitoring-rule-ucmr-meetings-and-materials for persons who do not participate in the webinar.

III. General Information

A. How does EPA use different monitoring tiers to implement the Unregulated Contaminant Monitoring Program?

EPA published the list of contaminants for the first UCMR (UCMR 1) in the **Federal Register** (FR) on September 17, 1999 (64 FR 50556, (USEPA, 1999)), the second UCMR (UCMR 2) on January 4, 2007 (72 FR 367, (USEPA, 2007)), the third UCMR (UCMR 3) on May 2, 2012 (77 FR 26072, (USEPA, 2012)), and the fourth UCMR (UCMR 4) on December 20, 2016 (81 FR 92666, (USEPA, 2016a)). EPA has utilized up to three different tiers of

contaminant monitoring, associated with three different "lists" of contaminants, in past UCMRs. EPA designed the monitoring tiers to reflect the availability and complexity of analytical methods, laboratory capacity, sampling frequency, and cost, as well as labor hours on and the characteristics of PWSs performing the monitoring. For example, monitoring that is more complex, costly, and/or tailored is more likely to be implemented under the second or third tiers, as described below.

The Assessment Monitoring tier is the largest in scope and is used to collect data to determine the national occurrence of "List 1" contaminants in PWS-supplied drinking water for the purpose of estimating national population exposure. The Assessment Monitoring tier has been used in the four previous UCMRs to collect occurrence data from all systems serving more than 10,000 people and a representative sample of 800 smaller systems. Consistent with the AWIA, the Assessment Monitoring approach was redesigned for the proposed UCMR 5 and would require all systems serving 3,300 or more people and a representative sample of systems serving fewer than 3,300 to perform monitoring (USEPA, 2020a). The population-weighted sampling design for the nationally representative sample of small systems (used in previous UCMR cycles to select 800 systems serving 10,000 or fewer, and proposed to be used in UCMR 5 to select 800 systems serving fewer than 3,300) calls for the sample to be stratified by water source type (ground water or surface water), service size category, and state (where each state is allocated a minimum of two systems in its State Monitoring Plan). The allowable margin of error at the 99% confidence level is $\pm$1% for an expected contaminant occurrence of 1%. Assessment Monitoring is the primary tier used for contaminants and generally relies on analytical methods that use more common techniques, and are expected to be widely available. EPA has used an Assessment Monitoring tier for 72 contaminants and contaminant groups over the course of

UCMR 1 through UCMR 4. The Agency is proposing to exclusively require Assessment Monitoring in UCMR 5 and anticipates that this will generally be the case in future UCMR cycles when practical, since this monitoring approach yields the most complete set of occurrence data to support EPA's decision making.

The Screening Survey tier is smaller in scope than Assessment Monitoring, applying to all very large water systems serving more than 100,000 people, 320 randomly selected systems serving 10,001 to 100,000 people, and 480 randomly selected systems serving 10,000 or fewer people. The Screening Survey approach is used to collect data to determine the national occurrence of "List 2" contaminants in PWS-supplied drinking water. This tier generally pertains to monitoring with less established analytical techniques, such that laboratory capacity and/or cost may be a concern. The Screening Survey design for the nationally representative sample of PWSs serving fewer than 100,000 people has an allowable margin of error of ±1% at the 99% confidence level for an expected occurrence of 1%; however, unlike Assessment Monitoring, the stratified design is not population-weighted. EPA has used Screening Survey monitoring for 36 contaminants over the course of UCMR 1 through UCMR 4. A Screening Survey tier is not proposed for UCMR 5 because Assessment Monitoring for the 30 proposed contaminants has been deemed practical and would allow EPA to collect a more robust set of occurrence data than provided for under a Screening Survey approach.

A Pre-Screen Testing tier for "List 3" contaminants can be customized to meet the specific monitoring objectives for a specific group of PWSs. EPA used Pre-Screen Testing to collect data for two viruses under UCMR 3. That monitoring relied on specialized analytical methods and sampling techniques, and focused on 800 small, undisinfected groundwater systems in vulnerable areas. A Pre-Screen Testing tier is not proposed for UCMR 5.

B. How are the CCL, the UCMR program, the Regulatory Determination process, and the NCOD interrelated?

Under the 1996 amendments to the SDWA, Congress established a multi-step, risk-based approach for determining which contaminants would become subject to drinking water standards. Under the first step, EPA is required to publish a CCL every five years that identifies contaminants that are not subject to any proposed or promulgated drinking water regulations, are known or anticipated to occur in PWSs, and may require future regulation under the SDWA. Under the second step, EPA must require, every five years, monitoring of unregulated contaminants to determine their occurrence in drinking water systems; this is the UCMR program. Under the third step, EPA is required to determine, every five years, whether or not to regulate at least five contaminants from the CCL. Under §1412(b)(1)(A) of the SDWA, EPA regulates a contaminant in drinking water 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 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.

For the contaminants that meet all of the three criteria, the SDWA requires EPA to publish national primary drinking water regulations (NPDWRs). Information on the CCL and the regulatory determination process can be found at: https://www.epa.gov/ccl.

The data collected through the UCMR program are made available to the public through the National Contaminant Occurrence Database (NCOD) for drinking water. EPA developed the

NCOD to satisfy statutory requirements in the 1996 Amendments to the SDWA to assemble, and maintain a drinking water contaminant occurrence database for both regulated and unregulated contaminants in water systems. NCOD houses data on unregulated contaminant occurrence; data from EPA's "Six Year Review" of national drinking water regulations; and ambient and/or source water data. Section 1445(g)(3) of the SDWA requires that EPA maintain UCMR data in the NCOD, and use the data when evaluating the frequency and level of occurrence of contaminants in drinking water at a level of public health concern. The UCMR results can be viewed by the public via NCOD (https://www.epa.gov/sdwa/national-contaminant-occurrence-database-ncod) or via the UCMR web page at: https://www.epa.gov/dwucmr.

C. What are the Consumer Confidence Reporting and Public Notice Reporting requirements for public water systems that are subject to UCMR?

In addition to reporting UCMR monitoring data to EPA, PWSs are responsible for presenting and addressing UCMR results in their annual Consumer Confidence Reports (CCRs) (40 CFR 141.153), and must address Public Notice (PN) requirements associated with UCMR (40 CFR 141.207). Today's notice does not propose changes to these reporting requirements. More details about the CCR and PN requirements can be viewed by the public at: https://www.epa.gov/ccr and https://www.epa.gov/dwreginfo/public-notification-rule, respectively.

D. What notable changes are being proposed for UCMR 5?

This action proposes to revise the existing UCMR to address recent changes in the SDWA, and to reflect lessons learned through prior experience implementing the UCMR. These additional proposed changes include: requiring water systems serving 3,300 or more persons to monitor per the AWIA requirements; updating the list of the UCMR 5 contaminants, analytical

methods, monitoring time frame, and sampling locations; revising the data elements required in addition to the occurrence data (outlined in Exhibit 2 below); revising data reporting timeframes; and effecting conforming and editorial changes, such as those necessary to remove requirements solely related to UCMR 4. A track-changes version of the rule language, comparing UCMR 4 to the proposed changes for UCMR 5, ("Proposed Revisions to CFR Parts 141.35 and 141.40" (USEPA, 2020c)), is included in the public docket (Docket ID No. EPA-HQ-OW-2020-0530) for this proposed rule. EPA's proposed approach and rationale for changes are described in the following sections.

Exhibit 2: Notable Changes Proposed for UCMR 5

CFR Rule Section			Description of Proposed Change	Corresponding Preamble Section
Number	**Title/Description**	**Current (UCMR 4) requirement**		
§141.35(d), §141.40(a)(2)(ii), and §141.40(a)(4)(ii)	Scope of UCMR 5 applicability	UCMR 4 included all CWSs and NTNCWSs that serve more than 10,000 people, and a representative set of 800 systems serving 10,000 or fewer people.	Proposes revisions to the scope of UCMR 5 to address all CWSs and NTNCWSs serving 3,300 or more people and a representative set of systems serving fewer than 3,300 people (consistent with AWIA).	I.A
§141.40(a)(3)	Related specifications for the analytes to be monitored, including sampling timeframe	UCMR 4 specified 30 contaminants (cyanotoxins, metals, pesticides, brominated haloacetic acid groups, alcohols, and semivolatile chemicals) and sample collection from January 2018 through December 2020.	Proposes a new list of 29 PFAS and lithium as contaminants for monitoring; identifies associated analytical methods, MRLs, and sampling locations; and proposes to revise the sample collection dates to January 2023 through December 2025.	III.E + III.I
§141.40(a)	Applicability date	UCMR 4 specified December 31, 2015, as the basis for determining which systems were subject to monitoring.	Proposes to revise the date used to determine which systems are subject to monitoring to February 1, 2021.	III.H
§141.35(c)(3)	Ground Water Representative Monitoring Plans (GWRMPs)	UCMR 4 specified "within 120 from publication of the final rule (April 19, 2017)" as the deadline to submit a GWRMP.	Proposes flexibility to the deadline for PWSs to submit a GWRMP proposal to EPA.	III.I
§141.35(c)(6)(ii) and §141.40(a)(5)(vi)	Reporting timeframe	UCMR 4 specified that laboratories must approve analytical results in EPA's electronic data reporting system within 120	Proposes to revise the timeframe for laboratories to post and approve analytical results in EPA's electronic data reporting system (for review by the PWS) to "within 90 days from the sample collection date."	III.I

		days from the sample collection date and specified that PWS had 60 days (from when the laboratory posted the data to EPA's electronic data reporting system) to review, approve, and submit their data to the state and EPA.	Proposes to revise the timeframe for PWSs to review, approve, and submit data to the state and EPA to no more than "30 days from when the laboratory posts the data to EPA's electronic data reporting system."	
§141.35(e)	Reporting requirements - Data elements	UCMR 4 specified data elements applicable to the contaminants included in that cycle.	Proposes changes to the data elements to be reported to EPA based on the contaminants proposed for monitoring.	III.J
§141.40(a)(5)(ii)	Laboratory approval application timeframe	UCMR 4 specified that laboratories interested in supporting monitoring must initially apply within 120 days of publication of the final rule. April 19, 2017 was specified as the date by which all registration and application materials must be completed and returned to UCMR_Sampling_Coordinator@epa.gov.	Proposes a more flexible timeframe for laboratories to apply to support UCMR 5 monitoring. Proposes that registration and application materials are to be submitted to EPA "by August 1, 2022." Additonally, revises the email correspondence to be UCMR_Lab_Approval@epa.gov.	III.L

E. How did EPA prioritize candidate contaminants and what contaminants are proposed for UCMR 5?

In establishing the proposed list of contaminants for UCMR 5, EPA evaluated unregulated contaminants in accordance with the statutory authorities described in section I.A of

this document. In accordance with these requirements, EPA's commitments under the PFAS Action Plan (USEPA, 2019a), and the process described in this document, EPA is proposing monitoring for the unregulated contaminants listed in Exhibit 3 using the specified methods.

Exhibit 3: Proposed UCMR 5 Analytes

List 1 Analytes	
Twenty-five Per- and Polyfluoroalkyl Substances (PFAS) using EPA Method 533 (SPE LC/MS/MS)[1]:	
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	perfluorodecanoic acid (PFDA)
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	perfluorododecanoic acid (PFDoA)
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	perfluoroheptanesulfonic acid (PFHpS)
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	perfluoroheptanoic acid (PFHpA)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	perfluorohexanesulfonic acid (PFHxS)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	perfluorohexanoic acid (PFHxA)
hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	perfluorononanoic acid (PFNA)
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	perfluorooctanesulfonic acid (PFOS)
perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	perfluorooctanoic acid (PFOA)
perfluoro-3-methoxypropanoic acid (PFMPA)	perfluoropentanesulfonic acid (PFPeS)
perfluoro-4-methoxybutanoic acid (PFMBA)	perfluoropentanoic acid (PFPeA)
perfluorobutanesulfonic acid (PFBS)	perfluoroundecanoic acid (PFUnA)
perfluorobutanoic acid (PFBA)	
Four Per- and Polyfluoroalkyl Substances (PFAS) using EPA Method 537.1 (SPE LC/MS/MS)[2]:	
n-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	perfluorotetradecanoic acid (PFTA)

List 1 Analytes	
Twenty-five Per- and Polyfluoroalkyl Substances (PFAS) using EPA Method 533 (SPE LC/MS/MS)[1]:	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	perfluorotridecanoic acid (PFTrDA)
One Metal/Pharmaceutical using EPA Method 200.7 (ICP-AES)[3] or alternate SM[4] or ASTM[5]:	
lithium	

[1] EPA Method 533 (Solid phase extraction (SPE) liquid chromatography/tandem mass spectrometry (LC/MS/MS)) (USEPA, 2019c).
[2] EPA Method 537.1 Version 2.0 (Solid phase extraction (SPE) liquid chromatography/tandem mass spectrometry (LC/MS/MS)) (USEPA, 2020d).
[3] EPA Method 200.7 (Inductively coupled plasma-atomic emission spectrometry (ICP-AES)) (USEPA, 1994).
[4] Standard Methods (SM) 3120 B (SM, 2017) or SM 3120 B-99 (SM Online, 1999).
[5] ASTM International (ASTM) D1976-20 (ASTM, 2020).

EPA considered the current (fourth) Contaminant Candidate List (CCL 4), which includes 97 chemicals or chemical groups and 12 microbes (81 FR 81099, November 17, 2016 (USEPA, 2016b)). EPA also evaluated contaminants nominated by the public for potential inclusion on the next (fifth) CCL (CCL 5) (83 FR 50364, October 5, 2018 (USEPA, 2018b)) and considered other priority contaminants, including those highlighted in the PFAS Action Plan (USEPA, 2019a). Further, EPA considered the opportunity to collect occurrence data for non-CCL contaminants using the proposed methods for CCL contaminants that would result in little-to-no additional expense (i.e., concurrent with the collection of data for CCL contaminants). EPA's proposed approach addresses the PFAS requirement in NDAA (Public Law 116-92) by including all 29 PFAS that are within the scope of EPA Methods 533, published December 2019 (USEPA, 2019c), and 537.1, initially published November 2018 and updated via version 2.0 in March 2020 (USEPA, 2020d).

EPA evaluated candidate UCMR 5 contaminants using a multi-step prioritization process. The first step included identifying contaminants that: (1) were not monitored under prior UCMR

cycles; (2) may occur in drinking water; and (3) are expected to have a completed, validated drinking water method in time for rule proposal.

The next step was to consider the following: availability of health assessments or other health-effects information (e.g., critical health endpoints suggesting carcinogenicity); public interest (e.g., PFAS); active use (e.g., pesticides that are registered for use); and availability of occurrence data.

During the final step, EPA considered stakeholder input; looked at cost-effectiveness of the potential monitoring approaches; considered implementation factors (e.g., laboratory capacity); and further evaluated health effects, occurrence, and persistence/mobility data to identify the proposed list of UCMR 5 contaminants.

Contaminant-specific information (e.g., source, use, production, release, persistence, mobility, health effects, and occurrence) that EPA used to evaluate candidate contaminants, is contained in "Information Compendium for Candidate Contaminants for the Proposed Unregulated Contaminant Monitoring Rule (UCMR 5)" (USEPA, 2020e). The Information Compendium can be found in EPA public docket for this proposed rule, under Docket ID No. EPA-HQ-OW-2020-0530. EPA invites comment on the proposed UCMR 5 contaminants (and their associated analytical methods) identified in Exhibit 3.

F. What other contaminants did EPA consider?

This notice describes the 30 contaminants that EPA has identified as the highest priorities for UCMR 5 monitoring through the process described in the preceding section. This process prioritizes the unregulated contaminants for which nationally representative data on the frequency and level of occurrence are useful. EPA believes that the primary utility of the UCMR data is for the Agency's regulatory evaluation. The SDWA requires that the data collected under

the UCMR be used to develop the CCL (see §1412(b)(1)(B)(i)(I)) and to make regulatory determinations for CCL contaminants (see §1412(b)(1)(B)(ii)(II)). EPA believes that the UCMR can be useful to States, water systems, and to water system consumers but that is not the primary purpose of the data collection.

In developing a UCMR rule EPA also considers the burden that UCMR places upon water systems to perform monitoring and, in accordance with SDWA §1445(j)(1) and 1445(j)(3), the new expenses of small system monitoring and the laboratory capacity to support the analysis of UCMR samples. EPA is proposing a rule that reflects a consideration of the burden on water systems, the new expenses associated with implementing the rule, and the utility of the information to be collected. Although the NDAA allows the Agency to require monitoring for more contaminants beyond those proposed, EPA believes that the utility of the additional data that would be collected does not warrant their inclusion. As described in the following sections, data collection for *Legionella pneumophila* and four haloacetonitriles (dichloroacetonitrile, dibromoacetonitrile, trichloroacetonitrile, and bromochloroacetonitrile) would not be useful to EPA's regulatory deliberations.

Also, due to limitations of analytical methodologies, data collection for 1,2,3-trichloropropane and total organic fluorine (TOF) would not be useful.

The information that EPA considered when evaluating contaminants may be found in the Information Compendium (USEPA, 2020e).

EPA invites comment on these contaminants and any other priority contaminants commenters wish to recommend. In your comments, please identify the following: any new contaminant(s) that you believe EPA should include in the UCMR 5 monitoring; any contaminant(s) in Exhibit 3 that you believe should be removed from the list; the recommended

analytical method(s) for any new contaminant(s) that you propose; and other relevant details (*e.g.*, reporting level, sampling location, sampling frequency, analytical cost). Comments that provide supporting data or rationale are especially helpful to EPA.

1. *Legionella pneumophila*

Legionella pneumophila is recognized as an important biofilm-related opportunistic pathogen associated with waterborne disease. It is a naturally occurring pathogen, widely found in the environment. *Legionella pneumophila* may enter drinking water distribution systems and proliferate under certain conditions (USEPA, 2001). Under EPA's Surface Water Treatment Rule (SWTR), EPA established NPDWRs for Giardia, viruses, *Legionella*, turbidity and heterotrophic bacteria and set maximum contaminant limit goals of zero for *Giardia lamblia*, viruses and *Legionella* (54 FR 27486, June 29, 1989 (USEPA, 1989)). EPA is currently examining opportunities to enhance protection against *Legionella pneumophila* through potential revisions to the suite of Microbial and Disinfection Byproduct (MDBP) rules, which includes the SWTR. As stated in the conclusions from EPA's third "Six-Year Review of Drinking Water Standards" (82 FR 3518, January 11, 2017 (USEPA, 2017)), "EPA identified the following NPDWRs under the SWTR as candidates for revision under the Six-Year Review 3, because of the opportunity to further reduce residual risk from pathogens (including opportunistic pathogens such as *Legionella)* beyond the risk addressed by the current SWTR." In accordance with the dates in the Settlement Agreement between EPA and Waterkeeper Alliance (*Waterkeeper Alliance, Inc. v. U.S. EPA*, No. 1:19-cv-00899-LJL (S.D.N.Y. Jun. 1, 2020)), the Agency anticipates signing a proposal for revisions to the MDBP rules and a final action on the proposal by July 31, 2024 and September 30, 2027, respectively. Accordingly, EPA has concerns about the utility of a UCMR 5 data set on *Legionella pneumophila* based on the timeframe for the Agency deliberations about the MDBP revisions. The UCMR 5 data collection would not be

complete in time to inform regulatory revision and would not reflect conditions in water systems after any regulatory revisions become effective.

The Six-Year Review 3 conclusion and Settlement Agreement state EPA's approach to investigating public health risks potentially associated with *Legionella*. Inclusion of *Legionella pneumophila* in UCMR 5 would add significant monitoring and reporting complexity, and cost. If *Legionella pneumophila* were to be added to UCMR 5, most of the additional cost would be borne by large PWSs (for analysis of their samples) and EPA (for analysis of samples from small PWSs). In such case, sample collection would likely be at the distribution-system sampling locations described in the Disinfectants and Disinfection Byproducts Rule (D/DBPR) (40 CFR 141.622). Because *Legionella pneumophila* is regulated via "treatment technique" and EPA does not require that it be measured, the Agency has not evaluated or validated analytical methods for its measurement. EPA is aware that there are a number of potential techniques for measuring *Legionella pneumophila*, including the commercially-available Legiolert™ test **(**IDEXX Laboratories, Inc., 2020). EPA estimates that this additional monitoring would result in $11 million in new expenses for large PWSs, $20 million in new expenses for the Agency for small system monitoring, and $0.5 million in new expenses for small PWSs and states over the 5-year UCMR period. EPA believes this is a significant burden for data that would not be available in time to inform regulatory revision and that would not reflect conditions in water systems after any regulatory revisions become effective. EPA invites comments on whether *Legionella pneumophila* should be included in UCMR 5.

2. Haloacetonitriles

The four haloacetonitriles represent a group of unregulated disinfection byproducts (DBPs). They were detected relatively frequently in monitoring under the DBP Information Collection Rule (1997-1998), available via https://www.epa.gov/dwsixyearreview/supplemental-

data-six-year-review-3, and are generally considered more cytotoxic and genotoxic than the regulated DBPs. EPA Method 551.1 is an existing validated method approved for measuring regulated total trihalomethanes in drinking water (USEPA, 1995); it is also capable of measuring unregulated haloacetonitriles. Similar to the situation with *Legionella pneumophila*, EPA is examining opportunities to enhance protection against DBPs, including these haloacetonitriles through potential revisions to the MDBP rules; see previous paragraph regarding the anticipated timeframe for those revisions and note the concern about timing relative to UCMR 5 data collection. As with *Legionella pneumophila*, inclusion of haloacetonitriles in UCMR 5 would introduce significant monitoring and reporting complexity and cost compared to the sampling design for PFAS and lithium. If haloacetonitriles were to be added to UCMR 5, most of the additional expenses would be borne by large PWSs (for analysis of their samples) and EPA (for analysis of samples from small PWSs). In such case, sample collection would likely be at the distribution-system sampling locations described in the Disinfectants and Disinfection Byproducts Rule (D/DBPR) (40 CFR 141.622). EPA estimates this would result in $16 million in new expenses for large PWSs, $20 million in new expenses for the Agency, and $0.5 million in new expenses for small PWSs and states over the 5-year UCMR period. EPA invites comments on whether haloacetonitriles should be included in UCMR 5.

3. 1,2,3-trichloropropane

1,2,3-trichloropropane is a man-made chemical used as an industrial solvent, cleaning and degreasing agent, and synthesis intermediate. 1,2,3-trichloropropane occurrence data collected during UCMR 3 (USEPA, 2012) may be found at https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#3. EPA's March 2020 "Announcement of Preliminary Regulatory Determinations for Contaminants on the Fourth Drinking Water Contaminant Candidate List" (available via

https://www.epa.gov/ccl/regulatory-determination-4) concluded that the Agency needs additional lower-level occurrence information prior to making a preliminary regulatory determination for 1,2,3-trichloropropane. EPA is not proposing 1,2,3-trichloropropane monitoring in UCMR 5 because the Agency concludes that available analytical methods would not support the collection of data at concentrations lower than the levels monitored during UCMR 3 (USEPA, 2019d). At 0.03 µg/L, the minimum reporting level (MRL) established in UCMR 3 is higher than the EPA health reference level (HRL) associated with a cancer risk level of one cancer case per million people (0.0004 µg/L (0.4 ng/L) (USEPA, 2019d), but lower than the cancer risk level associated with one cancer case per 10,000 people (0.04 µg/L)). EPA invites comment on any aspects of 1,2,3-trichloropropane as a candidate for UCMR 5, particularly comments on additional methods that may support national monitoring at quantitation levels lower than 0.0004 µg/L.

4. Total Organic Fluorine (TOF)

There are a number of analytical techniques that have been applied to measuring organic fluorine in environmental matrices and drinking water, and some have proposed trying to correlate PFAS, in aggregate, with measurements of total organic fluorine. TOF, by combustion ion chromatography, relies on extracting fluorine-containing compounds from water, defluorinating, and capturing the resulting hydrogen flouride gas in solution for analysis. While there is high interest in TOF (and other techniques that might capture a broader suite of PFAS), the measurement approach is subject to significant technical challenges, and a robust method that would support national monitoring is unlikely to be ready in time to support UCMR 5 rulemaking. Further, TOF methods for drinking water may not be sensitive or specific enough to support decision making; TOF is not specific to PFAS, and any fluorine-containing compounds (e.g., pesticides, pharmaceuticals) that are retained during extraction would be included in the

organic fluorine measurement. EPA cannot reliably estimate the cost to measure TOF under UCMR because TOF methods have little commercial laboratory availability at this time.

G. What are the costs of alternatives to the proposed UCMR 5?

As described in the preceding sections, EPA considered alternatives to the proposed UCMR 5. One alternative EPA considered recognizes that the Agency cost to support the expanded small-PWS monitoring scope defined in the AWIA may exceed available resources. Specifically, the AWIA provisions would increase the number of PWS samples for which EPA would perform analysis by 8-fold. Exhibit 4 presents the cost over 5 years for the proposed-rule baseline and presents the alternative cost if EPA were to promulgate a final UCMR 5 that reverts to the traditional UCMR approach to small system monitoring (i.e., includes 800 systems serving 10,000 or fewer people).

Exhibit 4: Estimated 5-year (2022-2026) Cost ($ million) of the Proposed UCMR and an Alternative with Reduced Small System Monitoring[1]

Action	**Total cost to Large PWSs**	**Total cost to EPA[2]**	**Total cost to small PWSs and States**	**Total Program Cost (sum of costs for large and small PWSs, EPA, and states)**
UCMR 5 proposed-rule baseline (presumes funds are available to support AWIA-based scope and that 29 PFAS and lithium are monitored)	$47.8	$52.7	$5.5	$105.9
Alternative UCMR 5 which would include only include 800 systems serving 10,000 or fewer people (presumes that 29 PFAS and lithium are monitored)	$47.8	$14.7	$3.4	$65.9
Difference between proposed-rule baseline and alternative	$0	$38.0	$2.1	$40.0

[1] Totals may not equal the sum of components due to rounding.

[2] Accounts for cost of analyses for samples from small PWSs and other implementation expenses

Exhibit 5 presents the costs over 5 years for the UCMR 5 proposed-rule baseline and alternatives, in which EPA would add monitoring for *Legionella pneumophila* and/or haloacetonitriles to the proposed UCMR 5 analytes (29 PFAS and lithium).

Exhibit 5: Estimated 5-year (2022-2026) Cost ($ million) of the Proposed UCMR and Alternatives that Add Monitoring for *Legionella pneumophila* and/or Haloacetonitriles (Differences Between the Baseline and Alternatives [$ million] are Noted Parenthetically)[1]

Action	**Total cost to Large PWSs**	**Total cost to EPA[2]**	**Total cost to small PWSs and States**	**Total Program Cost (sum of costs for large and small PWSs, EPA, and states)**
UCMR 5 proposed-rule baseline (presumes funds are available to support AWIA-based scope and that 29 PFAS and lithium are monitored)	$47.8	$52.7	$5.5	$105.9
Require monitoring for *Legionella pneumophila* (in addition to 29 PFAS and lithium)	$58.7 (+ $11.0)	$72.9 (+ $20.2)	$6.0 (+ $0.5)	$137.6 (+ $31.7)
Require monitoring for haloacetonitriles (in addition to 29 PFAS and lithium)	$63.6 (+ $15.8)	$72.7 (+ $20.0)	$6.0 (+ $0.5)	$142.2 (+ $36.3)
Require monitoring for *Legionella pneumophila* and haloacetonitriles (in addition to 29 PFAS and lithium)	$73.3 (+ $25.6)	$92.9 (+ $40.2)	$6.0 (+ $0.5)	$172.2 (+ $66.3)

[1] Totals may not equal the sum of components due to rounding.
[2] Accounts for cost of analyses for samples from small PWSs and other implementation expenses

Exhibit 6 presents the costs over 5 years for the UCMR 5 "pre-AWIA" alternative baseline proposed-rule baseline (i.e., in which the Agency would include 800 nationally-representative water systems serving fewer than or equal to 10,000), and associated scenarios in which EPA would add monitoring for *Legionella pneumophila* and/or haloacetonitriles to the

proposed UCMR 5 analytes (29 PFAS and lithium).

Exhibit 6: Estimated 5-year (2022-2026) Cost ($ million) of a UCMR 5 "Pre-AWIA" Alternative Baseline, and Associated Scenarios that Add Monitoring for *Legionella pneumophila* and/or Haloacetonitriles (Differences Between the Baseline and Alternatives [$ million] are Noted Parenthetically) [1]

Action	**Total cost to Large PWSs**	**Total cost to EPA**[2]	**Total cost to small PWSs and States**	**Total Program Cost (sum of costs for large and small PWSs, EPA, and states)**
UCMR 5 "pre-AWIA" alternative baseline (presumes that monitoring includes 800 PWSs serving ≤10,000 and that 29 PFAS and lithium are monitored)	$47.8	$14.7	$3.4	$65.8
Require monitoring for *Legionella pneumophila* (in addition to 29 PFAS and lithium)	$58.7 (+$11.0)	$18.4 (+$3.7)	$3.4 (+$0.04)	$80.5 (+$14.7)
Require monitoring for haloacetonitriles (in addition to 29 PFAS and lithium)	$63.6 (+$15.8)	$16.2 (+$1.5)	$3.4 (+$0.04)	$83.2 (+$17.4)
Require monitoring for *Legionella pneumophila* and haloacetonitriles (in addition to 29 PFAS and lithium)	$73.3 (+$25.6)	$19.2 (+$4.5)	$3.4 (+$0.04)	$96.0 (+$30.2)

[1] Totals may not equal the sum of components due to rounding.
[2] Accounts for cost of analyses for samples from small PWSs and other implementation expenses

H. What is the proposed applicability date?

The applicability date represents an internal milestone used by EPA to determine if a PWS is included in the UCMR program, and if it is a small or large PWS. It does not represent a

date by which respondents need to take any action. In §141.40(a), EPA proposes February 1, 2021 as the new applicability date to determine which PWSs are subject to UCMR 5. That is, the determination of whether a PWS is required to monitor under UCMR 5 is based on the type of system (e.g., CWS, NTNCWS, etc.) and its retail population served, as indicated by the Safe Drinking Water Information System Federal Reporting Services (SDWIS/Fed) inventory on February 1, 2021. A determination of applicability on February 1, 2021 allows time for EPA to share the tentative list of PWSs with the states for their review, and to load PWS information into EPA's reporting system so that PWSs can be notified promptly once the final rule is published. If a PWS receives such notification and believes its retail population served in SDWIS/Fed is inaccurate (resulting in the PWS being erroneously included in UCMR 5), the system should contact their state authority to verify its population as of the applicability date and request a correction, if necessary. The applicability date for a given UCMR cycle is routinely established near the publication of the UCMR proposal. EPA believes that a later applicability date would be impractical given the planning that needs to occur prior to sample collection.

I. What are the proposed UCMR 5 sampling design and timeline of activities?

The proposed rule identifies sampling and analysis for UCMR 5 contaminants within the sampling period of 2023 to 2025 based on the Assessment Monitoring framework because, as described in section I.B of this document, EPA anticipates that there will be appropriate laboratory capacity. Preparations prior to 2023 are expected to include coordinating laboratory approval, selecting representative small systems, organizing Partnership Agreements, developing State Monitoring Plans (see III.N of this document), establishing monitoring schedules and inventory, and conducting outreach and training. Exhibit 7 illustrates the major activities that EPA expects will take place in preparation for, and during the implementation of the UCMR 5.

Exhibit 7: Proposed Timeline of UCMR 5 Activities

2022	2023	2024	2025	2026
Pre-sampling Activity by EPA • Manage Lab Approval Program • Organize Partnership Agreements and State Monitoring Plans • Begin PWS SDWARS registration/inventory • Review GWRMP submittals • Conduct outreach/trainings	← **Sampling Period** → **EPA Implementation Activities** • Provide compliance assistance • Implement small system monitoring • Post data quarterly to NCOD **PWS Sample Collection; Laboratory Analysis; Reporting** • All large systems serving more than 10,000 people • All small systems serving between 3,300 and 10,000 people • 800 small systems serving fewer than 3,300 people			**Post-sampling Activity** **PWSs, Laboratories** • Complete resampling, as needed • Conclude data reporting **EPA** • Complete upload of UCMR 5 data to NCOD

To minimize the impact of the rule on small systems (those serving 10,000 or fewer people), EPA pays for their sample kit preparation, sample shipping fees, and sample analysis.

As noted in section I.B of this document, the AWIA mandates the expanded UCMR monitoring "*subject to the availability of appropriations for such purpose,"* recognizing the greater EPA burden created by the AWIA (as EPA funds testing and laboratory analysis for small systems under the UCMR). If EPA concludes that it will not have the resources necessary to support the expanded monitoring described by the AWIA, the Agency will not promulgate a final rule that requires all water systems serving between 3,300 and 10,000 persons to monitor. Rather, EPA will use the approach from prior to the enactment of AWIA, and include 800 nationally-representative water systems serving fewer than or equal to 10,000 in the UCMR program.

Large systems (those serving more than 10,000 people) pay for all costs associated with

their monitoring. Exhibit 8 shows a summary of the estimated number of PWSs subject to monitoring.

Exhibit 8: Systems to Participate in UCMR 5 Monitoring

System Size (# of people served)	National Sample: Assessment Monitoring Design List 1 Chemicals	Total # of Systems per Size Category
Small Systems[1] (25 – 3,299)	800 randomly selected systems (CWSs and NTNCWSs)	800
Small Systems[2] (3,300 – 10,000)	All systems (CWSs and NTNCWSs)	5,147
Large Systems[3] (10,001 and over)	All systems (CWSs and NTNCWSs)	4,364
TOTAL		**10,311**

[1] EPA pays for all analytical costs associated with monitoring at small systems.
[2] Small system counts are approximate. EPA pays for all analytical costs associated with monitoring at small systems.
[3] Large system counts are approximate.

1. Sampling Frequency, Timing

On a per-system basis, the anticipated number of samples collected by each system is consistent with sample collection during prior UCMR cycles (although, as described elsewhere, the number of water systems subject to UCMR would be significantly greater under this proposal). Water systems would be required to collect samples based on the typical UCMR sampling frequency and time frame as follows: for surface water, ground water under the direct influence of surface water, and mixed locations, sampling would take place for four consecutive quarters over the course of 12 months (total of 4 sampling events). Sampling events would occur 3 months apart. For example, if the first sample is taken in January, the second would then occur anytime in April, the third would occur anytime in July, and the fourth would occur anytime in October. For ground water locations, sampling would take place twice over the course of 12

months (total of 2 sampling events). Sampling events would occur five to seven months apart. For example, if the first sample is taken in April, the second sample would then occur anytime in September, October, or November.

EPA expects to consult with the states and initially determine schedules (year and months of monitoring) for large water systems. Thereafter, these PWSs would have an opportunity to modify this initial schedule for planning purposes or other reasons (*e.g.*, to spread costs over multiple years, a sampling location will be closed during the scheduled month of monitoring, etc.). EPA proposes to schedule and coordinate small system monitoring by working closely with states. State Monitoring Plans provide an opportunity for states to review and revise the initial sampling schedules that EPA proposes (see discussion of State Monitoring Plans in section III.N of this document).

2. Sampling Locations and Ground Water Representative Monitoring Plans

Consistent with past UCMR cycles, sample collection for the UCMR 5 contaminants would take place at the entry point to the distribution system (EPTDS). As during past UCMRs and as described in §141.35(c)(3), the proposed rule would allow large ground water systems (or large surface water systems with ground water sources) that have multiple ground water EPTDSs to request approval to sample at representative monitoring locations rather than at each ground water EPTDS. GWRMPs approved under prior UCMRs may be used for UCMR 5, presuming no significant changes in the configuration of the ground water EPTDSs since the prior approval. Water systems that intend to use a previously approved plan must send EPA a copy of the approval documents received under prior UCMRs from their state (if reviewed by the state) or EPA.

Relative to the rules for prior UCMR cycles, this proposal provides greater flexibility to PWSs in submitting GWRMPs to EPA. As proposed, plans must be submitted to EPA six

months prior to the PWS's scheduled sample collection, instead of by a specified date; those scheduled to collect samples in 2024 or 2025 would have significant additional time to develop and propose representative plans. PWSs, particularly those scheduled for sample collection in 2023, are encouraged to submit proposals for new GWRMP by December 31, 2022, to allow time for review by EPA and, as appropriate, the state. EPA will work closely with the states to coordinate the review of GWRMPs in those cases where such review is part of the state's Partnership Agreement. Changes to inventory data in the Safe Drinking Water Accession and Review System (SDWARS) that impact a PWS's representative plan before or during the UCMR sampling period must be reported within 30 days of the change. EPA will collaborate with small systems (particularly those with many ground water locations) to develop a GWRMP when warranted, recognizing that EPA pays for the analysis of samples from small systems.

3. Reporting Times

This action proposes changes in the timeframes for laboratories to post and approve analytical results in SDWARS, and for PWSs to then review and approve the posted results in SDWARS. EPA recognizes that multiple states have expressed an interest in earlier access to UCMR data (see Docket ID No. EPA-HQ-OW-2020-0530) and believes that shorter timeframes for posting and approving data are feasible based on our experience with UCMR reporting to-date. EPA has observed that many laboratories are routinely posting data to SDWARS within 90 days of sample collection. EPA has also observed that many large PWSs are approving and submitting data within 30 days of their laboratory posting the data. Accordingly, EPA proposes that laboratories be given 90 days (versus the current 120 days) from the sample collection date to post and approve analytical results in SDWARS for PWS review. EPA proposes that large PWSs be given 30 days (versus the current 60 days) to review and approve the analytical results posted to SDWARS. As with the current UCMR requirements, data would be considered

approved and available for state and EPA review if the PWS takes no action within their allotted review period. EPA welcomes comments on these proposed changes to the reporting requirements and invites input on other changes that could address the interest in earlier access to data.

J. What are the reporting requirements for the UCMR 5?

EPA proposes changes to the reporting requirements currently established for UCMR 4, as detailed in Table 1 of §141.35(e), to account for the UCMR 5 contaminants and the monitoring approach being proposed. These changes include removing data elements related to the specific contaminants from the previous UCMR, and adding and updating data elements based on the proposed list of contaminants to be monitored. EPA is proposing certain data element changes, based on experience from the previous UCMR, that are intended to improve data reporting from laboratories and water systems. Recognizing that data elements are specifically tailored to the requirements of each monitoring cycle, EPA invites comment on the appropriateness of the proposed UCMR 5 data elements relative to the proposed UCMR 5 contaminants, analytical methods and reporting requirements. EPA welcomes comments on the proposed data elements and associated definitions, as well as any others that may provide useful ancillary data to support an assessment of the occurrence information.

K. What are Minimum Reporting Levels (MRLs) and how were they determined?

EPA establishes MRLs for contaminants under the UCMR to ensure consistency in the quality of the information reported to the Agency. As defined in§141.40(a)(5)(iii), the MRL is the minimum quantitation level that, with 95% confidence, can be achieved by capable analysts at 75% or more of the laboratories using a specified analytical method. More detailed explanation of the MRL calculation is in the “Technical Basis for the Lowest Concentration

Minimum Reporting Level (LCMRL) Calculator" (USEPA, 2010), available on the Internet at (https://www.epa.gov/dwanalyticalmethods/lowest-concentration-minimum-reporting-level-lcmrl-calculator).

EPA requires each laboratory interested in supporting UCMR analyses to demonstrate that they can reliably make quality measurements at or below the established MRL to ensure that high quality results are being reported by participating laboratories. EPA established the proposed MRLs in §141.40(a)(3), Table 1, for each analyte/method by obtaining data from at least three laboratories that performed "lowest concentration minimum reporting level" (LCMRL) studies. The results from these laboratory LCMRL studies can be found in the "UCMR 5 Laboratory Approval Manual" (USEPA, 2020f).

The LCMRL is the lowest concentration of a contaminant that can be quantified with the precision and accuracy specified in "Technical Basis for the Lowest Concentration Minimum Reporting Level (LCMRL) Calculator" (USEPA, 2010), available on the Internet at (https://www.epa.gov/dwanalyticalmethods/lowest-concentration-minimum-reporting-level-lcmrl-calculator). The multiple laboratory LCMRLs were then processed through a statistical routine to derive an MRL that, with 95% confidence, is predicted to be attainable by 75% of laboratories using the prescribed method. EPA considers these to be the lowest reporting levels that can practically and consistently be achieved on a national basis (recognizing that individual laboratories may be able to measure at lower levels). EPA invites comments on the proposed MRLs, and will consider changing the proposed MRLs if the Agency obtains scientific information demonstrating that a different MRL is attainable and practical.

L. How do laboratories become approved to conduct the UCMR 5 analyses?

Consistent with prior UCMRs, this proposed action maintains the requirement that PWS

use laboratories approved by EPA to analyze UCMR 5 samples. Interested laboratories are encouraged to apply for EPA approval as early as possible, beginning with the publication of this proposal. The UCMR 5 laboratory approval process is designed to assess whether laboratories possess the required equipment and can meet laboratory-performance and data-reporting criteria described in this action.

EPA expects demand for laboratory support to increase significantly based on the greater number of water systems proposed for UCMR 5. EPA estimates that the number of participating small water systems will increase from the typical 800 to approximately 6,000 (see Exhibit 8 in section III.I of this document). In preparation for this increased participation, EPA anticipates soliciting proposals and awarding contracts to laboratories to support small system monitoring prior to the end of the proficiency testing (PT) program. Historically, laboratories awarded contracts by EPA have been required to first be approved to perform all methods. The anticipated steps and requirements for the laboratory approval process are described in steps 1 through 6 of the following paragraphs.

EPA anticipates following its typical approach to approving UCMR laboratories, which would require laboratories seeking approval to: (1) provide EPA with data that demonstrate a successful completion of an initial demonstration of capability (IDC) as outlined in each method; (2) verify successful performance at or below the MRLs as specified in this action; (3) provide information about laboratory standard operating procedures (SOPs); and (4) participate in two EPA PT studies for the analytes of interest. Audits of laboratories may be conducted by EPA prior to and/or following approval, and maintaining approval is contingent on timely and accurate reporting. The “UCMR 5 Laboratory Approval Manual” (USEPA, 2020f) provides more specific guidance on EPA laboratory approval program and the specific method acceptance

criteria. EPA will also include sample collection procedures that are specific to the methods in the "UCMR 5 Laboratory Manual," and will address this point in our outreach to the public water systems that will be collecting samples.

The structure of the anticipated UCMR 5 laboratory approval program is similar to that employed in the previous UCMRs, and would provide an assessment of the ability of laboratories to perform analyses using the methods listed in §141.40(a)(3), Table 1. Laboratory participation in the UCMR laboratory approval program is voluntary. However, as in the previous UCMRs, and as proposed for UCMR 5, EPA would require PWSs to exclusively use laboratories that have been approved under the program. EPA expects to post a list of approved UCMR 5 laboratories to: https://www.epa.gov/dwucmr and will bring this to the attention of the PWSs in our outreach to them.

1. Request to participate

Laboratories interested in the UCMR 5 laboratory approval program first email EPA at: UCMR_Lab_Approval@epa.gov to request registration materials. EPA expects to accept such requests beginning with the publication of the proposal in the **Federal Register**. Based on a January 1, 2023, anticipated start for UCMR 5 sample collection, EPA anticipates that the final opportunity for a laboratory to complete and submit the necessary registration and application information will be August 1, 2022.

2. Registration

Laboratory applicants provide registration information that includes: laboratory name, mailing address, shipping address, contact name, phone number, email address and a list of the UCMR 5 methods for which the laboratory is seeking approval. This registration step provides EPA with the necessary contact information, and ensures that each laboratory receives a customized application package.

3. Application package

Laboratory applicants will complete and return a customized application package that includes the following: IDC data, including precision, accuracy and results of MRL studies; information regarding analytical equipment and other materials; proof of current drinking water laboratory certification (for select compliance monitoring methods); method specific SOPs; and example chromatograms for each method under review.

As a condition of receiving and maintaining approval, the laboratory will be expected to promptly post UCMR 5 monitoring results and quality control data that meet method criteria (on behalf of its PWS clients) to EPA's UCMR electronic data reporting system, SDWARS.

4. EPA's review of application package

EPA will review the application packages and, if necessary, request follow-up information. Laboratories that successfully complete the application process become eligible to participate in the UCMR 5 PT program.

5. Proficiency testing

A PT sample is a synthetic sample containing a concentration of an analyte or mixture of analytes that is known to EPA, but unknown to the laboratory. To be approved, a laboratory is expected to meet specific acceptance criteria for the analysis of a UCMR 5 PT sample(s) for each analyte in each method, for which the laboratory is seeking approval. EPA anticipates offering up to three of these studies prior to the publication of the final rule, and at least two studies after publication of the final rule. This allows laboratories to complete their portion of the laboratory approval process prior to publication of the final rule, and receive their approval immediately following the publication of the final rule. A laboratory is expected to participate in and report data for at least two PT studies. This allows EPA to collect a robust data set for PT results, and provides laboratories with extra analytical experience using UCMR 5 methods. Laboratories

must pass a PT for every analyte in the method to be approved for that method, and may participate in multiple PT studies in order to produce passing results for each analyte. EPA has taken this approach in UCMR 5, recognizing that EPA Method 533 contains 25 analytes. EPA does not expect to conduct additional PT studies after the start of PWS monitoring; however, laboratory audits will likely be ongoing throughout the implementation of UCMR 5. Initial laboratory approval is expected to be contingent on successful completion of PT studies, which includes properly uploading the PT results to SDWARS. Continued laboratory approval is contingent on successful completion of the audit process and satisfactorily meeting all the other stated conditions.

6. Written EPA approval

After a laboratory successfully completes steps 1 through 5, EPA expects to send the laboratory a notification letter listing the methods for which approval is either "pending" (*i.e.*, pending promulgation of the final rule if the PT studies have been conducted prior to that time), or for which approval is "granted" (if after promulgation of the final rule). Laboratories receiving pending approval are expected to be granted approval without further action following promulgation of the final rule if no changes have been made to the rule that impact the laboratory approval program. EPA expects to contact the laboratory if changes are made between the proposed and final rules that warrant additional action by the laboratory.

M. What documents are being incorporated by reference?

The following methods are being incorporated by reference into this section for the UCMR 5 monitoring. All method material is available for inspection electronically at http://www.regulations.gov (Docket ID No. EPA-HQ-OW-2020-0530), or from the sources listed for each method. EPA has worked to make these methods and documents reasonably

available to interested parties. The methods that may be used to support monitoring under this rule are as follows:

1. Methods from the U.S. Environmental Protection Agency

The following methods are available at EPA's Docket No. EPA-HQ-OW-2020-0530.

(i) EPA Method 200.7 "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry," Revision 4.4, 1994. Available on the Internet at https://www.epa.gov/esam/method-2007-determination-metals-and-trace-elements-water-and-wastes-inductively-coupled-plasma. This is an EPA method for the analysis of metals and trace elements in water by ICP-AES and is proposed to measure lithium during UCMR 5. See also the discussion of non-EPA methods for lithium in this section.

(ii) EPA Method 533 "Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry," November 2019, EPA 815-B-19-020. Available on the Internet at https://www.epa.gov/dwanalyticalmethods. This is an EPA method for the analysis PFAS in drinking water using SPE and LC/MS/MS and is proposed to measure 25 PFAS during UCMR 5 (11Cl-PF3OUdS, 8:2 FTS, 4:2 FTS, 6:2 FTS, ADONA, 9Cl-PF3ONS, HFPO-DA (GenX), NFDHA, PFEESA, PFMPA, PFMBA, PFBS, PFBA, PFDA, PFDoA, PFHpS, PFHpA, PFHxS, PFHxA, PFNA, PFOS, PFOA, PFPeS, PFPeA, and PFUnA).

(iii) EPA Method 537.1 "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, November 2020, EPA/600/R-20/006. Available on the Internet at https://www.epa.gov/dwanalyticalmethods. This is an EPA method for the analysis of PFAS in drinking water using SPE and LC/MS/MS and is proposed to measure four

PFAS during UCMR 5 (NEtFOSAA, NMeFOSAA, PFTA, and PFTrDA).

2. Alternative Methods from American Public Health Association – Standard Methods (SM)

The following methods are from American Public Health- Standard Methods (SM), 800 I Street NW., Washington, DC 20001-3710

(i) "Standard Methods for the Examination of Water & Wastewater," 23rd edition (2017).

(a) SM 3120 B "Metals by Plasma Emission Spectroscopy (2017): Inductively Coupled Plasma (ICP) Method." This is a Standard Method for the analysis of metals in water and wastewater by emission spectroscopy using ICP and may be used for the analysis of lithium.

(ii) "Standard Methods Online," approved 1999. Available for purchase on the Internet at http://www.standardmethods.org.

(a) SM 3120 B "Metals by Plasma Emission Spectroscopy: Inductively Coupled Plasma (ICP) Method (Editorial Revisions, 2011)," (SM 3120 B-99). This is a Standard Method for the analysis of metals in water and wastewater by emission spectroscopy using ICP and may be used for the analysis of lithium.

3. Methods from ASTM International

The following methods are from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(i) ASTM D1976-20 "Standard Test Method for Elements in Water by Inductively-Coupled Plasma Atomic Emission Spectroscopy," approved May 1, 2020. Available for purchase on the Internet at https://www.astm.org/Standards/D1976.htm. This is an ASTM method for the analysis of elements in water by ICP-AES and may be used to measure lithium.

N. What is the State's role in the UCMR?

UCMR is a direct implementation rule (i.e., EPA has primary responsibility for its implementation), and state participation is voluntary. Under the previous UCMR cycles, specific activities that individual states agreed to carry out or assist with were identified and established exclusively through Partnership Agreements. Through Partnership Agreements, states can help EPA implement the UCMR, and help ensure that the UCMR data are of the highest quality possible to best support the Agency decision making. Under UCMR 5, EPA expects to continue to use the Partnership Agreement process to determine and document the following: the process for review and revision of the State Monitoring plans; replacing and updating system information including inventory; review of proposed GWRMPs; notification and instructions for systems; and compliance assistance. EPA is considering deploying a SDWIS/State extraction tool to assist partnered states with providing system information to the Agency. EPA recognizes that primacy agencies often have the best information about their PWSs and encourages them to partner in the UCMR 5 program.

O. How did EPA consider Children's Environmental Health?

By monitoring for unregulated contaminants that may pose health risks via drinking water, UCMR furthers the protection of public health for all citizens, including children. Children consume more water per unit of body weight compared to adults. Moreover, formula-fed infants drink a large amount of water compared to their body weight. Thus, while children's exposure to contaminants in drinking water may present a disproportionate health risk (USEPA, 2011), the objective of UCMR 5 is to collect nationally representative drinking water occurrence data on unregulated contaminants for consideration in potential future regulation. The detailed information on the prioritization process, as well as contaminant-specific information

(e.g., source, use, production, release, persistence, mobility, health effects, and occurrence), that EPA used to select the proposed analyte list, is contained in "Information Compendium for Candidate Contaminants for the Proposed Unregulated Contaminant Monitoring Rule (UCMR 5)" (USEPA, 2020e).

Executive Order 13045 does not apply to UCMR 5 because EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children (See IV.G. Executive Order 13045 of this document). However, EPA's Policy on Evaluating Health Risks to Children, which ensures that the health of infants and children is explicitly considered in the Agency's decision making, is applicable, see: https://www.epa.gov/children/epas-policy-evaluating-risk-children.

Using quantitation data from multiple laboratories, EPA establishes statistically-based UCMR reporting levels that are projected to be feasible for the national network of approved drinking water laboratories to quantify accurately. EPA generally sets the reporting levels as low as is practical, even if that level is well below concentrations that are currently associated with known or suspected health effects. In doing so, EPA positions itself to better address contaminant risk information in the future, including that associated with unique risks to children. EPA requests comments regarding any further steps that may be taken to evaluate and address health risks to children that fall within the scope of UCMR 5.

P. How did EPA address Environmental Justice?

EPA has concluded that this action is not subject to Executive Order 12898 because it does not establish an environmental health or safety standard (see IV.J. Executive Order 12898 of this document). This proposed action would provide EPA and other interested parties with scientifically valid data on the national occurrence data of selected contaminants in drinking

water. By seeking to identify unregulated contaminants that may pose health risks via drinking water from all PWSs, UCMR furthers the protection of public health for all citizens. EPA recognizes that unregulated contaminants in drinking water are of interest to all populations and structured the rulemaking process and implementation of the UCMR 5 rule to allow for meaningful involvement and transparency. EPA organized public meetings and webinars to share information regarding the development of UCMR 5; consulted with tribal governments; and convened a workgroup that included representatives from several states.

EPA proposes to continue to collect U.S. Postal Service Zip Codes for each PWS's service area, as collected under UCMR 3 and UCMR 4, to support potential assessments of whether or not minority, low-income and/or indigenous-population communities are uniquely impacted by particular drinking water contaminants. EPA solicits comment on the utility of this approach (including whether this is an appropriate way for PWSs to identify service areas), and welcomes comments regarding other actions the Agency could take to further address environmental justice within the UCMR. EPA welcomes, for example, comments regarding sampling and/or modeling approaches, and the feasibility and utility of applying these approaches to determine disproportionate impacts. EPA also welcomes comments on information other than Zip Codes that could be collected and used to support potential assessments of whether or not minority, low-income and/or indigenous-population communities are uniquely impacted by particular drinking water contaminants.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of

Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket. A full analysis of potential costs associated with this action, the "Draft Information Collection Request for the Unregulated Contaminant Monitoring Rule (UCMR 5),"(USEPA, 2020b) ICR Number 2040-NEW, is also available in the docket (Docket ID No. EPA-HQ-OW-2020-0530). A summary of the draft ICR can be found in section I.C of this document.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the PRA. The Information Collection Request (ICR) document (USEPA, 2020b) that EPA prepared has been assigned EPA ICR number 2040-NEW. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The information that EPA proposes to collect under this rule fulfills the statutory requirements of §1445(a)(2) of the SDWA, as amended in 1996, 2018, and 2019. The data will describe the source of the water, location and test results for samples taken from public water systems (PWSs). The information collected will support EPA's decisions as to whether or not to regulate particular contaminants under the SDWA. Reporting is mandatory. The data are not subject to confidentiality protection.

The five-year UCMR 5 period spans 2022-2026. As proposed, UCMR 5 sample collection begins in 2023 and continues through 2025. Since ICRs cannot be approved by OMB for a period longer than three years pursuant to 5 CFR 1320.10, the primary analysis in the ICR only covers the first three years of the collection (i.e., 2022-2024). Prior to expiration of the ICR, EPA will seek to renew the ICR and thus receive approval to collect information under the PRA

in the remaining two years of the UCMR 5 period.

Respondents/affected entities: The respondents/affected entities are small PWSs (those serving 10,000 or fewer people); large PWSs (those serving 10,001 to 100,000 people); very large PWSs (those serving more than 100,000 people); and states.

Respondent's obligation to respond: Mandatory (40 CFR 141.35)

Estimated number of respondents: Respondents to UCMR 5, as proposed, include ~5,900 small PWSs, ~4,400 large PWSs, and the 56 primacy agencies (50 states, one tribal nation, and five territories) for a total of ~10,400 respondents.

Frequency of response: The frequency of response varies across respondents and years. Across the initial 3-year ICR period for UCMR 5, small PWSs would sample an average of 2.8 times per PWS (*i.e.*, number of responses per PWS); large PWSs would sample and report and average of 3.2 time per PWS; and very large PWSs would sample and report an average of 3.7 times per PWS.

Total estimated burden: 48,406.1 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $9,734,617, annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to EPA using the docket identified at the beginning of this rule. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by

selecting "Currently under 30-day Review - Open for Public Comments" or by using the search function. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[insert date 30 days after publication in the Federal Register]**. EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

For purposes of assessing the impacts of this rule on small entities, EPA considered small entities to be PWSs serving 10,000 or fewer people. As required by the RFA, EPA proposed using this alternative definition in the **Federal Register** (63 FR 7606, February 13, 1998 (USEPA, 1998a)), sought public comment, consulted with the Small Business Administration (SBA) and finalized the alternative definition in the Consumer Confidence Reports rulemaking, (63 FR 44512, August 19, 1998 (USEPA, 1998b)). As stated in that Final Rule, the alternative definition would apply to this regulation, and future drinking water rules.

Exhibit 9: Number of Publicly- and Privately-Owned Small Systems Subject to UCMR 5

System Size (# of people served)	Publicly-Owned	Privately-Owned	Total[1]
Ground Water			
500 and under	134	401	534
501 to 3,300	120	45	165
3,301 to 10,000	2,334	541	2,875
Subtotal Ground Water	***2,588***	***987***	***3,574***
Surface Water (and Ground Water Under the Direct Influence of Surface Water)			
500 and under	22	27	49
501 to 3,300	38	14	52
3,301 to 10,000	1,762	509	2,272
Subtotal Surface Water	***1,822***	***550***	***2,373***
Total of Small Water Systems	***4,410***	***1,537***	***5,947***

[1] PWS counts were adjusted to display as whole numbers in each size category.

The basis for the proposed UCMR 5 RFA certification is as follows: For the 5,947 small water systems that would be affected, the average annual cost for complying with this rule represents no more than 0.5% of system revenues (the highest estimated percentage is for GW systems serving 500 or fewer people, at 0.5% of its median revenue). The average yearly cost to small systems to comply with UCMR 5 over the five-year period of 2022-2026, as proposed, is approximately $0.3 million. The average yearly cost to EPA to implement UCMR 5 over the same period, as proposed, is approximately $10.5 million, with most of that cost associated with the small system sampling program. EPA anticipates that approximately one third of the 5,947 small PWSs will collect samples in each of three years (2023, 2024, and 2025).

PWS costs are attributed to the labor required for reading about UCMR 5 requirements,

monitoring, reporting and record keeping. The estimated average annual burden across the 5-year UCMR 5 implementation period of 2022-2026 is 1.3 hours at $52 per small system. Average annual cost, in all cases, is less than 0.5% of system revenues. By assuming all costs for laboratory analyses, shipping and quality control for small entities, EPA incurs the entirety of the non-labor costs associated with the UCMR 5 small system monitoring, or 96% of total small system testing costs. Exhibit 10 and Exhibit 11 present the estimated economic impacts in the form of a revenue test for publicly- and privately-owned systems.

Exhibit 10: UCMR 5 Relative Cost Analysis for Small Publicly-Owned Systems (2022-2026)

System Size (# of people served)	Annual Number of Systems Impacted[1]	Average Annual Hours per System	Average Annual Cost per System	SBREFA Criteria-Revenue Test[2]
Ground Water Systems				
500 and under	27	1.0	$40.65	0.09%
501 to 3,300	24	1.1	$43.37	0.02%
3,301 to 10,000	467	1.3	$49.92	0.01%
Surface Water (and Ground Water Under the Direct Influence of Surface Water) Systems				
500 and under	5	1.4	$54.39	0.07%
501 to 3,300	8	1.4	$56.19	0.02%
3,301 to 10,000	353	1.5	$57.39	0.004%

[1]PWS counts were adjusted to display as whole numbers in each size category. Includes the publicly-owned portion of small systems subject to UCMR 5.
[2] Costs are presented as a percentage of median annual revenue for each size category.

Exhibit 11: UCMR 5 Relative Cost Analysis for Small Privately-Owned Systems (2022-2026)

System Size (# of people served)	Annual Number of Systems Impacted[1]	Average Annual Hours per System	Average Annual Cost per System	SBREFA Criteria-Revenue Test[2]

Ground Water Systems				
500 and under	80	1.0	$40.65	0.48%
501 to 3,300	9	1.1	$43.37	0.03%
3,301 to 10,000	108	1.3	$49.92	0.004%
Surface Water (and Ground Water Under the Direct Influence of Surface Water) Systems				
500 and under	5	1.4	$54.39	0.11%
501 to 3,300	3	1.4	$56.19	0.02%
3,301 to 10,000	102	1.5	$57.39	0.004%

[1] PWS counts were adjusted to display as whole numbers in each size category. Includes the privately-owned portion of small systems subject to the UCMR 5.
[2] Costs are presented as a percentage of median annual revenue for each size category.

EPA has determined that 5,947 small PWSs (for Assessment Monitoring), or approximately 9.35% of all small systems, would experience an impact of no more than 0.5% of revenues. This accounts for small PWSs familiarizing themselves with the regulatory requirements; reading sampling instructions; traveling to the sampling location; collecting and shipping the samples; and maintaining their records. The 5,975 small PWSs are comprised of all 5,147 systems serving between 3,300 and 10,000, and the representative group of 800 systems serving fewer than 3,300; the remainder of small systems would not participate in UCMR 5 monitoring and would not be impacted.

The Agency certifies that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, EPA believes that the impact of concern is any significant adverse economic impact on small entities, and that an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. Although this proposed rule

will not have a significant economic impact on a substantial number of small entities, EPA has attempted to reduce impacts by assuming all costs for analyses of the samples, and for shipping the samples from small systems to laboratories contracted by EPA to analyze the UCMR 5 samples (the cost of shipping is included in the cost of each analytical method). EPA has historically set aside $2.0 million each year from the Drinking Water State Revolving Fund (DWSRF) with its authority to use DWSRF monies for the purposes of implementing this provision of the SDWA. EPA anticipates drawing on these and additional funds, if available, to implement the proposed plan and carry out the expanded UCMR monitoring approach outlined in the AWIA rather than the alternative approach used in UCMR 4 and the preceding UCMR cycles. Thus, the costs to these small systems will be modest and limited to the labor associated with collecting a sample and preparing it for shipping.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action implements mandate(s) specifically and explicitly set forth in the SDWA, §1445(a)(2), Monitoring Program for Unregulated Contaminants. without the exercise of any policy discretion by EPA.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action has tribal implications. However, it will neither impose substantial direct compliance costs on federally recognized tribal governments, nor preempt tribal law. As described previously, this proposed rule requires monitoring by all large PWSs. Information in the SDWIS/Fed water system inventory indicates there are approximately 19 large tribal PWSs (ranging in size from 10,001 to 40,000 customers). EPA estimates the average annual cost to each of these large PWSs, over the 5-year rule period, to be $1,839. This cost is based on a labor component (associated with the collection of samples), and a non-labor component (associated with shipping and laboratory fees), and represents less than 1.2% of average revenue/sales for large PWSs. UCMR 5, as proposed, would also require monitoring by all small PWSs serving 3,300 to 10,000 customers and a nationally representative sample of small PWSs serving fewer than 3,300 customers. Information in the SDWIS/Fed water system inventory indicates there are approximately 72 small tribal PWSs (ranging in size from 3,300 to 10,000 customers). EPA estimates that less than 2% of small tribal systems serving fewer than 3,300 customers will be selected as part of the nationally representative sample. EPA estimates the average annual cost to small tribal systems over the 5-year rule period to be $52. Such cost is based on the labor associated with collecting a sample and preparing it for shipping and represents less than 0.5% of average revenue/sales for small PWSs. All other small-PWS expenses (associated with shipping and laboratory fees) are paid by EPA.

EPA consulted with tribal officials under the Agency's Policy on Consultation and Coordination with Indian Tribes early in the process of developing this regulation to permit them to have meaningful and timely input into its development. A summary of that consultation, titled, "Summary of the Tribal Coordination and Consultation Process for the Fifth Unregulated

Contaminant Monitoring Rule (UCMR 5) Proposal," is provided in the electronic docket listed in the **ADDRESSES** section of this document. EPA specifically solicits additional comment on this proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

Executive Order 13045 applies to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. This action does not meet those criteria and is not subject to Executive Order 13045.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution or use of energy and has not otherwise been designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.

I. National Technology Transfer and Advancement Act (NTTAA)

This action involves technical standards. EPA proposes to allow the use of methods developed by the Agency, and three major voluntary consensus method organizations to support UCMR 5 monitoring. The voluntary consensus method organizations are Standard Methods for the Examination of Water and Wastewater, and ASTM International. EPA identified acceptable consensus method organization standards for the analysis of lithium.

All of these standards are reasonably available for public use. EPA methods are free for download on the Agency's website. The methods in the Standard Methods for the Examination

of Water and Wastewater 23rd edition are consensus standards, available for purchase from the publisher, and are commonly used by the drinking water laboratory community. The methods in the Standard Methods Online are consensus standards, available for purchase from the publisher's website, and are commonly used by the drinking water laboratory community. The methods from ASTM International are consensus standards, are available for purchase from the publisher's website, and are commonly used by the drinking water laboratory community. EPA welcomes comments on this aspect of the proposed rulemaking; the Agency specifically invites the public to identify potentially-applicable voluntary consensus standards and explain why such standards should be used in this rule.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

EPA believes that this action is not subject to Executive Order 12898 (59 FR 7629, February 16, 1994) because it does not establish an environmental health or safety standard. Background information regarding EPA's consideration of Executive Order 12898 in the development of this proposed rule is provided in section III.P of this document, and an additional supporting document has been placed in the electronic docket listed in the **ADDRESSES** section of this document.

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List of Subjects in 40 CFR Part 141: Environmental protection, Chemicals, Incorporation by reference, Indian-lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water supply.

Jane Nishida,
Acting Administrator.

For the reasons set forth in the preamble, EPA proposes to amend 40 CFR Part 141 as follows:

PART 141 - NATIONAL PRIMARY DRINKING WATER REGULATIONS

1. The authority citation for Part 141 continues to read as follows:

Authority: 42 U.S.C. 300f, 300g-1, 300g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-4, 300j-9, and 300j-11.

Subpart D—Reporting and Recordkeeping

2. In §141.35:

a. Revising the fourth sentence in paragraph (a).

b. Removing "December 31, 2017," and add in its place "December 31, 2022," in paragraph (c)(1).

c. Revising paragraphs (c)(2), (c)(3)(i), (c)(3)(ii), (c)(3)(iii), (c)(4), (c)(5)(i), (c)(6)(ii), and paragraph (d) introductory text.

d. Revising the first, second, and third sentences of paragraph (d)(2).

e. Adding paragraph (d)(3).

f. Revising paragraph (e).

The revisions and addition read as follows:

§141.35 Reporting for unregulated contaminant monitoring results.

(a) * * * For the purposes of this section, PWS "population served" is the retail population served directly by the PWS as reported to the Federal Safe Drinking Water Information System (SDWIS/Fed). * * *

* * * * *

(c) * * *

(2) *Sampling location inventory information.* You must provide your inventory information by December 31, 2022, using EPA's electronic data reporting system, as specified in paragraph (b)(1) of this section. You must submit, verify or update data elements 1-9 (as defined in Table 1 of paragraph (e) of this section) for each sampling location, or for each approved representative sampling location (as specified in paragraph (c)(3) of this section regarding representative sampling locations. If this information changes, you must report updates, including new sources and sampling locations that are put in use before or during the UCMR sampling period, to EPA's electronic data reporting system within 30 days of the change.

(3) * * *

(i) *Qualifications.* Large PWSs that have EPA- or State-approved representative EPTDS sampling locations from a previous UCMR cycle, or as provided for under §141.23(a)(1), §141.24(f)(1), or §141.24(h)(1), may submit a copy of documentation from your State or EPA that approves your representative sampling plan. PWSs that do not have an approved representative EPTDS sampling plan may submit a proposal to sample at representative EPTDS(s) rather than at each individual EPTDS if: you use ground water as a source; all of your well sources have either the same treatment or no treatment; and you have multiple EPTDSs from the same source, (i.e. same aquifer). You must submit a copy of the existing or proposed representative EPTDS sampling plan, as appropriate, at least six months prior to your scheduled sample collection, as specified in paragraph (b)(1) of this section. If changes to your inventory that impact your

representative plan occur before or during the UCMR sampling period, you must report updates within 30 days of the change.

(ii) *Demonstration.* If you are submitting a proposal to sample at representative EPTDS(s) rather than at each individual EPTDS, you must demonstrate that any EPTDS that you propose as representative of multiple wells is associated with a well that draws from the same aquifer as the wells it will represent. The proposed well must be representative of the highest annual-volume and most consistently active wells in the representative array. If that representative well is not in use at the scheduled sampling time, you must select and sample an alternative representative well. You must submit the information defined in Table 1, paragraph (e) of this section for each proposed representative sampling location. You must also include documentation to support your proposal that the specified wells are representative of other wells. This documentation can include system-maintained well logs or construction drawings indicating that the representative well(s) is/are at a representative depth, and details of well casings and grouting; data demonstrating relative homogeneity of water quality constituents (e.g., pH, dissolved oxygen, conductivity, iron, manganese) in samples drawn from each well; and data showing that your wells are located in a limited geographic area (e.g., all wells within a 0.5 mile radius) and/or, if available, the hydrogeologic data indicating the time of travel separating the representative well from each of the individual wells it represents (e.g., all wells within a five-year time of travel delineation). Your proposal must be sent in writing to EPA, as specified in paragraph (b)(1) of this section.

(iii) *Approval.* EPA or the State (as specified in the partnership agreement reached between the State and EPA) will review your proposal and coordinate any necessary

changes with you. Your plan will not be final until you receive written approval from EPA, identifying the final list of EPTDSs where you will be required to monitor.

(4) *Contacting EPA if your PWS has not been notified of requirements.* If you believe you are subject to UCMR requirements, as defined in §141.40(a)(1) and (2)(i), and you have not been contacted by either EPA or your State by [120 days after publication of the **Federal Register**], you must send a letter to EPA, as specified in paragraph (b)(1) of this section. The letter must be from your PWS Official and must include an explanation as to why the UCMR requirements are applicable to your system along with the appropriate contact information. A copy of the letter must also be submitted to the State, as directed by the State. EPA will make an applicability determination based on your letter, and in consultation with the State when necessary, and will notify you regarding your applicability status and required sampling schedule. However, if your PWS meets the applicability criteria specified in §141.40(a)(2)(i), you are subject to the UCMR monitoring and reporting requirements, regardless of whether you have been contacted by the State or EPA.

(5) * * *

(i) *General rescheduling notification requirements.* Large systems may independently change their monitoring schedules up to December 31, 2022, using EPA's electronic data reporting system, as specified in paragraph (b)(1) of this section. After this date has passed, if your PWS cannot sample according to your assigned sampling schedule (e.g., because of budget constraints, or if a sampling location will be closed during the scheduled month of monitoring), you must mail or email a letter to EPA, as specified in paragraph (b)(1) of this section, prior to the scheduled sampling date. You

must include an explanation of why the samples cannot be taken according to the assigned schedule, and you must provide the alternative schedule you are requesting. You must not reschedule monitoring specifically to avoid sample collection during a suspected vulnerable period. You are subject to your assigned UCMR sampling schedule or the schedule that you revised on or before December 31, 2022, unless and until you receive a letter from EPA specifying a new schedule.

* * * * *

(6) * * *

(ii) *Reporting schedule*. You must require your laboratory, on your behalf, to post and approve the data in EPA's electronic data reporting system, accessible at https://www.epa.gov/dwucmr, for your review within 90 days from the sample collection date (sample collection must occur as specified in §141.40(a)(4)). You then have 30 days from when the laboratory posts and approves your data to review, approve, and submit the data to the State and EPA via the Agency's electronic data reporting system. If you do not electronically approve and submit the laboratory data to EPA within 30 days of the laboratory posting approved data, the data will be considered approved by you and available for State and EPA review.

* * * * *

(d) *Reporting by small systems.* If you serve a population of 3,300 to 10,000, and meet the applicability criteria in §141.40(a)(2)(ii), you must meet the reporting requirements in paragraphs (d)(1) through (3) of this section. If you serve a population of less than 3,300 people, and you are notified that you have been selected for UCMR

monitoring, your reporting requirements will be specified within the materials that EPA sends you, including a request for contact information, and a request for information associated with the sampling kit.

* * * * *

(2) *Sampling location inventory information.* You must provide your inventory information by December 31, 2022, using EPA's electronic data reporting system, as specified in paragraph (b)(1) of this section. If this information changes, you must report updates, including new sources, and sampling locations that are put in use before or during the UCMR sampling period, to EPA's electronic data reporting system within 30 days of the change, as specified in paragraph (b)(1) of this section. * * *

(3) *Contacting EPA if your PWS has not been notified of requirements.* If you believe you are subject to UCMR requirements, as defined in §141.40(a)(1) and (2)(ii), and you have not been contacted by either EPA or your State by [120 days after publication of the **Federal Register**], you must send a letter to EPA, as specified in paragraph (b)(1) of this section. The letter must be from your PWS Official and must include an explanation as to why the UCMR requirements are applicable to your system along with the appropriate contact information. A copy of the letter must also be submitted to the State, as directed by the State. EPA will make an applicability determination based on your letter, and in consultation with the State when necessary, and will notify you regarding your applicability status and required sampling schedule. However, if your PWS meets the applicability criteria specified in §141.40(a)(2)(ii), you are subject to the UCMR monitoring and reporting requirements, regardless of whether you have been contacted by the State or EPA.

(e) *Data elements.* Table 1 defines the data elements that must be provided for UCMR monitoring.

TABLE 1—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS

Data element	Definition
1. Public Water System Identification (PWSID) Code	The code used to identify each PWS. The code begins with the standard 2-character postal State abbreviation or Region code; the remaining 7 numbers are unique to each PWS in the State. The same identification code must be used to represent the PWS identification for all current and future UCMR monitoring.
2. Public Water System Name	Unique name, assigned once by the PWS.
3. Public Water System Facility Identification Code	An identification code established by the State or, at the State's discretion, by the PWS, following the format of a 5-digit number unique within each PWS for each applicable facility (*i.e.*, for each source of water, treatment plant, distribution system, or any other facility associated with water treatment or delivery). The same identification code must be used to represent the facility for all current and future UCMR monitoring.
4. Public Water System Facility Name	Unique name, assigned once by the PWS, for every facility ID (e.g., Treatment Plant).
5. Public Water System Facility Type	That code that identifies that type of facility as either: **CC** = consecutive connection. **SS** = sampling station. **TP** = treatment plant. **OT** = other.
6. Water Source Type	The type of source water that supplies a water system facility. Systems must report one of the following codes for each sampling location: **SW** = surface water (to be reported for water facilities that are served entirely by a surface water source during the twelve-month period). **GU** = ground water under the direct influence of surface water (to be reported for water facilities that are served all or in part by ground water under the direct influence of surface water at any time during the twelve-month sampling period), and are not served at all by surface water during this period. **MX** = mixed water (to be reported for water facilities that are served by a mix of surface water, ground water and/or ground water under the direct influence of surface water during the twelve-month period). **GW** = ground water (to be reported for water facilities that are served entirely by a ground water source during the twelve-month period).

7. Sampling Point Identification Code	An identification code established by the State, or at the State's discretion, by the PWS, that uniquely identifies each sampling point. Each sampling code must be unique within each applicable facility, for each applicable sampling location (*i.e.*, entry point to the distribution system). The same identification code must be used to represent the sampling location for all current and future UCMR monitoring.
8. Sampling Point Name	Unique sample point name, assigned once by the PWS, for every sample point ID (e.g., Entry Point).
9. Sampling Point Type Code	A code that identifies the location of the sampling point as: EP = entry point to the distribution system.
10. Disinfectant Type	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 a 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.
11. Treatment Information	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, SCO, 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
12. Sample Collection Date	The date the sample is collected, reported as 4-digit year, 2-digit month, and 2-digit day (YYYYMMDD).
13. Sample Identification Code	An alphanumeric value up to 30 characters assigned by the laboratory to uniquely identify containers, or groups of containers, containing water samples collected at the same sampling location for the same sampling date.
14. Contaminant	The unregulated contaminant for which the sample is being analyzed.
15. Analytical Method Code	The identification code of the analytical method used.
16. Extraction Batch Identification Code	Laboratory assigned extraction batch ID. Must be unique for each extraction batch within the laboratory for each method. For CCC samples report the Analysis Batch Identification Code as the value for this field. For methods without an extraction batch, leave this field null.
17. Extraction Date	Date for the start of the extraction batch (YYYYMMDD). For methods without an extraction batch, leave this field null.
18. Analysis Batch Identification Code	Laboratory assigned analysis batch ID. Must be unique for each analysis batch within the laboratory for each method.
19. Analysis Date	Date for the start of the analysis batch (YYYYMMDD).
20. Sample Analysis Type	The type of sample collected and/or prepared, as well as the fortification level. Permitted values include: **CCCL = MRL level** continuing calibration check; a calibration standard containing the contaminant, the internal standard, and surrogate analyzed to verify the existing calibration for those contaminants. **CCCM = medium level** continuing calibration check; a calibration standard containing the contaminant, the internal standard, and surrogate analyzed to verify the existing calibration for those contaminants. **CCCH** = **high level** continuing calibration check; a calibration

	standard containing the contaminant, the internal standard, and surrogate analyzed to verify the existing calibration for those contaminants. **FS** = field sample; sample collected and submitted for analysis under this rule. **LFB =** laboratory fortified blank; an aliquot of reagent water fortified with known quantities of the contaminants and all preservation compounds. **LRB =** laboratory reagent blank; an aliquot of reagent water treated exactly as a field sample, including the addition of preservatives, internal standards, and surrogates to determine if interferences are present in the laboratory, reagents, or other equipment. **LFSM** = laboratory fortified sample matrix; a UCMR field sample with a known amount of the contaminant of interest and all preservation compounds added. **LFSMD** = laboratory fortified sample matrix duplicate; duplicate of the laboratory fortified sample matrix. **QCS =** quality control sample; a sample prepared with a source external to the one used for initial calibration and CCC. The QCS is used to check calibration standard integrity. **FRB** = field reagent blank; an aliquot of reagent water treated as a sample including exposure to sampling conditions to determine if interferences or contamination are present from sample collection through analysis.
21. Analytical Results—Sign	A value indicating whether the sample analysis result was: (<) “less than” means the contaminant was not detected, or was detected at a level below the Minimum Reporting Level. (=) “equal to” means the contaminant was detected at the level reported in “Analytical Result— Measured Value.”
22. Analytical Result—Measured Value	The actual numeric value of the analytical results for: Field samples; laboratory fortified matrix samples; laboratory fortified sample matrix duplicates; and concentration fortified.
23. Additional Value	Represents the true value or the fortified concentration for spiked samples for QC Sample Analysis Types (CCCL, CCCM, CCCH, QCS, LFB, LFSM and LFSMD).
24. Laboratory Identification Code	The code, assigned by EPA, used to identify each laboratory. The code begins with the standard two-character State postal abbreviation; the remaining five numbers are unique to each laboratory in the State.
25. Sample Event Code	A code assigned by the PWS for each sample event. This will associate samples with the PWS monitoring plan to allow EPA to track compliance and completeness. Systems must assign the following codes: **SE1, SE2, SE3 and SE4 -** represent samples collected to meet

	UCMR Assessment Monitoring requirements; where "SE1" and "SE2" represent the first and second sampling period for all water types; and "SE3" and "SE4" represent the third and fourth sampling period for SW, GU, and MX sources only.
26. Historical Information for Contaminant Detections and Treatment	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? **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, SCO, INF, DFL, or SSF) **IEX** = Ionic exchange **Nanofiltration and reverse osmosis** **OZON** = Ozone **Biologically Active Carbon** **MFL** = Membrane filtration **ULVL** = Ultraviolet light **Other** **No =** have never tested for the contaminant **DK** = I do not know
27. Potential PFAS Sources	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 Launderers** **PS = Public Safety Activities** (e.g., fire and rescue services) **WM = Waste Management** **HW = Hazardous waste collection, treatment and disposal, 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** = I am not aware of any potential current and/or historical sources **DK – I do not know**
28. Direct Potable Reuse Water Information	A yes or no answer provided by the PWS for each entry point to the distribution system. Question: Do you use direct potable reuse as a source of water? **Yes** = If yes, what is the blending ratio when used? Enter blending ratio at sample point **No** = do not use direct potable reuse water

Subpart E–Special Regulations, Including Monitoring Regulations and Prohibition on Lead Use

3. In §141.40:

a. Removing "December 31, 2015" and add it its place "February 1, 2021 or subsequent corrections from the State," in paragraph (a) introductory text.

b. Revising paragraphs (a)(2)(ii), (a)(2)(ii)(A), (a)(3), (a)(4)(i)(A) and (B) and (C).

c. Revising paragraph (a)(4)(ii) and the first sentence in paragraph (a)(4)(ii)(A).

d. Removing paragraph (a)(4)(iii).

e. Revising the fifth and sixth sentences in paragraph (a)(5)(ii), and paragraph (a)(5)(iii).

g. Removing and reserving paragraph (a)(5)(iv).

h. Revising paragraphs (a)(5)(v) and (vi) and paragraph (c).

The revisions read as follows:

§141.40 Monitoring requirements for unregulated contaminants.
(a) * * *

* * * * *

(2) * * *

(ii) *Small systems.* EPA will provide sample containers, provide pre-paid air bills for shipping the sampling materials, conduct the laboratory analysis, and report and review monitoring results for all small systems selected to conduct monitoring under paragraphs (a)(2)(ii)(A) through (C) of this section. If you own or operate a PWS (other than a transient non-community water system) that serves a retail population of 3,300 to 10,000 people, or if you serve a population of fewer than 3,300 people and you are notified of monitoring requirements by the State or EPA, you must monitor as follows:

(A) *Assessment Monitoring.* You must monitor for the contaminants on List 1 per Table 1, in paragraph (a)(3) of this section, if you serve 3,300 to 10,000 people or are notified by your State or EPA that you are part of the State Monitoring Plan for Assessment Monitoring.

* * * * *

(3) *Analytes to be monitored.* Lists 1, 2, and 3 contaminants are provided in the following table:

TABLE 1—UCMR CONTAMINANT LIST

1—Contaminant	2—CASRN	3—Analytical methods[a]	4—Minimum reporting level[b]	5—Sampling location[c]	6—Period during which sample collection to be

					completed
List 1: Assessment Monitoring					
Per- and Polyfluoroalkyl Substances (PFAS)					
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	EPA 533	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	EPA 533	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	EPA 533	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	EPA 533	0.002 µg/L	EPTDS	1/1/2023–12/31/2025
hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	13252-13-6	EPA 533	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	EPA 533	0.02 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	EPA 533	0.004 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorobutanesulfonic acid (PFBS)	375-73-5	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorobutanoic acid (PFBA)	375-22-4	EPA 533	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorodecanoic acid (PFDA)	335-76-2	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorododecanoic acid (PFDoA)	307-55-1	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoroheptanesulfonic acid (PFHpS)	375-92-8	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoroheptanoic acid (PFHpA)	375-85-9	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025

perfluorohexanesulfonic acid (PFHxS)	355-46-4	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorohexanoic acid (PFHxA)	307-24-4	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorononanoic acid (PFNA)	375-95-1	EPA 533	0.004 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorooctanesulfonic acid (PFOS)	1763-23-1	EPA 533	0.004 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorooctanoic acid (PFOA)	335-67-1	EPA 533	0.004 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoropentanesulfonic acid (PFPeS)	2706-91-4	EPA 533	0.004 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoropentanoic acid (PFPeA)	2706-90-3	EPA 533	0.003 µg/L	EPTDS	1/1/2023–12/31/2025
perfluoroundecanoic acid (PFUnA)	2058-94-8	EPA 533	0.002 µg/L	EPTDS	1/1/2023–12/31/2025
n-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	EPA 537.1	0.005 µg/L	EPTDS	1/1/2023–12/31/2025
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	EPA 537.1	0.006 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorotetradecanoic acid (PFTA)	376-06-7	EPA 537.1	0.008 µg/L	EPTDS	1/1/2023–12/31/2025
perfluorotridecanoic acid (PFTrDA)	72629-94-8	EPA 537.1	0.007 µg/L	EPTDS	1/1/2023–12/31/2025
Metal/Pharmaceutical					
lithium	7439-93-2	EPA 200.7, SM 3120 B, ASTM D1976-20	9 µg/L	EPTDS	1/1/2023–12/31/2025
List 2: Screening Survey					
Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
List 3: Pre-Screen Testing					
Reserved	Reserved	Reserved	Reserved	Reserved	Reserved

Column headings are:

1—Contaminant: The name of the contaminant to be analyzed.

2—CASRN (Chemical Abstracts Service Registry Number) or Identification Number: A unique number identifying the chemical contaminants.

3—Analytical Methods: Method numbers identifying the methods that must be used to test the contaminants.

4—Minimum Reporting Level (MRL): The value and unit of measure at or above which the concentration of the contaminant must be measured using the approved analytical methods. If EPA determines, after the first six months of monitoring that the specified MRLs result in excessive resampling, EPA will establish alternate MRLs and will notify affected PWSs and laboratories of the new MRLs. N/A is defined as non-applicable.

5—Sampling Location: The locations within a PWS at which samples must be collected.

6—Period During Which Sample Collection to be Completed: The time period during which the sampling and testing will occur for the indicated contaminant.

[a]The analytical procedures shall be performed in accordance with the documents associated with each method, see paragraph (c) of this section.

[b]The MRL is the minimum concentration of each analyte that must be reported to EPA.

[c]Sampling must occur at your PWS's entry points to the distribution system (EPTDSs), after treatment is applied, that represent each non-emergency water source in routine use over the 12-month period of monitoring. Systems that purchase water with multiple connections from the same wholesaler may select one representative connection from that wholesaler. The representative EPTDS must be a location within the purchaser's water system. This EPTDS sampling location must be representative of the highest annual volume connections. If the connection selected as the representative EPTDS is not available for sampling, an alternate highest volume representative connection must be sampled. See 40 CFR 141.35(c)(3) for an explanation of the requirements related to the use of representative GW EPTDSs.

(4) * * *

(i)* * *

(A) *Sample collection period.* You must collect the samples in one continuous 12-month period for List 1 Assessment Monitoring, and, if applicable, for List 2 Screening Survey, or List 3 Pre-Screen Testing, during the time frame indicated in column 6 of Table 1, in paragraph (a)(3) of this section. EPA or your State will specify the month(s) and year(s) in which your monitoring must occur. As specified in §141.35(c)(5), you must contact EPA if you believe you cannot collect samples according to your schedule.

(B) *Frequency.* You must collect the samples within the timeframe and according to the frequency specified by contaminant type and water source type for each sampling location, as specified in Table 2, in this paragraph. For the second or subsequent round of sampling, if a sample location is non-operational for more than one month before and one month after the scheduled sampling month (*i.e.*, it is not possible for you to sample within the window specified in Table 2, in this paragraph), you must notify EPA as specified in §141.35(c)(5) to reschedule your sampling.

TABLE 2—MONITORING FREQUENCY BY CONTAMINANT AND WATER SOURCE TYPES

Contaminant type	Water source type	Timeframe	Frequency[1]
List 1 Contaminants—	Surface water, Mixed, or GWUDI	12 months	You must monitor for four consecutive quarters. Sample events must occur three months apart. (Example: If first monitoring is in January, the second monitoring must occur any time in April, the third any time in July and the fourth any time in October).
	Ground water	12 months	You must monitor twice in a consecutive 12-month period. Sample events must occur 5-7 months apart. (Example: If the first monitoring event is in April, the second monitoring event must occur any time in September, October or November).

[1]Systems must assign a sample event code for each contaminant listed in Table 1. Sample event codes must be assigned by the PWS for each sample event. For more information on sample event codes see §141.35(e) Table 1.

(C) *Location.* You must collect samples for each List 1 Assessment Monitoring contaminant, and, if applicable, for each List 2 Screening Survey, or List 3 Pre-Screen Testing contaminant, as specified in Table 1, in paragraph (a)(3) of this section. Samples must be collected at each sample point that is specified in column 5 and footnote c of Table 1, in paragraph (a)(3) of this section. If you are a GW system with multiple EPTDSs, and you request and receive approval from EPA or the State for sampling at representative EPTDS(s), as specified in §141.35(c)(3), you must collect your samples from the approved representative sampling location(s).

* * * * *

(ii) *Small systems.* If you serve a population of 3,300 to 10,000 people and meet the UCMR applicability criteria specified in paragraph (a)(2)(ii) of this section, or if you serve a population of fewer than 3,300 people and are notified that you are part of the State Monitoring Plan, you must comply with the requirements specified in paragraphs

(a)(4)(ii)(A) through (H) of this section. If EPA or the State informs you that they will be collecting your UCMR samples, you must assist them in identifying the appropriate sampling locations and in collecting the samples.

(A) *Sample collection and frequency.* You must collect samples at the times specified for you by the State or EPA. Your schedule must follow both the timing of monitoring specified in Table 1, List 1, and, if applicable, List 2, or List 3, and the frequency of monitoring in Table 2 of this section.

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(5) * * *

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(ii) * * * To participate in the UCMR Laboratory Approval Program, the laboratory must register and complete the necessary application materials by August 1, 2022. Correspondence must be addressed to: UCMR Laboratory Approval Coordinator, USEPA, Technical Support Center, 26 West Martin Luther King Drive, (MS 140), Cincinnati, Ohio 45268; or emailed to EPA at: UCMR_Lab_Approval@epa.gov.

(iii) *Minimum Reporting Level.* The MRL is defined by EPA as the quantitation limit achievable, with 95% confidence, by 75% of laboratories nationwide, assuming the use of good instrumentation and experienced analysts.

* * * * *

(iv) [Reserved]

(v) *Method defined quality control.* You must ensure that your laboratory analyzes Laboratory Fortified Blanks and conducts Laboratory Performance Checks, as appropriate to the method's requirements, for those methods listed in Table 1, column 3,

in paragraph (a)(3) of this section. Each method specifies acceptance criteria for these QC checks.

(vi) *Reporting.* You must require your laboratory, on your behalf, to post and approve these data in EPA's electronic data reporting system, accessible at https://www.epa.gov/dwucmr, for your review within 90 days from the sample collection date. You then have 30 days from when the laboratory posts and approves your data to review, approve and submit the data to the State and EPA, via the Agency's electronic data reporting system. If you do not electronically approve and submit the laboratory data to EPA within 30 days of the laboratory posting approved data, the data will be considered approved by you and available for State and EPA review.

* * * * *

(c) *Incorporation by reference.* These standards are incorporated by reference into this section with the approval of the Director of the **Federal Register** under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection electronically at http://www.regulations.gov.The material is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 1-86-NARA-NARA or 1-866-272-6272 or go to http://www.archives.gov/federal-register/cfr/about.html.

(1) U.S. Environmental Protection Agency, Water Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20004.

(i) Method 200.7 "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry," Revision 4.4, EMMC Version, 1994. Available on the internet at https://www.epa.gov/esam/method-

2007-determination-metals-and-trace-elements-water-and-wastes-inductively-coupled-plasma.

(ii) Method 537.1 "Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry," Version 2.0, 2020. Available on the Internet at https://www.epa.gov/water-research/epa-drinking-water-research-methods.

(iii) Method 533 "Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry," November 2019, EPA 815-B-19-020. Available on the Internet at https://www.epa.gov/dwanalyticalmethods.

(2) American Public Health Association, 800 I Street, NW, Washington, DC 20001-3710.

(i) "Standard Methods for the Examination of Water & Wastewater," 23rd edition (2017).

(A) SM 3120 B "Metals by Plasma Emission Spectroscopy (2017): Inductively Coupled Plasma (ICP) Method."

(ii) The following methods are from "Standard Methods Online." Available for purchase on the Internet at http://www.standardmethods.org.

(A) SM 3120 B "Metals by Plasma Emission Spectroscopy: Inductively Coupled Plasma (ICP) Method (Editorial Revisions, 2011)," (SM 3120 B-99)

(3) ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(i) ASTM D1976-20 "Standard Test Method for Elements in Water by

Inductively-Coupled Plasma Atomic Emission Spectroscopy," approved May 1, 2020. Available for purchase on the Internet at https://www.astm.org/Standards/D1976.htm.