

**Information Collection Request
for UCMR 2
-- Renewal --**

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ACRONYMS

ASDWA	Association of State Drinking Water Administrators
CCL	Contaminant Candidate List
CCR	Consumer Confidence Report
CFR	Code of Federal Regulations
CWS	Community Water System
DBP	Disinfection Byproduct
DBPR	Stage 1 Disinfection Byproducts Rule
DSMRT	Distribution System Maximum Residence Time
EPA	Environmental Protection Agency
EPTDS	Entry Point to the Distribution System
FR	Federal Register
FTE	Full Time Equivalent
GS	General Schedule
GWUDI	Ground Water under the Direct Influence of Surface Water
ICR	Information Collection Request
LCMRL	Lowest Concentration Minimum Reporting Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRL	Minimum Reporting Level
NAICS	North American Industry Classification System
NCOD	National Contaminant Occurrence Database
NPDWR	National Primary Drinking Water Regulation
NTNCWS	Non-transient Non-community Water System
OMB	Office of Management and Budget
OW	Office of Water
PA	Partnership Agreement
PT	Proficiency Testing
PWS	Public Water System
PWSID	Public Water System Identification
QA/QC	Quality Assurance/Quality Control
RFA	Regulatory Flexibility Act
SDWA	Safe Drinking Water Act
UCMR	Unregulated Contaminant Monitoring Regulation

— PART A OF THE SUPPORTING STATEMENT —

1 IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title and Number of the Information Collection

Title: Unregulated Contaminant
Monitoring in Public Water Systems (UCMR 2)(Renewal)

OMB Control Number: 2040-0270

EPA Tracking Number: 2192.03

1(b) Short Characterization

Section 1445(a)(2) of the Safe Drinking Water Act (SDWA), as amended in 1996, requires that once every 5 years, beginning in August 1999, the United States Environmental Protection Agency (EPA) issue a new list of no more than 30 contaminants to be monitored, and procedures for placement of the monitoring data in the National Contaminant Occurrence Database (NCOD). EPA's program must also include a nationally "representative sample of systems serving 10,000 or fewer persons" that will be required to monitor, and a frequency and schedule for monitoring.

EPA published the revisions to the Unregulated Contaminant Monitoring Regulation (UCMR) for public water systems (PWSs) on September 17, 1999 (64 FR 50556).¹ This revised regulation included programmatic changes, and provided a list of contaminants for which monitoring was required or would be required in the future. In this first UCMR cycle (UCMR 1), EPA established a three-tiered approach for monitoring contaminants based on the availability of analytical methods and contaminant properties.

EPA developed a contaminant list and sampling design for the second UCMR cycle (*i.e.*, UCMR 2) of 2007-2011. The rule for UCMR 2 (published January 4, 2007 (72 FR 367)) builds on the established structure of UCMR 1 and makes some changes to the rule design. UCMR 2 monitoring is taking place from January 2008 through December 2010. The applicable Information Collection Request (ICR) renewal period is 2010-2012. Estimates of implementation burden and cost over the entire five-year UCMR 2 cycle of 2007-2011 are attached as Appendix B to this ICR. Note that the complete five-year UCMR 2 cycle of 2007-2011 overlaps with the applicable ICR renewal period only during 2010 and 2011. Moreover, PWSs will only be involved in active monitoring during 2010 (*i.e.*, one-third of this ICR period).

Assessment Monitoring, the largest in scale of the three UCMR monitoring components, is being conducted from January 2008 through December 2010 by 800 systems serving 10,000 or fewer people (hereafter referred to as small systems), and by all systems serving 10,001 and over

¹ ? Transient non-community water systems and those systems that purchase *all* of their water from another PWS are excluded from regulation.

people, for 10 “List 1” contaminants. Under Assessment Monitoring, contaminants for which standard analytical techniques are available are monitored to assess national occurrence in drinking water. The Screening Survey (for 15 “List 2” contaminants) is being conducted from January 2008 through December 2010 by 800 systems serving 100,000 or fewer people, and *all* systems serving more than 100,000 people (407 systems). Small systems will not be subject to more than one component of UCMR 2 monitoring. For cost estimation and scheduling purposes, EPA assumes that approximately one-third of systems will monitor during each of the three monitoring years (2008 - 2010); thus, two-thirds of all systems required to conduct UCMR 2 monitoring were assumed to monitor during the first UCMR 2 ICR period of 2007-2009, and one-third of systems required to conduct UCMR 2 monitoring are assumed to monitor during the second UCMR 2 ICR period of 2010-2012.

Respondents to UCMR 2 include 1,280 small water systems (800 for Assessment Monitoring, and 480 for the Screening Survey), the 3,633 large and very large PWSs, and the 56 States and primacy agents (referred to collectively as “States” for simplicity in this document), for a total of 4,969 respondents (over the UCMR 2 implementation period of 2007-2011). The frequency of response varies across respondents and years.

Small systems (those serving 10,000 or fewer) that are selected for UCMR 2 monitoring will sample an average of 2.7 times per system (*i.e.*, number of responses per system) across the three-year ICR renewal period of 2010-2012. The average total burden per response for small systems is estimated to be 1.8 hours. Large systems (those serving 10,001 to 100,000) and very large systems (those serving more than 100,000) will sample and report an average of 3.1 and 3.6 times per system, respectively, across the three-year ICR period of 2010-2012. The average total burdens per response for large and very large systems are estimated to be 3.8 and 8.7 hours, respectively. The larger burden per response for the very large systems reflects the fact that these systems typically have more sampling locations than large systems. States are assumed to incur 2 responses over the three-year ICR period related to coordination with EPA and systems, with an average burden per response of 95.2 hours. In aggregate, during the ICR period of 2010-2012, the average response (*e.g.*, responses from systems and States) is associated with a total burden of 5.8 hours, with a labor plus non-labor cost of \$1,939 per response.

The annual average per respondent burden hours and costs for the ICR period of 2010-2012 are: small systems — 1.6 hour burden at \$44 for labor; large systems — 3.8 hours at \$114 for labor, and \$1,747 for analytical costs; very large systems — 10.4 hours at \$369 for labor, and \$7,260 for analytical costs; and States — 63.5 hours at \$3,499 for labor. Annual average burden and cost per respondent (including both systems and States) is estimated to be 5.8 hours, with a labor plus non-labor cost of \$1,919 per respondent (note that small systems do not pay for testing costs, so they only incur labor costs). The total annual burden for the ICR reporting period of 2010-2012 is 9,761 (with a labor cost of \$387,096); the total annual analytical cost is \$2.86 million.

The Agency estimates the annual burden to EPA for UCMR program activities during the ICR years of 2010-2012 to be 5,720 hours, at an annual labor cost of \$0.4 million. EPA’s annual non-labor costs are estimated to be \$1.1 million. Non-labor costs are primarily attributed to the cost of sample testing for small systems (testing is just under 95 percent of non-labor).

2 NEED FOR AND USE OF THE COLLECTION

2(a) Need/Authority for the Collection

The information collected under this action is required by EPA to carry out its regulatory development responsibilities under SDWA section 1445(a)(2), Monitoring Program for Unregulated Contaminants. This section, as amended in 1996, requires that once every 5 years beginning in August 1999, the Agency issue a new list of no more than 30 contaminants to be monitored, and procedures for placement of the monitoring data in NCOD. EPA's program must also include a nationally "representative sample of systems serving 10,000 or fewer persons" that will be required to monitor, and a frequency and schedule for monitoring.

Section 1412(b)(4) of SDWA, as amended in 1996, requires EPA to promulgate maximum contaminant level goals (MCLGs) and promulgate National Primary Drinking Water Regulations (NPDWRs) for contaminants that: may have adverse human health effects; are known to or anticipated to occur in PWSs; or, in the opinion of the Administrator, present an opportunity for reducing health risks. The NPDWRs specify maximum contaminant levels (MCLs) or treatment techniques for drinking water contaminants (42 USC 300g-1). An MCL must be set as close to the MCLG as possible. NPDWRs apply to PWSs (42 USC 300f(1)(A)). Section 1412(b)(1) requires the Agency to develop a list of unregulated contaminants for regulatory consideration (*i.e.*, the candidate contaminant list (CCL)), to issue regulations that establish criteria for listing contaminants, and to carry out the UCMR Program. The Agency was required to issue the list of contaminants by August 1999, and every 5 years thereafter.

Section 1445(a)(1) of the Act requires each PWS to "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 him in establishing regulations, [or] ... in evaluating the health risks of unregulated contaminants ...". This section authorizes EPA to require systems to monitor, provide the Agency with these data, and to maintain records of this information.

In addition, section 1401(1)(d) of the SDWA 1996 Amendments defines NPDWRs to include "criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including accepted methods for quality control and testing procedures ...". This section authorizes EPA to require systems and laboratories to use Agency-approved methods and quality assurance criteria for collecting and analyzing water samples.

The sections from the SDWA 1996 Amendments, discussed above, are included as Appendix A of this document, in order by section number.

2(b) Practical Utility/Users of the Data

The unregulated contaminant monitoring data collected under the rule will be used to support: (1) the development and interactive evolution of the CCL; (2) the Administrator's determination of whether to regulate a contaminant; and (3) regulation development. In addition, if the contaminant has significant occurrence and health effects, EPA will use the results: as part of an exposure assessment; for establishing the baseline for health effects and economic analyses; for contaminant co-occurrence analysis; and for treatment technology evaluation, including contaminant source management. Further, the results may suggest that the occurrence of certain contaminants may be significant enough to initiate research on health effects and treatment technology. Finally, the data may guide future source water protection efforts.

System-level records of the analytical results of this monitoring will be maintained by each PWS. EPA-approved laboratories will report these results to EPA's electronic data reporting system. PWSs will review the information posted by the laboratory and submit the approved data to the State and EPA, via the electronic reporting system.

The data collected through the UCMR program is being stored in the NCOD to facilitate analysis and review of contaminant occurrence, to guide the development of the CCL process, and to support the Administrator's determination of whether or not to regulate a contaminant in the interest of protecting public health.

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

- Primacy agencies, which include State regulators, Indian Tribes, and, in some instances, EPA Regional Administrators
- PWS managers
- Staff from other EPA programs (such as Comprehensive Environmental Response, Compensation, and Liability Act; the Resource Conservation and Recovery Act; and the Office of Enforcement and Compliance Assurance)
- 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

- 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 EPA. With public health protection as its top priority, EPA drew upon several different sources in developing the UCMR 2 contaminant list. In the early stages of list development, EPA began by identifying a broad list of over 200 contaminants. These contaminants were: (1) UCMR "reserved" contaminants (*i.e.*, those identified as priorities under UCMR 1 but reserved for later monitoring because methods were not yet available); (2) contaminants on the first CCL (either deferred pesticides for which additional information was needed or suspected endocrine disruptors); or (3) other emerging contaminants (those identified as probable carcinogens or those that could be identified by analytical methods used in measuring other priority UCMR contaminants). EPA pared down the list based on previously established priorities, health effects, and the availability of an analytical method and analytical reference standard.

3(b) Public Notice Required Prior to ICR Submission to OMB

Following publication of the proposed rule on August 22, 2005 (70 FR 49094), EPA received several cost-related public comments. Several public commenters felt that EPA's estimates of cost and burden to public water systems were too low, including laboratory and shipping fees, and estimated labor burden.

As part of the proposed rule ICR development, EPA estimated laboratory fees based on consultations with several national drinking water laboratories, and based on costs of similar analytical methods. In response to comments, EPA revisited the estimates of UCMR 2 method pricing. EPA approached 3 additional national drinking water laboratories (different than those consulted previously) and requested pricing estimates for UCMR 2 methods. EPA has used the average of the pricing estimates from these laboratories in the cost estimates. EPA also revisited key shipping company pricing lists to ensure that shipping cost assumptions were as accurate as possible. Details on the revised estimates are presented in Section 6(a)(ii) Estimating Non-labor Costs.

With respect to per system burden estimates, EPA notes that all burden estimates represent average burden hours, which include surface water systems that may have very few sampling points, and thus lower sampling burden, as well as those systems with higher numbers of sampling points that would therefore have greater sampling activity labor burden. Moreover, a system's burden is primarily incurred during its one year of required UCMR monitoring (between January 2008 and December 2010). 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 (2007 - 2009). Small systems (those serving 10,000 or fewer people) will have the lowest burden not only because of the relative smaller size of their infrastructure, but also because these systems will receive a great deal of direct assistance from EPA and/or their State.

3(c) Consultations

EPA's Office of Ground Water and Drinking Water developed a process for stakeholder involvement in its regulatory activities for the purpose of providing early input to regulation development. When designing and developing the 1999 UCMR program, EPA held meetings for: developing the CCL; establishing the information requirements of the NCOD; and contaminant selection. During the initial development of the UCMR program, stakeholders including PWSs, States, industry, and other organizations attended meetings to discuss UCMR. Seventeen other meetings were held specifically concerning UCMR development. A description of public involvement activities related to UCMR are provided in the September 1999, UCMR Final Rule *Federal Register* at 64 FR 50556.

Specific to the development of UCMR 2, a stakeholder meeting was held on October 29, 2003 in Washington, DC. There were 25 attendees, representing State agencies, federal agencies, laboratories, PWSs, and drinking water associations. The topics of presentations and discussions included: the rationale for selecting a new list of contaminants; analytical methods to be used in measuring these contaminants; sampling design, particularly for the Screening Survey monitoring; procedure for determining the lowest concentration minimum reporting levels (LCMRLs); validation of laboratory performance at or below the minimum reporting level (MRL); revisions to data elements; and other proposed revisions based on lessons learned during implementation of UCMR 1.

EPA published the proposed UCMR 2 on August 22, 2005 (70 FR 49094) and requested public comment on the rule design and content, as well as on the ICR. EPA received comments from 36 public commenters, addressing a variety of issues on the proposed regulation. In response to comments received, EPA removed perchlorate from UCMR 2, and revised or clarified requirements pertaining to system applicability criteria, reporting, monitoring, and quality control. In addition, several commenters felt that EPA's estimates of cost and burden to public water systems were too low, including laboratory and shipping fees, and estimated labor burden. EPA's responses to these cost- and burden-related comments are addressed above in Section 3(b) Public Notice Required Prior to ICR Submission to OMB and in Section 6(a)(ii) Estimating Non-labor Costs.

3(d) Effects of Less Frequent Collection

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

Monitoring frequencies were determined based on statutory requirements, which specify that monitoring be varied based on the number of people served by a system, contaminants likely to be found, and source of supply. The monitoring frequency design also considers that the number of people served affects exposure to contaminants, as well as the resources available to undertake monitoring activity. The collection frequencies in the rule are discussed further in section 5(b), 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 system;
- source of the supply (*e.g.*, surface water or ground water);
- contaminants likely to be found; and
- temporal variability in occurrence.

The Assessment Monitoring component of data collection will be conducted from January 2008 through December 2010 by all large (those systems serving 10,001 to 100,000 people) and very large systems (those systems serving more than 100,000 people), and by a nationally representative sample of 800 small systems (those serving 10,000 people or fewer). The Screening Survey component will be conducted from January 2008 through December 2010 by all very large systems and by a sample of 800 systems serving 100,000 or fewer people. Samples will be collected from entry points to the distribution system (EPTDSs). Systems with multiple ground water EPTDSs will only be required to sample at representative sampling locations for each ground water source, as long as those sites have been approved. In addition, Screening Survey systems that are required to monitor for disinfection byproducts (DBPs) under the Stage 1 Disinfection Byproducts Rule (DBPR) will be required to sample for nitrosamines at one distribution system sampling point per treatment plant, as well as their EPTDS sampling locations.

For both Assessment Monitoring and Screening Surveys, samples will be collected twice during the monitoring year for ground water sampling locations², and four times during the monitoring year for sampling locations that are fed in whole or part by a surface water or ground water under the direct influence of surface water (GWUDI) source. Multiple samples during a year are necessary to capture the annual variability in contaminant occurrence to approach an adequate characterization of potential exposure. The required sampling frequencies will help provide the quality and quantity of data that will be statistically necessary for regulatory determinations. The Agency will schedule the year and months of system monitoring, though large systems will have the option of changing their schedules by coordinating a new schedule with EPA.

EPA is maintaining the same statistical design that was established under UCMR 1 for its UCMR 2 national representative sample of 800 small systems and continuing with a census of

² ? Ground water systems are required to sample only two times per year because they generally show less seasonal fluctuation than surface water or GWUDI systems. Rule language regarding sampling schedule/frequency ensures that ground water systems collect at least one of their samples during the most vulnerable period, which the rule specifies by default to be May – July.

large water systems for Assessment Monitoring. EPA believes that the combination of a nationally representative sample of small systems and a census of large systems provides a powerful tool for assessing contaminant occurrence in PWSs, and that this is the most effective and accurate survey approach. A sample of 800 systems from the universe of over 61,000 small systems will provide a confidence level of 99 percent with an allowable error of ± 1 percent. The set of representative systems are distributed among different size categories, but weighted by population served, to ensure that the sample can provide estimates of exposure.

EPA has selected these high standards to ensure the quality of the estimation. EPA considered larger sample frames because of the many uncertainties involved, but the sample size of 800 was deemed adequate to meet the needs for the national estimate. Smaller sample sizes (*i.e.*, fewer systems monitored) were also considered, but rejected. In general, many population surveys with continuous variables use a lower level of confidence (95 percent) and/or a larger allowable error. However, the larger possible error is not considered acceptable for this program. Examination and analysis of current occurrence data show that many contaminants that are currently regulated, or being considered for regulation occur in 1 percent or less of systems on a *national* basis. For many contaminants, a 1 percent occurrence nationally translates into a substantially larger occurrence regionally. Also, even a small percentage of systems with detections can translate into a significant population affected. With a greater margin of error, and the resultant smaller sample size, such occurrence might be missed entirely. Also, it is necessary for EPA to make some judgments about the occurrence of contaminants in relation to source waters and different size categories of systems. Many statutes and current regulations differentiate implementation requirements based on system size or water source. While combining sampling results from the representative sample of small systems with that from all large systems provides increased power in the total sample, EPA must be able to evaluate occurrence, and possible regulatory options, related to the small systems. SDWA and many current rules focus on burden reduction for small systems when feasible. Also, there are many other uncertainties and sources of variance in such a sample program. For example, all contaminants have censored distributions (*i.e.*, "less than detection level" analytical results) and there are a myriad of factors that affect variability and vulnerability of ground water systems. It remains unclear how normal sampling theory accommodates these. Hence, the high confidence level, low allowable error, and larger sample size should help to ensure adequate data to meet the objectives of the UCMR program.

The sample size for the Screening Survey under UCMR 2 will be increased to ensure the data can be used to support regulatory determinations, and rule development, if warranted. Thus, if a contaminant of concern is found to occur with some significance during the Screening Survey, it may not be necessary to conduct Assessment Monitoring. EPA may instead be able to make a regulatory determination based on these data and move to protect public health more quickly. The new Screening Survey design also accounts for possible laboratory capacity issues related to the use of uncommon methods.

The new design increases confidence in the sampling results in two ways. First, the Screening Survey would use a larger stratified random sample of 800 systems (compared to 300 under UCMR 1), allocated across five strata for systems serving 100,000 or fewer people. The sample size is derived from the same rationale as that for Assessment Monitoring, but the sample frame is expanded to include large systems serving between 10,001 and 100,000 people.

Second, the Screening Survey will include a census of the largest PWSs, those serving 100,001 or more people (407 systems), referred to as "very large" systems. Using a census of these very large systems will minimize the possibility of missing contaminant occurrence at the systems that serve the largest portion of the population, while keeping the number of systems required to conduct the Screening Survey relatively small.

There will be no "Index System" component to the UCMR 2 program. Under UCMR 1, samples were collected from 30 small Index Systems during all 5 years of the monitoring cycle to assess any trends in temporal occurrence, other data variability, or program problems. EPA is not including Index System monitoring for UCMR 2 based on the lack of contaminant occurrence observed at Index Systems monitored in UCMR 1.

EPA has further reduced the number of systems burdened by UCMR by not requiring systems that purchase all of their water to monitor. The national sample (described above) will exclude systems that purchase the entirety of their water from other systems, to minimize redundant sampling of sources. Exposure estimates can be extrapolated to purchased systems from the monitoring data of the original source systems.

The UCMR program will also exclude transient, non-community systems. Projecting exposure from such systems is complex and inconclusive because of the transient nature of the population served by them. The results from the small community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) can be extrapolated to these systems.

Since it is possible that certain contaminants are not likely to be found if their associated chemical use does not occur in a particular State, UCMR includes a provision for waivers for large systems on a State-wide, chemical-specific basis. However, for small systems, waivers will not be considered because eliminating small systems from the nationally representative sample would compromise the data quality and consistency requirements of a representative sample. The representative sample must provide adequate information on both the presence and absence of contaminants for the systems sampled. Since EPA will pay for this testing, it does not place a significant burden on these small systems.

3(e) General Guidelines

This ICR has been completed in accordance with the October 2001 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 EPA's Office of Environmental Information, Office of Information Collection, 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 is taking an approach that minimizes burden to the respondents. In addition, this collection does not violate any of the OMB guidelines for information collection activities. Specifically, the respondents are not required to:

- Report information to EPA more than quarterly.
 - 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 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 NAICS/SIC Codes

Data associated with this ICR are collected and maintained by PWSs. States, Territories, and Tribes with primacy to administer the regulatory program for PWSs under SDWA may participate in UCMR 2 implementation through a Partnership Agreement (PA). These primacy agencies may sometimes conduct monitoring and maintain records. The North American Industry Classification System (NAICS) code for PWSs is 22131. The NAICS code for State agencies that include drinking water programs are classified as 92411 (Administration of Air and Water Resources and Solid Waste Management Programs) or 92312 (Administration of Public Health Programs).

4(b) Information Requested

This ICR summarizes the data items and respondent activities associated with UCMR 2.

4(b)(i) Data Items

A discussion of data and information that are part of the reporting and recordkeeping requirements for systems is found below in section 4(b)(i)(a), Part A of this ICR document. The requirements for States are discussed below in section 4(b)(i)(b), Part A of this ICR document.

4(b)(i)(a) Public Water System Reporting and Recordkeeping

The UCMR 2 monitoring list is specified in §141.40 and shown here in Exhibit 1. Following public comment on the proposed rule, and based on further Agency consideration, EPA removed

perchlorate from the UCMR 2 monitoring list. Thus, UCMR 2 includes 25 contaminants, as compared to the 26 proposed in August 2005. UCMR 2 also includes modifications and clarifications to the reporting requirements for large systems that were established under UCMR 1. These include: reporting sampling location and contact information prior to monitoring; submitting proposals for representative EPTDSs; ensuring electronic reporting of analytical results and associated data elements by laboratories; and reviewing, approving, and submitting monitoring data that was posted by laboratories.

Exhibit 1: UCMR 2 Contaminant List	
List 1, Assessment Monitoring	
1,3-dinitrobenzene	2,2',4,4',6-pentabromodiphenyl ether (BDE-100)
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)	2,4,6-trinitrotoluene (TNT)
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)	Dimethoate
2,2',4,4',5,5'-hexabromobiphenyl (245-HBB)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)	Terbufos sulfone
List 2, Screening Survey	
Acetochlor	Metolachlor OA
Acetochlor ESA	N-nitroso-diethylamine (NDEA)
Acetochlor OA	N-nitroso-dimethylamine (NDMA)
Alachlor	N-nitroso-di-n-butylamine (NDBA)
Alachlor ESA	N-nitroso-di-n-propylamine (NDPA)
Alachlor OA	N-nitroso-methylethylamine (NMEA)
Metolachlor	N-nitroso-pyrrolidine (NPYR)
Metolachlor ESA	

The rule also modifies the reporting requirements to make reported results more useful for sound scientific analyses of the occurrence of unregulated contaminants. The 15 required data elements are listed in Exhibit 2. Large systems must electronically report data elements 1 through 5, and 7 through 15 if conducting Assessment Monitoring, and all 15 if conducting Screening Survey. Small systems must record data elements 1 through 5, and 7 if conducting Assessment Monitoring, and 1 through 7 if conducting Screening Survey. All systems participating in UCMR monitoring must inform EPA of any changes to data elements 1 through 6, if applicable.

Exhibit 2: Unregulated Contaminant Monitoring Reporting Requirements	
1. Public Water System Identification (PWSID) Code	9. Contaminant
2. Public Water System Facility Identification Code	10. Analytical Method Code
3. Water Source Type	11. Sample Analysis Type

Exhibit 2: Unregulated Contaminant Monitoring Reporting Requirements	
4. Sampling Point Identification Code	12. Analytical Results - Sign
5. Sampling Point Type Code	13. Analytical Result - Value
6. Disinfectant Residual Type	14. Laboratory Identification Code
7. Sample Collection Date	15. Sample Event Code
8. Sample Identification Code	

4(b)(i)(b) State Reporting and Recordkeeping

As was true for UCMR 1, UCMR 2 will be a direct implementation rule, and therefore States will not be required to report to EPA. Implementation activities for each State will be identified and determined through PAs with EPA. If participating in a PA, States will at a minimum be reviewing and revising Initial State Monitoring Plans, notifying systems of their UCMR responsibilities, and providing EPA with a list of the systems notified. Because States have no specified reporting cycle, it is assumed that States have 1.0 response per year, encompassing all communication and coordination activities with EPA and systems.

4(b)(ii) Respondent Activities

Respondents include both PWSs and States. System activities and State activities are discussed below in sections 4(b)(ii)(a) and 4(b)(ii)(b), respectively (Part A of this ICR document). Changes to this Respondent Activities section primarily address clarifications of the timing of activities relative to this ICR renewal period.

4(b)(ii)(a) Public Water System Activities

To comply with the requirements in this regulation, systems are expected to conduct the following activities:

- read regulations and/or letter from State or EPA which outline requirements;
- monitor or provide monitoring assistance (*e.g.*, sample collection and shipping);
- report and maintain records; and
- report to the public.

Each of these activities is discussed in more detail below.

Read Regulations/State Letter: All PWSs that are participating in UCMR monitoring are assumed to have read the UCMR regulations and/or a State-issued guidance letter during the 2007-2009 ICR period. Small systems can rely on summarized information from the State or EPA for information pertaining to the regulation, rather than reading the regulation.

Monitoring or Monitoring Assistance: Monitoring activities that are considered in the system cost and burden estimates include receiving sampling kits from the laboratory, reading sampling instructions, and collecting and shipping the sample. Assessment Monitoring is scheduled to occur during January 2008 through December 2010 for 10 chemical contaminants.

The Screening Survey is scheduled for January 2008 through December 2010 for 15 other chemical contaminants. For cost estimation and scheduling purposes, EPA assumes that approximately one-third of systems will monitor during each of the three monitoring years (2008 - 2010); thus, two-thirds of all systems required to conduct UCMR 2 monitoring were assumed to monitor during the first UCMR 2 ICR period of 2007-2009, and one-third of systems required to conduct UCMR 2 monitoring are assumed to monitor during the second UCMR 2 ICR period of 2010-2012. Appendix B provides a comprehensive cost estimate for implementation of the rule, including labor and non-labor costs for the entire five-year UCMR cycle of 2007 - 2011. Note that the complete five-year UCMR 2 cycle of 2007-2011 overlaps with the applicable ICR period only during 2010 and 2011 (and, PWSs will only be involved in active monitoring during 2010 (i.e., one-third of this ICR period)).

For both Assessment Monitoring and the Screening Survey, surface water (and GWUDI) sampling points will be monitored four times during the applicable year of monitoring, and ground water sampling points will be monitored twice during the applicable year of monitoring. Monitoring will be conducted at EPTDSs. Large ground water systems with multiple EPTDSs will only be required to sample at representative sampling locations for each ground water source, as long as those sites have been approved by EPA or the State. In addition, Screening Survey systems that are required to monitor for DBPs will be required to sample for nitrosamines at one distribution system sampling point per treatment plant (i.e., at the distribution system maximum residence time (DSMRT)), as well as their EPTDS sampling locations.

Reporting and Recordkeeping: As noted in section 4(b)(i)(a), Part A of this ICR document, several of the requirements related to reporting of contact information, reporting of sampling location data, electronic reporting by laboratories, and data elements associated with monitoring data were modified by the UCMR 2 rule. Activities related to these reporting requirements include:

Reporting Prior to Monitoring - Contact information: As under UCMR 1, large systems are required to report contact information to EPA. This information includes the name, affiliation, mailing address, phone number, facsimile number, and e-mail address for the PWS Technical Contact and PWS Official (i.e., the official spokesperson for a PWS's UCMR activities). UCMR 2 clarifies that the information must be submitted to EPA's electronic data reporting system within a specified time frame after rule promulgation. Small systems must provide this information by mail, in response to a specific written request that they will receive from EPA.

Sampling location information: Prior to sampling, large PWSs must also provide inventory information related to each applicable sampling location. For each sampling location or each approved representative sampling location, large PWSs must submit: PWS identification (PWSID) code; PWS facility identification code; sampling point identification code; sampling point type code; sampling location water type. In addition, large systems that are required to conduct Screening Survey monitoring must report the disinfectant(s) used to maintain a residual in the distribution system for each distribution system sampling location.

Representative EPTDS proposal: Some systems that use ground water as a source and have multiple EPTDSs may monitor at representative entry point(s), rather than at each EPTDS. To qualify, these ground water systems 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). Systems meeting these criteria can submit a proposal to EPA or the State. The proposal must demonstrate that any EPTDS selected as representative of the ground water supplied from multiple wells be associated with an individual well that draws from the same aquifer as the multiple wells (*i.e.*, those being represented).

Reporting Monitoring Results - Small systems: Under UCMR 1, small systems were technically held to the same data review and approval requirements as those for large systems. However, because EPA pays for and organizes the small system testing program, this review and approval step for small systems proved impractical. Under UCMR 2, small systems would only be required to record system 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 will be specified in the instructions sent to the system.

Large systems: UCMR 2 specifies that laboratories must post the analytical results and associated data elements to EPA's electronic data reporting system within 120 days of sample collection. The rule also clarifies that large systems must ensure that their laboratory meets this requirement, and that systems review, approve, and submit the data to the State and EPA via the electronic reporting system within 60 days from when the laboratory posts the data. After 60 days from the laboratory's posting, if the PWS has not approved and submitted the data, the data will be considered approved and final for EPA review.

Recordkeeping - Section 141.33 requires systems to maintain records of chemical monitoring data for 10 years. No changes are being made to those recordkeeping requirements.

Reporting to the Public: SDWA section 1445(a)(2)(E) requires notification of the results of the UCMR program to be made available to those served by the system. CWSs are required to notify their users of the detection of any contaminants (including unregulated contaminants) in their Consumer Confidence Reports (CCRs), pursuant to §141.153(d)(3)(iv), published in the *Federal Register* (63 FR 44512). Monitoring and reporting violations for all systems (CWSs and NTNCWSs) will be reportable under the Public Notification Rule (64 FR 25964 (May 13, 1999)).

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

For UCMR 1, EPA estimated State burdens and costs using the 1993 State Resource Model (documented in the “Resource Analysis Computer Program for State Drinking Water Agencies”). That model was designed by EPA, in coordination with 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 systems affected, estimates of violation rates, etc.). Since that time, EPA and ASDWA have worked together to update and improve the previous version of the resource model. EPA used the updated resource model (the “2001 ASDWA Drinking Water Program Resource Needs Self Assessment”, as documented in: “Public Health Protection Threatened by Inadequate Resources for State Drinking Water Programs - An Analysis of State Drinking Water Program Resources, Needs, and Barriers”; ASDWA, April 2003) to estimate resources that States may need for the oversight and implementation of UCMR 2. Assumptions that were applied in using this resource assessment tool are described in section 6(b), Part A of this ICR document. EPA assumes that State participation will closely reflect that which occurred during UCMR 1. 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 will be delineated in PAs between the States and EPA. However, in response to the regulation, EPA anticipates that State activities will generally include EPA coordination activities/PAs, data management and support, program implementation, and training/overhead. Though some States may choose to conduct sampling for their systems, this activity is not part of the PA agreement and is optional for States. Burden for sampling is currently attributed to systems only. If States choose to conduct monitoring for systems, burden would be similar to that estimated for systems.

State Coordination with EPA/PAs: State activities that involve coordination with EPA include coordination and drafting of a PA, review of and response to EPA’s proposed State Monitoring Plan, review of PWS proposals for representative EPTDSs, and general ongoing coordination.

Review of State Monitoring Plans was one of the first UCMR activities to take place at the State level. Each State received a proposed initial State Monitoring Plan from EPA, which listed all systems that would be required to conduct Assessment Monitoring and the Screening Surveys. For systems that are part of the sample, EPA generated a list to provide similar replacement systems for States to select from, for those systems that may not have been correctly specified in the initial plan. If a State identified systems on the original proposed State Monitoring Plan that it determined were not appropriate for the representative sample (*e.g.*, if systems were inactive, or had switched to purchased water), the State could propose an alternative plan by selecting other systems from EPA’s alternate list to replace the ineligible systems. The State Monitoring Plans also specified the year and months during which systems would monitor. States were given the option to modify these schedules. Since these UCMR 2 activities were completed by States in 2007, they are not applicable to the current ICR period of 2010-2012.

Some systems that use ground water as a source of water have submitted a proposal for monitoring at representative entry point(s), rather than monitor at every EPTDS. State involvement in the review of these proposals was determined in the PA process.

EPA recognizes the necessity for States to maintain ongoing communications with EPA regarding the requirements of UCMR. An example of this would be instances when States need clarification and guidance regarding a specific requirement of the regulation. These ongoing

communication activities are included in estimated burdens across the entire UCMR 2 implementation period of 2007-2011.

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

Program Implementation: Program implementation activities for each State may include notification and guidance letter to systems, data review, ongoing system support, and enforcement.

Following review and finalization of State Monitoring Plans, participating States prepared a notification letter that described system monitoring schedules and requirements under the regulation. The participating States notified each applicable system and sent the list of these notified systems to EPA. It is also likely that States will receive telephone calls from water systems asking for clarification and guidance pertaining to the requirements of UCMR. States may choose to review monitoring results, in part to determine whether a system has met its monitoring and reporting requirements.

State Staff Training and Overhead: Technical staff are assumed to participate in rule-specific training designed to assist them in understanding the regulation, their roles and responsibilities, and to allow the State to better provide technical assistance to the systems. In addition, general overhead costs, such as clerical and managerial needs, are allocated to the UCMR staff requirements in the standard State Resource Model, 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–AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

5(a) Agency Activities

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

5(a)(i) Regulatory Support Activities

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

Laboratory Approval and Quality Assurance/Quality Control (QA/QC) Activities: EPA incurs various costs related to laboratory approvals and laboratory quality assurance and control, including the following activities:

- *QC audits of contract laboratories* - EPA will be conducting QC audits at each of the approved laboratories during each year of UCMR 2 monitoring (January 2008 through December 2010). Only those QC audits for 2010 coincide with this ICR period.
- *Analytical standards provision and coordination* - Specialized analytical standards are distributed to participating laboratories by EPA during each year of UCMR 2 monitoring (January 2008 through December 2010). This ICR includes EPA’s coordination and distribution of these standards in 2010 only.

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

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 1, below, illustrates the time line for UCMR implementation activities. EPA developed its PAs with States and the State Monitoring Plans prior to the beginning of PWS monitoring activities. EPA is conducting its ongoing evaluation of the data during 2007-2011 (i.e., the five-year UCMR 2 cycle).

Exhibit 1: Time Line of UCMR Activities				
2006 and 2007	2008	2009	2010	2011
EPA Lab approval program				Final EPA data analysis
Representative Sample of PWSs Selected by EPA	Assessment Monitoring: List 1 Contaminants All systems serving more than 10,000; 800 systems serving 10,000 or fewer people			
EPA/State PAs and State Monitoring Plans Developed				
Inform PWSs/Establish Monitoring Plans	Screening Survey: List 2 Contaminants All systems serving more than 100,000 people; 800 systems serving 100,000 or fewer people			
Next RegDet ¹ scheduled for CCL 2 contaminants				

¹ RegDet = Regulatory Determination

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

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

The single largest cost to EPA for implementation of UCMR is for small system sample analyses. During the ICR period of 2010-2012, EPA will pay for the analytical and shipping costs for just one-third of small systems selected for Assessment Monitoring and Screening Survey monitoring (two-thirds of monitoring was completed during 2008 and 2009, covered under the previous UCMR 2 ICR period of 2007-2009). EPA is conducting some QC activities that apply only to small systems. Specifically, EPA is sending “duplicates” of 10 percent of small system samples to separate laboratories for analysis. The quality control duplicates are intended to provide standard, real time, QC checks among the different contract laboratories.

5(b) Information Collection Methodology and Management

UCMR 2 specifies that laboratories must report the analytical results and associated data elements to EPA’s electronic data reporting system. UCMR 2 clarifies that large systems must ensure that their laboratory posts the data in EPA’s electronic data reporting system, and must review, approve, and submit the data to the State and EPA via the EPA electronic reporting system. After 60 days from the laboratory’s posting, if the PWS has not approved and submitted the data, the data will be considered approved and final for EPA review. Electronic reporting will provide significant collection efficiencies, and reduce the possibility of data input error.

EPA is conducting ongoing data analysis, including 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.

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

5(c) Small Entity Flexibility

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

The RFA provides default definitions for each type of small entity. Small entities are defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any "not-for-profit enterprise which is independently owned and operated and is not dominant in its field." However, the RFA also authorizes an agency to use alternative definitions for each category of small entity, "which are appropriate to the activities of the agency" after proposing the alternative definition(s) in the **Federal Register** and taking comment (5 USC 601(3)-(5)). In addition, to establish an alternative small business definition, agencies must consult with SBA's Chief Counsel for Advocacy.

For purposes of assessing the impacts of the final rule on small entities, EPA considered small entities to be PWSs serving 10,000 or fewer people, because this is the system size specified in SDWA as requiring special consideration with respect to small system flexibility. As required by the RFA, EPA proposed using this alternative definition in the **Federal Register**, (63 FR 7605, February 13, 1998 (USEPA, 1998a)), requested public comment, consulted with the SBA, and finalized the alternative definition in the Consumer Confidence Reports rulemaking, (63 FR 44511, August 19, 1998 (USEPA, 1998c)). As stated in that Final Rule, the alternative definition is applied to this regulation as well.

After considering the economic impacts of the final rule on small entities, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by the final rule are a subset of small community and non-transient non-community PWSs serving 10,000 or fewer people. EPA has determined that the 1,280 small PWSs required to participate in either the Assessment Monitoring or Screening Survey components of UCMR 2 will experience an average cost of \$43 per year; the remainder of small systems are not subject to the final rule.

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of the rule on small entities. As required by SDWA, the Agency specifically structured the rule to avoid significantly affecting small entities by assuming all costs for laboratory analyses, shipping, and QC for small entities. As a result, EPA incurs the entirety of the non-labor costs associated with UCMR 2 small system monitoring. With its authority to use monies from the Drinking Water State Revolving Fund (DWSRF) for the purposes of implementing this provision of SDWA, EPA has set aside \$2.0 million each year to apply towards these costs. Small system costs are limited to the additional labor required for reading about their requirements, monitoring, reporting, and recordkeeping. The estimated average annual burden across the five-year UCMR 2 cycle of 2007 - 2011 is estimated to be 1.5 hours at \$43 per small system. These costs for small systems are discussed in Section 6(a)(i) of this document.

5(d) Collection Schedule

UCMR 2 applies the same monitoring frequencies as those used under UCMR 1 because, as detailed in Part A, section 3(d), of this ICR document, the Agency believes that it is sufficient to gather necessary information on occurrence of unregulated contaminants, without significantly burdening small systems. Both Assessment Monitoring and Screening Survey activities are expected to occur from January 2008 through December 2010. Monitoring frequency

specifications are the same for both Assessment Monitoring and Screening Surveys:

- Surface water or GWUDI systems will collect four samples for each required component of UCMR monitoring, taken as follows: systems will select either the first, second, or third month of a quarter and sample in that same month of each of four consecutive quarters to ensure that one of those sampling events occurs during the vulnerable time.
- Ground water systems will collect samples two times in a year for each required component of UCMR monitoring, taken such that as least one of the samples is collected during the vulnerable time (typically May through July). Monitoring schedules will identify two dates, six months apart; however systems will have the flexibility to collect their second sample sets within 5 - 7 months of the first sample set.

Small systems will only be selected for one component of UCMR monitoring, if at all. UCMR activities that occur after the year 2009 are not included in this ICR analysis (Appendix B contains estimates for the 5-year UCMR 2 program, 2007-2011). Exhibits 3 and 5 illustrate the time line of general UCMR activities, and system monitoring activities, respectively.

6 ESTIMATING THE BURDEN AND COST OF THE COLLECTION

This section describes the respondent burden and cost for activities under UCMR 2. 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 Agency's burden and cost estimates are shown in section 6(c) (all in Part A of this ICR document).

This ICR focuses only on the cost of the UCMR data collection over the years 2010-2012. Cost tables that are presented in this section have analogous tables in Appendix B, which present costs for the entire UCMR 2 cycle (2007-2011).

There are two primary categories of costs associated with UCMR: (1) labor costs, such as program implementation, sample collection, recordkeeping, 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 attributed to monitoring activities and the fees for laboratory analytical services. Assessment Monitoring targets a list of 10 contaminants and the Screening Survey targets 15 contaminants.

EPA is committed to accurately characterizing the burden and costs of rules it promulgates. In the development of various drinking water program rule ICRs, EPA has 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, system inventory numbers (the number of water systems in the various size categories by primary water source), the number of sampling points for each system, and analytical services. The sources and assumptions used in estimating costs and burdens are described below. For consistency, the sources and assumptions that were used for the 2007-2009 UCMR 2 ICR period are also used for the 2010-2012 UCMR 2 ICR period.

6(a) Estimating Burden and Cost to Public Water Systems

Specific assumptions used in estimating system 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 costs estimates is provided in section 6(a)(iii), Part A of this ICR document.

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

Inventory Data: Small system inventory was based on the same source as that used for the current drinking water ICR entitled: *Disinfectants/Disinfection Byproducts, Chemical, and Radionuclides Information Collection Request* (OMB Control Number: 2040-0204; EPA Tracking Number: 1896.05). Large system inventory data are from UCMR data collected for UCMR 1 implementation, as of March 2006.

EPTDS Data: All EPTDS data were taken from *Community Water System Survey 2000, Volume II Detailed Tables and Survey Methodology*, Table 7, entitled “Average Number of Entry Points to the Distribution System By Primary Source Water”, which gives the average number of entry points for ground water and surface water systems.

DSMRT Data: Number of DSMRT samples per system per sampling period were estimated by multiplying the number of treatment plants per system (from *Community Water System Survey 2000, Volume II Detailed Tables and Survey Methodology*, Table 11) by the percentage of systems disinfecting (*Fourth Edition of the Baseline Handbook*, Table B1.3.3, originally derived from the 1995 Community Water System Survey). As a conservative measure, the average number of CWSs treatment plants were also used to represent the number of NTNCWS treatment plants (*i.e.*, it is likely that NTNCWSs have fewer treatment plants than CWSs, and thus lower actual costs for DSMRT sampling than estimated).

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

Both Assessment Monitoring and Screening Survey monitoring are being conducted from January 2008 through December 2010. Assessment Monitoring is being conducted by 800 systems serving 10,000 or fewer people, and all systems serving 10,001 and over. Screening Survey monitoring is being conducted by 800 systems serving 100,000 or fewer people, plus all systems serving more than 100,000 people. It is assumed for this cost estimation that one-third of systems will conduct monitoring each year. The UCMR program will affect a total of 4,913 systems, one-third of which will conduct monitoring during the ICR years of 2010-2012. Exhibit 2 below presents the estimated numbers of regulated systems required to participate in UCMR 2. Exhibit 3 presents the time line in which the system monitoring activities will take place.

System Size	Assessment Monitoring List 1	Screening Survey List 2	TOTAL ¹
Small (serving 25 - 10,000)	800 (selected systems)	480 (selected systems; different from those for List 1)	1,280
Large (serving 10,001-100,000)	3,226 (all)	320 (selected systems)	3,226
Very Large (serving >100,000)	407 (all)	407 (all)	407
TOTAL	4,433	1,207	4,913

1. Totals for large and very large systems are not additive, since Screening Survey systems are a subset of those conducting Assessment Monitoring (i.e., some large and all very large systems will conduct both Assessment Monitoring and Screening Survey monitoring).

Exhibit 3: UCMR 2 Sampling Activity Time Line for Cost and Burden Estimations				
2007	2008	2009	2010	2011
			<i>(designated ICR years are 2010-2012)</i>	
<i>No UCMR monitoring activity</i>	Assessment Monitoring¹			<i>No UCMR monitoring activity</i>
	~a systems sample (~1,478 PWSs)	~a systems sample (~1,478 PWSs)	~a systems sample (~1,478 PWSs)	
	Screening Survey¹			
	~a systems sample (~402 PWSs)	~a systems sample (~402 PWSs)	~a systems sample (~402 PWSs)	

¹ The following assumptions, based on the specifications in UCMR 2, were used to estimate cost and burden:

- Approximately one-third of systems will monitor during each of the three monitoring years (2008 - 2010); thus, only one-third of all systems required to conduct UCMR 2 monitoring are assumed to monitor during the ICR renewal period of 2010-2012. (The other two-thirds of participating systems have completed monitoring during 2008 and 2009, which fell within the previous UCMR 2 ICR period of 2007-2009.
- Systems serving more than 100,000 people must conduct both Assessment Monitoring and Screening Surveys.

The water system labor burden consists of three primary activities: (1) reading the regulations or State guidance letter; (2) monitoring or monitoring assistance; and (3) reporting and recordkeeping. Hourly labor rates (including overhead) vary by system size and are taken from the October 20, 2003 document *Labor Costs for National Drinking Water Rules*, Exhibit 20. The loaded wage rates are escalated to 2007 dollars using the December 2005 Employment Cost Index for wages and salaries in electric, gas, and sanitary services; and by applying an inflation factor of 3 percent. Estimated hourly rates range from approximately \$25.30 per hour for staff in water systems serving 500 or fewer people to almost \$35.60 per hour for systems serving more than 100,000 people (see Exhibit 4 for details).

Exhibit 4: Labor Rates Applied for Public Water Systems	
System Size	Labor Rate¹
500 and under	\$25.29 (for ground water) \$25.48 (for surface water/GWUDI)
501 to 3,300	\$28.15
3,301 to 10,000	\$28.83
10,001 to 50,000	\$29.65
50,001 to 100,000	\$29.65
100,001 and over	\$35.57

¹ PWS hourly labor rates (including overhead) are taken from *Labor Costs for National Drinking Water Rules*, Exhibit 20. All rates represent that for both ground water and surface water/GWUDI systems, except as noted. The loaded wage rates are escalated to 2007 dollars using the December 2005 Employment Cost Index for wages and salaries in electric, gas, and sanitary services; and by applying an inflation factor of 3 percent.

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

For each required UCMR component (Assessment Monitoring and/or Screening Surveys), systems are assumed to have read the regulations and/or a State-issued guidance letter during 2007, when UCMR 2 was established. Thus, this reading burden for UCMR 2 is considered to be complete, and not part of the applicable ICR period of 2010-2012. The reading burden was accounted for in the first UCMR 2 ICR period of 2007-2009.

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

For Assessment Monitoring, it is assumed that all participating systems would collect samples during January 2008 through December 2010, with approximately one-third of systems involved during each of the years. Thus, only one-third of all systems required to conduct UCMR 2 monitoring are assumed to monitor during the ICR period of 2010 - 2012. The other two-thirds of participating systems would have conducted monitoring during 2008 and 2009, which was accounted for in the previous UCMR 2 ICR period of 2007-2009. See Exhibit 3, above, for an illustration of the time line for system sampling activity. For both Assessment Monitoring and the Screening Survey, EPA assumes that each system will incur an estimated burden of 0.5 hours per sampling point to collect chemical samples for analysis. This monitoring burden includes receipt of monitoring kit, reading laboratory instructions, and collection and shipping of samples. It is calculated by: (hour burden per sampling point) times (number of sampling points) times (number of systems) times (number of sample events per year). Many ground water systems may realize savings in their sampling burden as a result of the allowance to sample at representative EPTDSs. Thus, sampling burden is calculated to account for the estimated reduction in entry points where these systems will sample (as described below in section 6(a)(ii), Part A of this ICR document).

6(a)(i)(c) Reporting and Recordkeeping

Under UCMR 2, regulated systems are required to report specific information prior to monitoring, and with their monitoring results.

Reporting Prior to Monitoring - As with the reading burden (described above, in Section 6(a)(i)(a)), all initial reporting prior to UCMR 2 monitoring (including proposals for representative EPTDSs) is considered to be complete, and not part of the applicable ICR period of 2010-2012. The initial reporting burden was accounted for in the first UCMR 2 ICR period of 2007-2009, and is included in Appendix B, which presents costs for the entire UCMR 2 cycle (2007-2011).

Small systems: EPA assumed that small systems only needed to send and confirm contact information prior to monitoring. These systems were allotted a one-time reporting burden of 2 hours.

Large surface water (and GWUDI) systems: EPA assumed that large surface water/GWUDI systems would send contact and sampling point information, and were allotted a one-time reporting burden of 6 hours.

Large ground water systems: EPA assumed that large ground water systems would send contact and sampling point information, which would require a one-time burden of 6 hours. An additional 8 hours were allotted to some ground water systems to account for compilation and submission of representative EPTDS proposal. Since it was unlikely that all systems would submit these proposals, EPA conservatively assumed that half of ground water systems serving 10,001 to 100,000 people would compile and submit this proposal; and assumes that all ground water systems serving more than 100,000 people would do so.

Reporting with Monitoring Results

Small systems: Small systems can choose whether to review their UCMR monitoring results. Because EPA is paying for and coordinating laboratory analyses, small systems are not required to review and approve their analytical results. Some systems may choose not to review at all, while others may review in detail. However, as a conservative assumption, small systems are each allotted 0.5 hours per sampling period for data review.

Large systems: This rule clarifies that large systems must review, approve, and submit the data to the State and EPA via the EPA electronic reporting system. These systems are allotted 2 hours per sampling period for this activity.

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

Systems are required to notify their users of the detection of any unregulated chemicals. Specifically, UCMR monitoring results will be reported by CWSs through the CCRs (63 FR 44512 (August 19, 1998)). Both CWSs and NTNCWSs must report any failure to monitor for unregulated contaminants required through UCMR under the Public Notification Rule (64 FR 25964 (May 13, 1999)). Therefore, no additional public notification burden is assumed under UCMR.

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

Under UCMR, small systems will only incur labor costs. By design of the rule, EPA assumes all laboratory and shipping costs for systems in the national representative sample of small systems. Thus, the laboratory fee and shipping cost estimates described here are the basis for EPA and large system non-labor costs.

The most significant cost associated with the implementation of UCMR is the cost of laboratory services for contaminant analysis. Exhibit 7 provides estimates of laboratory analytical costs associated with the analysis of each sample. These methods are comparatively new (with the exception of Method 525.2 for the parent acetanilides), and will not coincide with other compliance monitoring. EPA estimates of laboratory fees are based on consultations with national drinking water laboratories and costs of analytical methods similar to those that will be used for UCMR 2. Following publication of the ICR and proposed rule, EPA received several public comments expressing that estimated laboratory fees were too low. In response to comments, EPA revisited the estimates of UCMR 2 method pricing. EPA approached three additional national drinking water laboratories (different than those consulted previously) and requested pricing estimates for UCMR 2 methods. EPA has incorporated the average of the pricing estimates from the laboratories that were consulted. In addition to the newly estimated laboratory fees, perchlorate was removed from List 1 Assessment Monitoring based on public comment on the proposed UCMR 2. Where the proposed rule estimates for method costs (not including perchlorate analysis) totaled \$1,225, the revised estimate for the final rule is \$1,305, or \$80 per sample set more than was estimated for the proposed rule. For systems serving 10,000 or fewer people, EPA will pay for the costs for shipping and laboratory analysis.

Exhibit 7: Analytical Method Cost Estimates	
Contaminant/Contaminant Group	Cost
<i>List 1 - Assessment Monitoring</i>	
EPA Method 527 - Gas Chromatography (GC)/Mass Spectrometry (MS) (for 7 contaminants).....	\$220
EPA Method 529 - Explosives (for 3 contaminants).....	\$215
Total	\$435
<i>List 2 - Screening Survey Monitoring</i>	
EPA Method 521 - Nitrosamines (for 6 contaminants).....	\$310
EPA Method 535 - Acetanilides (for 6 contaminants)	\$370
EPA Method 525.2 - Acetanilide parents (for 3 contaminants).....	\$190
Total	\$870

UCMR 2 specifies that all samples be collected at EPTDSs. Some large systems that use ground water sources and have multiple EPTDSs may be able to realize significant savings by sampling representative entry point(s) rather than at each EPTDS. Systems can do this if: they meet certain system configuration criteria; submit a proposal regarding representative entry points; and receive approval from EPA or the State. Labor related to submission and coordination of these proposals is discussed above 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 systems, EPA assumed that effectively 75 percent of the current EPTDSs will be sampled at systems serving 10,001 to 100,000 people, and at ground water systems that serve more than 100,000 people 50 percent of EPTDSs will be sampled.

In addition to EPTDS samples, systems that are required to conduct Screening Survey sampling, and are subject to the distribution system sampling requirements of the DBPR, are required to also sample for nitrosamines at the point of DSMRT. Thus, large systems that are required to collect samples at both locations will incur additional costs for laboratory fees for the nitrosamine analyses. All surface water/GWUDI systems are assumed to disinfect, and thus have one DSMRT sampling point per treatment plant (surface water/GWUDI systems had an average number of 1 to 2 treatment plants per system). Whereas, ground water systems are estimated to disinfect at between 65 to 96 percent of their treatment plants (average number of treatment plants ranged from 1 to 7), depending on system size. These percentages were multiplied by the number of treatment plants to estimate the number of DSMRT samples collected by large ground water systems.

Shipping fees were calculated per required sample. Following publication of the proposed rule, EPA received several public comments expressing that shipping fee estimates were too low. Based on these comments, EPA revisited key shipping company pricing lists to ensure that shipping cost assumptions were as accurate and current as possible. Estimated shipping costs were based on the average cost of shipping a 15-pound package overnight; plus a ground shipment of the empty package which is sent to the PWSs prior to their required sampling. Specifically, EPA approximated that, for each sampling point, a package of empty sample bottles is shipped via ground transportation to the system; estimated at \$7.50 per package. Following sample collection, the system sends the package with full bottles via

overnight air back to the laboratory. To estimate the cost of this overnight shipment, EPA applied the approximate cost of shipping a 15-pound package across an average number of shipping zones at \$68.50. Thus, shipping cost for a large PWS is estimated at \$76 per sample set (again, small system laboratory and shipping costs are paid for by EPA). Shipping costs were estimated based on pricing information posted on: <http://www.fedex.com/> and <http://www.ups.com/>; accessed March 2006. For small systems, shipping includes the cost for one extra ground trip, for sending the empty bottles from the laboratory to the sampling coordinator, so that the sampling kit can be reused. Thus, shipping cost for a small PWS is estimated at \$83.50 per sample set.

Total laboratory and shipping fees were estimated per required sampling location (accounting for both the representative EPTDS allowance, and the additional DSMRT samples, as described above), per sampling event. Thus, the cost per sample was calculated as follows: (number systems) times (number of periods per year) times (number of sampling points per system) times (method and shipping costs).

6(a)(iii) Summary of Labor and Non-labor Costs to Public Water Systems

Exhibit 5a displays a summary of labor and non-labor costs, by year, for the three-year ICR period. As previously noted, the UCMR 2 cycle is 2007-2011, and all participating systems are collecting samples between January 2008 and December 2010, thus the ICR period of 2010-2012 coincides with only one year of UCMR 2 monitoring, and just two years of program implementation. Information presenting estimated costs over the five-year UCMR 2 implementation period is provided in Exhibit B-1a, in Appendix B. Small systems incur labor costs only. Large systems incur both labor and non-labor costs, as they are responsible for analytical costs.

The nationwide cost to systems for implementing the total UCMR program over the three-year ICR period of 2010-2012 is estimated to be \$9.2 million. Large and very large systems are expected to incur about 99 percent of this cost, \$9.1 million. Annual cost per small system for UCMR implementation over the three-year ICR period is estimated to be \$44 per system, all attributed to labor. Annual cost per large system is estimated to be \$114 for labor plus \$1,747 for analytical (non-labor) costs; with very large systems costs of \$369 for labor plus \$7,260 for analytical (non-labor) costs. Exhibits 2 and 3 illustrate numbers of systems participating and timing of monitoring. Per system labor burdens and costs for the UCMR program are presented in Exhibit 5b. In addition, this exhibit presents a summary of burden and cost per response. 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 system. All labor and non-labor costs associated with a reporting event (reading the regulations, monitoring, and reporting) are included in the per response cost estimate.

Exhibit 5a: Yearly Cost to Systems, by System Size and by Type of Cost (2010-2012)				
Cost Description	2010	2011	2012	Total
SMALL SYSTEMS (serving 10,000 or fewer people)				
<i>Labor Costs</i>				
<i>Reading and Initial Reporting</i>	\$0	\$0	\$0	\$0
<i>Monitoring</i>	\$40,693	\$0	\$0	\$40,693
<i>Reporting of Results</i>	\$15,814	\$0	\$0	\$15,814
<i>Non-Labor Costs (Laboratory Analysis and Shipping (paid for by EPA))</i>				
	\$0	\$0	\$0	\$0
Subtotal – Small Systems	\$56,506	\$0	\$0	\$56,506
LARGE SYSTEMS (serving 10,001 to 100,000 people)				
<i>Labor Costs</i>				
<i>Reading and Initial Reporting</i>	\$0	\$0	\$0	\$0
<i>Monitoring</i>	\$152,444	\$0	\$0	\$152,444
<i>Reporting of Results</i>	\$214,281	\$0	\$0	\$214,281
<i>Non-Labor Costs (Laboratory Analysis and Shipping)</i>				
	\$5,635,795	\$0	\$0	\$5,635,795
Subtotal – Large Systems	\$6,002,521	\$0	\$0	\$6,002,521
VERY LARGE SYSTEMS (serving greater than 100,000 people)				
<i>Labor Costs</i>				
<i>Reading and Initial Reporting</i>	\$0	\$0	\$0	\$0
<i>Monitoring</i>	\$80,865	\$0	\$0	\$80,865
<i>Reporting of Results</i>	\$69,428	\$0	\$0	\$69,428
<i>Non-Labor Costs (Laboratory Analysis and Shipping)</i>				
	\$2,954,765	\$0	\$0	\$2,954,765
Subtotal – Very Large Systems	\$3,105,058	\$0	\$0	\$3,105,058
ALL SYSTEMS				
<i>Total Labor for All Systems</i>	\$573,525	\$0	\$0	\$573,525
<i>Total Non-Labor for All Systems</i>	\$8,590,560	\$0	\$0	\$8,590,560
Total Labor and Non-Labor for All Systems	\$9,164,085	\$0	\$0	\$9,164,085

¹ Labor costs were estimated by system size and water source by multiplying estimated burden (as described in Section 6(a)(i)) for each activity by estimated system labor rates (see Exhibit 4 in Section 6(a)(i)). Non-labor costs were also estimated by system size and water source, and by multiplying “number of systems” by “number of sampling points” by “number of required samples” by “lab and shipping fees”.

Exhibit 5b: Per System (Respondent) and Per Respondent UCMR Costs (2010-2012)						
Burden / Cost	Total over 2010-2012			Annual Average over 2010-2012		
	<i>Small Systems</i>	<i>Large Systems</i>	<i>Very Large Systems</i>	<i>Small Systems</i>	<i>Large Systems</i>	<i>Very Large Systems</i>
PER RESPONDENT:						
Labor Cost	\$132	\$341	\$1,108	\$44	\$114	\$369
Non-Labor Cost	\$0	\$5,241	\$21,780	\$0	\$1,747	\$7,260
Burden (labor hours)	4.7	11.5	31.1	1.6	3.8	10.4
PER RESPONSE:						
Number of Responses per Respondent	2.7	3.1	3.6	0.9	1.0	1.2
Labor Cost per Response	\$50	\$111	\$308	\$17	\$37	\$103
Non-Labor Cost per Response	\$0	\$1,711	\$6,055	\$0	\$570	\$2,018
Burden (labor hours) per Response	1.8	3.8	8.7	0.6	1.3	2.9

6(b) Estimating the Burden and Cost to States

Since UCMR is a direct implementation rule, individual State costs will largely depend on specifications in their PA. EPA assumed that States will incur only labor costs, because no capital investments are expected for this second cycle of the program. Because States will be 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 are assumed to have an average of 1.0 response per year during each year of the UCMR 2 cycle; 2007-2011.

EPA used the “2001 ASDWA Drinking Water Program Resource Needs Self Assessment” to estimate State burden and cost for the implementation and oversight of UCMR 2. This assessment tool (or model) was developed by ASDWA to assist States in estimating the resources needed to implement their Statewide drinking water programs (in both full-time equivalent staff (FTEs) and dollars). In 2000, the United States General Accounting Office had used a previous version of this model to estimate nationwide drinking water program needs for Congress. The tool was later updated and improved based on comments from 27 States. To make the model easier to use, ASDWA established suggested salary and benefit ranges (*i.e.*, default values), resource needs for the various NPDWRs, and other key variables.

EPA used the defaults values (or average values within a default range) that were provided in the model to estimate the national burden and cost for State UCMR 2 activities. Defaults included:

- one FTE is equivalent to 1,800 hours per year; overhead and holidays, sick leave, etc. are accounted for through default loading of base salaries;

- professional and support staff salaries vary for different sized States (very small, small, medium, large, very large); and
- suggested ranges of FTEs for the implementation of the Phase II/V, Arsenic, and UCMR programs (*i.e.*, the relevant subsection of the model).

Understandably, the model had bundled the State resource needs for Phase II/V, Arsenic, and UCMR, because of the inherent overlap and similarities in the programs. However, because these programs were bundled, EPA needed to “extract” the UCMR costs from the aggregated costs. Based on best professional estimates, and consultations with staff from three State drinking water programs (California, Connecticut, and Nebraska) regarding the relative magnitude of the UCMR program, EPA assumed that:

- during the first UCMR 2 ICR period (2007-2009), preparatory and organizational activities included State Monitoring Plans finalized, system notifications sent, and Assessment Monitoring and Screening Survey monitoring being conducted; thus UCMR 2 was estimated to represent 3 percent of the bundled program resource needs (though these are not relevant to the current ICR estimations for 2010-2012); and
- during the last two years of the five-year cycle (2010 and 2011), there are fewer organizational activities; thus, UCMR 2 is estimated to represent 1 percent of the bundled program resource needs (applicable to 2 of the 3 ICR years, 2010-2012).

EPA ran the model for each of the State size categories that were based on the number of systems for which States have drinking water program oversight responsibilities. To estimate nationwide costs, the size-specific “per State” estimates that are generated by the model were then multiplied by the number of States in each size category, as shown in Exhibit 6.

EPA further refined the model estimates by taking the level of State participation under UCMR 1 into consideration. EPA reviewed five key areas of State participation under UCMR 1, including: review and revision to the State Monitoring Plans; assisting EPA with update to information for large systems; two separate sets of system notifications; and compliance assistance. Based on levels of involvement in each of these UCMR activities, States typically participated in between 40 and 100 percent of their optional UCMR activities. However, some States chose not to participate at all. Burden estimates generated from the resource model were multiplied by this “percent participation in UCMR 1” to approximate State costs at expected participation levels under UCMR 2.

Exhibit 6: 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
<i>Total</i>	56

EPA estimates that the average annual burden over 3 years (2010-2012) for 56 States to implement UCMR will be 3,555 hours (or 63.5 hours per State per year), with an average annual cost (labor only) of \$195,921 (or \$3,499 per State per year). See Exhibits 7a and 7b for a summary of estimated State burdens and costs (analogous five-year information for 2007-2011 provided in Exhibits B-2a and B-2b, in Appendix B).

Exhibit 7a: Yearly Cost and Burden to States for Implementation of UCMR (2010-2012)					
Cost/Burden	2010	2011	2012	Total	Annual Average
<i>Costs to All States for labor related to UCMR implementation and oversight</i>					
	\$313,317	\$274,447	\$0	\$587,763	\$195,921
<i>Labor burden for all States for UCMR implementation and oversight</i>					
	5,371	5,295	0	10,666	3,555

Exhibit 7b: Per State (Respondent) and Per Response UCMR Costs (2010-2012)		
Burden / Cost	Total over 2010-2012	Annual Average over 2010-2012
PER RESPONDENT:		
Labor Cost	\$10,496	\$3,499
Non-Labor Cost	\$0	\$0
Burden (labor hours)	190.5	63.5
PER RESPONSE:		
Number Responses per Respondent ¹	2.0	0.7
Labor Cost per Response	\$5,248	\$1,749
Non-Labor Cost per Response	\$0	\$0
Burden (labor hours) per Response	95.2	31.7

6(c) Estimating Agency Burden and Cost

EPA will incur burden and costs related to UCMR implementation activities, including: regulatory support activities; national and regional oversight and data analysis; and the small system 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 during the first quarter of 2006 (see the U.S. Office of Personnel Management Web site: www.opm.gov). With these assumptions, labor and contractor rates were determined to be \$69.46 per hour, based on a 2,080 hour work year, with a \$87,664 annual salary plus a 3 percent inflation factor for 2007 salaries, and 60 percent overhead. Additional cost assumptions are described below in sections 6(c)(i)-(iii), Part A of this ICR document. Cost and burden estimates are presented in Exhibits 8a and 8b, 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: EPA incurs various labor or contractor costs related to the laboratory PT/approvals; laboratory QA/QC; and provision of analytical standards, as follows:

- Laboratory approval (PT program) is estimated to have cost EPA \$200,000 prior to the beginning of monitoring. Cost estimates from best professional judgment were based on costs realized by the Agency for prior similar activities. Costs for the PT program were included within the 2007 costs to reflect the costs of the UCMR 2 program. Though not relevant to the applicable ICR period of 2010-2012, these costs are included in Appendix B, which presents costs for the entire UCMR 2 cycle (2007-2011).
- QC audits of contract laboratories are occurring throughout active UCMR monitoring. Labor (hours) for each trip includes: a 3-day site inspection (for 2 individuals); 1 full-day travel for 2 individuals (assume 2 half days); and 3 days of report writing (for 1 individual), which includes review and response to laboratory comments. Travel costs for 2 individuals include: \$500 round trip flight, 3 nights hotel stay, 2 full day food per diem, and 2 days at the proportional meals rate from the 2006 Federal rate for the Continental U.S. (from the U.S. Government Services Administration Web site: <http://www.gsa.gov>). Also included is \$150 for rental of one car for both travelers. It is estimated that these QC audits will take place 4 times each year, at an estimated \$7,896 per trip (only applicable to this ICR period during 2010).
- Analytical standards provision and coordination is estimated to cost EPA \$600,000 total for three ICR years (or \$200,000 per full year of monitoring). Cost estimates from best professional judgment are based on costs realized by the Agency for prior similar activities (only applicable in to this ICR period during 2010).

Technical Support/Guidance Document Development: These activities are estimated to cost EPA \$150,000 total over the ICR period; including costs for developing and distributing guidance for laboratories that will participate in UCMR 2 testing; health

effects fact sheets; and other pertinent guidance related to UCMR 2 implementation. These activities took place in the previous UCMR 2 ICR period of 2007-2009, and thus are not applicable to this ICR period (2010-2012). However, these costs are included in Appendix B, which presents costs for the entire UCMR 2 cycle (2007-2011). Cost estimates from best professional judgment are based on costs realized by the Agency for prior similar activities.

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

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 2 activity (2008-2010), EPA is dedicating approximately 5.5 FTEs each year to program oversight and data analysis. During 2011, scheduled monitoring will be complete, thus, only data analysis and follow-up activities will take place. EPA estimates that during 2011, approximately 2.75 FTEs will be needed. This final year of data analysis was not included in the previous UCMR 2 ICR estimations. These activities are estimated as labor cost and burden to the Agency (see the corresponding description of these activities in section 5(a)(ii), Part A of this ICR document). These activities are estimated to cost EPA \$1.19 million in total over the three-year ICR period of 2010-2012.

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

EPA provides logistical support for the small system testing program. This activity includes costs for contractual labor and sampling supplies, and is estimated at \$400 per sampling event per sampling site, based on actual costs incurred during UCMR 1 for this same activity. These activities are estimated to cost EPA \$1.16 million in total over the three ICR years of 2010-2012.

The single largest cost to EPA for implementation of UCMR is for small system sample analyses. EPA pays for small system sample analyses and shipping for Assessment Monitoring and Screening Survey. EPA also pays for quality control duplicates for 10 percent of all samples.

As estimated for large systems, shipping fees were calculated per required sample (accounting for both the representative EPTDS allowance, and the additional DSMRT samples, as described above in section 6(a)(ii), Part A of this ICR document). To address public comments to the proposed rule ICR, EPA revisited key shipping company pricing lists to ensure that shipping cost assumptions were as accurate and current as possible. Estimated shipping costs were based on the average cost of shipping a 15-pound package overnight; plus a ground shipment of the empty package which is sent to the PWSs prior to their required sampling. Specifically, EPA approximated that, for each sampling point, a package of empty sample bottles is shipped via ground transportation to the system; estimated at \$7.50 per package. Following sample collection, the system sends the package with full bottles via overnight air back to the laboratory. To estimate the cost of this overnight shipment, EPA applied the approximate cost of shipping a 15-pound package across an average number of shipping zones at \$68.50. For small systems, shipping includes the cost for one extra ground trip, for sending the empty bottles from the laboratory to the sampling coordinator, so that the sampling kit can be reused. Thus, shipping cost for a small PWS is estimated at \$83.50 per sample set.

These analytical and shipping fees are estimated to cost EPA \$1.8 million in total over the three ICR years of 2010-2012. See section 6(a)(ii), Part A of this ICR document, for assumptions regarding applicable laboratory fees for individual methods. Total costs that EPA will incur for the small system testing program were calculated by multiplying the laboratory and shipping fees by: (number of systems) times (number of sampling periods per year (including an additional 10 percent QA samples)) times (number of sampling points per system).

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

The EPA cost for the UCMR 2 program during the ICR period of 2010-2012 is estimated to be \$4.43 million (with annual average cost over the ICR period of \$1.48 million). EPA costs for UCMR implementation are shown in Exhibit 8a; average annual labor and non-labor costs, as well as small system testing program costs are shown in Exhibit 8b. Appendix B, Exhibits B-3a and B-3b provide analogous information over the five-year UCMR 2 implementation period 2007-2011.

Exhibit 8a: Yearly Cost to EPA for UCMR Implementation, by Type of Cost (2010-2012)					
Cost Description	2010	2011	2012	Total	Average
<i>Regulatory Support Activities: laboratory proficiency testing; QC audits; analytical standards provision; and technical support, guidance document development (non-labor costs)</i>					
<i>Lab PT</i>	\$0	\$0	\$0	\$0	\$0
<i>QC Audits</i>	\$31,582	\$0	\$0	\$31,582	\$10,527
<i>Analytical Standards</i>	\$200,000	\$0	\$0	\$200,000	\$66,667
<i>Technical Support</i>	\$0	\$0	\$0	\$0	\$0
Subtotal – Regulatory Support	\$231,582	\$0	\$0	\$231,582	\$77,194
<i>National and Regional Oversight and Data Analysis: UCMR management oversight; review and evaluation of data from Assessment Monitoring (labor costs)</i>					
	\$794,622	\$397,311	\$0	\$1,191,934	\$397,311
<i>Small System Testing: implementation coordination; and analytical and shipping costs for small system testing for both Assessment Monitoring and Screening Surveys (non-labor costs)</i>					
<i>Implementation Coordination</i>	\$1,163,562	\$0	\$0	\$1,163,562	\$387,854
<i>Fees for Analysis and shipping</i>	\$1,844,421	\$0	\$0	\$1,844,421	\$614,807
Subtotal – Small System Testing	\$3,007,983	\$0	\$0	\$3,007,983	\$1,002,661
TOTAL	\$4,034,187	\$397,311	\$0	\$4,431,498	\$1,477,166

Exhibit 8b: Summary of EPA Burdens and Costs for UCMR Implementation (2010-2012)	
Burden/Cost	Annual Average Burden/Cost over Three-year ICR Period of 2010-2012
Labor Cost	\$397,311
Non-Labor Cost	\$1,079,855
Total Cost to EPA for UCMR Implementation	\$1,477,166
Burden (labor hours)	5,720

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

For the UCMR 2 cycle of 2007-2011, the universe of respondents includes 4,913 PWS respondents, comprised of non-purchased CWSs and non-purchased NTNCWSs, as well as 56 State respondents. Assessment Monitoring will be conducted by 800 systems serving 10,000 or fewer people, plus all 3,633 systems that serve more than 10,000 people. Screening Survey monitoring is being conducted by 800 systems serving 100,000 or fewer people, plus all 407 serving more than 100,000 people. As described previously, PWS sampling is conducted four times during the monitoring year for surface water/GWUDI sampling locations, and twice for ground water sampling locations (i.e., frequency of response depends on water source). States will be involved in a variety of UCMR implementation and oversight activities, but have few defined responses; thus, States are assumed to have an average of 1 response per year (during active UCMR years 2010 and 2011, or two-thirds of the ICR period of 2010-2012).

Exhibit 9 summarizes national hours and costs for UCMR 2 during the ICR period of 2010-2012. Analogous information for the entire five-year UCMR 2 cycle of 2007-2011 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 small systems is 2,022 hours, with a cost of \$56,506 (small systems only incur labor costs, EPA pays for all laboratory fees and shipping costs). The total labor burden to large systems is 12,370 hours, with a labor cost of \$366,726, and non-labor costs for analysis and shipping of \$5.64 million. Very large systems are estimated to have a total labor burden for the ICR period of 4,226 hours, with a labor and non-labor costs of \$150,293 and \$2.95 million, respectively. The total burden to States over the three-year ICR period is 10,666 hours, with a labor cost of \$0.59 million. EPA anticipates that States will not incur any significant non-labor costs. The EPA total burden over the same time frame is 17,160 hours, with labor costs of \$1.19 million, and non-labor costs of \$3.24 million.

Exhibit 9: UCMR 2 National Cost Summary for the ICR period (2010-2012)¹				
Type of Cost	2010	2011	2012	TOTAL
Small Systems				
Labor Cost	\$56,506	\$0	\$0	\$56,506
Non-Labor Cost	\$0	\$0	\$0	\$0
Total Small System Cost	\$56,506	\$0	\$0	\$56,506
Large Systems				
Labor Cost	\$366,726	\$0	\$0	\$366,726
Non-Labor Cost	\$5,635,795	\$0	\$0	\$5,635,795
Total Large System Cost	\$6,002,521	\$0	\$0	\$6,002,521
Very Large Systems				
Labor Cost	\$150,293	\$0	\$0	\$150,293
Non-Labor Cost	\$2,954,765	\$0	\$0	\$2,954,765
Total Very Large System Cost	\$3,105,058	\$0	\$0	\$3,105,058
States				
Labor Cost	\$313,317	\$274,447	\$0	\$587,763
Non-Labor Cost	\$0	\$0	\$0	\$0
Total State Cost	\$313,317	\$274,447	\$0	\$587,763
EPA²				
Labor Cost	\$794,622	\$397,311	\$0	\$1,191,934
Non-Labor Cost	\$3,239,565	\$0	\$0	\$3,239,565
Total EPA Cost	\$4,034,187	\$397,311	\$0	\$4,431,498
National Total				
Total with EPA	\$13,511,589	\$671,758	\$0	\$14,183,346
Total without EPA	\$9,477,402	\$274,447	\$0	\$9,751,848
Total Burden (hours) for All Responses				
Small Systems	2,022	0	0	2,022
Large Systems	12,370	0	0	12,370
Very Large Systems	4,226	0	0	4,226
States	5,371	5,295	0	10,666
EPA	11,440	5,720	0	17,160
Total with EPA	35,429	11,015	0	46,443
Total without EPA	23,989	5,295	0	29,284

1. See Exhibit 5a for further PWS cost estimation details.

2. Although EPA is not considered a respondent to the UCMR regulations, Agency burdens 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

The renewal of this ICR will result in an average annual decrease of 30,625 hours in the total estimated respondent burden identified in the currently approved ICR. The reasons that respondents to UCMR 2 will incur a different burden during this second ICR period of 2010-2012, than respondents incurred during the first UCMR 2 ICR period of 2007-2009 include:

- Fewer PWSs participating during this ICR period: UCMR 2 monitoring takes place from 2008-2010, with approximately 1/3 of systems participating in each of those three years. Thus, during the first ICR period of 2007-2009, approximately 2/3 of participating systems (~ 3,275 systems) completed their required monitoring, and during the second ICR period of 2010-2012, the remaining 1/3 (~ 1,638 systems) will complete their required monitoring. See Section 6(a)(i) *Estimating Burden and Labor Costs* for detailed explanations.
- Schedule of activities for PWSs different during this ICR period: Some initial activities were assumed to be conducted by all systems during 2007 (or prior to monitoring), including reading regulations, and reporting prior to monitoring (contact and sampling location information, and representative EPTDS proposals). Thus, there are some PWS activities that took place during the first UCMR 2 ICR period of 2007-2009, that will not take place during the second ICR period of 2010-2012. See Section 4(b)(ii)(a) *Public Water System Activities* for detailed explanations.
- Schedule of activities also different for participating States and EPA: Management and support activities for States and EPA also vary with the UCMR 2 monitoring schedule. Thus, both States and EPA are expected to have different burdens during this second UCMR 2 ICR period of 2010-2012. See Section 4(b)(ii)(b) *State Activities* and Section 5(a) *Agency Activities* for details.

6(f) Burden Statement

With respect to per system burden estimates, EPA notes that all burden estimates represent average burden hours, which include surface water systems that may have very few sampling points, and thus lower sampling burden, as well as those systems with higher numbers of sampling points that would therefore have greater sampling activity labor burden. Moreover, a system's burden is primarily incurred during its one year of required UCMR monitoring (between January 2008 and December 2010). 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 (2010-2012). Small systems (those serving 10,000 or fewer people) have the lowest burden not only because of the relative smaller size of their infrastructure, but also because these systems will receive a great deal of direct assistance from EPA and/or their State.

Small systems (those serving 10,000 or fewer) that are selected for UCMR 2 monitoring will sample an average of 2.7 times per system (*i.e.*, number of responses per system) across the three-year ICR period of 2010-2012. The average total burden per response for small systems is estimated to be 1.8 hours. Large systems (those serving 10,001 to 100,000) and very large systems (those serving more than 100,000) will sample and report an average of 3.1 and 3.6 times per system, respectively, across the three-year ICR period of 2010-2012. The average total burdens per response for large and very large systems are estimated to be 3.8 and 8.7 hours, respectively. The larger burden per response for the very large systems reflects the fact that these systems typically have more sampling locations than large systems. States are assumed to incur 2 responses over the three-year ICR period related to coordination with EPA and systems, with an average burden per response of 95.2 hours. In aggregate, during the ICR period of 2010-2012, the average response (*e.g.*, responses from systems and States) is associated with a total burden of 5.8 hours, with a labor plus non-labor cost of \$1,939 per response.

The annual average per respondent burden hours and costs for the ICR period of 2010-2012 are: small systems — 1.6 hour burden at \$44 for labor; large systems — 3.8 hours at \$114 for labor, and \$1,747 for analytical costs; very large systems — 10.4 hours at \$369 for labor, and \$7,260 for analytical costs; and States — 63.5 hours at \$3,499 for labor. Annual average burden and cost per respondent (including both systems and States) is estimated to be 5.8 hours, with a labor plus non-labor cost of \$1,919 per respondent (note that small systems do not pay for testing costs, so they only incur labor costs). The total annual burden for the ICR reporting period of 2010-2012 is 9,761 (with a labor cost of \$387,096); the total annual analytical cost is \$2.86 million.

The Agency estimates the annual burden to EPA for UCMR program activities during the ICR years of 2010-2012 to be 5,720 hours, at an annual labor cost of \$0.4 million. EPA’s annual non-labor costs are estimated to be \$1.1 million. Non-labor costs are primarily attributed to the cost of sample testing for small systems (testing is just under 90 percent of non-labor).

Exhibit 10 presents per respondent and per response burdens and costs over the UCMR ICR period of 2010-2012 (analogous information for the 2007-2011 UCMR 2 implementation period is provided in Exhibit B-5, Appendix B).. This exhibit also presents average annual burdens and costs.

Exhibit 10: UCMR 2 Per Respondent Burden and Cost Summary for the ICR Period (2010-2012)							
Burden (hours)/ Cost (dollars)	Small Systems	Large Systems	Very Large Systems	States	EPA	National Average with EPA ¹	National Average without EPA
Three-Year Total per Respondent							
Total # of Responses Per Respondent	2.7	3.1	3.6	2.0	n/a	n/a	3.0

Exhibit 10: UCMR 2 Per Respondent Burden and Cost Summary for the ICR Period (2010-2012)							
Burden (hours)/ Cost (dollars)	Small Systems	Large Systems	Very Large Systems	States	EPA	National Average with EPA¹	National Average without EPA
Labor Cost Per Respondent	\$132	\$341	\$1,108	\$10,496	\$1,191,934	\$1,389	\$686
Non-Labor Cost Per Respondent	\$0	\$5,241	\$21,780	\$0	\$3,239,565	\$6,981	\$5,072
<i>Total Cost (Labor plus Non-Labor)</i>	<i>\$132</i>	<i>\$5,582</i>	<i>\$22,887</i>	<i>\$10,496</i>	<i>\$4,431,498</i>	<i>\$8,369</i>	<i>\$5,758</i>
Total Cost Per Response	\$50	\$1,822	\$6,363	\$5,248	n/a	n/a	\$1,939
Total Burden Per Respondent (hours)	4.7	11.5	31.1	190.5	17,160.0	27.4	17.3
Total Burden Per Response (hours)	1.8	3.8	8.7	95.2	n/a	n/a	5.8
Average Annual per Respondent							
Ave. # of Responses Per Respondent	0.9	1.0	1.2	0.7	n/a	n/a	1.0
Labor Cost Per Respondent	\$44	\$114	\$369	\$3,499	\$397,311	\$463	\$229
Non-Labor Cost Per Respondent	\$0	\$1,747	\$7,260	\$0	\$1,079,855	\$2,327	\$1,691
<i>Ave. Cost (Labor plus Non-Labor)</i>	<i>\$44</i>	<i>\$1,861</i>	<i>\$7,629</i>	<i>\$3,499</i>	<i>\$1,477,166</i>	<i>\$2,790</i>	<i>\$1,919</i>
Ave. Cost Per Response	\$17	\$607	\$2,121	\$1,749	n/a	n/a	\$646
Ave. Burden Per Respondent (hours)	1.6	3.8	10.4	63.5	5,720.0	9.1	5.8
Ave. Burden Per Response (hours)	0.6	1.3	2.9	31.7	n/a	n/a	1.9

¹ National average burdens and costs differ greatly between the State respondents and the various system respondents. This should be taken into consideration when looking at the national average with or without EPA. PWS labor costs were estimated by system size and water source by multiplying estimated burden (as described in Section 6(a)(i)) for each activity by estimated system labor rates (see Exhibit 4 in Section 6(a)(i)). Non-labor costs were also estimated by system size and water source, and by multiplying “number of systems” by “number of sampling points” by “number of required samples” by “lab and shipping fees”. All burden and cost estimation assumptions for systems and States are described in Section 6(a) and 6(b) in Part A of this document. Average “per respondent” costs were derived by dividing through by the number of respondents from each category.

This UCMR is necessary for several reasons. Its primary purpose is to support the development of the CCL, the Administrator’s determination of whether to regulate a contaminant, and regulation development. The data collected under UCMR may also be used as a basis for determining exposure, for establishing the baseline for health effects and economic analyses, for contaminant co-occurrence analyses, and for treatment technology evaluation, including contaminant source management. Further, the data may indicate the need to initiate research on health effects and treatment technology research, if they suggest that certain contaminants have significant occurrence. Finally, as a secondary use, the data may guide future source water protection efforts.

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 5.8 hours per response. 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 EPA’s regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency’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, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OW-2009-0089, which is available for online viewing at www.regulations.gov, or in person viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426. An electronic version of the public docket is available at 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. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OW-2009-0089 and OMB Control No. 2040-0270 in any correspondence.

— PART B OF THE SUPPORTING STATEMENT —

1 SURVEY OBJECTIVES, KEY VARIABLES, AND OTHER PRELIMINARIES

1(a) Survey Objectives

The primary objective of the statistical methods applied in this information collection is for EPA to identify and select a sample of PWSs that is representative of PWSs nationwide. The selected sample of PWSs will conduct monitoring of contaminants identified by the UCMR program. The representativeness of this sample of systems is critical to the UCMR program because the drinking water contaminant occurrence data collected by the PWSs will be used to: estimate national occurrence and exposure, establish a baseline for health effects and economic analyses, and provide information for regulatory determinations.

1(b) Key Variables

Key variables associated with selecting a nationally representative sample of PWSs include: system size, source water type, and geographical location.

1(c) Statistical Approach

Section 1445(a)(2) of SDWA (as amended in 1996) requires that the UCMR program include only a representative sample of systems serving 10,000 or fewer people. In addition to satisfying statutory requirements, selection of a sample of systems for participation in UCMR allows for significant national costs savings, as compared to monitoring by all PWSs. To estimate national occurrence and exposure, the primary UCMR program objective, the representative sample of PWSs must allow EPA to collect high quality data about contaminant occurrence.

1(d) Feasibility

EPA anticipates that the survey (the statistical sample) objectives are achievable given the existing time and resource constraints.

- High PWS response/participation rates (>95%) during UCMR 1 have given EPA confidence that equivalent or better can be achieved during UCMR 2.
- The statistical approach to this data collection requires only a fraction of small systems to conduct monitoring, resulting in much smaller cost and burden at the national level than would be incurred if all systems monitored. Small systems that are selected for UCMR 2 monitoring will incur only a few hours of labor burden. EPA will pay for all laboratory fees and shipping costs related to small system testing.
- The survey results will be completed in time to inform the corresponding cycle of CCL regulatory determinations.

2 SURVEY DESIGN

2(a) Target Population and Coverage

Public water systems are the target population for UCMR monitoring. Transient non-community water systems and those that purchase all of their water from another system are not subject to UCMR 2. All other PWSs that serve more than 10,000 people will be subject to at least the Assessment Monitoring component of UCMR 2 monitoring. Eligible small PWSs (serving 10,000 or fewer people) will only be required to conduct UCMR 2 monitoring if they are part of the statistical selection, as described below. Small PWSs will only be selected to monitor for either Assessment Monitoring or the Screening Survey, not both.

2(b) Sample Design

2(b)(i) Sampling Frame

EPA will develop the sample frame for the statistical selection of UCMR systems, including the system PWSID, name, source water category, and population-served data for each UCMR-eligible PWS. Initial data will be pulled from EPA's Safe Drinking Water Information System (SDWIS) inventory database, and will be adjusted to account for known anomalies in population and inventory reporting (for example, how consecutive systems or wholesalers report their population data).

2(b)(ii) Sample Size

UCMR 2 monitoring will include: Assessment Monitoring conducted by all PWSs serving more than 10,000 people ("large" PWSs), and 800 representative PWSs serving 10,000 or fewer people ("small" PWSs); and Screening Survey conducted by all PWSs serving more than 100,000 people, and 800 representative PWSs serving 100,000 or fewer people.

2(b)(iii) Stratification Variables

In developing the representative sample, EPA considers factors such as population served, water source, and geographic location. The sample PWSs will be stratified by population served (system size), allocating samples proportionately to each State by system size, and then by water source type. (Other provisions, presented below, ensure broad geographic coverage.)

2(b)(iv) Sampling Method

To satisfy the specifications of SDWA section 1445(a)(2)(A), the representative sample of systems will account for different system sizes, sources of water supply, and geographic location (e.g., States). The sample will be stratified water source type (i.e., ground or surface water) and by system size category (i.e., serves 25 to 500 people, 501 to 3,300 people, etc.). This stratification allows EPA to account for different exposure risks of contaminant occurrence that may be related to the vulnerability differences between surface and ground water sources and differing management and financial capacity that can vary across system sizes.

With contaminant exposure assessment as a primary goal, systems will be selected in proportion to the population served, as was generally done under UCMR 1. This population-weighted allocation leads to statistically valid estimates of national exposure. To ensure the sample provides equity across States for involvement in the UCMR, EPA will include at least two systems from each State. This additional PWS selection requirement will provide allocation across all the States and territories to account for differences in spatial vulnerability and contaminant occurrence, and to ensure equity in participation. Small Tribal water systems across the EPA Regions are grouped into a single category (equivalent to a "State") for the representative sample.

2(b)(v) Multi-Stage Sampling

Because PWS status often changes over time, EPA will also select "alternate" systems that fit the size/source water strata of the originally selected system. Through an interactive review process with the States, systems that no longer meet eligibility criteria (for example, if they are in a different size category than when originally selected, have become inactive, or purchase all of their water) will be replaced by an alternate system that meets the stratification criteria.

2(c) Precision Requirements

2(c)(i) Precision Targets

The representative sample of PWSs must be selected so that the data collected yield accurate and precise estimates of national contaminant occurrence (the fraction of systems in which a contaminant occurs) and exposure (the fraction of people exposed to a contaminant). For estimates of exposure fractions, EPA will allow a margin of error of $\pm 1\%$ with 99% confidence, when the estimated exposure fraction is 1%. That is, if the estimated exposure fraction is 1%, EPA must be able to state with 99% confidence that the true exposure fraction is between 0% and 2%. Because there are uncertainties and sources of variation in this and other such sampling programs, statistical sampling theory used to derive levels of accuracy and precision may not account for all of these sources of variation. Hence, the high confidence level, low allowable error, and consequent large sample size should help ensure adequate data to meet the objectives of the UCMR program.

2(c)(ii) Nonsampling error

For those PWSs required to conduct UCMR monitoring, response is a requirement. As with any regulation, some non-compliance can be expected. However, high compliance levels (>95%) during UCMR 1 (attributable to extensive outreach and compliance assistance) give EPA confidence that the same or better can be achieved during UCMR 2. EPA plans to continue outreach and compliance assistance efforts, as needed.

2(d) Questionnaire Design

No questionnaires will be used for the UCMR. Analytical results for contaminant occurrence will be electronically reported directly by the laboratories to EPA's electronic reporting system.

3 PRETESTS AND PILOT TESTS

For UCMR 2, EPA will apply the same basic statistical methods that were used for the UCMR 1 national representative sample of small systems. Following sample adjustments made through communications with States, >99% of the final sample of small systems (and >95% of large systems) completed their required monitoring and reporting.

4 COLLECTION METHODS AND FOLLOW-UP

4(a) Collection Methods

Large PWSs (those serving more than 10,000 people) are required to submit their data through EPA's electronic data reporting system. Small PWSs (those serving 10,000 or fewer people) will be working directly with an EPA-appointed UCMR Sampling Coordinator, and monitoring data from the small PWSs will be submitted directly to EPA's electronic reporting system by the laboratories conducting the analyses.

4(b) Survey Response and Follow-up

High compliance levels (>95%) during UCMR 1 have given EPA confidence that equivalent or better levels can be achieved during UCMR 2. EPA plans to continue outreach and compliance assistance efforts, as needed. Each small system will be working with a UCMR Sampling Coordinator, and will have minimal reporting requirements and one-on-one compliance assistance.

"Lessons learned" during UCMR 1 helped refine several UCMR 2 requirements. Monitoring schedules in UCMR 2 will be specified for all large systems (whereas in UCMR 1, large systems could choose when to monitor across a multi-year monitoring period). In addition, reporting deadlines have been more clearly defined. In some cases during UCMR 1, EPA had to wait until the end of a three-year monitoring period to make a compliance determination and contact systems with appropriate follow-up. With the revisions under UCMR 2, EPA or participating States will have the ability to quickly contact systems regarding sample results that are not received when expected.

5 ANALYZING AND REPORTING SURVEY RESULTS

5(a) Data Preparation

After PWSs or their laboratories post their UCMR 2 monitoring results and required data elements to EPA's electronic reporting system, EPA allows a specified time for quality control review by the PWS, States, and the Agency before placing the data in NCOD for public access.

Data problems will likely exist, but the following efforts will be taken by EPA to reduce problems and increase the dependability and quality of the occurrence data. The UCMR electronic data reporting system and EPA QA/QC assessments will screen for the use of inappropriate measurement units and other improper data. In addition, EPA plans to have other automated QC functions in place to identify possible data quality issues such as duplicate data submissions, and data completeness. All samples will be collected by trained PWS staff and analytical results will be generated by laboratories that are approved for UCMR 2 drinking water analysis. Electronic data submission also avoids potential re-keying errors. Therefore, some assumptions are made regarding the general quality of the raw data that will be received. As part of the data QA/QC procedures, all edits or changes made to the data will be documented.

5(b) Analysis

For UCMR 1, EPA developed a two-stage analytical approach for the evaluation of the national occurrence of contaminants. UCMR 2 expects to use the same 2-tier approach to analyzing the data.

The first stage of analysis, Stage 1, provides a straight-forward evaluation of occurrence for simple and conservative assessments of contaminant occurrence. The Stage 1 analysis of the UCMR data consists of non-parametric, unweighted counts and simple descriptive statistics of analytical results for each of the contaminants. These occurrence analyses are conducted at the sample level, system level and population-served level. For each contaminant, occurrence measures include the number and percent of samples for each contaminant with analytical detections, and the minimum, median, maximum, and 99th percentile values of those detections. System-level occurrence measures include the number and percent of systems with one or more analytical detections, and the number and percent of systems with two or more analytical detections of a given contaminant. Population-served occurrence measures include: the number and percent of population-served by systems with one or more analytical detections, and the number and percent of population-served by systems with two or more analytical detections of a given contaminant. Similar measures may also be conducted for each entry point to the distribution system for each system. Since these contaminant and system level occurrence measures are based on raw occurrence data (that have not been adjusted for population-weighting and sampling), they are less accurate representations of national occurrence than occurrence measures based on adjusted occurrence data.

Based on the findings of the Stage 1 analysis, EPA can select contaminant(s) for which more detailed and sophisticated statistical evaluations -- the Stage 2 analysis -- may be warranted as a next step to generate national probability estimates of contaminant occurrence and exposure. Specifically, the modeling and estimation of system mean contaminant concentrations may be

desired. The Stage 2 analysis uses a Bayesian-based hierarchical model to estimate the percent (and number) of systems with a mean contaminant concentration above any specified concentration threshold. The Bayesian-based Hierarchical Model also provides quantified error of estimation, and enables estimates of mean contaminant concentrations below the MRL. This statistical model was used to generate the contaminant occurrence estimates for 60 regulated contaminants for the first Six-Year Review of NPDWRs, for which it underwent a peer review.

5(c) Reporting Results

After final review, formatting, and analysis of the data collected through this ICR, the data will be made available to the public through the NCOD, as is being done with the data collected and analyzed for UCMR 1. A full report, including detailed descriptions of the occurrence analysis approach; data characteristics (including data quality and limitations); analytical methodology; and analytical results, will be provided to the public and posted on the UCMR 2 Web site once complete. The analytical results and report will provide support for regulatory determinations for the drinking water CCL.

— APPENDICES —

APPENDIX A: Relevant Authorities in the SDWA 1996 Amendments

APPENDIX A: Relevant Authorities in the SDWA 1996 Amendments

Section 1401

For purposes of this title:

- (1) The term "primary drinking water regulation" means a regulation which-
- (A) applies to public water systems;
 - (B) specifies contaminants which, in the judgment of the Administrator, may have any adverse effect on the health of persons;
 - (C) specifies for each such contaminant either–
 - (i) a maximum contaminant level, if, in the judgment of the Administrator, it is economically or technologically feasible to ascertain the level of such contaminant in water in public water systems, or
 - 1. (ii) if, in the judgment of the Administrator, it is not economically or technologically feasible to ascertain the level of such contaminant sufficient to satisfy the requirements of section 1412; and
 - (D) contains criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including accepted methods for quality control and testing procedures to insure compliance with such levels and to insure proper operation and maintenance of the system, and requirements as to (i) the minimum quality of water which may be taken into the system and (ii) siting for new facilities for public water systems. At any time after promulgation of a regulation referred to in this paragraph, the Administrator may add equally effective quality control and testing procedures by guidance published in the Federal Register. Such procedures shall be treated as an alternative for public water systems to the quality control and testing procedures listed in the regulation.

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 of 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 a 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 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)(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 1997 through 2003.

(d) SCREENING METHODS- Section 1445 (42 U.S.C. 300j-4) is amended by adding the following after subsection (h):

(1) 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.

(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; and

(C) other reliable and appropriate monitoring information on the occurrence of the contaminants in public water systems that is available to the Administrator.

APPENDIX B: Burden and Cost Exhibits for the Five-Year UCMR 2 Cycle of 2007-2011

Exhibit B-1a: Yearly Cost to Systems, by System Size and by Type of Cost (2007-2011) <i>(corresponds to Exhibit 6a)</i>						
Cost Description	2007	2008	2009	2010	2011	Total
SMALL SYSTEMS (serving 10,000 or fewer people)						
<i>Labor Costs</i>						
<i>Reading and Initial Reporting</i>	\$106,942	\$0	\$0	\$0	\$0	\$106,942
<i>Monitoring</i>	\$0	\$40,693	\$40,693	\$40,693	\$0	\$122,078
<i>Reporting of Results</i>	\$0	\$15,814	\$15,814	\$15,814	\$0	\$47,441
<i>Non-Labor Costs (Laboratory Analysis and Shipping (paid for by EPA))</i>						
	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal – Small Systems	\$106,942	\$56,506	\$56,506	\$56,506	\$0	\$276,460
LARGE SYSTEMS (serving 10,001 to 100,000 people)						
<i>Labor Costs</i>						
<i>Reading and Initial Reporting</i>	\$1,173,506	\$0	\$0	\$0	\$0	\$1,173,506
<i>Monitoring</i>	\$0	\$152,444	\$152,444	\$152,444	\$0	\$457,333
<i>Reporting of Results</i>	\$0	\$214,281	\$214,281	\$214,281	\$0	\$642,843
<i>Non-Labor Costs (Laboratory Analysis and Shipping)</i>						
	\$0	\$5,635,795	\$5,635,795	\$5,635,795	\$0	\$16,907,385
Subtotal – Large Systems	\$1,173,506	\$6,002,521	\$6,002,521	\$6,002,521	\$0	\$19,181,068
VERY LARGE SYSTEMS (serving greater than 100,000 people)						
<i>Labor Costs</i>						
<i>Reading and Initial Reporting</i>	\$225,998	\$0	\$0	\$0	\$0	\$225,998
<i>Monitoring</i>	\$0	\$80,865	\$80,865	\$80,865	\$0	\$242,594
<i>Reporting of Results</i>	\$0	\$69,428	\$69,428	\$69,428	\$0	\$208,285
<i>Non-Labor Costs (Laboratory Analysis and Shipping)</i>						
	\$0	\$2,954,765	\$2,954,765	\$2,954,765	\$0	\$8,864,295
Subtotal – Very Large Systems	\$225,998	\$3,105,058	\$3,105,058	\$3,105,058	\$0	\$9,541,172
ALL SYSTEMS						
<i>Total Labor for All Systems</i>	\$1,506,446	\$573,525	\$573,525	\$573,525	\$0	\$3,227,021
<i>Total Non-Labor for All Systems</i>	\$0	\$8,590,560	\$8,590,560	\$8,590,560	\$0	\$25,771,680
Total Labor and Non-Labor for All Systems	\$1,506,446	\$9,164,085	\$9,164,085	\$9,164,085	\$0	\$28,998,701

Exhibit B-1b: Per System (Respondent) and Per Response UCMR Costs (2007-2011) <i>(corresponds with Exhibit 6b)</i>						
Burden / Cost	Total over 2007-2011			Annual Average over 2007-2011		
	<i>Small Systems</i>	<i>Large Systems</i>	<i>Very Large Systems</i>	<i>Small Systems</i>	<i>Large Systems</i>	<i>Very Large Systems</i>
PER RESPONDENT:						
Labor Cost	\$216	\$705	\$1,663	\$43	\$141	\$333
Non-Labor Cost	\$0	\$5,241	\$21,780	\$0	\$1,048	\$4,356
Burden (labor hours)	7.7	23.8	46.8	1.5	4.8	9.4
PER RESPONSE:						
Number Responses per Respondent	2.7	3.1	3.6	0.5	0.6	0.7
Labor Cost per Response	\$81	\$230	\$462	\$16	\$46	\$92
Non-Labor Cost per Response	\$0	\$1,711	\$6,055	\$0	\$342	\$1,211
Burden (labor hours) per Response	2.9	7.8	13.0	0.6	1.6	2.6

Exhibit B-2a: Yearly Cost and Burden to States for Implementation of UCMR (2007-2011) <i>(corresponds with Exhibit 8a)¹</i>							
Cost/Burden	2007	2008	2009	2010	2011	Total	Annual Average
<i>Costs to All States for labor related to UCMR implementation and oversight</i>							
	\$617,360	\$648,343	\$600,227	\$313,317	\$274,447	\$2,453,694	\$490,739
<i>Labor burden for all States for UCMR implementation and oversight</i>							
	11,635	11,861	10,649	5,371	5,295	44,811	8,962

1. Costs are attributed to labor and are estimated over the period 2007-2011.

Exhibit B-2b: Per State (Respondent) and Per Response UCMR Costs (2007-2011) <i>(corresponds with Exhibit 8b)</i>		
Burden / Cost	Total over 2007-2011	Annual Average over 2007-2011
PER RESPONDENT:		
Labor Cost	\$43,816	\$8,763
Non-Labor Cost	\$0	\$0
Burden (labor hours)	800.2	160.0

Exhibit B-2b: Per State (Respondent) and Per Response UCMR Costs (2007-2011) <i>(corresponds with Exhibit 8b)</i>		
Burden / Cost	Total over 2007-2011	Annual Average over 2007-2011
PER RESPONSE:		
Number Responses per Respondent ¹	5.0	1.0
Labor Cost per Response	\$8,763	\$1,753
Non-Labor Cost per Response	\$0	\$0
Burden (labor hours) per Response	160.0	32.0

1. States are assumed to have 1 response per year during the UCMR 2 cycle of 2007-2011, since there are no specific cyclical State reporting requirements under the UCMR program.

Exhibit B-3a: Yearly Cost to EPA for UCMR Implementation, by Type of Cost (2007-2011) <i>(corresponds with Exhibit 9a)¹</i>							
Cost Description	2007	2008	2009	2010	2011	Total	Average
Regulatory Support Activities: <i>laboratory proficiency testing; QC audits; analytical standards provision; and technical support, guidance document development (non-labor costs)</i>							
Lab PT	\$200,000	\$0	\$0	\$0	\$0	\$200,000	\$40,000
QC Audits	\$0	\$31,582	\$31,582	\$31,582	\$0	\$94,746	\$18,949
Analytical Standards	\$0	\$200,000	\$200,000	\$200,000	\$0	\$600,000	\$120,000
Technical Support	\$100,000	\$50,000	\$0	\$0	\$0	\$150,000	\$30,000
Subtotal – Regulatory Support	\$300,000	\$281,582	\$231,582	\$231,582	\$0	\$1,044,746	\$208,949
National and Regional Oversight and Data Analysis: <i>UCMR management oversight; review and evaluation of data from Assessment Monitoring (labor costs)</i>							
	\$397,311	\$794,622	\$794,622	\$794,622	\$397,311	\$3,178,490	\$635,698
Small System Testing: <i>implementation coordination; and analytical and shipping costs for small system testing for both Assessment Monitoring and Screening Surveys (non-labor costs)</i>							
Implementation Coordination	\$0	\$1,163,562	\$1,163,562	\$1,163,562	\$0	\$3,490,686	\$698,137
Fees for Analysis and shipping	\$0	\$1,844,421	\$1,844,421	\$1,844,421	\$0	\$5,533,262	\$1,106,653
Subtotal – Small System Testing	\$0	\$3,007,983	\$3,007,983	\$3,007,983	\$0	\$9,023,948	\$1,804,790
TOTAL	\$697,311	\$4,084,187	\$4,034,187	\$4,034,187	\$0	\$13,247,184	\$2,649,437

1. Agency costs are estimated over the period 2007-2011. Though some start-up costs likely began in 2006, costs are presented beginning in 2007, with beginning of rule implementation activities.

Exhibit B-3b: Summary of EPA Burdens and Costs for UCMR Implementation (2007-2011) <i>(corresponds with Exhibit 9b)</i>	
Burden / Cost	Annual Average Cost over (2007-2011)
Labor Cost	\$635,698
Non-Labor Cost	\$2,013,739
Total Cost to EPA for UCMR Implementation	\$2,649,437
Burden (labor hours)	9,152

Exhibit B-4: National Cost Summary for UCMR 2 Implementation (2007-2011)¹ <i>(corresponds with Exhibit 10)</i>						
Type of Cost	2007	2008	2009	2010	2011	TOTAL
Small Systems						
Labor Cost	\$106,942	\$56,506	\$56,506	\$56,506	\$0	\$276,460
Non-Labor Cost	\$0	\$0	\$0	\$0	\$0	\$0
Total Small System Cost	\$106,942	\$56,506	\$56,506	\$56,506	\$0	\$276,460
Large Systems						
Labor Cost	\$1,173,506	\$366,726	\$366,726	\$366,726	\$0	\$2,273,683
Non-Labor Cost	\$0	\$5,635,795	\$5,635,795	\$5,635,795	\$0	\$16,907,385
Total Large System Cost	\$1,173,506	\$6,002,521	\$6,002,521	\$6,002,521	\$0	\$19,181,068
Very Large Systems						
Labor Cost	\$225,998	\$150,293	\$150,293	\$150,293	\$0	\$676,877
Non-Labor Cost	\$0	\$2,954,765	\$2,954,765	\$2,954,765	\$0	\$8,864,295
Total Very Large System Cost	\$225,998	\$3,105,058	\$3,105,058	\$3,105,058	\$0	\$9,541,172
States						
Labor Cost	\$617,360	\$648,343	\$600,227	\$313,317	\$274,447	\$2,453,694
Non-Labor Cost	\$0	\$0	\$0	\$0	\$0	\$0
Total State Cost	\$617,360	\$648,343	\$600,227	\$313,317	\$274,447	\$2,453,694
EPA²						
Labor Cost	\$397,311	\$794,622	\$794,622	\$794,622	\$397,311	\$3,178,490
Non-Labor Cost	\$300,000	\$3,289,565	\$3,239,565	\$3,239,565	\$0	\$10,068,694
Total EPA Cost	\$697,311	\$4,084,187	\$4,034,187	\$4,034,187	\$0	\$13,247,184
National Total						
Total with EPA	\$2,821,118	\$13,896,615	\$13,798,499	\$13,511,589	\$671,758	\$44,699,578

Exhibit B-4: National Cost Summary for UCMR 2 Implementation (2007-2011)¹ <i>(corresponds with Exhibit 10)</i>						
Type of Cost	2007	2008	2009	2010	2011	TOTAL
Total without EPA	\$2,123,806	\$9,812,428	\$9,764,312	\$9,477,402	\$274,447	\$31,452,394
Total Burden (hours) for All Responses						
Small Systems	3,840	2,022	2,022	2,022	0	9,905
Large Systems	39,584	12,370	12,370	12,370	0	76,694
Very Large Systems	6,354	4,226	4,226	4,226	0	19,031
States	11,635	11,861	10,649	5,371	5,295	44,811
EPA	5,720	11,440	11,440	11,440	5,720	45,760
Total with EPA	67,133	41,918	40,706	35,428	11,015	196,201
Total without EPA	61,413	30,478	29,266	23,988	5,295	150,441

1. During 2007, all systems are assumed to incur some reading and reporting burden, as described in Part A, Section 4(b)(ii)(a) of this document. See Exhibit 6a for further PWS cost estimation details.

2. Although EPA is not considered a respondent to the UCMR regulations, Agency burdens 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 2 Per Respondent Burden and Cost Summary (2007-2011) <i>(corresponds with Exhibit 11)</i>							
Burden (hours)/ Cost (dollars)	Small Systems	Large Systems	Very Large Systems	States	EPA	National Average with EPA ¹	National Average without EPA
Five-Year Total per Respondent							
Total # of Responses Per Respondent	2.7	3.1	3.6	5.0	n/a	n/a	3.0
Labor Cost Per Respondent	\$216	\$705	\$1,663	\$43,816	\$3,178,490	\$1,783	\$1,143
Non-Labor Cost Per Respondent	\$0	\$5,241	\$21,780	\$0	\$10,068,694	\$7,211	\$5,186
<i>Total Cost (Labor plus Non-Labor)</i>	\$216	\$5,946	\$23,443	\$43,816	\$13,247,184	\$8,994	\$6,330
Total Cost Per Response	\$81	\$1,941	\$6,517	\$8,763	n/a	n/a	\$2,093
Total Burden Per Respondent	7.7	23.8	46.8	800.2	45,760.0	39.5	30.3
Total Burden Per Response	2.9	7.8	13.0	160.0	n/a	n/a	10.0
Average Annual per Respondent							
Ave. # of Responses Per Respondent	0.5	0.6	0.7	1.0	n/a	n/a	0.6

Exhibit B-5: UCMR 2 Per Respondent Burden and Cost Summary (2007-2011) <i>(corresponds with Exhibit 11)</i>							
Burden (hours)/ Cost (dollars)	Small Systems	Large Systems	Very Large Systems	States	EPA	National Average with EPA ¹	National Average without EPA
Labor Cost Per Respondent	\$43	\$141	\$333	\$8,763	\$635,698	\$357	\$229
Non-Labor Cost Per Respondent	\$0	\$1,048	\$4,356	\$0	\$2,013,739	\$1,442	\$1,037
<i>Ave. Cost (Labor plus Non-Labor)</i>	\$43	\$1,189	\$4,689	\$8,763	\$2,649,437	\$1,799	\$1,266
Ave. Cost Per Response	\$16	\$388	\$1,303	\$1,753	n/a	n/a	\$419
Ave. Burden Per Respondent	1.5	4.8	9.4	160.0	9,152.0	7.9	6.1
Ave. Burden Per Response	0.6	1.6	2.6	32.0	n/a	n/a	2.0

1. National average burdens and costs differ greatly between the State respondents and the various system respondents. This should be taken into consideration when looking at the national average with or without EPA. PWS labor costs were estimated by system size and water source by multiplying estimated burden (as described in Section 6(a)(i)) for each activity by estimated system labor rates (see Exhibit 4 in Section 6(a)(i)). Non-labor costs were also estimated by system size and water source, and by multiplying “number of systems” by “number of sampling points” by “number of required samples” by “lab and shipping fees”. All burden and cost estimation assumptions for systems and States are described in Section 6(a) and 6(b) in Part A of this document. Average “per respondent” costs were derived by dividing through by the number of respondents from each category.