Information Collection Request for the Unregulated Contaminant Monitoring Rule (UCMR 5) (Proposed Rule)

Office of Water (MS-140)
EPA 815-D-20-002
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ACRONYMS

ASDWA	Association of State Drinking Water Administrators
ASTM	American Society for Testing Materials
AWIA	America's Water Infrastructure Act of 2018
BLS	United States Bureau of Labor Statistics
CCL	Contaminant Candidate List
CCR	Consumer Confidence Report
CFR	Code of Federal Regulations
CWS	Community Water System
EPA	United States Environmental Protection Agency
EPTDS	Entry Point to the Distribution System
FR	Federal Register
FTE	Full-Time Equivalent
GS	General Schedule
ICP-AES	Inductively Coupled Plasma – Atomic Emission Spectrometry
ICR	Information Collection Request
LC-MS/MS	Liquid Chromatography – Tandem Mass Spectrometry
NAICS	North American Industry Classification System
NCOD	National Drinking Water Contaminant Occurrence Database
NDAA	National Defense Authorization Act for Fiscal Year 2020
NTNCWS	Non-Transient Non-Community Water System
OES	Occupational Employment Statistics
OGWDW	Office of Ground Water and Drinking Water
OMB	Office of Management and Budget
OW	Office of Water
PFAS	Per- and Polyfluoroalkyl Substances
PT	Proficiency Testing
PWS	Public Water System
PWSID	Public Water System Identification
QA	Quality Assurance
QC	Quality Control
RFA	Regulatory Flexibility Act
SBA	Small Business Administration
SDWA	Safe Drinking Water Act
SDWIS/Fed	Safe Drinking Water Information System Federal Reporting Services
SIC	Standard Industrial Classification
SM	Standard Methods
SMP	State Monitoring Plan
SPE	Solid Phase Extraction
TNCWS	Transient Non-Community Water System
UCMR	Unregulated Contaminant Monitoring Rule

– PART A OF THE SUPPORTING STATEMENT –

1 IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title and Number of the Information Collection

Title:	Information Collection Request for the fifth Unregulated Contaminant Monitoring Rule (UCMR 5)
OMB Control Number:	2040-NEW
EPA Tracking Number:	2683.01

1(b) Short Characterization

Section 1445(a)(2) of the Safe Drinking Water Act (SDWA) requires that once every five years, beginning in 1999, the United States Environmental Protection Agency (EPA) issue a new list of priority unregulated contaminants in drinking water to be monitored by public water systems (PWSs).

Information collected under the program informs the EPA decision making regarding whether or not to regulate particular contaminants in drinking water. The SDWA requires that the EPA vary the frequency and schedule for the monitoring program based on the number of persons served, the source of supply, and the contaminants likely to be found. The SDWA, as amended by America's Water Infrastructure Act of 2018 (AWIA) (Public Law 115-270), specifies that, subject to the availability of appropriations for such purpose and appropriate laboratory capacity, the EPA's UCMR program must require all systems serving between 3,300 and 10,000 persons to monitor, and ensure that only a nationally representative sample of systems serving fewer than 3,300 persons are required to monitor. The program would continue to ensure that systems serving a population larger than 10,000 people are required to monitor. The SDWA, as amended by the National Defense Authorization Act for Fiscal Year 2020 (NDAA) (Public Law 116-92), specifies that the 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 SDWA also requires the EPA to enter the monitoring data into the publicly available National Drinking Water Contaminant Occurrence Database (NCOD).

The EPA published the first Unregulated Contaminant Monitoring Rule (UCMR 1) in the *Federal Register* (FR) on September 17, 1999 (64 FR 50556). The second UCMR (UCMR 2) was published in the FR on January 4, 2007 (72 FR 367), the third UCMR (UCMR 3) was published in the FR on May 2, 2012 (77 FR 26072), and the fourth UCMR (UCMR 4) was published in the FR on December 20, 2016 (81 FR 92666). Each built on the established

structure of the previous UCMRs. The EPA revised the proposed contaminant list, analytical methods, cost assumptions and sampling design for the proposed UCMR 5. Where expressions such as "PWSs *will* sample an average of X times" or "sample collection *begins* in 2023" are used in this document, this is under the presumption that the final rule is promulgated as proposed. The EPA recognizes that the monitoring approach may change between the proposed rule and final rule.

The five-year UCMR 5 period spans 2022-2026. As proposed, UCMR 5 sample collection begins in 2023 and continues through 2025. The applicable three-year period for this particular Information Collection Request (ICR) is 2022-2024. The applicable ICR period overlaps with the first three years of the five-year UCMR 5 period. Most of the burden is incurred in the second, third and fourth year (i.e. sample collection and analysis) of the UCMR 5 monitoring period. The first year (the planning year) involves a lesser burden, and the final fifth year involves the least burden since the program is concluding. The three-year UCMR 5 ICR renewal period (2025-2027) will overlap with the last two years of the five-year UCMR 5 period, and therefore will have substantially lower figures.

For convenience, estimates of implementation burden and cost over the entire five-year UCMR 5 period (including pre-sampling activity and post-sampling reporting) are attached as Appendix B to this ICR. Many of the exhibits throughout the body of this ICR (three-year figures) have corresponding exhibits in Appendix B (five-year figures), as noted in the exhibit titles.

This rule identifies three analytical methods to support water system monitoring for 29 per- and polyfluoroalkyl substances (PFAS) and one metal/pharmaceutical (lithium).

As proposed, a total of 5,947 PWSs serving 10,000 or fewer people (hereafter referred to as small PWSs), will conduct monitoring for the 29 PFAS plus lithium (3,575 small PWSs served by ground water and 2,372 small PWSs served by surface water or ground water under the direct influence of surface water sources).

All PWSs serving more than 10,000 people (hereafter referred to as large PWSs) will conduct monitoring for the 29 PFAS plus lithium. This includes "very large" systems (i.e., those serving more than 100,000 people).

UCMR 5 includes Assessment Monitoring for "List 1" contaminants.[1] UCMR 5 does not include a Screening Survey (for "List 2" contaminants) or Pre-Screen Testing (for "List 3" contaminants).

PWSs would be required to collect samples for the unregulated contaminants during a continuous 12-month period during the sampling timeframe. Sampling would take place quarterly for surface water and ground water under the direct influence of surface water systems (a total of four sampling events), and at 6-month intervals for ground water systems (a total of two sampling events).

[1] Transient non-community water systems (TNCWSs) are excluded from Assessment Monitoring under UCMR 5, consistent with the typical UCMR approach.

The EPA expects that approximately one-third of the PWSs will monitor during each of the three sample collection years (2023-2025); thus, approximately two-thirds of the PWSs are expected to collect samples between 2023-2024 (i.e., during this ICR period). Approximately one-third of the PWSs are expected to collect samples during the second (renewal) UCMR 5 ICR period of 2025-2026.

Respondents to UCMR 5 include approximately 5,947 small PWSs; 4,364 large and very large PWSs; and 56 states and primacy agencies (referred to collectively as "states" for simplicity); for a total of 10,367 respondents. The frequency of response varies across respondents and years.

Small PWSs selected for UCMR 5 monitoring sample an average of 2.8 times per PWS (i.e., number of responses per PWS) across the three-year ICR period. The estimated burden per response for small PWSs is 2.4 hours. Large PWSs and very large PWSs sample and report an average of 3.2 and 3.7 times per PWS, respectively, across the three-year ICR period. The estimated burden per response for large and very large PWSs, respectively, are 7.0 and 8.8 hours.

States incur only labor costs associated with UCMR 5 implementation. State activities are determined through individual Partnership Agreements with the EPA. The EPA assumed that state participation levels will reflect the participation levels that occurred in UCMR 4. States incur 3.0 responses over the three-year ICR period related to coordination with the EPA and PWSs, with an estimated burden per response of 302.5 hours. In aggregate, during the ICR period, the average response (i.e., responses from PWSs and states) is associated with a burden of 7 hours, with a labor plus non-labor cost of $1,728 per response.

The annualized per respondent burden hours and costs for the ICR period are: small PWSs – 2.2 hours, or $86, for labor; large PWSs – 7.5 hours, or $290 for labor and $2,775 for analytical costs; very large PWSs – 10.7 hours, or $409, for labor and $8,501 for analytical costs; and states – 302.5 hours, or $17,562, for labor. Annualized burden and cost per respondent (for PWSs and states) is 7 hours, with a labor plus non-labor cost of $1,723 per respondent.

The annualized burden to the EPA for UCMR 5 program activities during the ICR years is 24,960 hours, with an annual labor cost of $2,226,432. The EPA's annualized non-labor costs are $9.5 million. The EPA's non-labor costs are primarily attributed to the cost of sample analysis for small PWSs (sample analysis represents approximately 91% of non-labor cost).

2 NEED FOR AND USE OF THE COLLECTION

2(a) Need/Authority for the Collection

As part of its responsibilities under the SDWA, the EPA implements section 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 issue a list of priority unregulated contaminants in drinking water to be monitored by PWSs. 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. The SDWA requires that the EPA enter the monitoring data into the EPA's publicly available NCOD. The SDWA, as amended in 2018 by AWIA (Public Law 115-270), specifies that, subject to the availability of appropriations for such purpose and appropriate laboratory capacity, the EPA's UCMR program must require all systems serving between 3,300 and 10,000 persons to monitor, and ensure that only a nationally representative sample of systems serving fewer than 3,300 persons are required to monitor. The program would continue to ensure that systems serving a population larger than 10,000 people are required to monitor. The SDWA, as amended by the NDAA (Public Law 116-92), specifies that the 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. EPA is using this authority as the basis for monitoring the unregulated contaminants under this rule.

The applicable sections from the SDWA are included as Appendix A of this document.

2(b) Practical Utility/Users of the Data

The UCMR 5 data support the Administrator's determination of whether to regulate a contaminant through the Regulatory Determination process and, as appropriate, regulation development. If the contaminant has significant occurrence and health effects, the EPA may use the results to: support an exposure assessment; establish the baseline for health effects and economic analyses; analyze contaminant co-occurrence; and evaluate treatment technologies, including contaminant source management. The results can suggest that contaminant occurrence is significant enough to initiate research on health effects and treatment technologies. Finally, the data can guide future source water protection efforts.

EPA-approved laboratories report the results from sample analyses to the EPA's electronic data reporting system. Large PWSs review the information posted by the laboratory that support them and submit the approved data to the state and EPA, via the electronic data reporting system. Results for small PWSs are directly reported via the EPA's electronic data reporting system by the laboratories contracted by the EPA, and are reviewed by the EPA on behalf of the small PWS. The data collected through the UCMR program are stored in the NCOD to facilitate analysis and review of contaminant occurrence. Each PWS maintains records of the analytical results of this monitoring.

The primary user of the information collected under this ICR is EPA's Office of Water (OW). Other users of this information could include the following:

- Primacy agencies, which include state regulators, Indian tribes, and, in some instances, EPA Regions.
- PWS managers.
- Staff from other EPA programs (such as the Office of Superfund Remediation and Technology Innovation; the Office of Resource Conservation and Recovery; the Office of Enforcement and Compliance Assurance; the Office of Pesticide Programs; and the Office of Research and Development).
- Federal Emergency Management Administration.
- Centers for Disease Control and Prevention.
- Military bases.
- Rural Development Administration/Farmers Home Administration.
- Department of Interior.
- Department of Housing and Urban Development.
- United States Army Corps of Engineers.
- White House Task Forces.
- American Water Works Association.
- Association of Metropolitan Water Agencies.
- National Rural Water Association.
- National Association of Water Companies.
- Association of State Drinking Water Administrators (ASDWA).
- Natural Resources Defense Council.
- Consumers Federation of America.
- Small Business Administration (SBA).
- Other environmental and industry groups.
- News organizations.
- Private industries.
- Individuals.

3 NON-DUPLICATION, CONSULTATIONS AND OTHER COLLECTION CRITERIA

3(a) Non-duplication

The data required by UCMR are not available from any other source and are not duplicative of information otherwise accessible to the EPA. Under the 1996 Amendments to the SDWA, Congress established a risk-based approach for determining which contaminants would become subject to drinking water standards. This includes the requirement for the EPA to require monitoring, every five years of priority unregulated contaminants to determine their occurrence in drinking water systems; this is the UCMR program.

3(b) Public Notice Required Prior to ICR Submission to the Office of Management and Budget (OMB)

To comply with the 1995 Amendments to the Paperwork Reduction Act, the EPA is seeking public comment on this ICR. To comment on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested approaches for minimizing respondent burden, the EPA has established a public docket for UCMR 5, which includes this ICR, under Docket ID No. EPA-HQ-OW-2020-0530**.** The public can submit any comments related to the ICR for this action to the EPA and the Office of Management and Budget (OMB).

3(c) Consultations

The EPA's Office of Ground Water and Drinking Water (OGWDW) incorporated early stakeholder involvement in the UCMR regulatory development process. In the late 1990s, the EPA held meetings for the design and development of both the Candidate Contaminant List (CCL) and UCMR programs. Stakeholders who provided comments concerning the development of the UCMR program included PWSs, states, industry, and other organizations. Seventeen meetings were held concerning UCMR program development. A description of public involvement activities related to UCMR is provided in the September 17, 1999, UCMR 1 Final Rule at 64 FR 50556. Stakeholder meeting feedback and public comment input were likewise considered for UCMR 2, UCMR 3, and UCMR 4.

Specific to the development of UCMR 5, the EPA held two public stakeholder meetings. The EPA held the first meeting, focused on drinking water methods for priority unregulated contaminants, on June 6, 2018, in Cincinnati, Ohio. Participants included representatives from state agencies, laboratories, PWSs, environmental organizations and drinking water associations. Meeting topics included an overview of the regulatory process (CCL, UCMR and Regulatory Determination), and drinking water methods under development, particularly for CCL contaminants. The EPA held a second stakeholder meeting on July 16, 2019, also in Cincinnati, Ohio. Attendees representing state agencies, laboratories, PWSs, tribes, environmental

organizations and drinking water associations participated in the meeting via webinar and in person. Meeting topics included the anticipated impacts of AWIA, analytical methods and contaminants being considered by the EPA; potential sampling design; the laboratory approval process; and other possible aspects of the UCMR 5 approach. The EPA plans to hold a third public stakeholder meeting (via webinar) after the proposed rule is published.

3(d) Effects of Less Frequent Collection

The EPA considered a wide range of alternatives for frequency of collection that could still allow the EPA to meet its statutory requirements and overall objectives. Less frequent data collection would affect the integrity of the data and result in insufficient data to fulfill the needs envisioned by the 1996 SDWA Amendments, including support of the Administrator's regulatory determinations and drinking water regulation development.

Monitoring frequencies are determined based on statutory requirements, which specify that monitoring be varied based on the number of people served by a PWS, contaminants likely to be found and source of water supply. The monitoring frequency design also considers that the number of people served affects exposure to contaminants and considers resources available to undertake monitoring activity. The collection frequencies in this rule are discussed further in section 5(d), Part A of this ICR document. Monitoring frequencies have been carefully devised based on the following factors:

- Data quality needed for a representative sample;
- Precision and accuracy needed from the representative sample;
- Number of people served by the PWS;
- Source of the supply (e.g., surface water or ground water);
- Likelihood of finding contaminants; and
- Temporal variability in occurrence.

The general timing of monitoring and the number of PWSs required to monitor for each component of the UCMR can be found in section 1(b) Part A of this ICR document. More detailed information on monitoring schedules can be found in section 5(d) Part A of this ICR document.

The EPA used a statistical design (documented in the EPA's "Selection of Nationally Representative Public Water Systems for the Unregulated Contaminant Monitoring Rule") to select its UCMR 5 national representative sample of 800 small PWSs serving fewer than 3,300 people, and the proposal specifies a census of PWSs serving 3,300 or more people for Assessment Monitoring. The latter presumes that the EPA will receive the appropriations authorized by AWIA that would be necessary to support this monitoring scope. The EPA concluded that the combination of a nationally representative sample of small PWSs serving fewer than 3,300 people and a census of PWSs serving 3,300 or more people provides a powerful tool for assessing contaminant occurrence in PWSs.

The set of representative small PWSs are distributed among different size categories, but weighted by population served, to ensure that the sample can provide estimates of exposure. The sample size of 800 small PWSs assumes that:

1. The sample set of PWSs is a random sample of the population of systems;
2. The sample of PWSs approximates a normal distribution of the universe of PWSs; and,
3. The presence of a contaminant can be determined in each PWS with certainty.

Examination and analysis of current occurrence data show that many contaminants that are currently regulated, or being considered for regulation, occur in a fraction of PWSs on a *national* basis. For many contaminants, low occurrence nationally does not necessarily correlate to a low occurrence regionally. Even a small percentage of PWSs with detections can translate into a significant population affected.

3(e) General Guidelines

This ICR was completed in accordance with the October 2009 version of "EPA's Guide to Writing Information Collection Requests Under the Paperwork Reduction Act of 1995" (hereafter, the "ICR Handbook"). The ICR Handbook was prepared by the EPA's Office of Environmental Information, Collection Strategies Division. The ICR Handbook provides the most current instructions for ICR preparation to ensure compliance with the 1995 Paperwork Reduction Act Amendments and OMB's implementing guidelines.

EPA took an approach to UCMR 5 that minimizes burden on the respondents. This collection complies with all OMB guidelines for information collection activities. Specifically, the respondents are not required to:

- Prepare a written response to a collection of information in fewer than 30 days after receipt of a request.
- Submit more than an original and two copies of any document.
- Retain records, other than health, medical, government contract, grant-in-aid or tax records, for more than three years.
- Participate in a statistical survey that is not designed to produce data that can be generalized to the universe of the study.
- Use a statistical data classification that has not been reviewed and approved by OMB.
- Receive a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use.
- Submit proprietary, trade secret, or other confidential information unless the EPA can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

3(f) Confidentiality

This information collection does not require respondents to disclose confidential information.

3(g) Sensitive Questions

No questions of a sensitive nature are included in any of the information collection requirements outlined in this ICR.

4 RESPONDENTS AND THE INFORMATION

4(a) Respondents and North American Industry Classification System (NAICS)/Standard Industrial Classification (SIC) Codes

Data associated with this ICR will be collected and maintained by PWSs. States, territories, and tribes with primacy to administer the regulatory program for PWSs under the SDWA can choose to participate in UCMR 5 implementation through a Partnership Agreement with the EPA. These primacy agencies will sometimes collect samples and maintain records. The North American Industry Classification System (NAICS) code for privately-owned PWSs is 221310. The NAICS code for municipal PWS operators and state agencies that include drinking water programs is 924110 (Administration of Air and Water Resources and Solid Waste Management Programs).

4(b) Information Requested

This ICR summarizes the data items and respondent activities associated with UCMR 5.

4(b)(i) Data Items, including record keeping requirements

A discussion of data and other information that are part of the reporting and record keeping requirements for PWSs is found in section 4(b)(i)(a), Part A of this ICR document. The requirements for states are discussed in section 4(b)(i)(b), Part A of this ICR document.

4(b)(i)(a) PWS Reporting and Record Keeping

40 Code of Federal Regulations (CFR) 141.35 requires PWSs that are subject to the UCMR requirements to report monitoring results for the unregulated contaminants listed in 40 CFR 141.40 to the EPA (see Exhibit 1 for the UCMR 5 contaminant list).

Exhibit 1: UCMR 5 Analytes

Twenty-nine PFAS	
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	perfluoroheptanesulfonic acid (PFHpS)
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	perfluoroheptanoic acid (PFHpA)
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	perfluorohexanesulfonic acid (PFHxS)
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	perfluorohexanoic acid (PFHxA)
4,8-dioxa-3H-perfluorononanoic acid	perfluorononanoic acid (PFNA)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	perfluorooctanesulfonic acid (PFOS)
hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	perfluorooctanoic acid (PFOA)
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	perfluoropentanesulfonic acid (PFPeS)
perfluoro (2-ethoxyethane) sulfonic acid	perfluoropentanoic acid (PFPeA)
perfluoro-3-methoxypropanoic acid	perfluoroundecanoic acid (PFUnA)
perfluoro-4-methoxybutanoic acid (PFMBA)	n-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
perfluorobutanesulfonic acid (PFBS)	n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
perfluorobutanoic acid (PFBA)	perfluorotetradecanoic acid (PFTA)
perfluorodecanoic acid (PFDA)	perfluorotridecanoic acid (PFTrDA)
perfluorododecanoic acid (PFDoA)	
One Metal/Pharmaceutical	
lithium	

The required data elements are listed in Exhibit 2. All PWSs must electronically report all data elements with their Assessment Monitoring samples. All PWSs participating in UCMR monitoring must inform EPA of any changes to data elements 1 through 9, if applicable.

Exhibit 2: UCMR 5 Reporting Requirements

1. Public Water System Identification (PWSID) Code	15. Analytical Method Code
2. PWS Name	16. Extraction Batch Identification Code
3. PWS Facility Identification Code	17. Extraction Date
4. PWS Facility Name	18. Analysis Batch Identification Code
5. PWS Facility Type	19. Analysis Date
6. Water Source Type	20. Sample Analysis Type
7. Sampling Point Identification Code	21. Analytical Results – Sign
8. Sampling Point Name	22. Analytical Result – Measured Value
9. Sampling Point Type Code	23. Additional Value
10. Disinfectant Type (primary disinfectants)	24. Laboratory Identification Code
11.Treatment Information (includes basic treatment information)	25. Sample Event Code
12. Sample Collection Date	26. Historical Information for Contaminant Detections and Treatment
13. Sample Identification Code	27. Potential PFAS Sources
14. Contaminant	28. Direct Potable Reuse Water Information

4(b)(i)(b) State Reporting and Record Keeping

UCMR 5 is a direct implementation rule, therefore states are not required to report to the EPA. Implementation activities for each state are identified and determined through Partnership Agreements with the EPA. If participating in a Partnership Agreement, states voluntarily review and revise Initial State Monitoring Plans (SMPs), notify PWSs of their UCMR responsibilities, and provide the EPA with a list of the PWSs notified. These state activities will be completed in 2022. Because states have no specified reporting cycle, this analysis assumes that states have 1.0 response per year during the ICR years, encompassing all communication and coordination activities with the EPA and PWSs.

4(b)(ii) Respondent Activities

Respondents include both PWSs and states. PWS and state activities are discussed in sections 4(b)(ii)(a) and 4(b)(ii)(b), Part A of this ICR document, respectively.

4(b)(ii)(a) PWS Activities

To comply with the requirements in this regulation, PWSs conduct the following activities:

- Read regulations and/or letter from the state or the EPA that outline requirements;
- Monitor or provide monitoring assistance (e.g., sample collection and shipping);
- Report and maintain records; and
- Report monitoring results to the public.

Each of these activities is discussed in more detail below.

Read Regulations/State Letter: All PWSs participating in UCMR monitoring read the UCMR regulations and/or a state-issued guidance letter during the year in which their monitoring occurs. Small PWSs can rely on summarized information from the state or the EPA for information pertaining to the regulation, rather than reading the regulation, because of the more limited scope of their responsibilities.

Monitoring or Monitoring Assistance: Monitoring activities that are considered in the PWS cost and burden estimates include receiving sampling kits from the laboratory, reading sampling instructions, traveling to the sampling location and collecting and shipping the sample.

As noted earlier, surface water and ground water under the direct influence of surface water systems will sample quarterly (four sampling events), and ground water systems will sample twice (at 6-month intervals). All sample collection will take place during a continuous 12-month period during the sampling timeframe. Sample collection for the UCMR 5 contaminants takes place at the entry point to the distribution system (EPTDS).

Large ground water PWSs with multiple EPTDSs are only required to sample at representative sampling locations for each ground water source, as long as those sites have been approved by the EPA or the state. PWSs that purchase water with multiple connections from the same wholesaler are permitted to monitor from one representative connection from that wholesaler. PWSs choose a sampling location from among the higher annual volume EPTDS connections. If the connection selected as the representative EPTDS is not available for sampling, an alternate representative connection will be sampled.

Reporting and Record Keeping: Activities related to these reporting requirements include:

- *Reporting Prior to Monitoring-*

  Contact and zip code information: Small and Large PWSs will be required to report contact information to the EPA. This information includes the name, affiliation, mailing address, phone number and email address for the PWS Technical Contact and PWS Official (i.e., the official spokesperson for a PWS's UCMR activities). Information is submitted to the EPA's electronic data reporting system within a specified timeframe after rule promulgation. Small PWSs may receive specific written requests. As a one-time reporting requirement under UCMR 5, PWSs will be required to report the U.S. Postal Service Zip Code(s) for all areas being served water by the PWS.

Sampling location and inventory information: PWSs will be required to provide sampling location(s) and to associate each source water location with its entry point location(s) prior to sampling. For each sampling location or each approved representative sampling location, PWSs will be required to submit: PWS Identification (PWSID) Code; PWS Name; PWS Facility Identification Code; PWS Facility Name; PWS Facility Type, Water Source Type; Sampling Point Identification Code; Sampling Point Name; and Sampling Point Type Code.

Representative sampling plan proposal: Some PWSs that use ground water as a source and have multiple EPTDSs can monitor at representative sampling location(s), rather than at each EPTDS. To qualify, these ground water PWSs (or source water PWSs with ground water sources) must have either the same treatment, or no treatment, at all of their well sources, and they must have an EPTDS for each well within a well field (resulting in multiple EPTDSs from the same source, such as an aquifer). PWSs meeting these criteria may submit a proposal (if such a proposal has not been previously approved). The proposal must demonstrate that any EPTDS selected as representative of multiple wells was associated with an individual well that draws from the same aquifer as the multiple wells (i.e., those being represented). The representative well must be one of the higher annual volume producing and more consistently active wells in the representative array. If that representative well is not in use at the scheduled sampling time, an alternative representative well must be sampled.

Representative intakes from wholesaler: PWSs that purchase water with multiple connections from the same wholesaler may monitor from one representative connection from that wholesaler. The representative EPTDS must be a location within the purchaser's water system. PWSs must choose a sampling location from among the higher annual volume EPTDS connections. If the connection selected as the representative EPTDS is not available for sampling, an alternate representative connection will be sampled.

- *Reporting Monitoring Results*

Small PWSs: Small PWSs will be required to record PWS and sample location information on the sampling forms and bottles that are sent to them by the UCMR Sampling Coordinator. The schedule for submitting this information is specified in the instructions sent to the PWS. Analytical results for small PWSs are directly reported via the EPA's electronic data reporting system by the laboratories contracted by the EPA within 90 days of sample collection. The EPA is responsible for reviewing analytical results via the EPA's data reporting system on behalf of the small PWS. Small PWSs will review the analytical results via the EPA's data reporting system.

Large PWSs: Laboratories will post the analytical results to the EPA's electronic data reporting system within 90 days of sample collection. Large PWSs must ensure that their laboratory meets this requirement, and those PWSs must review, approve, and submit the data to the state and the EPA via the electronic data reporting system within 30 days from when the laboratory posts the data along with the associated data elements. Consistent with prior UCMR cycles, if the PWS has not taken action within their allotted period, the data are considered approved and final for review by the EPA.

- *Record Keeping*

  40 CFR 141.33 requires PWSs to maintain records of chemical monitoring data for 10 years. No changes were made to those record keeping requirements.

Reporting to the Public: Section 1445(a)(2)(E) of the SDWA requires notification of the results of the UCMR program to be made available to those served by the PWS. Community water systems (CWSs) are required to notify their users of the detection of any contaminants (including unregulated contaminants) in their Consumer Confidence Reports (CCRs), pursuant to 40 CFR §141.153(d)(1)(ii), published in 63 FR 44512 on August 19, 1998. UCMR monitoring and reporting violations for all PWSs (including CWSs and non-transient non-community water systems (NTNCWSs)) are reportable under the Public Notification Rule (65 FR 25982, May 4, 2000). No changes were made to these reporting requirements.

4(b)(ii)(b) State Activities

For UCMR 1, the EPA originally estimated state burden and costs using a State Resource Model (documented in the "Resource Analysis Computer Program for State Drinking Water Agencies"). That model was designed by the EPA in coordination with Association of State Drinking Water Administrators (ASDWA) and required specific input for a list of activities and variables related to state operation of the UCMR drinking water program (e.g., number of PWSs affected, estimates of violation rates, etc.). Since its original publication in 1993, ASDWA updated and improved the resource model. The EPA used the updated resource model as documented in: "Insufficient Resources for State Drinking Water Programs Threaten Public Health: an Analysis of State Drinking Water Programs' Resources and Needs" (December 2013), to estimate resources that states may need for the oversight and implementation of UCMR 5. Assumptions that were applied in using this resource assessment tool are described in section 6(b), Part A of this ICR document. The EPA assumed that state participation will closely reflect that which occurred during UCMR 4. Therefore, model estimates were adjusted to account for actual levels of prior state participation.

Since UCMR is a direct implementation rule, specifics of each state's role are delineated in Partnership Agreements between the states and the EPA. Voluntary state activities include coordination, data management and support, program implementation and training/overhead. Though some states may choose to conduct sampling for their PWSs, this activity is not part of

the Partnership Agreement and is optional. Burden for sampling is currently attributed to PWSs. If states choose to conduct sample collection for PWSs, burden would be similar to that estimated for PWSs (and shifted from the PWS to the state) and would not impact the overall ICR burden estimate.

State Coordination with the EPA: State activities that involve coordination with the EPA include coordination and development of a Partnership Agreement, review of and response to the EPA's proposed SMP, review of PWS proposals for representative ground water sampling locations, and general ongoing coordination.

Review of SMPs is one of the first UCMR activities to take place at the state level. Each state receives a proposed initial SMP from the EPA, which lists all PWSs that will be required to conduct Assessment Monitoring, including small PWSs that were statistically selected as a sample, and all large PWSs subject to the rule by meeting applicability criteria. For PWSs that are part of the sample, the EPA will also generate a list to provide similar replacement PWSs for states to select from, for those PWSs that may not have been correctly specified in the initial plan. If a state identifies PWSs on the original proposed SMP that it determines are not appropriate for the representative ground water sampling locations (e.g., if PWSs are inactive, or sell all of their water and do not have their own retail customers), the state can propose an alternative plan by selecting other PWSs from the EPA's alternate list to replace the ineligible PWSs. The SMPs will also specify the year and months during which PWSs will monitor. States are given the option to modify these schedules.

The EPA assumes that some PWSs that use ground water as a source of water will submit a proposal for monitoring at representative sample location(s), rather than monitoring at every EPTDS. State involvement in the review of these proposals will be determined in the Partnership Agreement process.

EPA also recognizes that it will be necessary for states to maintain ongoing communications with the EPA regarding UCMR requirements. For example, states may need clarification and guidance on a specific requirement of the regulation. These ongoing communication activities are included in estimated burden across the ICR period of 2022-2025 (UCMR 5 period of 2022-2026).

Data Management and Support: Though there are no state data management and support activities included in UCMR, the EPA recognizes that many states update their databases to accommodate the revised UCMR data elements. Activities likely include data entry/downloading of data and general record keeping.

Program Implementation: Program implementation activities for each state can include developing and sending notification and guidance letters to PWSs, data review, ongoing PWS support and enforcement.

Following review and finalization of SMPs, participating states will prepare a notification letter that describes PWS sample collection schedules and requirements under the regulation. These

states will send notification to each applicable PWS and send the list of these notified PWSs to the EPA. The EPA assumes that PWSs will periodically call states asking for clarification and guidance about UCMR requirements. States can elect to review monitoring results, in part, to determine whether a PWS has met its monitoring and reporting requirements.

State Staff Training and Overhead: The EPA assumes that technical staff members will participate in training to assist them in understanding the regulation, their roles and responsibilities, and to allow the state to better provide technical assistance to PWSs. General overhead costs, such as clerical and managerial needs, are allocated to the UCMR staff requirements in ASDWA's estimates of state resource needs, which allocates support staff needs as a percentage of professional staff needs. See section 6(b), Part A of this ICR document, for further discussion of model assumptions.

5 INFORMATION COLLECTED–EPA ACTIVITIES, COLLECTION METHODOLOGY AND INFORMATION MANAGEMENT

5(a) EPA Activities

EPA Headquarters and Regional offices are responsible for oversight of state PWS programs and processing and analysis of UCMR data. EPA implementation activities are categorized into three major categories: regulatory support activities; program oversight and data analysis; and small PWS testing program, which are described in 5(a)(i)-(iii).

5(a)(i) Regulatory Support Activities

Regulatory support activities include laboratory approval and quality assurance/quality control (QA/QC); and technical support to PWSs, such as guidance documents.

Laboratory Approval and QA/QC Activities: The EPA incurs various costs related to laboratory approval and laboratory QA/QC, including the following activities:

- *Laboratory approval/Proficiency Testing (PT) program* - The EPA will assess whether laboratories meet the required equipment, laboratory performance and data reporting criteria. The EPA will register and evaluate laboratories based on the applications. Selected laboratories will then participate in the UCMR 5 PT program. The EPA expects to conduct these laboratory assessments during 2022.

- *QC audits of contract laboratories* - The EPA conducts Quality Control (QC) audits at each of the approved laboratories, not expected more than annually, during each UCMR 5 sample collection year (January 2023 through December 2025).

Technical Support/Guidance Document Development: The EPA expects to develop and distribute technical guidance for laboratories supporting UCMR 5. Within this ICR period, the EPA expects to provide technical support on an ongoing basis during 2023 and 2024.

5(a)(ii) National and Regional Oversight/Data Analysis

The EPA's UCMR program activities include data analysis, management oversight and implementation assistance to states. These are key management and oversight activities that must be conducted by EPA Headquarters or its Regional offices. Exhibit 3 illustrates the timeline for UCMR implementation activities. EPA expects to develop its Partnership Agreements with states and the SMPs prior to 2023, when sample collection will begin.

Exhibit 3: Timeline of UCMR 5 Activities

<table>
<tr><th>2022</th><th colspan="3">2023 2024 2025</th><th>2026</th></tr>
<tr>
<td>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</td>
<td colspan="3">← Sampling Period →

EPA Implementation Activities
• Provide compliance assistance
• Implement small system sample collection
• 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</td>
<td>Post-sampling Activity

PWSs, Laboratories
• Complete resampling, as needed
• Conclude data reporting

EPA
• Complete upload of UCMR 5 data to NCOD</td>
</tr>
</table>

5(a)(iii) Costs for Small System Testing Program

Implementation of the small PWS testing program is the largest portion of EPA costs for the UCMR program. Prior to sample collection, EPA activities for logistical support of the small PWS testing program include coordination of small PWS testing and provision of testing supplies.

During this ICR period, the EPA pays for the sample kit preparation, sample shipping fees and analysis costs.

5(b) Information Collection Methodology and Management

Laboratories report analytical results and associated data elements to the EPA's electronic data reporting system. Large PWSs are expected to ensure that their laboratory posts the data in the EPA's electronic data reporting system; the PWS then has the opportunity to review, approve, and submit the data to the state and the EPA via the EPA's electronic data reporting system. Laboratories have 90 days from sample collection to report analytical results and required data elements. PWSs have 30 days from the laboratory's posting to review and approve the reported results. After this, if the PWS has not taken action, the data will be considered approved and final for review by the EPA. Electronic reporting provides significant collection efficiencies, and reduces the possibility of data input error. This approach has worked well in prior UCMRs. The EPA will request feedback from the stakeholders that utilize the database to improve user functionality.

The UCMR data are maintained and analyzed through NCOD. The data collected under UCMR are used to support regulation development, to analyze the significance of occurrence and health effects, and to support the critical EPA function of program oversight. The public receives information regarding UCMR monitoring results through the CCRs, and will be able to access data through the NCOD. PWSs that fail to monitor for unregulated contaminants must notify the public of their failure to monitor.

The EPA conducts ongoing data analysis, which includes checks for anomalies in the data that may be related to data entry or laboratory errors. Data quality review and analysis includes: continuous analysis of laboratory results, review of all program data, and NCOD review.

5(c) Small Entity Flexibility

Note: The text below (all of section 5(c)) is the same Small Business Regulatory Enforcement Fairness Act analysis summary that is provided in the preamble to the rule. The Regulatory Flexibility Act (RFA) analysis is based on the entire five-year UCMR implementation period of 2022-2026, rather than the three-year ICR period of 2022-2024.

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. 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.

For purposes of assessing the impacts of this rule on small entities, the EPA considers small entities to be PWSs serving 10,000 or fewer people, because this is the system size specified in the SDWA as requiring special consideration with respect to small system flexibility. As required by the RFA, the EPA proposed using this alternative definition in the FR, (63 FR 7606, February 13, 1998), requested public comment, consulted with the Small Business

Administration, and finalized the alternative definition in the CCR rulemaking, (63 FR 44512, August 19, 1998). As stated in that Final Rule, the alternative definition would be applied to future drinking water rules, including this rule.

The evaluation of the overall impact on small systems, summarized in the preceding discussion, is further described as follows. The EPA analyzes the impacts for privately-owned and publicly-owned water systems separately, due to the different economic characteristics of these ownership types, such as different rate structures and profit goals. However, for both publicly- and privately-owned systems, the EPA uses the "revenue test," which compares annual system costs attributed to the rule to the system's annual revenues. The EPA used median revenue data from the 2006 CWS Survey for public and private water systems. The revenue figures were updated to 2019 dollars and escalated by three percent to account for inflation. The EPA assumes that the distribution of the sample of participating small systems will reflect the proportions of publicly- and privately-owned systems in the national inventory. The estimated distribution of the representative sample, categorized by ownership type, source water and system size, is presented in Exhibit 4.

Exhibit 4: 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	535
501 to 3,300	120	45	165
3,301 to 10,000	2,334	541	2,875
Subtotal Ground Water	***2,588***	***987***	***3,575***
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***	***2,372***
Total of Small Water Systems	***4,410***	***1,537***	***5,947***

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

The basis for the UCMR 5 RFA certification is as follows: for the 5,947 small water systems that will be affected, the annualized cost for complying with this rule ranges from 0.004% to 0.48% of system revenues (the highest estimated percentage is for privately-owned ground water systems serving 500 or fewer people, at 0.48% of its median revenue). Exhibit 5 presents the

yearly costs to small systems, and to the EPA for the small system sampling program, along with an illustration of system participation for each year of UCMR 5.

Exhibit 5: Implementation of UCMR 5 at Small Systems

Cost Description	2022	2023	2024	2025	2026	Total[1]
Costs to EPA for Small System Program (Assessment Monitoring)						
	$0.00	$12,987,068	$12,987,068	$12,987,068	$0.00	$38,961,204
Costs to Small Systems (Assessment Monitoring)						
	$0	$513,928	$513,928	$513,928	$0.00	$1,541,784
Total Costs to EPA and Small Systems for UCMR 5						
	$0	$13,500,996	$13,500,996	$13,500,996	$0.00	$40,502,988
System Sample Collection Activity Timeline						
Assessment Monitoring:		1/3 PWSs Sample	1/3 PWSs Sample	1/3 PWSs Sample		5,947

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

PWS costs are attributed to the labor required for reading about UCMR 5 requirements, monitoring, reporting, and record keeping. The estimated annualized burden across the five-year UCMR 5 implementation period of 2022-2026 is estimated to be 1.3 hours, or $52, per small system. By assuming all costs for laboratory analyses, shipping, and QC for small entities, the EPA incurs the entirety of the non-labor costs associated with UCMR 5 small system monitoring, or 96% of total small system testing costs. Exhibits 6 and 7 present the estimated economic impacts in the form of a revenue test for publicly- and privately-owned systems.

Exhibit 6: UCMR 5 Relative Cost Analysis for Small Publicly-Owned Systems (2022-2026)

System Size (# of people served)	Annual Number of Systems Impacted[1]	Annualized Hours per System (2022-2026)	Annualized Cost per System (2022-2026)	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				

System Size (# of people served)	Annual Number of Systems Impacted[1]	Annualized Hours per System (2022-2026)	Annualized Cost per System (2022-2026)	Revenue Test[2]
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.
[2] The Revenue Test was used to evaluate the economic impact of an information collection on small government entities (e.g., publicly-owned systems); costs are presented as a percentage of median annual revenue in each size category.

Exhibit 7: UCMR 5 Relative Cost Analysis for Small Privately-Owned Systems (2022-2026)

System Size (# of people served)	Annual Number of Systems Impacted[1]	Annualized Hours per System (2022-2026)	Annualized Cost per System (2022-2026)	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.
[2] The Revenue Test was used to evaluate the economic impact of an information collection on small government entities (e.g., publicly-owned systems); costs are presented as a percentage of median annual revenue in each size category.

The EPA has estimated the burden for the 5,947 small PWSs (approximately 9.35% of all small systems) participating in UCMR 5; the remainder of small systems will not be impacted.

Although this rule will not have a significant economic impact on a substantial number of small entities, the EPA attempts to reduce the impact of this rule on them. The EPA assumes all costs for analyses of the samples and for shipping the samples from small systems to laboratories contracted by the EPA to analyze UCMR 5 samples (the cost of shipping is now included in the cost of each analytical method). Thus, the costs to these small systems is limited to the labor hours associated with collecting a sample and preparing it for shipping.

We have therefore concluded that this action will have no significant net regulatory burden for all directly regulated small entities.

5(d) Collection Schedule

PWSs will be required to collect samples during a continuous 12-month period during the sampling timeframe. Sampling for surface water and ground water under the direct influence of surface water systems will take place quarterly (for a total of four sampling events), and for ground water systems sampling occurs at 6-month intervals (five to seven months apart for a total of two sampling events). Sample collection for the UCMR 5 contaminants will take place at the EPTDS.

Large PWS schedules (year and months of sample collection) will initially be determined by the EPA in conjunction with the states; these PWSs will have an opportunity to modify this schedule for planning purposes or other reasons (e.g., to conduct sample collection during the months the system or the state believes the PWS is most vulnerable, because of budget constraints, if a sampling location will be closed during the scheduled month of sample collection, etc.). The EPA will schedule and coordinate small system monitoring and work closely with partnering states. SMPs provide an opportunity for states to review and revise the initial sampling schedules that the EPA proposes.

Exhibits 3 and 9 illustrate the timeline of general UCMR activities, and PWS sample collection activities, respectively.

6 ESTIMATING THE BURDEN AND COST OF THE COLLECTION

This section describes the respondent burden and cost for activities under UCMR 5. The burden and cost estimates for PWSs are shown in section 6(a), burden and costs to states are shown in section 6(b), and the EPA's burden and cost estimates are shown in section 6(c) (all in Part A of this ICR document).

In general, burden hours are calculated by:

- Determining the activities that PWSs and states would complete to comply with the UCMR activity (as described in section 4(b)(ii));
- Estimating the number of hours per activity (as described in section 6(a) for systems and 6(b) for states);
- Estimating the number of respondents per activity; and,
- Multiplying the hours per activity by the number of respondents for that activity.

The EPA used the sources of information listed in section 6(a) and previous experience with the UCMR program to estimate the burden hours needed by systems. Assumptions are further described in sections 6(a)(i)(b) and 6(b).

The body of this ICR focuses only on the cost of the UCMR data collection over the years 2022-2024. Cost tables that are presented in this section have analogous tables in Appendix B, which present costs for the entire UCMR 5 period (2022-2026).

There are two primary categories of costs associated with UCMR: (1) labor costs, such as program implementation, sample collection, record keeping, reporting and data analysis; and (2) non-labor costs, such as laboratory fees for analyses of samples, shipping charges and contractor costs. The majority of costs are directly attributed to the fees for laboratory analytical services.

The EPA is committed to accurately characterizing the burden and costs of rules it promulgates. In the development of various drinking water program rule ICRs, the EPA developed a consistent set of assumptions to use in calculations. These have been developed and utilized in other drinking water program evaluations. Pertinent to the UCMR ICR are the standard assumptions for labor rates, PWS inventory numbers (the number of PWSs in the various size categories by primary water source), the number of sampling points for each PWS and analytical services. The sources and assumptions used in estimating costs and burden are described in this section.

6(a) Estimating Burden and Cost to PWSs

Specific assumptions used in estimating PWS labor burden and cost, as well as non-labor costs, are discussed in sections 6(a)(i) and 6(a)(ii), respectively (Part A of this ICR document). A summary of the cost estimates is provided in section 6(a)(iii), Part A of this ICR document.

The EPA used the following sources of PWS information to develop cost and burden estimates:

- *Inventory Data*: CWS and NTNCWS inventory was based on a Fiscal Year 2018, inventory extract from the Safe Drinking Water Information System Federal Reporting Services (SDWIS/Fed).
- *EPTDS Data*: All EPTDS data were from UCMR 4 sampling points.

6(a)(i) Estimating Burden and Labor Costs

The general timing of monitoring was discussed in section 1(b) of Part A of this document (Short Characterization). The UCMR program affects approximately 10,311 PWSs, roughly two-thirds of which will conduct sample collection in 2023 and 2024. Exhibit 8 presents the estimated numbers of regulated PWSs expected to participate. Exhibit 9 presents the timeline for the PWS monitoring activities.

While developing the cost estimates for UCMR 4, some public commenters suggested that the EPA underestimated PWS burden. In response to these comments, the EPA reviewed the UCMR burden estimates against burden estimates used in recently published drinking water rules. In all aspects of burden assumptions (e.g., time allotted for reading rule requirements, sampling reporting, etc.), the UCMR estimates were on par with, or more conservative (higher) than estimates made for other drinking water regulations. For UCMR 5, the EPA re-examined all cost estimates and assumptions to ensure that the most recently available data were used. All PWS burden estimates represent average burden hours, which include surface water and ground water under the direct influence of surface water PWSs that may have very few sampling points, and

thus lower sampling burden, as well as those PWSs with higher numbers of sampling points that would therefore have greater sampling activity labor burden. A PWS's burden is primarily incurred during its one year of required UCMR sample collection. However, in compliance with the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), these cost and burden estimates are presented as an average over the applicable three-year ICR period. Small PWSs have the lowest burden because these PWSs receive a great deal of direct assistance from the EPA and/or their state.

Exhibit 8: Systems to Participate in UCMR 5 Monitoring

System Size (# of people served)	National Sample Assessment Monitoring	Total # of Systems per Size Category
Small Systems		
25 – <3,300	800 randomly selected systems	800
3,300 – 10,000	All systems (5,147)	5,147
Large Systems		
10,001 and over	All systems (4,364)	4,364
TOTAL	**10,311**	**10,311**

Exhibit 9: UCMR 5 Sampling Activity Timeline for Cost and Burden Estimations

UCMR 5 – 2022 – 2026				
2022	**2023**	**2024**	**2025**	**2026**
Designated ICR Years				
No UCMR sample collection activity	Assessment Monitoring[1]			No UCMR sample collection activity
	~ 1/3 of PWSs sample	~ 1/3 of PWSs sample	~ 1/3 of PWSs sample	

[1] The following assumptions, based on the specifications in UCMR 5, were used to estimate cost and burden:

- All Assessment Monitoring PWSs will conduct sampling evenly across January 2023-December 2025 (i.e., one-third in each of the three consecutive periods).
- Approximately two-thirds of PWSs will conduct sample collection in the current ICR years of 2023 and 2024, and approximately one-third of PWSs will conduct sample collection during the ICR renewal years of 2025-2027.

The PWS labor burden consists of three primary activities: (1) reading the regulations or state guidance letter; (2) monitoring or monitoring assistance; and (3) reporting and record keeping.

Hourly labor rates (including overhead) are taken from the Bureau of Labor Statistics (BLS), National Occupational Employment and Wage Estimates, United States, BLS SOC Code 51-8031, "Local Government - Water and Liquid Waste Treatment Plant and System Operators". May 2019 data (published in March 2020) http://stats.bls.gov/oes/current/oes518031.htm. The local government Occupational Employment Statistics (OES) Designation of $24.28 was multiplied by a loading rate of 1.6 to account for benefits to remain consistent with the estimates used by the renewal ICR for the drinking water regulations (in progress). The resulting hourly wage rate for all PWSs was estimated to be $39.

6(a)(i)(a) Reading the Regulations/Guidance Letter

The EPA assumed that PWSs read the regulations and/or a state-issued guidance letter during the year in which PWSs monitor. Approximately two-thirds of PWSs will therefore read the

regulations or a state-issued guidance letter in 2023 and 2024. Small PWSs can rely on the state and the EPA for information pertaining to their requirements, rather than reading the regulation; the EPA assumed small PWSs will spend one hour, on average, reading the letter or guidance. The EPA assumed that PWSs serving more than 10,000 people read the regulation and information from the state, requiring on average four hours. National costs are estimated by multiplying the average burden hours by the average PWS labor rate, times the number of PWSs affected. Small PWSs are selected to monitor for the Assessment Monitoring contaminants. All large and very large PWSs served by surface water or ground water under the direct influence of surface water are expected to monitor for the Assessment Monitoring contaminants.

6(a)(i)(b) Monitoring Burden

Exhibit 9 provides an illustration of the timeline for PWS sampling activity. For Assessment Monitoring, the EPA assumed that each PWS will incur an estimated burden of 0.5 hours per sampling point to collect samples for analysis. The EPA assumed that PWSs will not be able to collect all samples at the same time or at the same locations.

The monitoring burden for Assessment Monitoring includes receipt of monitoring kit, reading laboratory instructions, travel time to collect samples and collection and shipping of samples. It is calculated by: (hour burden per sampling point) times (number of sampling points) times (number of PWSs) times (number of sample events per year). This estimate is an average. Some PWSs need less than 0.5 hours per sampling point to collect a sample, while other PWSs need more time. Many ground water PWSs realize savings in their sampling burden as a result of the allowance for representative sample points. Sampling burden accounts for the estimated reduction in entry points where these PWSs will sample (as described in section 6(a)(ii), Part A of this ICR document). Certain PWSs that purchase all of their water from a single wholesaler, and that have more than one connection to that wholesaler, may elect to sample from only one EPTDS. Because this cost savings has not been factored into the cost estimates, the sampling costs are conservative.

6(a)(i)(c) Reporting and Record Keeping

PWSs will be required to report specific information prior to monitoring, and will be required to report some information with their monitoring results.

- *Reporting Prior to Sample collection:* As with the reading burden (described above, in Section 6(a)(i)(a)), all initial reporting prior to UCMR 5 sample collection (including proposals for representative sample points) will be completed in 2022.

  Small PWSs: The EPA assumed that small PWSs will send contact and sampling point information prior to sample collection. The EPA estimated this one-time reporting burden will take PWSs two hours.

Large Surface Water (and Ground Water Under the Direct Influence of Surface Water) PWSs: The EPA assumed that large surface water and ground water under the direct influence of surface water PWSs will send contact and sampling point information prior to sample collection. The EPA allotted a one-time reporting burden of six hours.

Large Ground Water PWSs: The EPA assumed that large ground water PWSs will send contact and sampling point information, which will require a one-time burden of six hours. An additional eight hours were allotted to some ground water PWSs to account for compilation and submission of ground water representative sampling locations proposals. Since it was unlikely that all PWSs will submit these proposals, the EPA conservatively assumed that half of ground water PWSs serving 10,001 to 100,000 people will compile and submit this proposal; the EPA assumed that all ground water PWSs serving more than 100,000 people will submit these proposals.

- *Reporting with Monitoring Results*

  Small PWSs: Small PWSs can review their UCMR monitoring results in the EPA's electronic data reporting system, but are not required to do so. Some PWSs may not review sample results at all, while others may review the sample results in detail. As a conservative assumption, EPA estimated that it will take each small PWS 0.5 hours per sampling period for data review.

  Large PWSs: Large PWSs are expected to review, approve, and submit the data to the state and the EPA via the EPA's electronic data reporting system. The EPA estimated that it will take these PWSs two hours per sampling period for data review and submission.

6(a)(i)(d) Public Notification

The CCR rule requires that CWSs notify their consumers of the detection of any unregulated contaminants in their annual CCR reports (63 FR 44512 (August 19, 1998)). The Public Notification Rule requires that CWSs and NTNCWSs report any failure to conduct UCMR monitoring (65 FR 25982, May 4, 2000). No additional public notification is required by UCMR.

6(a)(ii) Estimating Non-labor Costs

Under UCMR, small PWSs only incur labor costs. By design of the rule, the EPA will assume all costs for analyses of the samples and for shipping the samples from small systems to laboratories contracted by the EPA to analyze UCMR 5 samples (the cost of shipping is now included in the

estimated cost of each analytical method). The laboratory analysis and shipping cost estimates described here are the basis for EPA and large PWS non-labor costs. Estimates of laboratory analytical costs associated with the analysis of each sample are presented in this section. EPA estimates are based on consultations with national drinking water laboratories.

Exhibit 10 shows the analytical costs per sample.

Exhibit 10: Assessment Monitoring Analytical Costs

Method Type	Average Analysis Cost per UCMR 5 Sample [1]
25 PFAS using EPA Method 533 (Solid Phase Extraction (SPE) Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS))	$490
4 PFAS using EPA Method 537.1 Solid Phase Extraction (SPE) Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS))	$404
1 Metal using EPA Method 200.7 (Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES)) or alternate SM[2] or ASTM[3]	$56
Total	**$950**

[1] The average analytical cost for Assessment Monitoring was determined by averaging estimates provided by four drinking water laboratories.
[2] Standard Method (SM) 3120 B or SM 3120 B-99
[3] ASTM International (ASTM) D1976-19

UCMR 5 specifies that all samples be collected at EPTDSs. Some large PWSs that use ground water sources and have multiple EPTDSs may be able to realize significant savings by sampling representative sample point(s) rather than sampling each EPTDS. PWSs must meet certain PWS configuration criteria, submit a proposal regarding representative sample points and receive approval from the EPA or the state. Labor related to submission and coordination of these proposals is discussed in section 6(a)(i)(c), Part A of this ICR document. To account for the savings on laboratory fees that will be realized by large ground water PWSs, the EPA assumed that large PWSs will sample at approximately 75% of the current EPTDSs, and that very large PWSs will sample at 50% of the current EPTDSs.

PWSs that purchase all of their water from a wholesale PWS, and that have more than one intake from that wholesaler may collect EPTDS samples from a representative intake. The representative site must be one of the higher annual volume EPTDS connections. The EPA did not attempt to estimate the number of PWSs that would take advantage of this allowance. Thus, the cost estimates presented in this ICR are conservative.

Total laboratory and shipping fees were estimated per required sampling location, per sampling event, as follows: (number of PWSs) times (number of periods per year) times (number of sampling points per PWS) times (method and shipping costs).

6(a)(iii) Summary of Labor and Non-labor Costs to PWSs

Exhibit 11a displays a summary of labor and non-labor costs, by year, for the three-year ICR period. Analogous information presenting estimated costs over the five-year UCMR 5 implementation period is provided in Exhibit B-1a, in Appendix B. Small PWSs incur labor costs only. Large PWSs incur both labor and non-labor costs.

The nationwide cost to PWSs for implementing the total UCMR program over the three-year ICR period is $32.9 million. Large and very large PWSs incur about 97% of the total PWS cost, $31.8 million. Annual cost per small PWSs for UCMR implementation over the three-year ICR period is $86 per PWSs, all attributed to labor. Annual cost per large PWSs is $290 for labor plus $2,775 for analytical (non-labor) costs, with very large PWSs costs of $409 for labor plus $8,501 for analytical (non-labor) costs. Exhibits 8 and 9 illustrate the number of participating PWSs and timing of sample collection. Per-PWS labor burden and costs are presented in Exhibit 11b. Analogous information for the five-year implementation period is provided in Exhibit B-1b, in Appendix B. “Response” is defined as each required reporting event for a PWS. All labor and non-labor costs associated with a reporting event (reading the regulations, sample collection and reporting) are included in the per-response cost estimate.

Exhibit 11a: Yearly Cost to Systems, by PWS Size and by Type of Cost (2022-2024)
(corresponds with Exhibit B-1a)

Cost Description	2022	2023	2024	Total[1]
SMALL PWSs (standard sample serving 10,000 or fewer people)				
Labor Costs				
Reading and Initial Reporting	$0	$231,029	$231,029	$462,058
Sample collection	$0	$175,160	$175,160	$350,321
Reporting of Results	$0	$107,738	$107,738	$215,477
Non-Labor Costs (Laboratory Analysis and Shipping (paid for by EPA))	$0	$0	$0	$0
Subtotal – Small PWSs	**$0**	**$513,928**	**$513,928**	**$1,027,856**
LARGE PWSs (serving 10,001 to 100,000 people)				
Labor Costs				
Reading and Initial Reporting	$0	$589,169	$589,169	$1,178,338
Sample collection	$0	$222,909	$222,909	$445,818
Reporting of Results	$0	$326,634	$326,634	$653,268
Non-Labor Costs (Laboratory Analysis and Shipping)	$0	$10,904,116	$10,904,116	$21,808,232
Subtotal – Large PWSs	**$0**	**$12,042,828**	**$12,042,828**	**$24,085,656**
VERY LARGE PWSs (serving greater than 100,000 people)				
Labor Costs				
Reading and Initial Reporting	$0	$63,122	$63,122	$126,245
Sample collection	$0	$74,441	$74,441	$148,882
Reporting of Results	$0	$40,551	$40,551	$81,103
Non-Labor Costs (Laboratory Analysis and Shipping)	$0	$3,697,809	$3,697,809	$7,395,619
Subtotal – Very Large PWSs	**$0**	**$3,875,924**	**$3,875,924**	**$7,751,848**
ALL PWSs				
Total Labor for All Systems	$0	$1,830,755	$1,830,755	$3,661,509
Total Non-Labor for All Systems	$0	$14,601,926	$14,601,926	$29,203,851
Total Labor and Non-Labor for All PWSs	**$0**	**$16,432,680**	**$16,432,680**	**$32,865,360**

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

Exhibit 11b: Per System (Respondent) and Per Response UCMR Costs (2022-2024)
(corresponds with Exhibit B-1b)

Burden / Cost	Total over 2022-2024			Annualized over 2022-2024		
	Small PWSs	Large PWSs	Very Large PWSs	Small PWSs	Large PWSs	Very Large PWSs
PER RESPONDENT:						
Labor Cost	$259	$869	$1,228	$86	$290	$409
Non-Labor Cost	$0	$8,326	$25,502	$0	$2,775	$8,501
Burden (labor hours)	6.7	22.4	32.1	2.2	7.5	10.7
PER RESPONSE:						
Number Responses per Respondent	2.8	3.2	3.7	0.9	1.1	1.2
Labor Cost per Response	$93	$271	$336	$31	$90	$112
Non-Labor Cost per Response	$0	$2,594	$6,977	$0	$865	$2,326
Burden (labor hours) per Response	2.4	7.0	8.8	0.8	2.3	2.9

6(b) Estimating the Burden and Cost to States

Since the UCMR is a direct implementation rule, individual state costs largely depend on the degree to which they volunteer to assist the EPA (as specified in their Partnership Agreement). The EPA assumed that states incur only labor costs, because no capital investments are expected for UCMR 5. Because states are involved in a variety of UCMR implementation and oversight activities but have few defined responses, burden estimates are based on yearly activities. Thus, for "per response" estimates, states have an average of 1.0 response per year.

The EPA used updated estimates from ASDWA's "Insufficient Resources for State Drinking Water Programs Threaten Public Health: an Analysis of State Drinking Water Programs' Resources and Needs." to estimate state burden and cost for the implementation and oversight of UCMR 5. The EPA reviewed the estimates used by ASDWA for various aspects of drinking water program implementation activities and used professional judgement and experience from prior UCMR cycles to determine which activities apply to assisting with UCMR 5. Assumptions include:

- One full-time equivalent (FTE) is equivalent to 2,080 hours per year; this is the same as was estimated in UCMR 4.

- States will need one supervisor per seven technical FTEs, and one support staff for every 20 technical FTEs.

- Wage rate information for states from the BLS was used since these rates are more recent than the rates used by ASDWA. This same source of information for the wage rate was used for the renewal ICRs for current drinking water regulations. Wage rate information was updated using the most recently available data, and was calculated as follows:

    - The state labor rate of $37.47 was multiplied by a loading rate of 1.6 to account for benefits. The wage rate was then escalated to 2020 dollars using the Employment Cost Index for wages and salaries in trade, transport, and utilities for March 2019 and March 2020. The index value is 137.4 for March 2019 and 141.9 for March 2020; accessed <http://www.bls.gov/news.release/eci.t09.htm> on 5/12/19. State Employee wage rates from National Occupational Employment and Wage Estimates, United States, BLS SOC Code 19-2041, "State Government - Environmental Scientists and Specialists, Including Health," hourly mean wage rate (http://stats.bls.gov/oes/current/oes192041.htm). The average estimated wage rate for states is $58.05.

The model included state resource needs for different aspects of the Phase II/V and nitrate regulations. The EPA needed to isolate the UCMR costs from the aggregated costs. Based on professional judgment regarding the relative magnitude of the UCMR program, the EPA assumed that:

- ASDWA's estimates of hours include the following activities for implementation of the chemical program: setting up sample collection schedules for PWSs; notifying PWSs of requirements; reviewing data/information submitted to the state; determining compliance; assigning violations; commencing enforcement actions; and data entry/record keeping /reporting to the EPA. ASDWA also included hours for running a waiver program. The estimates also assumed most states have a state-wide waiver and that most systems have individual use or susceptibility waivers for some analytes. The EPA used the same labor estimates as a base in order to provide a conservative estimate for UCMR 5 activities. Under UCMR 5, states are anticipated to: assist PWSs with sample collection schedules; notify PWSs of requirements; and possibly review data. The EPA's estimates allotted states 10.75 hours per small PWS, and 13.25 hours per large PWS to help implement the UCMR program. The EPA assumed that during the first and last year of the five-year UCMR period (2022 and 2026), when there are no sample collection activities, UCMR represents 1% of the bundled program resource needs (although the costs for 2025 and 2026 are not relevant to the current, 2022-2024, ICR estimations); during the three years when sample collection is conducted, UCMR represents 3% of the bundled program resource needs.
- ASDWA's model includes time for state staff training on database use; inventory updates; responses to data queries (e.g., producing monthly violation reports for program staff); quarterly reporting and record keeping; and QC of data entered for compliance oversight. ASDWA assumed one FTE per year for small and very small states, 1.75 FTEs

for medium states, five FTEs for large states, and six FTEs for very large states. For UCMR, EPA assumed that states will use this time to review PWS data. In some instances, states may enter and track UCMR data in their own database systems.

- States are estimated to need 20 hours in the first ICR year of 2022 to read and understand UCMR 5.
- States are assumed to need 0.15 FTEs in 2022 to develop Partnership Agreements with EPA. This estimate assumes that two FTEs will devote three weeks in the first year of UCMR 5 to complete this task.
- ASDWA provided estimates for PWS training and technical assistance with estimates ranging from 0.67 hours per PWS to two hours per PWS, based on population served. For UCMR 5, states were allotted one hour per PWS for technical assistance for all three sample collection years. This accounts for states writing monitoring schedule letters to PWSs and providing other technical assistance during monitoring years.
- ASDWA estimated that states will need to train technical staff on new rule requirements, noting that 11 hours were needed per technical FTE for three new rules. ASDWA assumed that training will include one day of classroom training per technical FTE and three hours per technical FTE for follow-up questions; reading rule; and discussions. EPA assumed that training will occur only in the first year, and that 3.67 hours per FTE (i.e., one-third of the 11 hours allotted for three new rules) for UCMR 5.

Some of the state labor estimates depend on the size of the state. Exhibit 12 shows the number of states in each size category. The EPA further refined the labor burden estimates by taking the level of state participation under UCMR 4 into consideration. The EPA reviewed key areas of state participation under UCMR 4 including: review and revision to the SMPs; assisting the EPA with updates to information for large PWSs; two separate sets of PWS notifications; and compliance assistance. Based on prior UCMR activities, 86 percent of states typically participated in their optional UCMR activities. Burden estimates generated from the ASDWA estimates were multiplied by this "percent participation in UCMR 4" to approximate state costs at expected participation levels under UCMR 5.

Exhibit 12: Number of States in Each Size Category (State Resource Model Assumptions)

Size Category	Number of States
Very Small	10
Small	11
Medium	23
Large	10
Very Large	2
Total	56

The EPA estimates that the annualized burden over the three ICR years (2022-2024) for 56 states to implement UCMR is 16,941 hours (or 303 hours per state per year), with an annualized cost of $983,460 (or $17,562 per state per year). See Exhibits 13a and 13b for a summary of estimated state burden and costs (analogous five-year information for 2022-2026 provided in Exhibits B-2a and B-2b, in Appendix B).

Exhibit 13a: Yearly Cost and Burden to States for Implementation of UCMR 5 (2022-2024)[1] *(corresponds with Exhibit B-2a)*

Cost/Burden	2022	2023	2024	Total[2]	Annualized Cost
Costs to all states for labor related to UCMR implementation and oversight					
	$1,180,421	$884,979	$884,979	$2,950,379	$983,460
Labor burden for all states for UCMR implementation and oversight (number of hours)					
	20,334	15,245	15,245	50,824	16,941

[1] All costs are attributed to labor and are estimated over the period 2022-2024.
[2] Totals may not equal the sum of components due to rounding.

Exhibit 13b: Per State (Respondent) and Per Response UCMR 5 Costs (2022-2024) *(corresponds with Exhibit B-2b)*

Burden / Cost	Total over 2022-2024	Annualized Cost over 2022-2024
PER RESPONDENT:		
Labor Cost	$52,685	$17,562
Non-Labor Cost	$0	$0
Burden (labor hours)	907.6	302.5
PER RESPONSE:		
Number Responses\ per Respondent[1]	3	1.0
Labor Cost per Response	$17,562	$5,854
Non-Labor Cost per Response	$0	$0
Burden (labor hours) per Response	302.5	100.8

[1] States have 1 response per year, since there are no specific cyclical state reporting requirements under the UCMR program.

6(c) Estimating The EPA Burden and Cost

The EPA incurs burden and costs related to UCMR implementation activities, including: regulatory support activities; national and regional oversight and data analysis; and the small PWS testing program. These activities are described in detail in section 5(a), Part A of this ICR document. Labor and contractual costs are estimated using the federal government general schedule (GS) pay scale; assuming a labor level of GS 13, step 5, and taken from the Maryland/District of Columbia rate schedule for January 2020 (see the U.S. Office of Personnel Management website: http://www.opm.gov). With these assumptions, labor and contractor rates were based on a 2,080 hour work year, with a $185,536 annual salary, which includes 60% overhead, or $89.20 per hour. Additional cost assumptions are described in sections 6(c)(i)-(iii), Part A of this ICR document. Cost and burden estimates are presented in Exhibits 14a and 14b, respectively.

6(c)(i) Regulatory Support Activities

Regulatory support activities include the labor and non-labor costs for laboratory approval process and QA/QC activities; and general technical support and guidance documents. Cost and burden assumptions for these activities are as follows:

Laboratory Approvals and QA/QC Activities: The EPA incurs various labor or contractor costs related to the laboratory PT/approvals; laboratory QA/QC; and electronic data reporting system as follows:

- The laboratory approval program (including the PT component) is estimated to cost EPA $245,975 in 2022 to prepare for the beginning of monitoring. Estimates were based on costs realized by the EPA for similar activities during UCMR 2, UCMR 3, and UCMR 4. A three percent inflation rate was applied to the costs of UCMR 4 to estimate the costs for UCMR 5. These costs are also included in Appendix B.

- QC Audits of contract laboratories occurs throughout active UCMR monitoring. Labor (hours) for each audit includes: a 3-day site inspection (for two individuals); one full-day travel for two individuals (assume two half days); and three days of report writing (for one individual), which includes review and response to laboratory comments. Travel costs for two individuals include: round trip flight, three nights hotel stay, two full day food per diem, and two days at the proportional meals rate from the 2019 federal rate for the Continental U.S. (from the U.S. Government Services Administration website: http://www.gsa.gov). Also included is rental of one car for both travelers. The EPA estimated that these QC audits would take place four times each sample collection year, at an estimated cost of $10,187 per trip.

- The EPA estimated that the electronic data reporting system will cost $1,080,000 total for three ICR years (or $360,000 per ICR year). Cost estimates are based on costs realized by the EPA for prior similar activities.

Technical Support/Guidance Document Development: These activities cost the EPA approximately $1,086,326 total over the ICR period including: costs for developing and distributing guidance for laboratories that will participate in UCMR 5 testing; fact sheets; and other pertinent guidance related to UCMR 5 implementation. These activities will take place in 2022 and 2023. Cost estimates were based on costs realized by the EPA for prior similar activities. For UCMR 5, a three percent inflation rate was applied to the costs of UCMR 4.

6(c)(ii) National and Regional Oversight and Data Analysis

The EPA activities include data analysis, management oversight and support at both the regional and national level for assistance to states with UCMR implementation. During the core period of UCMR 5 activity, the EPA estimates that it will dedicate 12 FTEs each year to program oversight and data analysis, based on experience with prior UCMR cycles. These activities are

estimated as labor cost and burden to the EPA (see the corresponding description of these activities in section 5(a)(ii), Part A of this ICR document). These activities will cost the EPA an estimated $6.7 million in total over the three-year ICR period.

6(c)(iii) Costs for Small System Testing Program

The EPA provides logistical support for the small PWS testing program. This activity includes costs for contractual labor, sampling supplies, and shipping costs, and is estimated to cost the EPA $490 per sampling event per sampling site, based on actual historical costs incurred during UCMR 4 for this same activity. These activities, plus analytical and shipping fees are estimated to cost the EPA $26.0 million in total over the three ICR years. See section 6(a)(ii), Part A of this ICR document, for assumptions regarding applicable laboratory fees for individual methods. Total costs that the EPA incurs for the small PWS testing program were calculated by multiplying the laboratory and shipping fees by: (number of PWSs) times (number of sampling periods per year) times (number of sampling points per PWS).

6(c)(iv) Estimated EPA Cost and Burden

The EPA estimates that the Agency cost for the UCMR 5 program during the ICR period of 2022-2024 is $35.2 million; (with annualized cost over the ICR period of $11.7 million). The EPA costs for UCMR implementation are shown in Exhibit 14a; annualized labor and non-labor costs, as well as small PWS testing program costs are shown in Exhibit 14b. Appendix B, Exhibits B-3a and B-3b provide analogous information over the five-year UCMR 5 implementation period.

Exhibit 14a: Yearly Cost to EPA for UCMR Implementation, by Type of Cost (2022-2024)[1]
(corresponds with Exhibit B-3a)

Cost Description	2022	2023	2024	Total[2]	Annualized Cost
Regulatory Support Activities: laboratory PT; QC audits; electronic data reporting system; and technical support, guidance document development					
Lab PT	$245,975	$0	$0	$245,975	$81,992
QC Audits	$20,375	$40,750	$40,750	$101,876	$33,959
Electronic Data Reporting System	$360,000	$360,000	$360,000	$1,080,000	$360,000
Technical Support	$422,987	$363,339	$300,000	$1,086,326	$362,109
Subtotal – Regulatory Support	**$1,049,338**	**$764,089**	**$700,750**	**$2,514,177**	**$838,059**
National and Regional Oversight and Data Analysis: UCMR management oversight; review and evaluation of data from all UCMR monitoring					
	$2,226,432	**$2,226,432**	**$2,226,432**	**$6,679,296**	**$2,226,432**
Small PWS Testing: implementation coordination; and analytical and shipping costs for small PWS testing for Assessment Monitoring					
Implementation Coordination	$0	$4,418,689	$4,418,689	$8,837,378	$2,945,793
Fees for Analysis and shipping – standard	$0	$8,568,379	$8,568,379	$17,136,758	$5,712,253
Subtotal – Small PWS Testing	**$0**	**$12,987,068**	**$12,987,068**	**$25,974,136**	**$8,658,045**
TOTAL	**$3,275,770**	**$15,977,589**	**$15,914,251**	**$35,167,610**	**$11,722,537**

[1] The EPA costs were estimated over the period 2022-2024.
[2] Totals may not equal the sum of components due to rounding.

Exhibit 14b: Summary of EPA Burden and Costs for UCMR Implementation (2022-2024)
(corresponds with Exhibit B-3b)

Burden / Cost	Annualized Cost over Three-year ICR Period of 2022-2024[1]
Labor Cost	$2,226,432
Non-Labor Cost	$9,496,105
Total Cost to EPA for UCMR	$11,722,537
Burden (labor hours)	24,960

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

6(d) Estimating the Respondent Universe and Total Burden and Costs

Section 1(b) of Part A of this ICR describes the general timing of monitoring. Exhibit 8 presents the estimated numbers of regulated PWSs affected by UCMR 5, and Exhibit 9 presents the timeline in which the PWS sample collection activities are expected to take place. The frequency of responses for PWSs is described in Section 4(b)(ii)(a).

Exhibit 15 summarizes national hours and costs for UCMR 5 during the ICR period. Analogous information for the entire five-year UCMR 5 period is presented in Exhibit B-4 in Appendix B. The total labor and non-labor costs are presented for each category of respondent. The total labor burden to the sample of small PWSs is 26,458 hours, with a cost of $1,027,856. The total labor burden to large PWSs is 58,624 hours, with a labor cost of $2.28 million, and non-labor costs for analysis and shipping of $21.8 million. Very large PWSs have a total labor burden for the ICR period of 9,312 hours, with labor and non-labor costs of $356,230 and $7.4 million, respectively. The total burden to states over the three-year ICR period is 50,824 hours, with a labor cost of $3.0 million. The EPA anticipates that states will not incur any significant non-labor costs. The EPA's total burden over the same timeframe is 74,880 hours, with labor costs of $6.7 million, and non-labor costs of $28.5 million.

Exhibit 15: UCMR 5 National Cost Summary for the ICR period (2022-2024) ***(corresponds with Exhibit B-4)***

Type of Cost	2022	2023	2024	TOTAL[1]	Annualized Cost
Small PWSs					
Labor Cost	$0	$513,928	$513,928	$1,027,856	$342,619
Non-Labor Cost	$0	$0	$0	$0	$0
Total Small PWS Cost	**$0**	**$513,928**	**$513,928**	**$1,027,856**	**$342,619**

Type of Cost	2022	2023	2024	TOTAL[1]	Annualized Cost
Large PWSs					
Labor Cost	$0	$1,138,712	$1,138,712	$2,277,424	$759,141
Non-Labor Cost	$0	$10,904,116	$10,904,116	$21,808,232	$7,269,411
Total Large PWS Cost	**$0**	**$12,042,828**	**$12,042,828**	**$24,085,656**	**$8,028,552**
Very Large PWSs					
Labor Cost	$0	$178,115	$178,115	$356,230	$118,743
Non-Labor Cost	$0	$3,697,809	$3,697,809	$7,395,619	$2,465,206
Total Very Large PWS Cost	**$0**	**$3,875,924**	**$3,875,924**	**$7,751,848**	**$2,583,949**
States					
Labor Cost	$1,180,421	$884,979	$884,979	$2,950,379	$983,460
Non-Labor Cost	$0	$0	$0	$0	$0
Total State Cost	**$1,180,421**	**$884,979**	**$884,979**	**$2,950,379**	**$983,460**
EPA					
Labor Cost	$2,226,432	$2,226,432	$2,226,432	$6,679,296	$2,226,432
Non-Labor Cost	$1,049,338	$13,751,157	$13,687,819	$28,488,314	$9,496,105
Total EPA Cost	$3,275,770	$15,977,589	$15,914,251	$35,167,610	$11,722,537
National Total					
Total with EPA	$4,456,191	$33,295,248	$33,231,910	$70,983,349	$23,661,116
Total without EPA	**$1,180,421**	**$17,317,659**	**$17,317,659**	**$35,815,739**	**$11,938,580**
Total Burden (hours) for All Responses [2]					
Small PWSs	0.0	13,229.2	13,229.2	26,458.4	8,819.5
Large PWSs	0.0	29,312.0	29,312.0	58,624.0	19,541.3

Type of Cost	2022	2023	2024	TOTAL[1]	Annualized Cost
Very Large PWSs	0.0	4,655.9	4,655.9	9,311.7	3,103.9
States	20,334.3	15,244.9	15,244.9	50,824.1	16,941.4
EPA	24,960.0	24,960.0	24,960.0	74,880.0	24,960.0
Total with EPA	45,294.3	87,402.0	87,402.0	220,098.2	73,366.1
Total without EPA	20,334.3	62,442.0	62,442.0	145,218.2	48,406.1

[1] Totals may not equal the sum of components due to rounding.
[2] Although EPA is not considered a respondent to the UCMR, Agency burden are shown here to illustrate the national costs of the program. National totals are shown with and without the Agency costs.

6(e) Reasons for Change in Burden

This ICR builds upon the ICR developed for UCMR 4, entitled: *Information Collection Request for UCMR 4, ICR Number 2192.08, OMB Control No. 2040-0270*. After the UCMR 1 program was established in 1999, subsequent UCMR cost and burden estimates were incorporated into the larger Chemical/Radionuclides ICR. However, the UCMR 2 and UCMR 3 ICRs were developed and tracked separately from the Chemical/Radionuclides ICR, because the Chemical/Radionuclides ICR was a "renewal" ICR, whereas the UCMR program is, per the SDWA, a program that must change every five years. Like the UCMR 2 and UCMR 3 ICRs, this action and subsequent ICRs will be developed and tracked separately. The reasons that respondents to this ICR incur a different burden than those responding to the previous UCMR ICRs include:

- UCMR 5 includes only one monitoring component; Assessment Monitoring.
- UCMR 5 includes a new list of unregulated contaminants. Because the laboratory methods are different, the cost of laboratory analysis differs for UCMR 5.
    - Under UCMR 5, approximately 10,311 PWSs will monitor for 30 chemicals using up to three methods with an estimated total unit cost of $950 per sample.
    - Under UCMR 4, approximately 5,100 PWSs monitored for 20 chemicals using up to seven methods with an estimated total unit cost of $1,446 per sample; and approximately 3,500 surface water and ground water under the direct influence of surface water PWSs monitored for 10 cyanotoxins using up to three methods with an estimated total unit cost of $1,050 per sample. These surface water and ground water under the direct influence of surface water PWSs monitored eight times instead of the traditional four times.
- The EPA will not collect duplicate Quality Assurance (QA) field samples for the small PWSs.
- The EPA updated wage rates, and re-examined labor burden estimates for states, EPA, and PWS activities.
- PWSs will collect samples only from EPTDS, whereas in UCMR 4 PWSs collected samples from EPTDS, distribution system, and source water (total organic carbon and bromide) locations.

6(f) Burden Statement

Small PWSs that were selected for UCMR 5 monitoring are expected to sample an average of 2.8 times per PWS (i.e., number of responses per PWS) across the three-year ICR period. The burden per response for small PWSs is 2.4 hours. Large PWSs and very large PWSs are expected to sample and report an average of 3.2 and 3.7 times per PWS, respectively, across the three-year ICR period. The estimated burden per response for large and very large PWSs is 7.0 and 8.8 hours, respectively. States are projected to incur 3.0 responses over the three-year ICR period related to coordination with the EPA and PWSs, with a burden per response of 302.5 hours. In aggregate during the ICR period, the average response (e.g., responses from PWS and states) is associated with a burden of 7 hours, with a labor plus non-labor cost of $1,728 per response.

The annualized per-respondent burden hours and costs for the ICR period are: small PWSs – 2.2 hours at $86 for labor; large PWSs – 7.5 hours at $290 for labor, and $2,775 for analytical costs; very large PWSs – 10.7 hours at $409 for labor, and $8,501 for analytical costs; and states – 302.5 hours at $17,562 for labor. Annualized burden and cost per respondent (for PWSs and states) is 7 hours, with a labor plus non-labor cost of $1,723 per respondent.

The annualized burden to the EPA for UCMR 5 program activities during the ICR years is 24,960 hours, with an annual labor cost of $2,226,432. The EPA's annualized non-labor costs are $9.5 million. Non-labor costs are primarily attributed to the cost of sample testing for small PWSs (testing is 91% of non-labor costs).

Exhibit 16 presents per-respondent and per-response burden and costs over the UCMR 5 ICR period of 2022-2024 (analogous information for the 2022-2026 UCMR 5 implementation period is provided in Exhibit B-5, Appendix B). This exhibit also presents average annual burden and costs.

Exhibit 16: UCMR 5 Per Respondent Burden and Cost Summary for the ICR Period (2022-2024) (corresponds with Exhibit B-5)

Burden (hours)/ Cost (dollars)	Small PWSs	Large PWSs	Very Large PWSs	States	EPA	National Average with the EPA[1]	National Average without the EPA
Three-Year Total per Respondent							
Total # of Responses Per Respondent	2.8	3.2	3.7	3.0	n/a	n/a	3.0
Labor Cost Per Respondent	$259	$869	$1,228	$52,685	$6,679,296	$1,918	$954
Non-Labor Cost Per Respondent	$0	$8,326	$25,502	$0	$28,488,314	$8,324	$4,214
Total Cost (Labor plus Non-Labor)	$259	$9,195	$26,731	$52,685	$35,167,610	$10,241	$5,168
Total Cost Per Response	$93	$2,865	$7,313	$17,562	n/a	n/a	$1,728
Total Burden Per Respondent (hr)	6.7	22.4	32.1	907.6	74,880.0	31.8	21.0
Total Burden Per Response (hr)	2.4	7.0	8.8	302.5	n/a	n/a	7.0
Average Annual per Respondent							
Ave. # of Responses Per Respondent	0.9	1.1	1.2	1.0	n/a	n/a	1.0
Labor Cost Per Respondent	$86	$290	$409	$17,562	$2,226,432	$639	$318
Non-Labor Cost Per Respondent	$0	$2,775	$8,501	$0	$9,496,105	$2,775	$1,405
Ave. Cost (Labor plus Non-Labor)	$86	$3,065	$8,910	$17,562	$11,722,537	$3,414	$1,723
Ave. Cost Per Response	$31	$955	$2,438	$5,854	n/a	n/a	$576

Burden (hours)/ Cost (dollars)	Small PWSs	Large PWSs	Very Large PWSs	States	EPA	National Average with the EPA[1]	National Average without the EPA
Ave. Burden Per Respondent (hr)	2.2	7.5	10.7	302.5	24,960.0	10.6	7.0
Ave. Burden Per Response (hr)	0.8	2.3	2.9	100.8	n/a	n/a	2.3

[1] National average burden and costs differ greatly between the state respondents and the various PWS respondents. This should be taken into consideration when looking at the national average with or without the EPA.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain or disclose or provide information to or for a federal agency. This includes the time needed to: review instructions; develop, acquire, install and utilize technology and systems for the purposes of collecting, validating and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. 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 the EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the EPA’s need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, the EPA established a public docket for this ICR. Docket ID Number EPA-HQ-OW-2020-0530, is available for public viewing at http://www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select “search,” then key in the Docket ID Number identified above. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room was closed to public visitors on March 31, 2020, 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 is a temporary suspension of mail delivery to the EPA, and no hand deliveries are currently accepted. For further information on EPA Docket Center services and the current status, please visit us online at https://www.epa.gov/dockets.

APPENDICES

APPENDIX A: Relevant Authorities in SDWA 1996, 2018 and 2019 Amendments

Section 1412(b)(1) IDENTIFICATION OF CONTAMINANTS FOR LISTING:

(A) GENERAL AUTHORITY – The Administrator shall, in accordance with the procedures established by this subsection, publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for a contaminant (other than a contaminant referred to in paragraph (2) for which a national primary drinking water regulation has been promulgated as of the date of enactment of the Safe Drinking Water Act Amendments of 1996) if the Administrator determines that

(i) the contaminant may have an adverse effect on the health of persons;

(ii) the contaminant is known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern; and

(iii) in the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.

(B) REGULATION OF UNREGULATED CONTAMINANTS–

(i) LISTING OF CONTAMINANTS FOR CONSIDERATION–

(I) Not later than 18 months after the date of enactment of the Safe Drinking Water Act Amendments of 1996 and every 5 years thereafter, the Administrator, after consultation with the scientific community, including the Science Advisory Board, after notice and opportunity for public comment, and after considering the occurrence data base established under section 1445(g), shall publish a list of contaminants which, at the time of publication, are not subject to any proposed or promulgated national primary drinking water regulation, which are known or anticipated to occur in public water systems, and which may require regulation under this title.

(II) The unregulated contaminants considered under subclause (i) shall include, but not be limited to, substances referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and substances registered as pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act.

(III) The Administrator's decision whether or not to select an unregulated contaminant for a list under this clause shall not be subject to judicial review.

(ii) DETERMINATION TO REGULATE–

(I) Not later than 5 years after the date of enactment of the Safe Drinking Water Act Amendments of 1996, and every 5 years thereafter, the Administrator shall, after notice of the preliminary determination and opportunity for public comment, for not fewer than 5 contaminants included on the list published under clause (i), make determinations of whether or not to regulate such contaminants.

(II) A determination to regulate a contaminant shall be based on findings that the criteria of clauses (i), (ii), and (iii) of subparagraph (A) are satisfied. Such findings shall be based on the best available public health information, including the occurrence data base established under section 1445(g).

(III) The Administrator may make a determination to regulate a contaminant that does not appear on a list under clause (i) if the determination to regulate is made pursuant to subclause (II).

(IV) A determination under this clause not to regulate a contaminant shall be considered final agency action and subject to judicial review.

(iii) REVIEW – Each document setting forth the determination for a contaminant under clause (ii) shall be available for public comment at such time as the determination is published.

(C) PRIORITIES – In selecting unregulated contaminants for consideration under subparagraph (B), the Administrator shall select contaminants that present the greatest public health concern. The Administrator, in making such selection, shall take into consideration, among other factors of public health concern, the effect of such contaminants upon subgroups that comprise a meaningful portion of the general population (such as infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations) that are identifiable as being at greater risk of adverse health effects due to exposure to contaminants in drinking water than the general population.

(D) URGENT THREATS TO PUBLIC HEALTH – The Administrator may promulgate an interim national primary drinking water regulation for a contaminant without making a determination for the contaminant under paragraph (4)(C), or completing the analysis under paragraph (3)(C), to address an urgent threat to public health as determined by the Administrator after consultation with and written response to any comments provided by the Secretary of Health and Human Services, acting through the director of the Centers for Disease Control and Prevention or the director of the National Institutes of Health. A determination for any contaminant in accordance with paragraph (4)(C) subject to an interim regulation under this subparagraph shall be issued, and a completed analysis meeting the requirements of paragraph (3)(C) shall be published, not later than 3 years after the date on which the regulation is promulgated and the regulation shall be repromulgated, or revised if appropriate, not later than 5 years after that date.

(E) REGULATION – For each contaminant that the Administrator determines to regulate under subparagraph (B), the Administrator shall publish maximum contaminant level goals and promulgate, by rule, national primary drinking water regulations under this subsection. The Administrator shall propose the maximum contaminant level goal and

national primary drinking water regulation for a contaminant not later than 24 months after the determination to regulate under subparagraph (B), and may publish such proposed regulation concurrent with the determination to regulate. The Administrator shall publish a maximum contaminant level goal and promulgate a national primary drinking water regulation within 18 months after the proposal thereof. The Administrator, by notice in the Federal Register, may extend the deadline for such promulgation for up to 9 months.

(F) HEALTH ADVISORIES AND OTHER ACTIONS – The Administrator may publish health advisories (which are not regulations) or take other appropriate actions for contaminants not subject to any national primary drinking water regulation.

Section 1412(b)(4) GOALS AND STANDARDS:

(A) MAXIMUM CONTAMINANT LEVEL GOALS – Each maximum contaminant level goal established under this subsection shall be set at the level at which no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety.

(B) MAXIMUM CONTAMINANT LEVELS – Except as provided in paragraphs (5) and (6), each national primary drinking water regulation for a contaminant for which a maximum contaminant level goal is established under this subsection shall specify a maximum contaminant level for such contaminant which is as close to the maximum contaminant level goal as is feasible.

(C) DETERMINATION – At the time the Administrator proposes a national primary drinking water regulation under this paragraph, the Administrator shall publish a determination as to whether the benefits of the maximum contaminant level justify, or do not justify, the costs based on the analysis conducted under paragraph (3)(C).

(D) DEFINITION OF FEASIBLE – For the purposes of this subsection, the term "feasible" means feasible with the use of the best technology, treatment techniques and other means which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purpose of this paragraph, granular activated carbon is feasible for the control of synthetic organic chemicals, and any technology, treatment technique, or other means found to be the best available for the control of synthetic organic chemicals must be at least as effective in controlling synthetic organic chemicals as granular activated carbon.

(E) FEASIBLE TECHNOLOGIES

(i) IN GENERAL – Each national primary drinking water regulation which establishes a maximum contaminant level shall list the technology, treatment techniques, and other means which the Administrator finds to be feasible for purposes of meeting such maximum contaminant level, but a regulation under this subsection shall not require that any specified technology, treatment technique, or other means be used for purposes of meeting such maximum contaminant level.

(ii) LIST OF TECHNOLOGIES FOR SMALL SYSTEMS – The Administrator shall include in the list any technology, treatment technique, or other means that is

affordable, as determined by the Administrator in consultation with the States, for small public water systems serving

(I) a population of 10,000 or fewer but more than 3,300;

(II) a population of 3,300 or fewer but more than 500; and

(III) a population of 500 or fewer but more than 25;

and that achieves compliance with the maximum contaminant level or treatment technique, including packaged or modular systems and point-of-entry or point-of-use treatment units. Point-of-entry and point-of-use treatment units shall be owned, controlled and maintained by the public water system or by a person under contract with the public water system to ensure proper operation and maintenance and compliance with the maximum contaminant level or treatment technique and equipped with mechanical warnings to ensure that customers are automatically notified of operational problems. The Administrator shall not include in the list any point-of-use treatment technology, treatment technique, or other means to achieve compliance with a maximum contaminant level or treatment technique requirement for a microbial contaminant (or an indicator of a microbial contaminant). If the American National Standards Institute has issued product standards applicable to a specific type of point-of-entry or point-of-use treatment unit, individual units of that type shall not be accepted for compliance with a maximum contaminant level or treatment technique requirement unless they are independently certified in accordance with such standards. In listing any technology, treatment technique, or other means pursuant to this clause, the Administrator shall consider the quality of the source water to be treated.

(iii) LIST OF TECHNOLOGIES THAT ACHIEVE COMPLIANCE – Except as provided in clause (v), not later than 2 years after the date of enactment of this clause and after consultation with the States, the Administrator shall issue a list of technologies that achieve compliance with the maximum contaminant level or treatment technique for each category of public water systems described in subclauses (I), (II), and (III) of clause (ii) for each national primary drinking water regulation promulgated prior to the date of enactment of this paragraph.

(iv) ADDITIONAL TECHNOLOGIES – The Administrator may, at any time after a national primary drinking water regulation has been promulgated, supplement the list of technologies describing additional or new or innovative treatment technologies that meet the requirements of this paragraph for categories of small public water systems described in subclauses (I), (II), and (III) of clause (ii) that are subject to the regulation.

(v) TECHNOLOGIES THAT MEET SURFACE WATER TREATMENT RULE – Within one year after the date of enactment of this clause, the Administrator shall list technologies that meet the Surface Water Treatment Rule for each category of public water systems described in subclauses (I), (II), and (III) of clause (ii).

Section 1445(a) Provision of Information to Administrator; Monitoring Program for Unregulated Contaminants

(1)(A) Every person who is subject to any requirement of this title or who is a grantee, shall establish and maintain such records, make such reports, conduct such monitoring, and provide such information as the Administrator may reasonably require by regulation to assist the Administrator in establishing regulations under this title, in determining whether such person has acted or is acting in compliance with this title, in administering any program of financial assistance under this title, in evaluating the health risks of unregulated contaminants, or in advising the public of such risks. In requiring a public water system to monitor under this subsection, the Administrator may take into consideration the system size and the contaminants likely to be found in the system's drinking water.
(B) Every person who is subject to a national primary drinking water regulation under section 1412 shall provide such information as the Administrator may reasonably require, after consultation with the State in which such person is located if such State has primary enforcement responsibility for public water systems, on a case-by-case basis, to determine whether such person has acted or is acting in compliance with this title.
(C) Every person who is subject to a national primary drinking water regulation under section 1412 shall provide such information as the Administrator may reasonably require to assist the Administrator in establishing regulations under section 1412 of this title, after consultation with States and suppliers of water. The Administrator may not require under this subparagraph the installation of treatment equipment or process changes, the testing of treatment technology, or the analysis or processing of monitoring samples, except where the Administrator provides the funding for such activities. Before exercising this authority, the Administrator shall first seek to obtain the information by voluntary submission.
(D) The Administrator shall not later than 2 years after the date of enactment of this subparagraph, after consultation with public health experts, representatives of the general public, and officials of State and local governments, review the monitoring requirements for not fewer than 12 contaminants identified by the Administrator, and promulgate any necessary modifications.

(2) MONITORING PROGRAM FOR UNREGULATED CONTAMINANTS

(A) ESTABLISHMENT – The Administrator shall promulgate regulations establishing the criteria for a monitoring program for unregulated contaminants. The regulations shall require monitoring of drinking water supplied by public water systems and shall vary the frequency and schedule for monitoring requirements for systems based on the number of persons served by the system, the source of supply, and the contaminants likely to be found, ensuring that only a representative sample of systems serving 10,000 persons or fewer are required to monitor.
(B) MONITORING PROGRAM FOR CERTAIN UNREGULATED CONTAMINANTS
(i) INITIAL LIST – Not later than 3 years after the date of enactment of the Safe Drinking Water Act Amendments of 1996 and every 5 years thereafter, the Administrator shall issue a list pursuant to subparagraph (A) of not more than 30

unregulated contaminants to be monitored by public water systems and to be included in the national drinking water occurrence data base maintained pursuant to subsection (g).

(ii) GOVERNORS' PETITION – The Administrator shall include among the list of contaminants for which monitoring is required under this paragraph each contaminant recommended in a petition signed by the Governor of each of 7 or more States, unless the Administrator determines that the action would prevent the listing of other contaminants of a higher public health concern.

(C) MONITORING PLAN FOR SMALL AND MEDIUM SYSTEMS

(i) IN GENERAL – Based on the regulations promulgated by the Administrator, each State may develop a representative monitoring plan to assess the occurrence of unregulated contaminants in public water systems that serve a population of 10,000 or fewer in that State. The plan shall require monitoring for systems representative of different sizes, types, and geographic locations in the State.

(ii) GRANTS FOR SMALL SYSTEM COSTS – From funds reserved under section 1452(o) or appropriated under subparagraph (H), the Administrator shall pay the reasonable cost of such testing and laboratory analysis as are necessary to carry out monitoring under the plan.

(D) MONITORING RESULTS – Each public water system that conducts monitoring of unregulated contaminants pursuant to this paragraph shall provide the results of the monitoring to the primary enforcement authority for the system.

(E) NOTIFICATION – Notification of the availability of the results of monitoring programs required under paragraph (2)(A) shall be given to the persons served by the system.

(F) WAIVER OF MONITORING REQUIREMENT – The Administrator shall waive the requirement for monitoring for a contaminant under this paragraph in a State, if the State demonstrates that the criteria for listing the contaminant do not apply in that State.

(G) ANALYTICAL METHODS – The State may use screening methods approved by the Administrator under subsection (i) in lieu of monitoring for particular contaminants under this paragraph.

(H) Authorization of Appropriations – There are authorized to be appropriated to carry out this paragraph $10,000,000 for each of the fiscal years 2019 through 2021.

1445(g) OCCURRENCE DATA BASE

(1) IN GENERAL – Not later than 3 years after the date of enactment of the Safe Drinking Water Act Amendments of 1996, the Administrator shall assemble and maintain a national drinking water contaminant occurrence data base, using information on the occurrence of both regulated and unregulated contaminants in public water systems obtained under subsection (a)(1)(A) or subsection (a)(2) and reliable information from other public and private sources.

(2) PUBLIC INPUT – In establishing the occurrence data base, the Administrator shall solicit recommendations from the Science Advisory Board, the States, and other interested parties concerning the development and maintenance of a national drinking

water contaminant occurrence data base, including such issues as the structure and design of the data base, data input parameters and requirements, and the use and interpretation of data.
(3) USE – The data shall be used by the Administrator in making determinations under section 1412(b)(1) with respect to the occurrence of a contaminant in drinking water at a level of public health concern.
(4) PUBLIC RECOMMENDATIONS – The Administrator shall periodically solicit recommendations from the appropriate officials of the National Academy of Sciences and the States, and any person may submit recommendations to the Administrator, with respect to contaminants that should be included in the national drinking water contaminant occurrence data base, including recommendations with respect to additional unregulated contaminants that should be listed under subsection (a)(2). Any recommendation submitted under this clause shall be accompanied by reasonable documentation that–

(A) the contaminant occurs or is likely to occur in drinking water; and
(B) the contaminant poses a risk to public health.

(5) PUBLIC AVAILABILITY – The information from the data base shall be available to the public in readily accessible form.
(6) REGULATED CONTAMINANTS – With respect to each contaminant for which a national primary drinking water regulation has been established, the data base shall include information on the detection of the contaminant at a quantifiable level in public water systems (including detection of the contaminant at levels not constituting a violation of the maximum contaminant level for the contaminant).
(7) UNREGULATED CONTAMINANTS – With respect to contaminants for which a national primary drinking water regulation has not been established, the data base shall include

(A) monitoring information collected by public water systems that serve a population of more than 10,000, as required by the Administrator under subsection (a);
(B) monitoring information collected from a representative sampling of public water systems that serve a population of 10,000 or fewer;
(C) if applicable, monitoring information collected by public water systems pursuant to subsection (j) that is not duplicative of monitoring information included in the data base under subparagraph (B) or (D); and
(D) other reliable and appropriate monitoring information on the occurrence of the contaminants in public water systems that is available to the Administrator.

1445(i) SCREENING METHODS

The Administrator shall review new analytical methods to screen for regulated contaminants and may approve such methods as are more accurate or cost-effective than established reference methods for use in compliance monitoring.
[42 U.S.C. 300j–4]

1445 (j) MONITORING BY CERTAIN SYSTEMS

(1) IN GENERAL.—Notwithstanding subsection (a)(2)(A), the Administrator shall, subject to the availability of appropriations for such purpose—

(A) require public water systems serving between 3,300 and 10,000 persons to monitor for unregulated contaminants in accordance with this section; and

(B) ensure that only a representative sample of public water systems serving fewer than 3,300 persons are required to monitor.

(2) EFFECTIVE DATE.—Paragraph (1) shall take effect 3 years after the date of enactment of this subsection.

(3) LIMITATION.—Paragraph (1) shall take effect unless the Administrator determines that there is not sufficient laboratory capacity to accommodate the analysis necessary to carry out monitoring required under such paragraph.

(4) LIMITATION ON ENFORCEMENT.—The Administrator may not enforce a requirement to monitor pursuant to paragraph (1) with respect to any public water system serving fewer than 3,300 persons, including by subjecting such a public water system to any civil penalty.

(5) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $15,000,000 in each fiscal year for which monitoring is required to be carried out under this subsection for the Administrator to pay the reasonable cost of such testing and laboratory analysis as are necessary to carry out monitoring required under this subsection.

National Defense Authorization Act for Fiscal Year 2020 (NDAA) (Public Law 116-92)

SEC. 7311. MONITORING AND DETECTION.

(a) MONITORING PROGRAM FOR UNREGULATED CONTAMINANTS.—

(1) IN GENERAL.—The Administrator shall include each substance described in paragraph (2) in the fifth publication of the list of unregulated contaminants to be monitored under section 1445(a)(2)(B)(i) of the Safe Drinking Water Act (42 U.S.C. 300j–4(a)(2)(B)(i)).

(2) SUBSTANCES DESCRIBED.—The substances referred to in paragraph (1) are perfluoroalkyl and polyfluoroalkyl substances and classes of perfluoroalkyl and polyfluoroalkyl substances— (A) for which a method to measure the level in drinking water has been validated by the Administrator; and (B) that are not subject to a national primary drinking water regulation.

(3) EXCEPTION.—The perfluoroalkyl and polyfluoroalkyl substances and classes of perfluoroalkyl and polyfluoroalkyl substances included in the list of unregulated contaminants to be monitored under section 1445(a)(2)(B)(i) of the Safe Drinking Water Act (42 U.S.C. 300j–4(a)(2)(B)(i)) under paragraph (1) shall not count towards the limit of 30 unregulated contaminants to be monitored by public water systems under that section.

APPENDIX B: Burden and Cost Exhibits for the Five-Year UCMR 5 Period of 2022-2026

Exhibit B-1a: Yearly Cost to Systems, by PWS Size and by Type of Cost (2022-2026) *(corresponds with Exhibit 11a)*

Cost Description	*2022*	*2023*	*2024*	*2025*	*2026*	*Total*[1]	*Annualized Cost*
SMALL PWSs (serving 10,000 or fewer people)							
Labor Costs							
Reading and Initial Reporting	$0	$231,029	$231,029	$231,029	$0	$693,087	$138,617
Sample collection	$0	$175,160	$175,160	$175,160	$0	$525,481	$105,096
Reporting of Results	$0	$107,738	$107,738	$107,738	$0	$323,215	$64,643
Non-Labor Costs (Laboratory Analysis and Shipping (paid for by EPA))	$0	$0	$0	$0	$0	$0	$0
Subtotal – Small PWSs	**$0**	**$513,928**	**$513,928**	**$513,928**	**$0**	**$1,541,784**	**$308,357**
LARGE PWSs (serving 10,001 to 100,000 people)							
Labor Costs							
Reading and Initial Reporting	$0	$589,169	$589,169	$589,169	$0	$1,767,506	$353,501
Sample collection	$0	$222,909	$222,909	$222,909	$0	$668,727	$133,745
Reporting of Results	$0	$326,634	$326,634	$326,634	$0	$979,902	$195,980
Non-Labor Costs (Laboratory Analysis and Shipping)	$0	$10,904,116	$10,904,116	$10,904,116	$0	$32,712,349	$6,542,470
Subtotal – Large PWSs	**$0**	**$12,042,828**	**$12,042,828**	**$12,042,828**	**$0**	**$36,128,484**	**$7,225,697**
VERY LARGE PWSs (serving greater than 100,000 people)							
Labor Costs							
Reading and Initial Reporting	$0	$63,122	$63,122	$63,122	$0	$189,367	$37,873
Sample collection	$0	$74,441	$74,441	$74,441	$0	$223,323	$44,665
Reporting of Results	$0	$40,551	$40,551	$40,551	$0	$121,654	$24,331
Non-Labor Costs (Laboratory Analysis and Shipping)	$0	$3,697,809	$3,697,809	$3,697,809	$0	$11,093,428	$2,218,686
Subtotal – Very Large PWSs	**$0**	**$3,875,924**	**$3,875,924**	**$3,875,924**	**$0**	**$11,627,773**	**$2,325,555**
ALL PWSs							
Total Labor for All PWSs	$0	$1,830,755	$1,830,755	$1,830,755	$0	$5,492,264	$1,098,453
Total Non-Labor for All PWSs	$0	$14,601,926	$14,601,926	$14,601,926	$0	$43,805,777	$8,761,155
Total Labor and Non-Labor for All PWSs	**$0**	**$16,432,680**	**$16,432,680**	**$16,432,680**	**$0**	**$49,298,041**	**$9,859,608**

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

Exhibit B-1b: Per System (Respondent) and Per Response UCMR 5 Costs (2022-2026) ***(corresponds with Exhibit 11b)***

Burden / Cost	Total over 2022-2026			Annualized Cost over 2022-2026		
	Small PWSs	Large PWSs	Very Large PWSs	Small PWSs	Large PWSs	Very Large PWSs
PER RESPONDENT:						
Labor Cost	$259	$869	$1,228	$52	$174	$246
Non-Labor Cost	$0	$8,326	$25,502	$0	$1,665	$5,100
Burden (labor hours)	6.7	22.4	32.1	1.3	4.5	6.4
PER RESPONSE:						
Number Responses per Respondent	2.8	3.2	3.7	0.6	0.6	0.7
Labor Cost per Response	$93	$271	$336	$19	$54	$67
Non-Labor Cost per Response	$0	$2,594	$6,977	$0	$519	$1,395
Burden (labor hours) per Response	2.4	7.0	8.8	0.5	1.4	1.8

Exhibit B-2a: Yearly Cost and Burden to States for Implementation of UCMR 5 (2022-2026)[1] ***(corresponds with Exhibit 13a)***

Cost/ Burden	2022	2023	2024	2025	2026	Total[2]	Annualized Cost
Costs to All states for labor related to UCMR implementation and oversight							
	$1,180,421	$884,979	$884,979	$884,979	$74,833	$3,910,191	$782,038
Labor burden for all states for UCMR implementation and oversight (number of hours)							
	20,334	15,245	15,245	15,245	1,289	67,358	13,472

[1] All costs are attributed to labor and are estimated over the period 2022-2026.
[2] Totals may not equal sum of components due to rounding.

Exhibit B-2b: Per State (Respondent) and Per Response UCMR 5 Costs (2022-2026) ***(corresponds with Exhibit 13b)***

Burden / Cost	Total over 2022-2026	Annual Cost over 2022-2026
PER RESPONDENT:		
Labor Cost	$69,825	$13,965
Non-Labor Cost	$0	$0
Burden (labor hours)	1202.8	240.6
PER RESPONSE:		
Number Responses per Respondent[1]	3	1.0
Labor Cost per Response	$13,965	$4,655
Non-Labor Cost per Response	$0	$0
Burden (labor hours) per Response	240.6	80.2

[1] States have 1 response per year over the three sample collection years, since there are no specific cyclical state reporting requirements under the UCMR program.

Exhibit B-3a: Yearly Cost to EPA for UCMR 5 Implementation, by Type of Cost (2022-2026)[1] ***(corresponds with Exhibit 14a)***

Cost Description	2022	2023	2024	2025	2026	Total[2]	Annualized Cost
Regulatory Support Activities: laboratory PT; QC audits; electronic data reporting system; and technical support, guidance document development							
Lab PT	$245,975	$0	$0	$0	$0	$245,975	$49,195
QC Audits	$20,375	$40,750	$40,750	$20,375	$0	$122,251	$24,450
Electronic Data Reporting System	$360,000	$360,000	$360,000	$360,000	$360,000	$1,800,000	$360,000
Technical Support	$422,987	$363,339	$300,000	$300,000	$150,000	$1,536,326	$307,265
Subtotal – Regulatory Support	**$1,049,338**	**$764,089**	**$700,750**	**$680,375**	**$510,000**	**$3,704,553**	**$740,911**
National and Regional Oversight and Data Analysis: UCMR management oversight; review and evaluation of data from all UCMR monitoring							
	$2,226,432	**$2,226,432**	**$2,226,432**	**$2,226,432**	**$1,113,216**	**$10,018,944**	**$2,003,789**
Small PWS Testing: implementation coordination; and analytical and shipping costs for small PWS testing							
Implementation Coordination	$0	$4,418,689	$4,418,689	$4,418,689	$0	$13,256,067	$2,651,213
Fees for Analysis and shipping	$0	$8,568,379	$8,568,379	$8,568,379	$0	$25,705,137	$5,141,027
Subtotal – Small PWS Testing	**$0**	**$12,987,068**	**$12,987,068**	**$12,987,068**	**$0**	**$38,961,204**	**$7,792,241**
TOTAL	**$3,275,770**	**$15,977,589**	**$15,914,251**	**$15,893,875**	**$1,623,216**	**$52,684,701**	**$10,536,940**

[1] The EPA costs are estimated over the period 2022-2026.

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

Exhibit B-3b: Summary of EPA Burden and Costs for UCMR 5 Implementation (2022-2026) *(corresponds with Exhibit 14b)*

Burden / Cost	Annualized Cost over Five-Year UCMR Period (2022-2026)
Labor Cost	$2,003,789
Non-Labor Cost	$8,533,151
Total Cost to EPA for UCMR Implementation	$10,536,940
Burden (labor hours)	22,464

Exhibit B-4: National Cost Summary for UCMR 5 Implementation *(2022-2026)*
(corresponds with Exhibit 15)

Type of Cost	2022	2023	2024	2025	2026	TOTAL[1]	Annualized Cost
Small PWSs							
Labor Cost	$0	$513,928	$513,928	$513,928	$0	$1,541,784	$308,357
Non-Labor Cost	$0	$0	$0	$0	$0	$0	$0
Total Small PWS Cost	**$0**	**$513,928**	**$513,928**	**$513,928**	**$0**	**$1,541,784**	**$308,357**
Large PWSs							
Labor Cost	$0	$1,138,712	$1,138,712	$1,138,712	$0	$3,416,136	$683,227
Non-Labor Cost	$0	$10,904,116	$10,904,116	$10,904,116	$0	$32,712,349	$6,542,470
Total Large PWS Cost	**$0**	**$12,042,828**	**$12,042,828**	**$12,042,828**	**$0**	**$36,128,484**	**$7,225,697**
Very Large PWSs							
Labor Cost	$0	$178,115	$178,115	$178,115	$0	$534,345	$106,867
Non-Labor Cost	$0	$3,697,809	$3,697,809	$3,697,809	$0	$11,093,428	$2,218,686
Total Very Large PWS Cost	**$0**	**$3,875,924**	**$3,875,924**	**$3,875,924**	**$0**	**$11,627,773**	**$2,325,555**
States							
Labor Cost	$1,180,421	$884,979	$884,979	$884,979	$74,833	$3,910,191	$782,038
Non-Labor Cost	$0	$0	$0	$0	$0	$0	$0
Total State Cost	**$1,180,421**	**$884,979**	**$884,979**	**$884,979**	**$74,833**	**$3,910,191**	**$782,038**
EPA							
Labor Cost	$2,226,432	$2,226,432	$2,226,432	$2,226,432	$1,113,216	$10,018,944	$2,003,789
Non-Labor Cost	$1,049,338	$13,751,157	$13,687,819	$13,667,443	$510,000	$42,665,757	$8,533,151
Total EPA Cost	**$3,275,770**	**$15,977,589**	**$15,914,251**	**$15,893,875**	**$1,623,216**	**$52,684,701**	**$10,536,940**
National Total							
Total with EPA	**$4,456,191**	**$33,295,248**	**$33,231,910**	**$33,211,534**	**$1,698,049**	**$105,892,933**	**$21,178,587**
Total without EPA	**$1,180,421**	**$17,317,659**	**$17,317,659**	**$17,317,659**	**$74,833**	**$53,208,232**	**$10,641,646**
Total Burden (hours) for All Responses[2]							
Small PWSs	0.0	13,229.2	13,229.2	13,229.2	0.0	39,687.6	7,937.5
Large PWSs	0.0	29,312.0	29,312.0	29,312.0	0.0	87,935.9	17,587.2
Very Large PWSs	0.0	4,655.9	4,655.9	4,655.9	0.0	13,967.6	2,793.5
States	20,334.3	15,244.9	15,244.9	15,244.9	1,289.1	67,358.1	13,471.6
EPA	24,960.0	24,960.0	24,960.0	24,960.0	12,480.0	112,320.0	22,464.0
Total with EPA	**45,294.3**	**87,402.0**	**87,402.0**	**87,402.0**	**13,769.1**	**321,269.3**	**64,253.9**
Total without EPA	**20,334.3**	**62,442.0**	**62,442.0**	**62,442.0**	**1,289.1**	**208,949.3**	**41,789.9**

[1] Totals may not equal the sum of components due to rounding.
[2] Although EPA is not considered a respondent to the UCMR, Agency burden are shown here to illustrate the national costs of the program. National totals are shown with and without the Agency costs.

Exhibit B-5: UCMR 5 Per Respondent Burden and Cost Summary (2022-2026)
(corresponds with Exhibit 16)

Burden (hours)/ Cost (dollars)	Small PWSs	Large PWSs	Very Large PWSs	States	EPA	**National Average with EPA[1]**	**National Average without EPA**
Five-Year Total per Respondent							
Total # of Responses Per Respondent	2.8	3.2	3.7	5.0	n/a	n/a	3.0
Labor Cost Per Respondent	$259	$869	$1,228	$69,825	$10,018,944	$1,873	$907
Non-Labor Cost Per Respondent	$0	$8,326	$25,502	$0	$42,665,757	$8,340	$4,226
Total Cost (Labor plus Non-Labor)	$259	$9,195	$26,731	$69,825	$52,684,701	$10,213	$5,132
Total Cost Per Response	$93	$2,865	$7,313	$13,965	n/a	n/a	$1,710
Total Burden Per Respondent (hr)	6.7	22.4	32.1	1,202.8	112,320.0	31.0	20.2
Total Burden Per Response (hr)	2.4	7.0	8.8	240.6	n/a	n/a	6.7
Average Annual per Respondent							
Ave. # of Responses Per Respondent	0.6	0.6	0.7	1.0	n/a	n/a	0.6
Labor Cost Per Respondent	$52	$174	$246	$13,965	$2,003,789	$375	$181
Non-Labor Cost Per Respondent	$0	$1,665	$5,100	$0	$8,533,151	$1,668	$845
Ave. Cost (Labor plus Non-Labor)	$52	$1,839	$5,346	$13,965	$10,536,940	$2,043	$1,026
Ave. Cost Per Response	$19	$573	$1,463	$2,793	n/a	n/a	$342
Ave. Burden Per Respondent (hr)	1.3	4.5	6.4	240.6	22,464.0	6.2	4.0
Ave. Burden Per Response (hr)	0.5	1.4	1.8	48.1	n/a	n/a	1.3

[1] National average burden and costs differ greatly between the state respondents and the various PWS respondents. This should be taken into consideration when looking at the national average with or without EPA.