

Information Collection Request
for the
Unregulated Contaminant Monitoring Regulation

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1 IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title and Number of the Information Collection

TITLE: *UNREGULATED CONTAMINANT* U.S. EPA ICR Number: 1882.01

MONITORING REGULATION

1(b) Short Characterization

The Office of Ground Water and Drinking Water in the Office of Water at the United States Environmental Protection Agency (EPA or Agency) is responsible for managing public drinking water system programs under the Safe Drinking Water Act (SDWA). The SDWA, as amended in 1996, requires the Agency to develop an Unregulated Contaminant Monitoring Regulation (UCMR). The requirements for unregulated contaminant monitoring were first established by the 1986 Amendments to the SDWA and were included as part of the Phase I chemical regulation under 40 CFR Parts 141.40(a)-(e). The Phase II regulation superceded the Phase I rule. Some of the Phase I unregulated contaminants became regulated under Phase II and additional contaminants were added to the list of unregulated contaminants. The Phase V chemical regulation further modified the list of contaminants as additional, unregulated contaminants became regulated. The basic monitoring and reporting requirements for unregulated contaminants are the same under the Phase I, II, and V regulations. Public water systems (PWSs) are required to report their monitoring results to the States/Primacy Agencies. These data are to be reported, in turn, to EPA. In addition, only systems serving less than 150 service connections are exempt from monitoring provided that they make their facilities available for monitoring by the States. Repeat monitoring is required every 5 years.

Section 125 of the SDWA 1996 Amendments substantially revises unregulated contaminant monitoring. The new program is to include: (1) a new list of contaminants (*i.e.*, the Unregulated Contaminant Monitoring Regulation (UCMR) List, developed in coordination with the Contaminant Candidate List (CCL) process), (2) a representative sample of PWSs serving 10,000 or fewer people, (3) placement of the monitoring data in the National Contaminant Occurrence Database (NCOD; authorized under the SDWA Amendments, •6), and (4) notification of consumers of the availability of monitoring results. The 1996 Amendments limit the number of contaminants that can be on the UCMR List to 30 or less, require that only a representative number of systems serving a population of 10,000 or fewer persons be required to monitor, and require that EPA pay the reasonable cost for sample analysis for this representative sample of systems. The proposed unregulated contaminant monitoring data will be used in future regulation development. The unregulated contaminant monitoring program is one of the cornerstones of the sound science approach to future drinking water regulation, which is an aim of the SDWA 1996 Amendments.

The proposed UCMR will replace the existing unregulated monitoring program which began in 1989. A companion action to this proposal, the "Suspension of Unregulated Contaminant Monitoring Requirements for Small Public Water Systems" (64 FR 1499) canceled the unregulated contaminant monitoring for those small systems serving 10,000 or fewer people which was required under the existing program.

This proposal would affect all 2,774 non-purchased community water systems (CWSs) and non-purchased, non-transient, non-community water systems (NTNCWSs)⁽¹⁾ serving more than 10,000 people (hereafter referred to as large systems); the 800 CWSs and NTNCWSs, serving 10,000 or fewer people (hereafter referred to as small systems) that will comprise the national representative sample; and the 56 States/Primacy Agencies. As illustrated in Figure 1, the proposed UCMR Program will include 3 years of Assessment Monitoring (2001-2003), with approximately one-third of all the affected systems monitoring each year for 11 contaminants (10 chemicals and 1 microbiological contaminants). Two Screening Surveys will be conducted in separate years, with each Screening Survey targeting a different list of chemical contaminants. A subset of approximately 300 Assessment Monitoring systems will collect samples for each of the Screening Surveys. Finally, another set of up to 200 systems will be chosen to participate in 1 year (2004) of Pre-Screen Testing.⁽²⁾

This Information Collection Request (ICR) was prepared in accordance with the December 1996 version of *EPA's Guide to Writing Information Collection Requests Under the Paperwork Reduction Act (PRA) of 1995* (or "ICR Handbook") prepared by EPA's Office of Policy, Planning, and Evaluation. It serves as an amendment to the current *Information Collection Request for the Public Water System Supply Program* (with EPA tracking number 0270.39 and OMB number 2040-0090, hereafter, referred to as the Drinking Water ICR). This ICR examines the impact of the UCMR program on PWSs and primacy agencies for the 3-year period 1999-2001. Since the actual implementation period for the UCMR program is 2001-2005, this ICR only presents the costs of implementation for the year 2001, plus the costs of some preparatory activities that are assumed to take place prior to implementation. In addition, since the ICR period coincides with only one of the three primary years of Assessment Monitoring, only approximately one-third of the water systems that will be regulated under the UCMR will be impacted during this ICR period. UCMR-related costs and burdens that are expected to occur after the year 2001 will be addressed in future ICRs.

For the ICR period 1999-2001, the burden for small systems is estimated to be an average of 1.5 hours annually per system, with an annual cost of \$32. Total cost for the 287 small systems that are affected during this ICR period is estimated at \$27,870. Large systems are estimated to have a 3.3 hour per system annual burden, with a labor cost of \$93 per year. Non-labor costs per year for these systems is estimated at \$2,793 per system. Total cost for the 925 large systems is estimated to be \$8.0 million for the years 1999-2001.

When considering the difference between UCMR costs and the current system costs for the Phase II/V unregulated contaminant monitoring program, small systems will realize an average savings under the proposed UCMR program of approximately \$324 per year for the ICR period.⁽³⁾ These savings are realized because under the proposed UCMR, EPA will pay for the testing costs for the national representative sample of small systems. Large systems that are affected during the ICR period will realize an average increased cost (primarily attributed to laboratory analytical fees) of \$1,215 per year.

On average, it is estimated that each State will incur 141 hours of burden per year, with an annual labor cost of \$5,647 for the ICR period 1999-2001. Non-labor costs for States were assumed to be minimal, with 10 percent of the States incurring a one-time \$25,000 contractor cost for upgrading their drinking water databases; an average of \$833 per year per State for the ICR period. The total cost for all States for the period 1999-2001 is estimated to be \$1.1 million. The average annual cost to all States will decrease by approximately \$0.92 million per year over 1999-2001, compared to implementation of the current unregulated monitoring program. State costs will decrease under the UCMR because they will have to oversee many fewer PWSs than under the existing program. The Agency is estimated to incur an annual burden of 9,150 hours, with an average annual cost for labor of \$366,000. Non-labor costs for EPA, which are primarily comprised of the analytical and shipping costs for representative set of small systems, and other contractor costs, are estimated at \$1.3 million per year over the period 1999-2001.⁽⁴⁾ The total EPA cost for the ICR period is estimated to be \$5.0 million; with an estimated increased cost of \$1.4 million per year compared to the existing program. The Agency cost increase will be primarily attributed to the cost of the small system testing program.

2 NEED FOR AND USE OF THE COLLECTION

The following sections describe the need for this information collection, the legal authority under which this information can be collected, and why this information is necessary to support drinking water program objectives.

2(a) Need/Authority for the Collection

The information collected under this rule is required by EPA to carry out its regulatory development responsibilities under the SDWA Section 1445(a) (2), Monitoring Program for Unregulated Contaminants. EPA is required to establish criteria for a monitoring program for unregulated contaminants and, by August 6, 1999, to publish a list of contaminants to be monitored. Without comprehensive, up-to-date information on drinking water contamination, the Agency will not be able to meet the SDWA statutory requirements.

Section 1412(b)(4) of the 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 health risk reduction. 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 CCL), to issue regulations which establish criteria for listing contaminants, and to carry out the UCMR Program. The Agency is required to finalize 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, •01(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.

2(b) Practical Utility/Users of the Data

The unregulated contaminant monitoring data collected under this proposed 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 certain contaminants have significant enough occurrence 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 monitoring actions will be maintained by each PWS. Systems will also report these data to the State/Primacy Agency. States will maintain records on each system's required monitoring and analytical results. States will report these results electronically to the Safe Drinking Water Information System (SDWIS) database, which will be linked to the National Contaminant Occurrence Database (NCOD).

The Agency currently uses the information in SDWIS to conduct various program analyses, and to support the critical Agency function of program oversight. The data are used to characterize compliance trends at the system, State, and national program levels. Furthermore, States use this information to maintain and track compliance data for PWSs located within their jurisdiction.

The Agency will use SDWIS in conjunction with NCOD to assess the monitoring data that will be generated as a result of the UCMR. Historically, reporting of analytical results to SDWIS has been limited to MCL exceedances or exceedances of the lead or copper action level. UCMR program reporting will include more complete analytical results on contaminant occurrence.

EPA's Office of Ground Water and Drinking Water, and other EPA offices that implement regulatory programs mandated by several environmental statutes (*e.g.*, Comprehensive Environmental Response, Compensation, and Liability Act; Resource Conservation and Recovery Act; and the Toxic Substances Control Act) use compliance monitoring data to support program implementation. Non-EPA organizations also use these data, including: the Rural Development Administration (formerly Farmers Home Administration), the Department of Interior, the Department of Housing and Urban Development, the U.S. Army Corps of Engineers, the Federal Emergency Management Agency, the Small Business Administration, White House Task

forces, environmental and industry groups, and many private companies and individuals. In addition, EPA often receives requests for public water system monitoring data or other information under the Freedom of Information Act (FOIA). Many FOIA requests require information regarding the occurrence of regulated contaminants in public water systems in a particular geographic area. Under the UCMR Program, as more actual contaminant data will be available to the public through EPA, it is anticipated that requests from these agencies, organizations, and individuals will increase.

3 NON-DUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

The following sections verify and affirm that this information collection satisfies the Office of Management and Budget's (OMB's) collection guidelines, has public support, and does not duplicate another collection. The EPA has consulted with other federal agencies, State agencies, industry organizations, water systems, and environmental groups to ensure non-duplication of this information collection.

3(a) Non-duplication

The data required by the UCMR are not available from any other source and are not duplicative of information otherwise accessible to EPA. The Agency assessed the results of previous unregulated contaminant monitoring and information from other data sources to establish the new CCL and in the ongoing process of development of the NCOD. The CCL identified contaminants of potential concern that may occur or are likely to occur in drinking water. EPA, in conjunction with the National Drinking Water Advisory Council's Working Group on Contaminant Occurrence and Selection, developed the UCMR List by selecting the contaminants from the CCL for which additional occurrence data was needed to assess potential environmental and health effects. Contaminants of concern that had other adequate sources of occurrence data were either listed as priorities for regulatory determination or priorities for health effects and/or treatment research, and were not included on the UCMR List.

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

To comply with the 1995 Amendments to the Paperwork Reduction Act, the Agency will solicit public comment on this ICR for a 45-day period coincident with the rule comment period and before it is submitted to OMB. The Agency will publish a notice in the *Federal Register* requesting

comment on the estimated respondent burden or any other aspect of this information collection. Comments received will be considered by the Agency and used to determine if any adjustments are needed to the burden/cost calculations before the ICR is finalized.

3(c) Consultations

Sections 102 and 126 of the SDWA are very specific about input from States, the public and the scientific community for the CCL and NCOD. Since the UCMR will result in data being placed in NCOD, and the CCL provides the basis for the UCMR List, public input began during these developmental stages of the UCMR.

During the development of the UCMR, stakeholders from a wide range of public and private entities provided key perspectives. Representatives from PWSs, States, industry, and other organizations attended two stakeholder meetings to discuss options directly related to the UCMR. An additional 17 meetings were held with stakeholders and the public concerning issues related to the UCMR. In total, 21 State health and environmental agencies, 5 water systems, 6 water associations, 6 health associations, 5 industrial associations, 4 environmental organizations, 4 community and consumer organizations, 29 companies, and 7 federal agency offices participated in the development of the proposed regulation.

As noted above, the CCL identifies contaminants for which EPA may take regulatory action and for which EPA needs additional data. The UCMR List includes those for which additional data are needed. The meetings to develop the CCL have included stakeholder meetings to discuss the list broadly and meetings focused on particular issues conducted through the National Drinking Water Advisory Council's Working Group on Occurrence and Contaminant Selection, as follows:

December 2-3, 1996 Stakeholders Meeting

April 3-4, 1997 NDWAC Working Group

June 23, 1997 NDWAC Working Group

July 17, 1997 NDWAC Working Group

January 7, 1998 NDWAC Conference Call

These meetings resulted in the Drinking Water Contaminant Candidate List, published on March 2, 1998 (63 FR 10274). The proposed UCMR List was derived from the CCL's list of Occurrence Priorities.

The NCOD development activities have included 10 public meetings on information requirements that should be considered for inclusion in that database. These meetings were held from October 1997 to February 1998. The work of the NCOD development team has been incorporated in the preparation of this proposed unregulated contaminant monitoring regulation as the reporting requirements for sample testing. Several documents are included in the docket for this rule concerning NCOD development which were used in the public meetings:[\(5\)](#)

Options for the National Drinking Water Contaminant Occurrence Database, Background Document (Working Draft), EPA 815-D-97-001, May 1997;

National Drinking Water Contaminant Occurrence Database - Development Strategy, Background Document (Working Draft), EPA 815-D-97-005, December 1997; and

Options for Design of the National Drinking Water Contaminant Occurrence Database, Background Document (Working Draft), EPA 815-D-98-001, January 1998.

EPA held its first stakeholders meeting to discuss options for the development of the UCMR on December 2-3, 1997, in Washington, DC. A range of stakeholders attended that meeting, including representatives of PWSs, States, industry, health and laboratory organizations, and the public. EPA prepared a background document for the meeting, *Options for Developing the Unregulated Contaminant Monitoring Regulation* (Working Draft), EPA 815-D-97-003, November 1997. A summary of the meeting is also available. Prior to preparation of this proposed regulation, EPA held a second stakeholders meeting on June 3-4, 1998, to obtain input from interested parties on significant issues evolving from drafting the regulation, which needed further public input. EPA prepared a public review document for that meeting, *Background Information and Draft Annotated Outline for a Proposed Unregulated Contaminant Monitoring Regulation*, Background Document, (Working Draft), May 1998. A meeting summary is available from the EPA Water Docket (Docket Number W-98-02). EPA also sent special requests for review of stakeholder documents to more than 360 tribes (exclusive of the Alaskan native villages) and to small system organizations to obtain their input.

The listing below identifies all the members of the public or organizations that participated in public meetings that provided input to the development of the UCMR (numbers in parentheses represent the count of people or organizations listed):

General Public (1)

Howard Fields

States (21)

Arizona Department of Environmental Quality

California Department of Health Services

Colorado Department of Health and Environment

Connecticut Department of Public Health

Florida Department of Environmental Regulation

Indiana Department Of Environmental Management

Illinois Environmental Protection Agency

Kansas Department of Health and Environment

Maryland Department of the Environment

Massachusetts Department of Health

Michigan Department of Environmental Quality

Minnesota Department of Health

Missouri Department of Natural Resources

New Jersey Department of Environmental Protection

New York Department of Health

Oregon Department of Human Resources

Pennsylvania Department of Environmental Protection

South Carolina Department of Health and Environmental Resources

South Dakota Department of Environment and Natural Resources

Texas Natural Resources Conservation Commission

Virginia Department of Health

Water Systems (5)

American Water Works Service Co.

Fairfax County Water Authority

Manchester Water Works

Philadelphia Suburban Water Company

Wichita Water & Sewer Department

Associations - Local Government (1)

National League of Cities

Associations - Water Related (6)

Association of State Drinking Water Administrators

American Water Works Association.

Association of Metropolitan Water Agencies

National Association of Water Companies

National Rural Water Association

Plumbing Manufacturers Institute

Associations - Health Related (6)

American Public Health Association

American Society for Microbiology

Association of State and Territorial Public Health Laboratory Directors

Association of State and Territorial Health Officials

Council of State and Territorial Epidemiologists

National Association of City and County Health Officials

Associations - Industrial (5)

American Crop Protection Association

Chemical Manufacturers Association

American Zinc Association

Salt Institute

NSF International

Academic Institutions (3)

Steven Balla, George Washington University

Dan Sklarew, George Mason University

Gary Toranzos, University of Puerto Rico

Environmental Organizations (4)

Clean Water Action

Department of Planet Earth

Environmental Working Group

Natural Resources Defense Council

Community and Consumer Organizations (4)

Consumer Federation of America

League of Women Voters

Arlington County League of Women Voters

Working Group on Community Right-to-Know

Companies (29)

3M Company

Abt Associates

ADI Technology Corporation

Barrick Gold Corporation

BASF Corporation

Black & Veatch

BNA Reporter

Brannon Wilder, Consultant

Capitolink Legislative and Regulatory Services

Cleary, Gottlieb

Designers & Planners Incorporated

DuPont Agricultural Products

Hach & Company

Haglar, Bailly, Incorporated

ICF, Incorporated

ISSI, Incorporated

International Business Services

JD Information Services, Incorporated

Jellinek, Schwartze, and Connolly

Kinetico Incorporated

Kinghorn & Associates

Latham & Watkins

LeBouef, Lamb, Greene & MacRae

Miller Management Group

Novigen Sciences Incorporated

Paul Nelson, Consultant

Paulson Group

Technology Planning & Management Corporation

Weinberg, Bergeson and Newman

Zeneca Agricultural Products

Other Non-Profit (1)

National Research Council

Other Federal (7)

National Center for Environmental Health (at the Center for Disease Control and Prevention)

US Department of Agriculture Forest Service

US Department of Agriculture Food Safety & Inspection Service

US Geological Survey

US Army Material Command

US Army Environmental Center

US Marine Corps - Headquarters

The Resource Analysis Computer Program for State Drinking Water Agencies (hereafter referred to as the State Resource Model), which is documented in the *Resource Analysis Computer Program for State Drinking Water Agencies*, January 1993, was used by the Agency in preparing this ICR. The model was designed by EPA's Office of Ground Water and Drinking Water to enable primacy agents to estimate the resources needed to fund their drinking water programs; it contains a comprehensive list of activities required to operate a drinking water program, including estimates of the number of systems affected. The assumptions used in the model are based on input from a Work Group of 39 State representatives and the Association of State Drinking Water Administrators (ASDWA). In addition, the average number of entry points for water systems of different size categories was derived from an ASDWA survey (ASDWA CWS Survey, 1993). Such information is critical in determining costs and burden because most drinking water rules require monitoring at each entry point.

In preparing this ICR amendment, EPA reviewed analytical costs assembled from recent laboratory pricing schedules previously compiled to develop consistent values for various program estimates. These analytical cost data were used to develop estimates in this ICR, as well as other drinking water program cost evaluations. These data were supplemented by an informal survey of national laboratories for methods where no price information was available.

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 proposed 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. Under the proposed UCMR, collection of unregulated contaminant occurrence data will be substantially reduced compared to that which is collected under the existing unregulated monitoring program. The existing program includes all systems serving more than approximately 500 people, with many States even collecting data from these smaller systems.⁽⁶⁾ For the primary component of the

UCMR Program -- *Assessment Monitoring* -- data will be collected from a representative sample of 800 small systems, along with all large systems. This means that data will be collected from perhaps 30,000 fewer systems across the nation.⁽⁷⁾ Assessment Monitoring will only cover the UCMR List 1 (1999) contaminants. The burden of data collection is even further reduced for List 2 and 3 contaminants.⁽⁸⁾ With this relatively small number of participating systems, it is imperative that the data collected is of the highest possible quality.

Monitoring frequencies were determined based on statutory requirements, which specify that monitoring be varied based on the number of persons served by a system, contaminants likely to be found, and source of supply. The monitoring frequency design also considers that the number of persons served affects exposure to contaminants, as well as the resources available to undertake monitoring activity. The collection frequencies in this rule are discussed further in Section **5(b)**. 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;
- temporal variability in occurrence; and,
- synchronization with the Standardized Monitoring Framework (SMF) for Phase II/V.⁽⁹⁾

The Assessment Monitoring component of data collection requires that: all regulated ground water systems (e.g., all large systems and the representative sample of small systems) monitor for the chemical contaminants two times during 1 year of the monitoring period (2001-2003) at each entry point to the distribution system representative of all water sources after treatment or other specified sampling locations; all regulated surface water systems monitor for the chemical contaminants once each quarter during 1 year of the monitoring period.⁽¹⁰⁾ 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. Based on input from States, it is assumed that State and system discretion will be used such that systems will conduct UCMR sampling coincident with SMF to the extent possible, reducing the system labor burden for collection, and reducing analytical costs to large systems.

The one microbiological contaminant on the Assessment Monitoring list will be monitored at two points in the distribution system, two times during the year that a system is monitoring; once at the most vulnerable time of the year, and once 6 months later. Each sampling event will include two locations in the distribution system after treatment: at the first tap below a representative entry point to the distribution system that are used for taking total coliform samples and at the tap nearest the end of the longest distribution line that represents the longest residence time.

EPA has considered various statistical needs for accuracy and precision of estimates in design of the representative sample, and proposes a sample of 800 systems from the universe of 65,636 small systems. This would 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 (Table 11).

EPA has selected these high standards to ensure the quality of the estimation. Larger sample frames were considered, 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 one percent or less of systems on a *national* basis. For many contaminants, a one 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 judgements about the occurrence of contaminants in relation to source waters and different size categories of systems. Many statutes and current regulations are differentially implemented for systems of different size, or for different source water categories. 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 themselves. 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.

Further, a portion of the sample needs to be distributed among all States, so that all States, and so that systems in all States, proportionately contribute to the overall results that will be used for decision making. All States need to share the burden of these programs, as well. EPA wants to ensure a minimum of two representative systems in each State. With the small sample size, no conclusions may be drawn about occurrence at the State level, but it is important that all States be represented. Some contaminants, such as some pesticides, may only be used intensively in select regions of the country. Some workgroup members have expressed concern that the relatively small number of systems in the representative sample may miss contaminants with such targeted regional use patterns. Including systems in every State, in proportion to population served, should ensure that contaminants with

regional use patterns, to the extent they contaminate water supplies, will be proportionately represented by the national sampling design. These factors were also considered in making the selection of the number of systems. Reducing the sample size would not accommodate these considerations for State representation.

EPA has further reduced the number of systems burdened by not requiring purchased water systems to monitor. The national sample (described above) will exclude systems that purchase their water from other systems, to avoid redundant sampling of sources. Further, exposure estimates for such contaminants can be extrapolated to purchased systems from the monitoring data of the original source systems. In the future, the UCMR list may include other types of contaminants that may necessitate sampling of purchased systems. The universe of systems from which a representative sample would be selected for such contaminants would then be revised to include systems using purchased water.

EPA proposes to exclude transient, non-community systems from the unregulated contaminant monitoring. Including the 97,000 transient systems would be very costly. Furthermore, 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 CWSs and 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, the proposed UCMR includes a provision for waivers for large systems on a State-wide, chemical-specific basis. However, for small system, waivers will not be considered, since this would be contradictory to the data quality and consistency requirements of a representative sample. Furthermore, since EPA will pay for this testing, it does not place a significant burden on these small systems. The representative sample must provide adequate information on both the presence and absence of contaminants for the systems sampled.

3(e) General Guidelines

The proposed UCMR complies with the guidelines published under the Paperwork Reduction Act and its 1995 amendments. The UCMR does not alter the PWS or State record keeping requirements under •141.33 and 142.14, respectively.

3(f) Confidentiality

This Information Collection Request does not raise confidentiality issues.

3(g) Sensitive Questions

This Information Collection Request does not ask sensitive questions.

4 THE RESPONDENTS AND THE INFORMATION REQUESTED

The following sections provide information on the respondents and the information that is requested of them.

4(a) Respondents/SIC Codes

Under the proposed UCMR, respondents include owners and operators of PWSs (including non-purchased CWSs and non-purchased NTNCWs) and the States. The Standard Industrial Classification (SIC) code for investor-owned water systems is 4941. The SIC code for publicly-owned water systems and State agencies is 9511. Ancillary systems (a system where providing water is ancillary to its primary business, *e.g.*, a mobile home park) cannot be categorized in a single SIC code.

4(b) Information Requested

The following sections provide detail on the data requested and associated respondent activities necessary to satisfy UCMR requirements. These

sections include a description of the proposed regulation.

4(b)(i) Data Items, Including Reporting and Record Keeping

A discussion of data and information that are part of the reporting and record keeping requirements for systems is found below in Section **4(b)(i)(a)**. The requirements for States are discussed below in Section **4(b)(i)(b)**.

4(b)(i)(a) Public Water System Reporting and Record Keeping

The current •1.35 requires all regulated PWSs to report monitoring results for the contaminants listed in •1.40 to the States. The proposed UCMR will require systems to report some additional data elements to the States with the sampling results. The UCMR also requires that all systems submit their data to the State in electronic format (unless the State waives this requirement).

The data elements to be reported are either system identifiers (e.g., system or facility identification) that the system already reports to the State, or added sample analytical information that the laboratory would provide. Most of the data elements already exist but will be required to be reported with the UCMR results. The newly proposed data elements for the UCMR Program are listed below in Table 1. The contaminants that will be monitored during this ICR period are listed in Table 2.

Table 1. Unregulated Contaminant Monitoring Reporting Requirements

#	Data Element
1	Public Water System (PWS) Identification Number
2	Sampling Station Type
3	Water Source Type
4	Sample Identification Number
5	Sample Collection Date

6	Contaminant
7	Analytical Results - Sign
8	Analytical Result - Value
9	Analytical Result - Unit of Measure
10	Analytical Method Number
11	Public Water System Facility Identification Number - Source Intake/Well, Treatment Plant and Sampling Station
12	Public Water System Facility Type
13	Latitude of the Public Water System Facility for Source Intake/Well and Treatment Plant
14	Longitude of the Public Water System Facility for Source Intake/Well and Treatment Plant
15	Sample Type
16	Detection Level
17	Detection Level Unit of Measure
18	Analytical Precision
19	Analytical Accuracy
20	Presence/Absence

Table 2. UCMR Assessment Monitoring / List 1 (1999) Contaminants: analytical methods and estimated costs per analysis¹

<i>Contaminant Name (Group)</i>	<i>CASRN</i>	<i>Assumed EPA Analytical Method</i>	<i>Cost</i>	<i>Incremental Cost²</i>
Chemical Contaminants				
2,4-dinitrotoluene (SOC)	121-14-2	525.2	\$160 est.	\$20 est.
2,6-dinitrotoluene (SOC)	606-20-2	525.2		
MTBE (methyl-tert-butyl-ether) (VOC)	1634-04-4	524.2	\$150 est.	\$20 est.
Nitrobenzene (VOC)	98-95-3	524.2		
DDE (SOC)	72-55-9	508, 508.1, 525.5	\$150 (est. for 508)	\$0 (est. for 508)
EPTC (s-ethyl-dipropylthiocarbamate) (SOC)	759-94-4	507, 525.2	\$160 (est. for 507)	\$40 (est. for 507)
Molinate (SOC)	2212-67-1	507, 525.2		
Terbacil (SOC)	5902-51-2	507, 525.2		
DCPA mono-acid degradate (SOC)	887-54-7	515.1, 515.2	\$160 (est. for 515.1)	\$20 (est. for 515.1)

DCPA di-acid degradate (SOC)	2136-79-0	515.1, 515.2		
Microbial Contaminants				
<i>Aeromonas hydrophila</i>	n/a	In review	\$25	n/a

1. Estimates of laboratory analytical costs were derived from review of recent laboratory price schedules that were compiled for cost estimations under various drinking water program regulations. In addition, five national drinking water laboratories and other UCMR stakeholders were consulted for the unique UCMR contaminants.

2. Instead of paying full analytical cost for Assessment Monitoring, large systems may pay only the smaller "incremental" analytical costs when UCMR monitoring coincides with ongoing compliance monitoring. With methods that are not currently in use, no cost savings can be realized.

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

SDWA •45(a)(2)(E) requires notification of the results of the UCMR Program to be made available to persons served by the system. The results of UCMR monitoring for CWSs will be reported through the Consumer Confidence Reports (CCR), pursuant to SDWA •14(c)(4)(B) and the final regulation recently published in the *Federal Register* (63 FR 44512). Failure to monitor for unregulated contaminants required through the UCMR will be reportable under the public notification rule.

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

Section 142.15 requires States to provide quarterly reports to the Agency on each system's compliance with monitoring and reporting. Under the UCMR Program, the types of information to be provided would include the reporting of analytical results and information pertaining to the sample, and analytical method. Under the UCMR, these data must be reported electronically. There are no changes to the types of records required, or the length of time that records must be retained, under •2.14. States must retain records of monitoring conducted by each system for a period of 12 years.

Stakeholders, including systems and States, supported the idea of electronic reporting. Electronic data transfer will allow EPA to conduct timely analysis of the data and will facilitate prompt follow up if necessary.

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.

4(b)(ii)(a) Public Water Systems

To comply with the requirements in this proposed regulation, systems must conduct the following activities:

- read regulations and/or letter from State/Primacy Agency which outline requirements;
- monitoring or monitoring assistance (e.g., sample collection and shipping);
- reporting and record keeping; and
- public notification.

Each of these activities are discussed in more detail below.

Read Regulations/State Letter

Systems are assumed to read the UCMR regulations and/or a State issued guidance letter at the beginning of their required monitoring year (i.e., one-third of the systems in each of the three Assessment Monitoring years). Small systems can rely on the State for information pertaining to the regulation, rather than reading the regulation. These systems are expected to spend one hour, on average, reading a letter from the State that outlines the requirements of the UCMR. Large systems are assumed to read both the regulation and information from the State, requiring on average • day (4 hours). National costs are estimated by multiplying the average burden hours by the average system labor rate, times the number of systems effected.

Monitoring or Monitoring Assistance

Under •1.40 of today's proposal, systems would sample according to schedules specified by the State, with input from EPA. Monitoring activities that are considered in the system cost and burden estimates include: receipt of sampling kits from the laboratory, reading of sampling instructions, and collecting and shipping the sample. The Assessment Monitoring list consists of 11 contaminants: 2 VOCs, 8 SOCs, and 1 microorganism (see Table 2). Again, Screening Surveys and Pre-Screen Testing will not be conducted until after the ICR period of 1999-2001, and thus are not considered here.

For Assessment Monitoring, it is assumed that one-third of all small Non-Index and large systems will conduct monitoring activities in each year from 2001 through 2003. Monitoring activities include: receipt of monitoring kit, reading laboratory instructions, and collection and shipping of samples. It is assumed that where possible, all systems (except for Index systems) will coordinate their sampling with the Phase II/V Standard Monitoring Framework (40 CFR Part 141) for sampling of chemical contaminants. Sections B.3 and B.4 of Appendix B explains the coincident sampling assumptions in further detail. These same systems are assumed to collect samples for *Aeromonas hydrophila* analysis along with their monitoring required under the Total Coliform Rule, thus no additional labor burden is allotted. Index systems will assist an EPA-appointed sample collector to collect Assessment Monitoring samples during each year from 2001 to 2005.

All small systems in the national representative sample (both Index and Non-Index) will also be required to collect a sample for standard water quality parameters (e.g., basic ions, nitrate) at each sampling station (i.e., all entry and distribution system sampling points). EPA will also pay for this testing.

Reporting and Record Keeping

All systems will be responsible for submitting monitoring data in electronic format to the State within 10 days of receipt of the results or the end of the required monitoring period (whichever is sooner). Section 141.35, as amended by the proposed rule requires electronic reporting, but allows States to waive the electronic reporting requirement if they so choose. The allowance in the case of small systems for contract laboratories to facilitate the electronic reporting to the States is also new, and will help reduce small system burden. The UCMR does not alter the retention periods for maintaining records under •2.14.

The National Contaminant Occurrence Database Information Requirements, in conjunction with the development of the UCMR, have identified additional data elements for reporting with the analytical results. These data elements are especially important since many of the UCMR list contaminants have not been routinely tested for and sample test data quality indicators are needed to assure quality and to appropriately interpret results. These added data elements can be routinely provided by the laboratories serving the systems. Most of these data elements are already included on laboratory reports but have not been reported or recorded by the States, or forwarded to EPA.

Other data elements required include items such as a sample location identifier (e.g., PWS identification number, and latitude and longitude of the sampling station) and are listed above in Table 1. Since these elements are already on record, there would only be a nominal one-time burden to compile and report these with the UCMR results. The rationale for proposing the inclusion of these data elements is that under current reporting, the results reported do not have detailed information concerning sample precision and accuracy, or location, which would further strengthen the results to be used in making regulatory decisions. It is more efficient and effective to transmit these elements with the original sample test data than to try to collect and collate them at a different point in time. Inclusion of these data elements is consistent with the SDWA Amendments which have expanded the determinations and types of analyses that need to be conducted to develop a rule.

Public Notification

CWSs are required to notify their users of the detection of any contaminants (including unregulated contaminants) in their Consumer Confidence Report, pursuant to •1.153(d)(3)(iv). Monitoring and reporting violations for all systems (CWSs and NTNCWSs) will also be reportable under the public notification rule.

4(b)(ii)(b) States

In response to the regulation, each State will generally undertake the following activities:

- EPA coordination activities
- Data management and support

- Laboratory training
- Program implementation

In addition to each of these activities, which are discussed in more detail below, States may apply for a state-wide waiver for a specific contaminant. The State must provide specific reasoning for each analyte for which a waiver is requested and provide supporting documentation that the contaminant (s) "has not been detected in the source waters or distribution systems, or never produced, used, stored, disposed, released, or naturally present in the State for a period of at least fifteen years prior to the date of [the waiver] application." The Agency, in consultation with the States, anticipates that States will not apply for these waivers. Even where waivers might be appropriate, it would only be for an individual compound that is included in a multi-analyte laboratory method, and thus would not affect the cost or burden estimates. Operating a PWS program involves many other activities. Only those that are affected by the UCMR are considered here.

State Coordination with EPA

State activities that involve coordination with EPA include: review of and response to EPA's proposed State Monitoring Plan, regulation adoption and primacy application, and general ongoing coordination.

If a State identifies systems on the EPA's original proposed State Monitoring Plan (State Plan) that it determines are not appropriate for the representative sample (e.g., if systems are inactive, or have switched to purchased water), the State can propose an alternative plan by selecting other system(s) from EPA's alternate list to replace the ineligible system(s). The State response to the national sampling plan should identify the State's most vulnerable period (if different than the rule-specified default of May - July). It should also identify the 5-25 systems in the State that are most vulnerable to the microbiological contaminants on List 3, in Table 12c, Appendix B.

In addition, EPA assumes that it will be necessary for States to maintain ongoing communications with EPA regarding the requirements of the UCMR. An example of this would be instances when the States need clarification and guidance regarding a specific requirement of the regulation.

Data Management and Support

Data management and support activities include: updating State databases to accommodate the UCMR Program, data entry, general record keeping, and reporting to SDWIS.

The results of all unregulated contaminant monitoring conducted under the UCMR must be reported electronically to SDWIS by each State. Although systems (or their contracted laboratories) are required to report to States in electronic format, States may choose to enter data as an assistance to systems. States also need staff to maintain records of all monitoring results and related data. EPA conservatively estimates State data entry costs, by assuming that all systems that are reporting to them will require data entry. (Note: The UCMR data will be reported to SDWIS for electronic routing to the National Drinking Water Contaminant Occurrence Database (NCOD).)

According to EPA reports which analyzed the results of an ASDWA survey, over 90 percent of States are able to report results from the current round of unregulated contaminant monitoring electronically to SDWIS.⁽¹¹⁾ Thus, approximately 10 percent of the States cannot report this information electronically. These States will need to update their systems to accommodate electronic transfer of unregulated contaminant data. (Though this could be as simple as entering the data into an MS Excel or Lotus spreadsheet.) All States will need some adjustment to their data entry fields to accommodate the new data elements required under this proposal.

Training for Laboratories

For this ICR, it is assumed that States will provide training to laboratory supervisors on the information required to be reported, and how to report these data. In addition, it is assumed that States will provide review and training on newly required laboratory quality control methods, including the procedure for analyzing *Aeromonas hydrophila* samples.

Program Implementation

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

States will initially prepare a letter which describes the requirements of the regulation, the system's monitoring schedule, and the system's requirements

under the regulation. For simplicity, it is assumed that the notification process will occur during 1 year. It is also assumed that States will receive telephone calls from water systems asking for clarification and guidance pertaining to the requirements of UCMR. States will review the unregulated contaminant monitoring results for systems, in part to determine whether a system has met its monitoring and reporting requirements. Finally, if systems do not comply with the UCMR monitoring and reporting requirements, it is assumed that States will issue a notice of violation.

State Staff Training and Overhead

All 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 proportionately to the UCMR staff requirements in the standard State Resource Model.

5 THE INFORMATION COLLECTED -- AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

The following sections describe the Agency activities related to analyzing, maintaining, and distributing the information collected.

5(a) Agency Activities

EPA Headquarters and Regional offices will be responsible for oversight of State public water system programs, and processing and analysis of the UCMR data. EPA implementation activities are categorized, as follows, into three major categories.

- Regulatory support activities

- Analytical cost for small system testing program, and
- National and regional oversight and data analysis.

Many of the EPA activities will take place after the period of analysis for this ICR. For instance, implementation of Screening Surveys and Pre-Screen Testing for the small system testing program, as well as preparations for the second round of the UCMR. EPA activities are listed below and discussed in further detail in Section D of Appendix B.

5(a)(i) Regulatory Support Activities

5(a)(i)(a) Laboratory Capacity and QA/QC Activities

EPA anticipates incurring various contractor costs related to national laboratory capacity and laboratory quality assurance and control, including the following activities:

- QC Audits of Contract Laboratories,
- Additional Contract Laboratory QC / Screening Survey Testing,
- Development of Laboratory Capability, and
- Ongoing Refinement of Laboratory Methods.

5(a)(i)(b) Implementation of Small System Testing Program / Reporting and Data Review Protocol

EPA contractor activities which are assumed for logistical support of the small system testing program include the following:

- Small System Plan Integration / Field Coordination, and
- Establish Reporting System and Protocol for Small System Program.

5(a)(i)(c) Technical Support / Guidance Document Development

Technical support and guidance document development are all-encompassing activities which cannot be considered directly attributable to the small system program, but rather, in support of general program implementation. EPA contractor activities which are assumed include the following:

- General External Laboratory QC Program, and
- Technical Support for Rule Amendments / Guidance Documents.

5(a)(i)(d) Data Quality Review and Analysis

EPA contractor activities also include extensive data quality review and analysis.

5(a)(ii) Analytical Costs for Small System Testing Program

5(a)(ii)(a) Small System Analytical and Shipping Costs

The single largest cost to EPA for implementation of the UCMR is for small system sample analyses. During the ICR period, EPA will pay for the analytical and shipping costs for small systems in the national representative sample for the first year of Assessment Monitoring, which falls in 2001.

EPA also expects to conduct some quality control activities that will not be required of the large systems. Specifically, EPA plans to send duplicates of ten percent of small system samples to a separate laboratory for analysis, and plans to collect some additional, standard water quality parameters for each sampling station at both Index and Non-Index systems. The quality control duplicates are intended to provide standard, real time, QC checks among the different contract laboratories. Water quality parameters will include some anions, cations, chlorine residuals, nitrate, total coliform, temperature, hardness, and specific conductance. This information is intended to enhance the use and interpretation of the UCMR results, providing data on water quality characteristics that may affect contaminant stability and allow analysis of co-occurrence, for example. In addition, EPA plans to collect in depth system operation information from the Index Systems. Contractors will collect detailed observations of system operations that may effect contaminant occurrence, such as nature of source water (what type of aquifer or source water body), number of wells, well depth, treatment, configuration of source water intake, treatment, entry points, distribution systems, and how are sources used (seasonally, blended, etc.).

5(a)(ii)(b) Contractor Site Visits to Index and Small Pre-Screen Testing System

EPA also expects to send contractors on site visits to 30 Index Systems to conduct Assessment Monitoring, each year from 2001 to 2005. In addition, EPA will send contractors to approximately 150 small Pre-Screen Testing systems during the year 2004. With each of the Assessment Monitoring and Pre-Screen Testing samples, contractors will collect water quality parameters at both the Index and Pre-Screen Testing Systems.

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

While it has not been determined if some of the UCMR support activities will be carried out by the EPA or by its contractors, there are key management and oversight activities that must be conducted by EPA Headquarters or its Regional offices. These activities are therefore estimated as labor cost and burden to the Agency. The UCMR program implementation plans assume that EPA will begin preparing for data analysis in the year 2000, and will ensure ongoing evaluation of the data during 2001 through 2005.

5(b) Information Collection Methodology And Management

States will be required to transmit the UCMR data to EPA electronically, and submission will be integrated in the existing quarterly SDWIS reporting cycle. For those few States that cannot already provide an electronic file, this ICR estimates the time and resources necessary for such States to adopt electronic reporting capabilities. Electronic reporting will account for significant collection efficiencies, and will reduce the possibility of data input error.

EPA plans to conduct ongoing data analysis which will include checks for anomalies in the data that may be related to data entry or laboratory errors. Data quality review and analysis will include: continuous analysis of laboratory results, use of Index system results for comparison with small system data, review of all program data, and NCOD review.

The UCMR data will be maintained and analyzed in SDWIS in conjunction with the NCOD. Historically, reporting of analytical results to SDWIS has been limited to MCL exceedances or exceedances of the lead or copper action level. UCMR marks the expansion of this reporting to include more complete analytical results on contaminant occurrence, as well as related source information. The data collected under UCMR will be used for regulation development, to analyze the significance of occurrence and health effects, and to support the critical Agency function of program oversight. Public access to the data is required under a separate EPA regulatory action. The public will be able to access the results of UCMR monitoring through the Consumer Confidence Reports, as well as through the NCOD. In addition, systems that fail to monitor for unregulated contaminants will be required to notify the public.

5(c) Small Entity Flexibility

Note: The following SBREFA analysis summary is the same as that provided in the proposed rule preamble. The RFA analysis is based on the entire UCMR implementation period, rather the three-year ICR period.

Under the Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA, or simply RFA), EPA generally is required to conduct a regulatory flexibility analysis describing the impact of the regulatory action on small entities as part of rulemaking. However, under •5(b) of the RFA, if EPA certifies that the rule will not have a significant economic impact on a substantial number of small entities, EPA is not required to prepare a regulatory flexibility analysis. Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 605(b) and for the reasons set forth below, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities.

For purposes of RFA analyses for SDWA rulemakings, the Agency defines small entities as systems serving 10,000 or fewer customers. This is the system size category specified in SDWA as requiring special consideration with respect to small system flexibility, so EPA has selected it as the criterion for a small business entity. EPA also consulted with the Small Business Administration regarding this definition and used it in the Consumer Confidence Reports rulemaking (63 FR 44511-44536 (August 19, 1998)). For further information regarding this definition of small entities, see the referenced Federal Register notice.

EPA has determined that the UCMR will affect small water utilities, since it is applicable to a subset of small community and non-transient noncommunity water systems. However, the systems impacted are limited to a representative sample of approximately 800 small public water systems (i.e., those serving 10,000 or fewer) or 1.2 percent of systems in that size category. These systems will be required to conduct monitoring, as specified in the UCMR (i.e., collect and prepare samples for shipping). EPA will assume all costs for testing of the samples and for shipping the samples from these systems to specific certified laboratories located throughout the United States. EPA has set aside \$2 million from the State Revolving Fund (SRF) in Fiscal Years 1998 and 1999, and plans to do so into the future with its authority to set aside SRF monies for the purposes of implementing this provision of SDWA.

EPA has estimated the impact of the proposed rule and concludes that the impact of the rule on small water systems will not be significant. The rationale for this conclusion is that EPA plans to pay the full costs of shipping and testing samples for small systems and does not plan, under any scenario, to ask systems to pay these costs. Thus, the costs to these systems will be limited to the labor hours associated with collecting a sample and preparing it for shipping. EPA will seek to implement an optimum and scientifically credible UCMR program that will provide a firm basis for future regulatory decisions.

System costs under both a "Full Implementation" and "Limited Implementation" scenario were estimated to ensure that small systems would not incur significant economic impacts under any circumstance. Cost summaries for both scenarios are provided below. (It is possible that up to 158 additional small systems could be involved in the unlikely event that all small Pre-Screen Testing systems selected fall outside of the national representative sample. Using an assumption of only 800 systems involved, however, is a conservative, or worst case, assumption, when estimating the burden and cost *per* system; i.e., this allocates the total cost and burden of the full implementation over 800 systems versus 958 systems. Hence, this assumption is used in the following estimates.)

Full Implementation Scenario

EPA guidance suggests, in implementing the RFA, that different tests be used to analyze small entity impacts on privately-owned versus publicly-owned entities, due to the different economic characteristics of these ownership types. For publicly-owned systems, EPA guidance suggests that a

"revenue test" be used, which compares annual system costs attributed to the rule to the system's annual revenues. Privately-owned systems are typically submitted to a "sales test", which involves the analogous comparison of UCMR-related costs to a privately-owned system's sales. EPA assumes that the distribution of the national representative sample of small systems will reflect the proportions of publicly- and privately-owned systems in the national inventory. The estimated distribution of the representative sample, categorized by ownership type, source water, and system size, is presented in Table 3.

Table 3. Number of Publicly- and Privately-Owned Small Systems to Participate in Assessment Monitoring					
Size Category	Publicly-Owned Systems		Privately-Owned Systems		Total - All Systems
	<i>Non-Index Systems</i>	<i>Index Systems</i>	<i>Non-Index Systems</i>	<i>Index Systems</i>	
GROUND WATER SYSTEMS					
500 and under	20	1	76	2	99
501 to 3,300	159	6	72	3	240
3,301 to 10,000	158	7	44	2	211
<i>Subtotal Ground Water Systems</i>	337	14	192	7	550
SURFACE WATER SYSTEMS					
500 and under	3	0	8	0	11
501 to 3,300	56	2	25	1	84
3,301 to 10,000	116	5	33	1	155
<i>Subtotal Surface Water Systems</i>	175	7	66	2	250
TOTAL	512	21	258	9	800

The basis for the UCMR RFA certification under full UCMR implementation is as follows: the average annual compliance costs of the rule represent less than one percent of revenues/sales for the 800 small water systems that will be affected. The EPA estimates that Agency and system costs for implementing small system sampling for the full UCMR program (2001-2005) will be approximately \$15.1 million. Since the Agency specifically structured the rule to avoid a significant impact to small entities by assuming all costs for laboratory analyses, shipping, and quality control, EPA costs comprise approximately 99 percent (\$15.0 million) of the total. (Note that EPA's contribution to the small system program is assumed to include all small system analytical and shipping costs, as well as all non-labor program support costs.) Table 4 presents the annual costs to small systems and to EPA for the small system sampling program, along with the number of participating small systems during each of the five years of the program.

Table 4. EPA Costs for Small Systems under Full Implementation of UCMR

Cost	2001	2002	2003	2004	2005	Total
Description ¹	(AM)	(AM & SS1)	(AM & SS2)	(AM for Index only & PST)	(AM Index only)	
<i>Costs to EPA for Small System Program (including Assessment Monitoring, Screening Survey, and Pre-Screen Testing): quality assurance, ongoing coordination, data analysis, analytical costs, shipping costs, and costs for contractor site visits to small Index and Pre-Screen Testing systems²</i>						
	\$3,392,183	\$3,538,029	\$3,533,202	\$3,814,617	\$752,537	\$15,030,568
<i>Costs to Small Systems (including Assessment Monitoring, Screening Survey, and Pre-Screen Testing): additional labor for reading regulations / guidance, sampling activity, and reporting and record keeping</i>						
	\$27,871	\$26,915	\$26,915	\$15,116	\$2,499	\$99,316
Total Costs to EPA and Small Systems for UCMR						
	\$3,420,054	\$3,564,944	\$3,560,117	\$3,829,733	\$755,036	\$15,129,884
<i>Number of Systems to Monitor each Year: Non-Index and Index in 2001-2003, Index only in 2004-2005³</i>						
<i>Public</i>	191	191	191	107	21	533
<i>Private</i>	96	96	95	81	9	267
TOTAL	287	287	286	188	30	800

1. AM = Assessment Monitoring; SS1 and SS2 = Screening Surveys Years One and Two; PST = Pre-Screen Testing.

2. EPA costs during the year 2001 include some start-up costs that may be actually be incurred during the year 2000.

3. Total number of systems is 800. All 30 Index systems sample during each year 2001-2005. One-third of Non-Index systems sample during each year from 2001-2003. A total of 180 small systems conduct Screening Surveys during each year, 2002 and 2003. 158 small systems conduct the Pre-Screen Testing during 2004. The rows do not add across, because the same 30 Index systems sample during every year of 5-year implementation cycle, and because the Screening Survey systems are a subset of the original sample of 800 systems (e.g., they are conducting multiple types of sampling). Pre-Screen Testing Systems may or may not be a subset of the original 800 systems.

System costs are attributed to the additional labor required for reading State letters, monitoring, reporting, and record keeping. Assuming that systems will efficiently conduct UCMR sampling (e.g., coincident with other required monitoring), the estimated average annual per system labor burden for full UCMR implementation will be: \$20 (1.0 hours) for ground water systems; and \$35 (1.6 hours) for surface water systems. In total, ground water and surface water systems average 1.2 hour of burden per year with an average annual cost of \$25. Average annual cost, in all cases, is less than 0.3 percent of system revenues/sales. Therefore, as stated above, the Administrator certifies that this proposed rule, as funded by EPA, will not have a significant

economic impact on small entities. Tables 5a and 5b below present the estimated economic impacts in the form of revenue/sales tests for publicly- and privately-owned systems. Further details of small system burden and cost are presented in Tables 9 and 10.

Table 5a. UCMR Full Implementation Scenario: Analysis for Publicly-Owned Systems (2001-2005)

System Size	Annual Number of Systems Impacted ¹		Average Annual Hours per System (2001-2005)		Average Annual Cost per System (2001-2005)		"Revenue Test" ²		
	Number	% of US Total	Non-Index	Index	Non-Index	Index	Non-Index	Index	
GROUND WATER SYSTEMS									
500 and under	5.8	0.01%	0.8	3.0	\$10.99	\$42.78	0.07%	0.26%	
501 to 3,300	41.4	0.34%	0.8	3.8	\$11.44	\$54.38	0.01%	0.05%	
3,301 to 10,000	42.5	1.77%	1.0	4.6	\$29.29	\$128.80	0.01%	0.03%	
SURFACE WATER SYSTEMS									
500 and under	2.3	0.12%	2.9	0.0	\$42.49	\$0.00	0.15%	0.00%	
501 to 3,300	17.9	0.98%	1.6	5.2	\$22.66	\$75.40	0.01%	0.04%	
3,301 to 10,000	30.5	3.03%	1.3	5.0	\$35.28	\$140.00	0.00%	0.02%	

1. Calculated as 1/5 of the Non-Index sample, plus all Index systems for each year from 2001-2005; actual sampling for Non-Index systems takes place over three years, while that of Index systems occurs over each of five years. Since Screening Survey systems are a subset of the Assessment Monitoring systems, this does not affect the average annual number of systems (e.g., these systems are conducting monitoring for two components of the UCMR program at the same time).

2. "Revenue Test" was used to evaluate the economic impact of an information collection on small government entities (i.e., publicly-owned systems). Costs are presented as a percentage of median annual revenue in each size category.

Table 5b. UCMR Full Implementation Scenario: Analysis for Privately-Owned Systems (2001-2005)

System Size	Annual Number of Systems Impacted ¹		Average Annual Hours per System (2001-2005)		Average Annual Cost per System (2001-2005) ¹		"Sales Test" ²		
	Number	% of US Total	Non-Index	Index	Non-Index	Index	Non-Index	Index	
GROUND WATER SYSTEMS									

500 and under	21.4	0.05%	0.8	3.0	\$10.99	\$42.78	0.07%	0.27%
501 to 3,300	18.8	0.15%	0.8	3.8	\$11.44	\$54.38	0.01%	0.05%
3,301 to 10,000	11.9	0.50%	1.0	4.6	\$29.29	\$128.80	0.00%	0.02%
SURFACE WATER SYSTEMS								
500 and under	6.5	0.34%	2.9	0.0	\$42.49	\$0.00	0.19%	0.00%
501 to 3,300	8.1	0.45%	1.6	5.2	\$22.66	\$75.40	0.01%	0.05%
3,301 to 10,000	8.5	0.85%	1.3	5.0	\$35.28	\$140.00	0.01%	0.02%

1. Calculated as 1/5 of the Non-Index sample, plus all Index systems for each year from 2001-2005; actual sampling for Non-Index systems takes place over three years, while that of Index systems occurs over each of five years. Since Screening Survey systems are a subset of the Assessment Monitoring systems, this does not affect the average annual number of systems (e.g., these systems are conducting monitoring for two components of the UCMR program at the same time).

2. "Sales Test" was used to evaluate the economic impact of an information collection on small private entities (i.e., privately-owned systems). Costs are presented as a percentage of median annual sales in each size category.

Limited Implementation Scenario

Despite the expected \$2 million per year budget, EPA recognizes that funding levels vary from year to year and thus cannot guarantee the precise amount that will ultimately be available to implement its UCMR program (although a considerable portion of those funds are currently on hand). In the event that an amount commensurate with funding the optimal UCMR program (in terms of numbers of small systems sampled and numbers of contaminants analyzed) may not be available, the Agency will adjust the UCMR program to accommodate the available funds. This adjustment may necessitate use of relatively fewer sample sites, testing of fewer contaminants, or both. EPA would use a random number generator select a representative sample of systems that would accommodate the available funds.

While the Agency considers the scenario of no additional funding to be unlikely, EPA also evaluated the scenario of "current funds only" for purposes of this RFA analysis. This "current available funds" scenario is the case in which EPA would receive no further funding for small system testing beyond the \$4 million that is currently set aside from the State Revolving Funds from Federal Fiscal Years 1998 and 1999. EPA anticipates funding this program such that no small system would incur testing costs as intended in the legislation. By analyzing small system impact under such a scenario, EPA can demonstrate that, regardless of funding levels, no small systems will be significantly impacted by the UCMR. Given the flexibility of the proposed rule, EPA can ensure defensible results, balanced with available funding.

In the optimal anticipated program, the sample of 800 systems is derived by applying a 99 percent confidence level, with 1 percent error tolerance. To accommodate a \$4 million budget, the representative sample of small systems would be reduced to approximately 400 systems. This smaller sample size would be less rigorous than the anticipated sample of 800 systems; the sample error would be approximately plus or minus 5 percent, affecting the scope and confidence of the national decisions that could be derived. These 400 systems would incur only labor costs related to collecting and packing the samples, while EPA would pay the shipping and testing costs for these samples.

With the currently available \$4 million, EPA will be able to fund approximately 48 percent of the planned Assessment Monitoring program for small systems. To estimate the costs under this scenario, it is assumed that only the Assessment Monitoring component of UCMR would be implemented. It is assumed that the smaller representative sample would be allocated across system size categories in the same proportions as those in the sample of 800 systems, with ten of these systems being Index sites, and will also reflect the proportions of publicly- and privately-owned systems in the national inventory of PWSs, as seen in Table 6. Furthermore, EPA preparations for the Screening Surveys, Pre-Screen Testing, and future UCMR cycles are assumed to be dropped, since with limited funds, current implementation would take precedence over planning for further monitoring.

Table 6. Number of Publicly- and Privately-Owned Systems to Participate in Assessment Monitoring, for Limited Funding Program¹

Size Category	Publicly-Owned Systems		Privately-Owned Systems		Total - All Systems
	<i>Non-Index Systems</i>	<i>Index Systems</i>	<i>Non-Index Systems</i>	<i>Index Systems</i>	
GROUND WATER SYSTEMS					
500 and under	11	0	38	1	50
501 to 3,300	80	2	36	1	119
3,301 to 10,000	79	2	22	1	104
<i>Subtotal Ground Water Systems</i>	170	4	96	3	273
SURFACE WATER SYSTEMS					
500 and under	1	0	4	0	5
501 to 3,300	28	1	13	0	42
3,301 to 10,000	58	2	16	0	76
<i>Subtotal Surface Water Systems</i>	87	3	33	0	123
TOTAL	257	7	129	3	396

1. The Limited Funding Program assumes that the only funds available to run the program are those that are currently in hand -- \$4 million of set aside funds from Federal Fiscal Years 1998 and 1999. This is a "worst case" funding scenario.

The Agency is concerned that a reduced sample size will reduce the statistical likelihood that the observed contaminant occurrence levels will be representative of actual occurrence across the nation. Because of this, the Agency will actively pursue funding for the full program described in this Preamble.

Under the limited funding scenario, EPA costs for Assessment Monitoring would primarily be incurred from 2001 to 2003. Systems are assumed to sample during one year of the three-year period, with one-third of systems sampling during each year. However, Index systems are assumed to monitor during each of the three Assessment Monitoring years. The distribution of costs to EPA and small systems over the entire five years is presented below in Table 7.

Table 7. EPA Costs for Small Systems -- Limited \$4 million Program						
Cost	2001	2002	2003	2004	2005	Total
<i>Costs to EPA for Assessment Monitoring Program: Quality assurance, ongoing coordination, data analysis, shipping costs, testing costs, reporting and analysis costs, and costs for contractor site visits to "Index" systems</i>						
	\$1,367,947	\$1,082,341	\$1,082,341	\$280,422	\$186,948	\$3,999,999
<i>Costs to Small Systems (Assessment Monitoring): including additional labor for reading regulations / guidance, sampling activity, and reporting and record keeping</i>						
	\$13,405	\$11,756	\$11,756	\$0	\$0	\$36,917
Total Costs to EPA and Small Systems for Assessment Monitoring						
	\$1,381,352	\$1,094,097	\$1,094,097	\$280,422	\$186,948	\$4,036,916
<i>Number of Systems each Year: Assessment Monitoring and Index Systems in 2001-2003¹</i>						
<i>Public</i>	92	92	92	0	0	264
<i>Private</i>	46	46	46	0	0	132
TOTAL	138	138	138	0	0	396

1. Rows do not add across because the 10 Index systems sample during each year 2001-2003. One-third of Non-Index systems sample during each year from 2001-2003.

Under this limited \$4 million program, EPA costs represent approximately 99 percent of the national cost for the small system sampling program. As in full UCMR implementation, small system costs are attributed to the additional labor required for reading State letter, monitoring, reporting, and record keeping. It is estimated that under the limited program (e.g., Assessment Monitoring only), the average annual per system labor burden will be: \$15 (0.7 hours) for ground water systems; and \$27 (1.2 hours) for surface water systems. In total, ground water and surface water systems average 0.9 hours of burden per year, with an average annual cost of \$19. System burdens here are lower than in the full implementation scenario primarily because no Screening Surveys or Pre-Screen Testing will occur under this scenario.

Through revenue and sales tests, determinations of economic impact are presented below in Tables 8a and 8b, respectively. Under this limited \$4 million program, systems will be subject to less required monitoring than in the full UCMR program. For both full UCMR implementation and the limited funding scenario, average annual cost is in all cases lower than 1 percent of annual sales/revenues. Thus, even in this worst case, limited implementation scenario, EPA certifies that this proposed rule would not impose a significant economic impact on small entities.

Table 8a: UCMR Limited Implementation Scenario: Analysis for Publicly-Owned Systems (2001-2005)

System Size	Annual Number of Systems Impacted ¹		Average Annual Hours per System (2001-2005)		Average Annual Cost per System (2001-2005)		"Revenue Test" ²	
	Number	% of US Total	Non-Index	Index	Non-Index	Index	Non-Index	Index
GROUND WATER SYSTEMS								
500 and under	2.2	0.00%	0.6	1.9	\$8.06	\$27.41	0.05%	0.17%
501 to 3,300	17.1	0.14%	0.6	2.1	\$9.15	\$30.89	0.01%	0.03%
3,301 to 10,000	17.2	0.72%	0.8	2.6	\$22.16	\$73.92	0.00%	0.02%
SURFACE WATER SYSTEMS								
500 and under	0.3	0.01%	1.1	0.0	\$15.41	\$0.00	0.05%	0.00%
501 to 3,300	6.0	0.33%	1.2	3.2	\$17.07	\$46.98	0.01%	0.03%
3,301 to 10,000	12.6	1.25%	1.1	3.1	\$31.35	\$87.36	0.00%	0.01%

1. Calculated as 1/5 of publicly-owned Non-Index sample, plus all public Index systems for each year from 2001-2003.

2. "Revenue Test" was used to evaluate the economic impact of an information collection on small governments (e.g., publicly-owned systems). Costs are presented as a percentage of median annual revenue in each size category.

System Size	Annual Number of Systems Impacted ¹		Average Annual Hours per System (2001-2005)		Average Annual Cost per System (2001-2005) ¹		"Sales Test" ²	
	Number	% of US Total	Non-Index	Index	Non-Index	Index	Non-Index	Index
GROUND WATER SYSTEMS								
500 and under	8.0	0.02%	0.6	1.9	\$8.06	\$27.41	0.05%	0.17%
501 to 3,300	7.8	0.06%	0.6	2.1	\$9.15	\$30.89	0.01%	0.03%
3,301 to 10,000	4.8	0.20%	0.8	2.6	\$22.16	\$73.92	0.00%	0.01%
SURFACE WATER SYSTEMS								
500 and under	0.8	0.04%	1.1	0.0	\$15.41	\$0.00	0.07%	0.00%
501 to 3,300	2.7	0.15%	1.2	3.2	\$17.07	\$46.98	0.01%	0.03%
3,301 to 10,000	3.5	0.35%	1.1	3.1	\$31.35	\$87.36	0.01%	0.02%

1. Calculated as 1/5 of the Non-Index sample, plus all Index systems for each year from 2001-2003.

2. "Sales Test" was used to evaluate the economic impact of an information collection on small privately-owned entities. Costs are presented as a percentage of median annual sales in each size category.

5(d) Collection Schedule

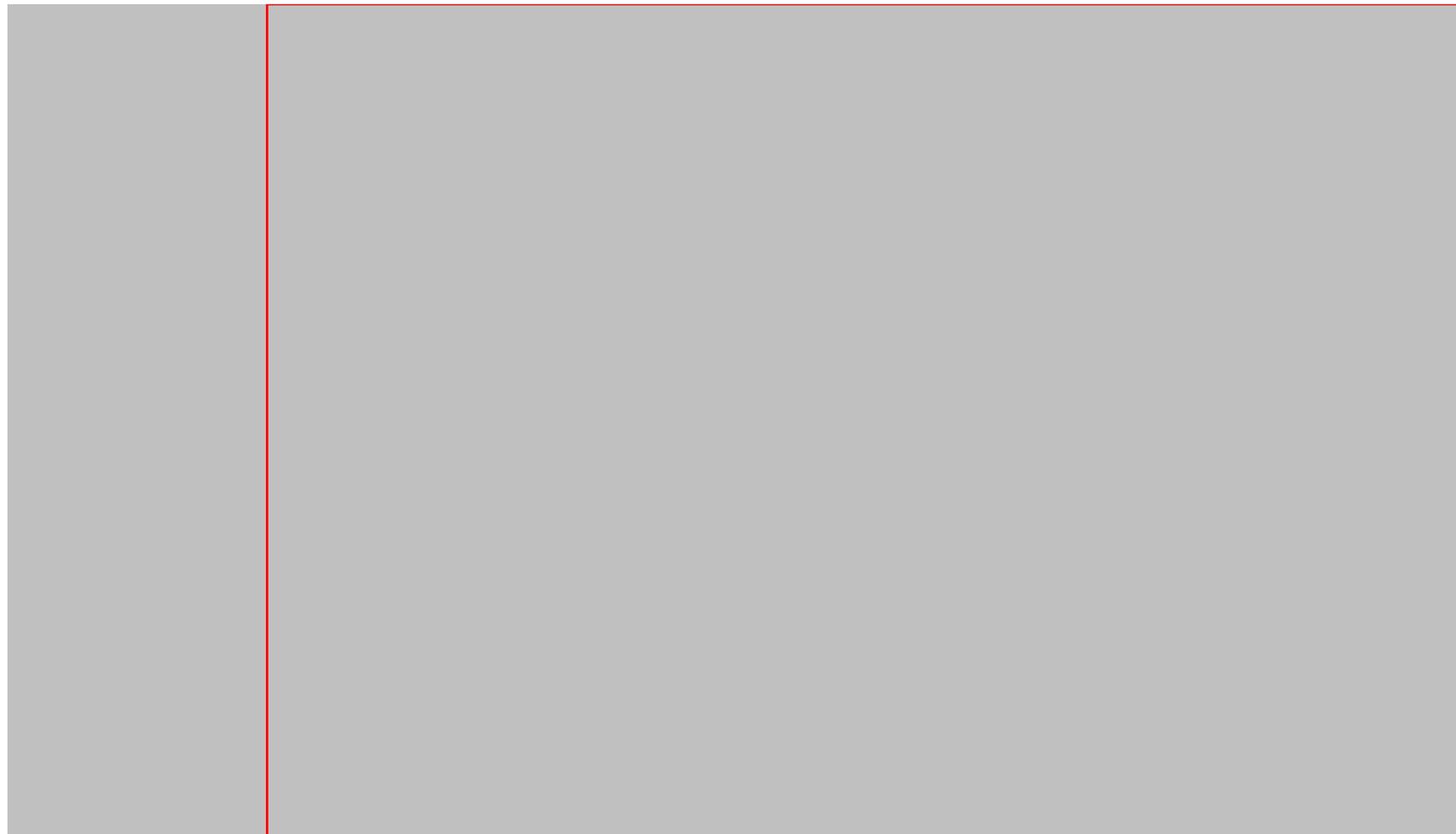
As discussed in Section 3(d), EPA has considered various alternatives for the frequency of monitoring and sample collection and is recommending the one that it considers to be sufficient to gather necessary information on occurrence of unregulated contaminants, without significantly burdening small systems. Assessment Monitoring activities are expected to occur in a 3-year period from 2001 through 2003. However, Assessment Monitoring for Index Systems will continue each year through 2005. Screening Surveys will take place in 2002 and 2003. Pre-Screen Testing will take place in 2004.

All UCMR activities that occur after the year 2001 are not included in this ICR analysis. The activity schedules for all respondents can be found in Appendix B: systems -- Table 10; States -- Table 21; EPA -- Table 24.

6 ESTIMATING THE BURDEN AND COST OF THE COLLECTION

This section describes the respondent burden and cost for activities under the UCMR, as well as for the current unregulated monitoring program (e.g., "baseline" estimates). 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)**.

This ICR focuses only on cost of the UCMR data collection over the years 1999 through 2001. Cost tables that are presented in this section have analogous tables in Appendix B which present costs for the entire program implementation period (2001-2005). Figure 2, below, illustrates that the ICR average annual costs include: 1 year of no costs (1999), 1 year of start-up costs for States and EPA (2000), and 1 year of average program implementation costs (2001).



(a) Index Systems sample during each of the 5 UCMR implementation years (2001-2005). During 2005, it is expected that they will be the only systems conducting sampling in this first round of the UCMR program.

(b) Since the schedule of the UCMR program implementation begins in the year 2001, the annual average cost for the ICR years 1999-2001 will include: one year of no costs (1999), one year of start-up costs for the States and EPA (2000), and one year of program implementation costs (2001).

There are two primary categories of costs associated with the UCMR: (1) labor costs, such as program implementation, sample collection, record keeping, reporting, and data analysis; and (2) non-labor costs, such as laboratory fees for analyses of samples, shipping charges, and other contractor costs. The majority of costs are attributed to monitoring activities, primarily for purchased laboratory analytical services. As noted, Assessment Monitoring targets a list of 11 contaminants (2 VOCs, 8 SOCs, and 1 microorganism). Screening Surveys and Pre-Screen Testing will not be conducted until after the effective period of this ICR (see Figure 2, above).

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 entry points for each system, and analytical services. Some of these assumptions, and their sources, were introduced in Section **3(c)** "Consultations". These assumptions are described below and in further detail in Section B of Appendix B to this ICR.

Laboratory method is the major determinant of analytical cost. While some of the contaminants are analyzed individually, many of the EPA-approved analytical methods assess several contaminants simultaneously. Moreover, some methods that are currently used for the regulated Phase II/V chemical monitoring also accommodate some chemicals on UCMR List 1, the Assessment Monitoring list. It is assumed that, whenever possible, large systems will only incur an incremental cost increase over their current analytical costs for these chemicals. Shown in Appendix B, Tables 12a through 12c are the common methods assumed for this cost analysis, the contaminants included in each method, the unit cost for analysis, and the incremental cost (*i.e.*, estimated laboratory fee for an analysis that coincides with ongoing compliance monitoring). The estimates of method costs are based on current laboratory pricing schedules.

The baseline in this ICR is considered to be the current Phase II/V unregulated monitoring program. As noted in Section **1(b)**, the past (and current) unregulated monitoring was integrated with the Phase I, II/V compliance monitoring. Because of this program integration, past program cost estimates only provide limited information that is specific to the unregulated contaminant monitoring component of chemical monitoring. The burden and cost for the UCMR program are compared to baseline estimates which were calculated for the purposes of this ICR. In some burden/cost categories, substantial reductions will be realized, compared to the current unregulated contaminant monitoring program. For example, States will be collecting and reporting monitoring data from perhaps 30,000 fewer water systems, because only a representative sample of systems serving 10,000 or fewer people will be involved in the UCMR. EPA and large systems will incur increased costs attributed to sample analysis and shipping. Specific assumptions for the baseline estimates are described below, in Section **6(f)**: Reasons for Change in Burden. The common methods assumed for the baseline cost analysis, the contaminants included in each method, the unit cost for analysis, and the incremental cost (*i.e.*, estimated costs for analysis that coincides with ongoing compliance monitoring) are shown in Appendix B, Table 30.

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

The estimates of system labor burden and labor cost are shown under Section **6(a)(i)**, and the estimates of non-labor costs are shown under Section **6(a)(ii)**.

Table 9 displays labor and non-labor costs by year for the three-year ICR period. As previously discussed, monitoring under the UCMR will be on a five-year cycle, beginning with the initial five-year cycle of 2001 to 2005. The ICR period of 1999-2001 only coincides with one year of the program implementation. Small systems incur labor costs only. Large systems will incur both labor and non-labor costs, as they are responsible for analytical costs. The majority of system costs are attributed to the Assessment Monitoring component of the UCMR, which is scheduled to take place from 2001 through 2003.

Table 9. Yearly Cost to Systems for Implementation of the Assessment Monitoring Component of the UCMR Program, by System Size and by Type of Cost

Cost Description	1999	2000	2001	Total
SMALL SYSTEMS				
<i>(serving 10,000 or fewer people)</i>				
<i>Total System Labor Costs (includes cost for reading regulations, for monitoring and monitoring assistance, and for reporting and record keeping)</i>				
	\$0	\$0	\$27,870	\$27,870
<i>System Costs for Laboratory Analysis and Shipping</i>				
	\$0	\$0	\$0	\$0
<i>Subtotal -- Small System Costs</i>	<i>\$0</i>	<i>\$0</i>	<i>\$27,870</i>	<i>\$27,870</i>
LARGE SYSTEMS				
<i>(serving greater than 10,000 people)</i>				
<i>Total System Labor Costs (includes cost for reading regulations, for monitoring, and for reporting and record keeping)</i>				
	\$0	\$0	\$259,060	\$259,060
<i>System Costs for Laboratory Analysis and Shipping</i>				
	\$0	\$0	\$7,747,520	\$7,747,520
<i>Subtotal -- Large System Costs</i>	<i>\$0</i>	<i>\$0</i>	<i>\$8,006,580</i>	<i>\$8,006,580</i>
TOTAL - ALL SYSTEM COSTS	\$0	\$0	\$8,034,450	\$8,034,450

The nationwide cost to systems for implementing the total UCMR program over the three-year ICR period is approximately \$8.03 million. Large

systems will incur most of this cost, approximately \$8.01 million. Annual cost per small system for UCMR implementation over the three-year ICR period is approximately \$32 per system, all attributed to labor. Approximately 287 small systems will participate in the UCMR during the ICR period. Annual cost per large system is estimated to be \$93 for labor plus \$2,793 for analytical (non-labor) costs. It is estimated that 925 large systems will participate in UCMR activities during the ICR period. Details of per system labor burdens and costs for the UCMR program (Assessment Monitoring only during the ICR period) are presented below in Tables 10. In addition, this table presents a summary of burden and cost per response. "Response" is defined as each required reporting event for the system. All labor and non-labor costs associated with a reporting event (reading the regulations, monitoring, and the reporting itself) are included in the per response cost estimate.

Table 10. Assessment Monitoring Per System and Per Response Costs

Burden / Cost	Total over 1999-2001		Annual Average over 1999-2001	
	<i>Small Systems</i>	<i>Large Systems</i>	<i>Small Systems</i>	<i>Large Systems</i>
Number Responses per Respondent	2.6	2.9	0.9	1.0
PER RESPONDENT:				
Labor Cost	\$97	\$280	\$32	\$93
Non-Labor Cost	\$0	\$8,379	\$0	\$2,793
Burden (labor hours)	4.5	10.0	1.5	3.3
PER RESPONSE:				
Labor Cost	\$37	\$95	\$12	\$32
Non-Labor Cost	\$0	\$2,841	\$0	\$947
Burden (labor hours)	1.7	3.4	0.6	1.1

6(a)(i) Estimates of Burden and Labor Costs to Public Water Systems

The UCMR will affect 3,574 PWSs, including non-purchased CWSs and non-purchased NTNCWSs. During the ICR years of 1999-2001, it is estimated that approximately one-third of these will be affected, since monitoring begins in 2001. Table 11 below presents the estimated numbers of regulated systems, by system size and water source. The water system labor burden consists of three primary activities: (1) reading the regulations or State letter; (2) monitoring or monitoring assistance; and (3) reporting and record keeping. Hourly labor rates (including overhead) are estimated at \$28 per hour for staff in water systems serving more than 3,300 people and \$14.50 per hour for systems serving 3,300 or fewer people.⁽¹²⁾ See Sections A and B of Appendix B for detailed explanations of the inventory, numbers of systems affected, and labor cost assumptions.

Table 11. Number of Index and Non-Index Systems to Conduct Assessment Monitoring, by Source Water and System Size¹

Size Category	Ground Water Systems		Surface Water Systems		Total - All Systems
	<i>Non-Index Systems</i>	<i>Index Systems</i>	<i>Non-Index Systems</i>	<i>Index Systems</i>	
500 and under	96	3	11	0	110
501 to 3,300	231	9	81	3	324
3,301 to 10,000	202	9	149	6	366
<i>Subtotal 10,000</i>	<i>529</i>	<i>21</i>	<i>241</i>	<i>9</i>	<i>800</i>
10,001 to 50,000	1,254	n/a	927	n/a	2,181
50,001 and over	204	n/a	389	n/a	593
<i>Subtotal >10,000</i>	<i>1,458</i>	<i>n/a</i>	<i>1,316</i>	<i>n/a</i>	<i>2,774</i>
TOTAL	1,987	21	1,557	9	3,574

1. Index systems will sample during each of the 5 years, 2001-2005 for the List 1 (1999) Contaminants. Each Non-Index and large system will sample for the List 1 (1999) Contaminants during one of three years (2001-2003), with one-third of the total number of systems assumed to sample during each of these three years. Approximately one-third of the systems presented here will be impacted during the ICR years of 1999-2001.

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

Systems are assumed to read the UCMR regulations and/or a State issued guidance letter at the beginning of their required monitoring year (i.e., one-third of the systems in each of the three Assessment Monitoring years). Small systems can rely on the State for information pertaining to the regulation, rather than reading the regulation. These systems are expected to spend one hour, on average, reading a letter from the State that outlines the requirements of the UCMR. Large systems are assumed to read both the regulation and information from the State, requiring on average one-half day (4 hours). National costs are estimated by multiplying the average burden hours by the average system labor rate, times the number of systems effected.

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

For Assessment Monitoring, it is assumed that one-third of all small Non-Index and large systems will conduct monitoring activities in each year from 2001 through 2003, with an estimated burden of 0.5 hours per entry 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 assumed that where possible, all systems (except for Index systems) will coordinate their sampling with the Phase II/V Standard Monitoring Framework (40 CFR Part 141) for sampling of chemical contaminants. Section B.3 of Appendix B explains the coincident sampling assumptions in further detail.

These same systems are assumed to collect samples for *Aeromonas hydrophila* analysis along with their monitoring required under the Total Coliform Rule, thus no additional labor burden is allotted. Index systems will assist an EPA-appointed sample collector to collect Assessment Monitoring samples during each year from 2001 to 2005. Because Index Systems cannot choose the timing of their monitoring activities, they are assumed to require an average of 0.25 hours to assist the sample collector at each monitoring point.

All small systems in the national representative sample (both Index and Non-Index) will also be required to collect a sample for standard water quality parameters (e.g., basic ions, nitrate) at each sampling station (i.e., all entry and distribution system sampling points). EPA will also pay for this testing. No additional labor burden is allotted to systems, since they will already be collecting samples at each sampling station.

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

Systems are assumed to require on average 0.5 hours per monitoring period to report analytical results to the State and to maintain their own records of the results. The burden associated with the one-time reporting of additional required data elements under UCMR is estimated to be 0.5 hours per system for all systems. This one-time burden is allotted with each system's first reporting period.

EPA considers this burden assumption to be conservative, since much of the UCMR activities will coincide with Phase II/V and other contaminant reporting and record keeping. In addition, for small systems, electronic reporting to States will be provided by the EPA-designated laboratories.

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

Systems are required to notify their users of the detection of any unregulated chemicals. Specifically, the results of UCMR monitoring will be reported through the Consumer Confidence Reports (63 FR 44512 (August 19, 1998)) and the revised Public Notification Rule (due late 1999). Failure to monitor for unregulated contaminants required through the UCMR would be reportable under the public notification rule. Therefore, no additional public notification burden is assumed under the UCMR.

6(a)(ii) Estimates of Non-labor Costs to Public Water Systems

Under the UCMR, no small system will incur non-labor costs. By design of the rule, the EPA assumes all laboratory and shipping costs for the systems in the national representative sample of small systems. Tables 9 and 10 summarize non-labor, analytical and shipping costs. For the ICR period of 1999 to 2001, it is estimated that large systems will incur \$2.7 million per year in analytical and shipping costs. The estimated 925 large systems that will participate during the ICR period will incur an average annual non-labor cost of \$2,793 per system.

For large systems, the most significant cost associated with the implementation of the UCMR is the cost of laboratory services for contaminant analysis. The estimated laboratory analytical cost associated with the Assessment Monitoring component of UCMR is shown in Tables 2. Estimated laboratory fees for the Screening Survey and Pre-Screen Testing components are presented in Section B.4 of Appendix B, since these components are implemented after the period of analysis for this ICR.

Note that instead of paying the full analytical cost for Assessment Monitoring, large systems may pay only the smaller "incremental" analytical costs (listed in Table 2) when UCMR monitoring coincides with ongoing Phase II/V compliance monitoring. In some cases, UCMR monitoring can utilize the same laboratory analytical methods that are required for ongoing compliance monitoring. Therefore, when UCMR monitoring and Phase II/V monitoring are conducted concurrently, only incremental fees are charged for analysis of the additional UCMR compounds. With methods that are not currently in use, no cost savings can be realized.

In addition, large systems incur costs for shipment of the full sample bottles from the system to the laboratory. Systems are assumed to ship a parcel of full sample bottles to laboratories for each entry point during each monitoring period. Cost efficiencies for system shipping charges are also applied, assuming lower costs where UCMR program sampling coincided with current monitoring schedules. For detailed explanation of the analytical and shipping cost calculations, see Section B.4 of Appendix B.

6(b) Estimating the Burden and Cost to States

EPA estimates that the total burden over 3 years (1999-2001) for 56 States/Primacy Agencies to implement the UCMR will be 23,717 hours, with a total cost (labor plus non-labor) of \$1.1 million. Although State costs will primarily be attributed to labor, it is assumed that some States will incur a one-time non-labor cost for contractor assistance to update the State database to comply with UCMR electronic reporting requirements. On a nationwide basis, this one-time non-labor cost is estimated to be \$140,000. On average, the annual cost to each State including labor and non-labor costs for implementing the UCMR program is expected to be \$6,480, with an annual labor burden per State of 141 hours (slightly less than 1/10 FTE). EPA emphasizes, however, that these are *average* State costs. Some States may incur annual costs that are greater than the average, and some may incur little or no costs, depending on the number of systems in the State Monitoring Plan and upon structure of the State drinking water program. (Note: Many aspects of State burden are related to the number of systems involved. With the UCMR design, using a statistical sample of small systems, each State will have very few systems, relative to their normal program population of systems. For example, nearly 75 percent of all States will have less than 10 small systems involved.) See Tables 12 and 13 for a detailed summary of estimated State burdens and costs.

Table 12. Yearly Total Cost to All States/Primacy Agencies for Implementation of UCMR, by Type of Cost¹

Cost Description	1999	2000	2001	Total
<i>EPA Coordination Activities</i> (review of State Monitoring Plan, identification of Pre-Screen Testing systems, most vulnerable period, regulation adoption, primacy application, ongoing coordination)	\$0	\$279,360	\$77,760	\$357,120
<i>Data Management and Support</i> (updating data system, data entry, record keeping)	\$0	\$260,960	\$21,600	\$282,560
<i>Laboratory Training</i> (for reporting requirements and technical training)	\$0	\$45,760	\$0	\$45,760
<i>Program Implementation</i> (system schedule and rule introduction, review of data, system support, enforcement)	\$0	\$100,800	\$122,400	\$223,200
<i>Overhead Costs</i> (supervision, staff training, clerical)	\$0	\$131,251	\$48,787	\$180,038
TOTAL - All State	\$0	\$818,131	\$270,547	\$1,088,678

1. All costs are attributed to State labor, except for a one time allowance during the year 2000 for updating of State databases for electronic reporting.

Table 13. UCMR Per State and Per Response Costs

Burden / Cost	Total for 1999-2001¹	Annual Average (over 3-year ICR period)
Number of Responses per Respondent ²	8	2.7
PER RESPONDENT:		
Labor Cost	\$16,941	\$5,647
Non-Labor Cost	\$2,500	\$833
Burden (labor hours)	423.5	141.2
PER RESPONSE:		
Labor Cost	\$2,116	\$705
Non-Labor Cost	\$314	\$105
Burden (labor hours)	52.9	17.6

1. State costs are estimated over the period 1999-2001, with some start up costs in the year 2000, and program implementation beginning in 2001.

2. States are assumed to have a total of four responses per year, since they are required under the drinking water program to send data updates to SDWIS on a quarterly basis.

As discussed, burdens and costs to the States are estimated using the standard State Resource Model. The resource model applies standardized overhead labor and costs to the base resources required to run the UCMR program, including clerical and supervisory staff to support the UCMR, and on-going training. The average State labor rate applied in estimating State labor costs is \$40 per hour, with 1,800 labor hours representing a "full-time equivalent" (FTE), the rates used for other drinking water program cost analyses.

The inputs to the State Resource Model (described below) were scaled in relation to other rules and activities. Also, UCMR activities are expected to be coordinated with other drinking water program activities (as is the current unregulated monitoring), thus, related burdens will generally be incremental additions to program activities. The assumptions and estimates for the entire implementation period of the UCMR for State burdens and costs are discussed in Section C.1 through C.5 of Appendix B.

6(b)(i) Coordination with EPA

Input to the State Resource Model for EPA coordination activities includes:

1. State Monitoring Plan / Regulation Adoption

- 90 hours (0.05 Full Time Equivalent (FTE)) per State in year 2000; includes regulation adoption and primacy application, review and response to EPA's proposed State Monitoring Plan, identification of Pre-Screen Testing systems, and identification of State's "most vulnerable" period (if different from the May-July default), and

2. Ongoing coordination with EPA

- 36 hours (0.02 FTE) per State/Primacy Agent per year; includes meetings/discussion regarding implementation and enforcement issues.

6(b)(ii) Data Management and Support

Input to the State Resource Model for data management and support includes:

1. Update State Data System

- 18 hours (0.01 FTE) per State are allotted for updating State data systems in the year 2000. With 90 percent of States requiring only minor changes to their databases, EPA makes a conservative assumption that each State would require 0.01 FTE to update their systems. The model assumes an additional \$25,000 in the year 2000 for contractor assistance to upgrade the database, for 10% of the States, and

2. File Management and Data Entry for Monitoring Results (on a quarterly basis)

- 0.5 hours per system per year for 2001-2005; includes record keeping and data entry into State database.

6(b)(iii) Laboratory Training

Input to the State Resource Model for training for certified labs includes:

1. Training for Compliance Reporting

- 16 hours (2 days) per State in the year 2000 is allotted for training laboratories how to properly report data under the UCMR, which includes informing the laboratories of the list of required data elements, and

2. Technical Training

- 16 hours (2 days) per State in the year 2000 is allotted for technical training for laboratories that serve large systems; this training would cover the specific laboratory procedures that would be required under the UCMR.

6(b)(iv) Program Implementation

Input to the State Resource Model for program implementation includes:

1. Notify Systems of Schedule

- 2 hours per system letter are allotted to each State,

2. Review Monitoring Results

- 32 hours (4 days) per 100 systems per year were allotted from 2002-2005; this includes compliance determination and review of data for quality control,

3. Issue Public Notice / Notice of Violation

- 1 hour per system in violation, assuming that 1% of systems serving 500 people and 0.8% of systems serving >500 people would incur monitoring and reporting violations during 2002-2005; burden would involve sending half of the systems a notice of violation and briefly phoning half with a reminder

of program requirements, and

4. Respond to Owner/Operator Inquires

- 0.5 hours per system per year (2001-2005); involves responding (via phone) to owner / operator inquiries regarding compliance with the UCMR.

6(b)(v) Overhead

Finally, the State Resource Model applies proportional overhead costs to the estimated total program staffing, as described below:

1. Supervision

- 1,800 hours (1 FTE) of supervisory staffing for every 10 FTEs; standard State Resource Model allocation,

2. Rule Training

- 40 hours (5 days) per FTE in the year 2000; standard State Resource Model allocation (training only in the initial year of rule adoption, with all technical staff to participate in rule-specific training),

3. Clerical

- 1,800 hours (1 FTE) for clerical staff for every 10 staff; standard State Resource Model allocation; includes general secretarial assistance (which is over and above the filing and data entry labor previously accounted), and

4. Ongoing Training

- 40 hours (5 days) per FTE per year; includes attending professional conferences, attending classes for skills such as public speaking and computers, and participating in seminars such as employee health and well being and stress management.

6(c) Estimating Agency Burden and Cost

EPA Headquarters and Regional offices will incur UCMR-related burden and costs to oversee State public water system programs, and to process and analyze the UCMR data. EPA implementation activities are categorized, as follows, into three major categories.

- *Regulatory support activities*: includes non-labor costs for laboratory capacity and QA/QC; implementation of small system testing program, data reporting and review protocol; general technical support and guidance documents; data quality review and analysis
- *Analytical cost for small system testing program*: includes non-labor costs for direct analytical and shipping costs for small systems for all components of the UCMR program; coordinate and fund on-site monitoring for Index Systems and small Pre-Screen Testing systems; and
- *National and regional oversight and data analysis*: includes EPA labor costs for management oversight and review and evaluation of data for Assessment Monitoring, Screening Surveys and Pre-Screen Testing.

Additional activities will be conducted prior to the implementation of the rule and therefore are not considered as part of this cost analysis. These activities are:

- Developing regulations and necessary guidance materials,
- Developing guidance documents for all systems,
- Providing logistical coordination for laboratory and sampling effort (e.g., preparing request for proposal, inter-agency agreement), and
- Modifying SDWIS to accommodate unregulated contaminants.

The EPA cost for the UCMR program during the ICR period 1999-2001, including regulatory support activities, analytical costs for the small system testing program, national and regional program oversight, and analysis of the data submissions is estimated to be \$5.0 million. The average annual cost over the ICR period is estimated to be \$1.7 million. EPA costs for UCMR implementation are shown in Table 14; average annual labor and non-labor costs, as well as small system testing program costs are shown in Table 15. Section D of Appendix B provides further discussion of EPA burden and cost assumptions.

Table 14. Yearly Cost to EPA for Implementation of the UCMR, by Type of Cost

Cost Description	1999	2000	2001	Total
<i>Regulatory Support Activities: laboratory capacity, QA/QC; small system testing program implementation, establishing reporting and data review protocol; technical support, guidance document development; and data quality review and analysis</i>	\$0	\$873,456	\$970,184	\$1,843,640
<i>Small System Testing for Assessment Monitoring: Analytical and shipping costs for small system Assessment Monitoring, costs for contractor site visits to Index Systems</i>	\$0	\$0	\$2,078,543	\$2,078,543
<i>National and Regional Oversight and Data Analysis: UCMR management oversight; review and evaluation of data from Assessment Monitoring</i>	\$0	\$603,000	\$495,000	\$1,098,000
TOTAL	\$0	\$1,476,456	\$3,543,727	\$5,020,183

Table 15. Summary of EPA Burdens and Costs for UCMR Implementation

Burden / Cost	Total Cost for	Annual Average Cost over 3-year ICR Period¹
	1999-2001	
Labor Cost	\$1,098,000	\$366,000
Non-Labor Cost	\$3,922,190	\$1,307,397
Total Cost to EPA for UCMR Implementation	\$5,020,190	\$1,673,397
Small System Testing Program Cost (subset of Burden (labor hours))	\$3,392,182	\$1,130,727
	27,450	9,150

1. Agency costs are estimated over the period 1999-2001, with implementation activities in 2001 and some start-up costs in the year 2000.

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

The universe of respondents for the UCMR is clearly defined. There are 3,574 PWS respondents, comprised of non-purchased CWSs and non-purchased NTNCWSs, as well as 56 State respondents. The system universe can be further divided into the 800 systems serving 10,000 and fewer people, and the 2,774 serving more than 10,000 people. However, for the ICR period of 1999-2001, only approximately one-third of the regulated PWSs are affected; 287 small systems and 925 large systems.⁽¹³⁾ The respondent universe for the ICR is listed below in Table 16. Also summarized in Tables 16 are response frequencies and national burden estimates for the UCMR ICR period of 1999-2001.

Tables 17 summarizes national costs for the Assessment Monitoring component of the UCMR during the period 1999-2001. The total labor and non-labor costs are presented for each category of respondent. The total labor burden to small systems is 1,299 hours, with a cost of \$27,870, and no non-labor costs. The total labor burden to large systems is 9,252 hours, with a labor cost of \$259,060, and non-labor costs for analysis and shipping of \$7.7 million. The total burden to States over the three-year ICR period is 23,717 hours, with a labor cost of \$0.9 million. Estimated non-labor costs to States are minimal, with a total of \$140,000 to fund updating of State data systems. The EPA total burden over the same timeframe is 27,450 hours, with labor costs of \$1.1 million, and non-labor costs of \$3.9 million.

Table 16. Assessment Monitoring Response and Burden Summary¹

Respondent Type	1999	2000	2001	TOTAL
Number of Respondents²				
Small Systems ³	0	0	287	287
Large Systems	0	0	925	925
States ⁴	0	56	56	56
EPA	0	1	1	1
Total with EPA	0	57	1,269	1,269
Total without EPA	0	56	1,268	1,268
Frequency of Response⁵				
Small Systems	0.0	0.0	2.6	2.6
Large Systems	0.0	0.0	2.9	2.9
States	0.0	4.0	4.0	8.0
EPA	0.0	1.0	1.0	2.0
Total with EPA	0.0	3.9	2.9	3.1

Total without EPA	0.0	4.0	2.9	3.1
Total Number of Responses				
Small Systems	0	0	752	752
Large Systems	0	0	2,727	2,727
States	0	224	224	448
EPA	0	1	1	2
Total with EPA	0	225	3,704	3,929
Total without EPA	0	224	3,703	3,927
Total Burden (hours) for All Responses				
Small Systems	0	0	1,299	1,299
Large Systems	0	0	9,252	9,252
States	0	16,953	6,764	23,717
EPA	0	15,075	12,375	27,450
Total with EPA	0	32,028	29,690	61,718
Total without EPA	0	16,953	17,315	34,268

1. 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 inclusion of Agency costs.

2. Number of respondents does not add across because some respondents participate during more than one year (e.g., States and Index systems).

3. Index systems are a subset of the national representative sample of small systems. These 30 systems will conduct Assessment Monitoring during each of the year of the UCMR implementation.

4. State costs will vary with the amount of system activity. During the year 2000, States will be reviewing and responding to EPA's proposed State plans, as well as completing their primacy applications.

5. Ground water systems must monitor and report at a frequency of two times in the year that they monitor, and surface water systems must monitor four times in the year that they monitor. States are assumed to have a response frequency of four times per year, since they must submit quarterly updates to the SDWIS database. The frequency estimates refer to the frequency of response for only those respondents that have any reporting requirements during a given year.

Table 17. Assessment Monitoring Cost Summary¹

Type of Cost	1999	2000	2001	TOTAL
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Small Systems				
Labor Cost	\$0	\$0	\$27,870	\$27,870
Non-Labor Cost	\$0	\$0	\$0	\$0
Total Small System Cost	\$0	\$0	\$27,870	\$27,870
Large Systems				
Labor Cost	\$0	\$0	\$259,060	\$259,060
Non-Labor Cost	\$0	\$0	\$7,747,520	\$7,747,520
Total Large System Cost	\$0	\$0	\$8,006,580	\$8,006,580
States				
Labor Cost	\$0	\$678,130	\$270,550	\$948,680
Non-Labor Cost	\$0	\$140,000	\$0	\$140,000
Total State Cost	\$0	\$818,130	\$270,550	\$1,088,680
EPA				
Labor Cost	\$0	\$603,000	\$495,000	\$1,098,000
Non-Labor Cost	\$0	\$873,460	\$3,048,730	\$3,922,190
Total EPA Cost	\$0	\$1,476,460	\$3,543,730	\$5,020,190
National Total				
Total with EPA	\$0	\$2,294,590	\$11,848,730	\$14,143,320
Total without EPA	\$0	\$818,130	\$8,305,000	\$9,123,130

1. Further detail regarding labor and non-labor costs are found in Sections B-D of Appendix B to this document.

6(f) Reasons for Change in Burden

6(f)(i) Current ICR

This ICR, in effect, amends the current drinking water program ICR (EPA #0270.39, OMB #2040-0090). However, the cost estimates related to the unregulated contaminant monitoring program within the current ICR are not used as the baseline costs for this analysis. An itemized listing of the burden and cost estimates provided in the current ICR are listed below in Table 18. The discussion below summarizes the necessity for developing new

baseline estimates. The new baseline assumptions and estimates are then provided in the remainder of this section.

Information Provided in Drinking Water ICR (#0270.39)	Estimates Derived from Current ICR
Unregulated contaminants	Phase II unregulated IOCs and SOCs
Inventory of systems subject to regulation	78,703
Total Number of Responses	1.1 million in 1996 only
Total Number of Responses per Respondent	14 responses per system in 1996
Total Burden for All Systems	29,945 hours
Burden per Response	0.03 hours or 2 minutes per response
Total Cost for All Systems	\$38.6 million
Average Cost per System	\$490 per system in 1996

There are several reasons why it was necessary for EPA to develop a baseline for the current unregulated contaminant monitoring. Chief among them is the fact that the current ICR only deals with unregulated monitoring through generalities, with limited documentation of how cost estimates are derived. The current ICR does not include the complete list of contaminants required, rather it notes only that estimates include the Phase II unregulated IOCs and SOCs. In contrast, the majority of the currently required compounds are VOCs. Further, few details are given on system assumptions (e.g., which systems are involved, how many have ground or surface water sources), entry points/sampling stations, monitoring frequencies, analytical costs, or labor burden assumptions.

The "new" baseline that EPA has developed contains more and newer information regarding system inventories, and labor and non-labor costs. For UCMR and baseline estimations, EPA used more detailed information on system entry points, made available through the ASDWA survey. The public water system inventory used for both the UCMR and the baseline has been specifically edited to correct discrepancies between SDWIS and actual system inventories (see Section B.1 of Appendix B for PWS inventory specifications). In addition, with information that is now known about the practical implementation of the chemical monitoring regulations, EPA estimated the additional labor incurred by systems for unregulated monitoring. Finally, EPA derived baseline analytical costs from more current laboratory pricing schedules.

6(f)(ii) "New" UCMR Baseline

Baseline costs for the existing Phase II/V unregulated contaminant monitoring are estimated for the purposes of this ICR cost analysis. The same general framework and approach is used as for the UCMR Assessment Monitoring program (see Section 4(b) of this document and Sections B - D of Appendix B). In estimating system and State costs and burdens, the same standard labor rates and activities are used. The same water system inventory numbers are used and complete implementation is assumed.

The existing program includes all systems serving more than approximately 500 people, with many States even collecting data from these smaller systems.⁽¹⁴⁾ Although systems serving 500 or fewer were generally not required to monitor under the existing rule, data in the Unregulated Contaminant Monitoring Information System (URCIS) show that about one-third of systems serving 500 or fewer people were none-the-less involved in the monitoring; thus, one-third were included in the estimates. Table 19 presents the inventory of systems that were used in estimating system and State baseline costs.

Size Category	Ground Water Systems	Surface Water Systems	Total Systems
500 and under	15,360	640	16,000
501 to 3,300	12,306	1,820	14,126
3,301 to 10,000	2,404	1,006	3,410
Subtotal 10,000	30,070	3,466	33,536
10,001 to 50,000	1,254	927	2,181
50,001 and over	204	389	593
Subtotal >10,000	1,458	1,316	2,774
TOTAL	31,528	4,782	36,310

One of the primary differences between the existing unregulated monitoring program and the proposed UCMR is in the list of required contaminants. There are 48 chemical contaminants listed in the existing unregulated program, 14 of which are "discretionary" contaminants that would not significantly effect the cost of analysis.⁽¹⁵⁾ The 34 required, non-discretionary contaminants and the relevant pricing assumptions used for these calculations are presented in Table 20 (this includes 13 SOCs (#1-13), 1 IOC (#14), and 20 VOCs (#15-34)). While there are more contaminants analyzed than under UCMR, they are derived from fewer analytical methods, and all are derived from standard methods used for routine compliance samples. Also, the monitoring has almost exclusively been conducted coincident with the systems' standard monitoring framework, allowing systems to primarily incur incremental analytical costs instead of full costs.

Table 20. Contaminants Required Under the Existing Phase II/V Unregulated Monitoring Program

	<i>Contaminant Name</i>	<i>CASRN</i>	<i>Method</i>	<i>Cost</i>	<i>Incremental Cost</i>
1	aldicarb	116-06-3	531.1	\$230	\$30
2	aldicarb sulfone	1646-88-4			
3	aldicarb sulfoxide	1646-87-3			
4	carbaryl	63-25-2			
5	3-hydroxycarbofuran	16655-82-6			
6	methomyl	16752-77-5			
7	aldrin	309-00-2	505, 508, 508.1	\$150	\$20
8	dieldrin	60-57-1			
9	propachlor	1918-16-7	508, 507	no charge	no additional charge
10	butachlor	23184-66-9	507	\$160	\$10
11	metolachlor	51218-45-2			
12	metribuzin	21087-64-9			
13	dicamba	1918-00-9	515.1, 515.2	\$150	no additional charge
14	sulfate	14808-79-8	Various	\$15	\$15
15	1,1,1,2-tetrachloroethane	630-20-6			
16	1,1,2,2-tetrachloroethane	79-34-5			
17	1,1-dichloroethane	75-34-3			
18	1,1-dichloropropene	563-58-6			

19	1,2,3-trichloropropane	96-18-4	502.2 (for 15-34)	\$173 (for 15-34)	\$90 (for 15-34)
20	1,3-dichloropropane	142-28-9			
21	1,3-dichloropropene	542-75-6			
22	2,2-dichloropropane	594-20-7			
23	bromobenzene	108-86-1			
24	bromodichloromethane	75-27-4			
25	bromoform	75-25-2			
26	bromomethane	74-83-9			
27	chlorodibromomethane	124-48-1			
28	chloroethane	75-00-3			
29	chloroform	67-66-3			
30	chloromethane (methyl chloride)	74-87-3			
31	dibromomethane	74-95-3			
32	m-dichlorobenzene	541-73-1			
33	o-chlorotoluene	95-49-8			
34	p-chlorotoluene	106-43-4			

For comparison, it is assumed that if existing (Phase II/V) unregulated contaminant monitoring continues, all regulated systems would conduct the monitoring over five years; with ground water systems sampling once in one year, and surface water systems sampling four times during one year. (This period overlaps parts of two cycles of monitoring. However, systems that had completed the first round before 2000 would need to complete another round if this program was not replaced by the UCMR.) Total cost over a three-year period to small systems for the existing unregulated monitoring program are estimated at \$21.50 million. When compared to the estimated UCMR ICR-period costs to small systems of \$27,870, the nationwide savings to small systems is estimated to be \$21.47 million. Annual per system costs *for those 287 small systems that participate in UCMR* monitoring during the ICR period will be reduced by approximately \$324 per year. Small systems will realize this savings because under the proposed program, none will be required to cover the cost of analysis for the unregulated contaminants, as many do under the existing program. Only those systems that become part of the national representative sample will incur any costs at all, and those will be attributed to labor only.

Large systems would incur a \$8.3 million cost for a three-year period of the existing unregulated monitoring program. For the period of the UCMR ICR, nationwide large system costs *decrease* by approximately \$338,000 compared to the existing program. However, only one-third of the large systems are incurring the UCMR costs during this period, thus *per system* costs are actually *increased* by an estimated \$1,215 per year. Large system cost increases are primarily due to the increase in laboratory analytical costs.

Baseline cost to the States is estimated to be \$3.8 million for a three-year cycle. Under the UCMR, States are estimated to incur \$1.1 million in costs over the ICR period. Thus, the total savings to States under the UCMR is estimated to be \$2.7 million. This savings is attributed to a decrease in required labor. States will be collecting and reporting monitoring data from many fewer water systems, because only a representative sample of systems serving 10,000 or fewer people will be involved in the UCMR.

EPA baseline costs are estimated as a percentage of the overall drinking water program. Agency costs for running the existing program are estimated at \$0.9 million for an analogous three-year period. EPA costs are significantly increased under the UCMR, primarily because, as proposed, the Agency will fund all small system analytical and shipping costs.

The Agency notes that reductions in costs can also be attributed to the "Suspension of Unregulated Contaminant Monitoring Requirements for Small Public Water Systems (Direct Final Rule)" (64 FR 1499 (January 8, 1999)), which was issued in conjunction with the UCMR. The Direct Final Rule cancels the requirements for systems serving less than 10,000 people to monitor for another round of the existing list of unregulated contaminants, beginning in the first quarter of calendar year 1999. This cancellation was issued because monitoring for the existing contaminants would overlap with this revised program. Approximately two-thirds of systems serving between 3,300 and 10,000 will save the costs of monitoring under the existing program by the action of the Direct Final Rule (e.g., in 1999 and 2000), before the UCMR becomes effective, resulting in an approximate system savings of \$5.3 million.

6(g) Burden Statement

For the ICR period 1999-2001, the average burden for small systems is estimated to be 4.5 hours per system, or an average annual burden of 1.5 hours per year, with an associated average annual cost of \$32. System burden includes time required to read the regulation or State letter, participate in sample collection, report results, and maintain records. The average burden for large systems is estimated to be 10.0 hours, or approximately 3.3 hours per year, with an average annual labor cost of \$93. Average non-labor cost per large system is estimated to be \$2,793 per year.

The average total burden hours (1999-2001) for a State or other primacy agent for the Public Water System Supervision Program is estimated to be 424 hours over the implementation period, or 141 hours per year (i.e., slightly less than 1/10 of an FTE). This burden includes time to read the regulation, inform systems of their requirements under the regulation, review and respond to EPA's monitoring plan, provide training for laboratories, review monitoring results, maintain records, report results to EPA's Safe Drinking Water Information System (SDWIS), and issue enforcement actions. Many of these activities are conducted in coincidence with current drinking water program requirements. EPA's cost and burden were discussed above.

Table 21 presents per respondent and per response burdens and costs over the UCMR ICR period of 1999-2001. This table also presents average annual burdens and costs.

Table 21. Assessment Monitoring Burden and Cost Summary						
Burden (hours) / Cost (dollars)	Small Systems	Large Systems	States	EPA	National Average with EPA ¹	National Average without EPA
ASSESSMENT MONITORING ONLY -- 3-Year Average Costs						
Ave. # of Responses Per Respondent	2.6	2.9	8.0	2.0	3.1	3.1
Labor Cost Per Respondent	\$97	\$280	\$16,941	\$1,098,000	\$1,840	\$975
Non-Labor Cost Per Respondent	\$0	\$8,379	\$2,500	\$3,922,190	\$9,311	\$6,224
<i>Total Cost (Labor plus Non-Labor)</i>	<i>\$97</i>	<i>\$8,659</i>	<i>\$19,441</i>	<i>\$5,020,190</i>	<i>\$11,151</i>	<i>\$7,199</i>
Total Cost Per Response	\$37	\$2,936	\$2,430	\$2,510,095	\$3,600	\$2,323
Total Burden Per Respondent	4.5	10.0	423.5	27,450.0	48.7	27.0
Total Burden Per Response	1.7	3.4	52.9	13,575.0	15.7	8.7
ASSESSMENT MONITORING ONLY -- Average Annual Costs						
Ave. # of Responses Per Respondent	0.9	1.0	2.7	0.7	1.0	1.0
Labor Cost Per Respondent	\$32	\$93	\$5,647	\$366,000	\$613	\$325
Non-Labor Cost Per Respondent	\$0	\$2,793	\$833	\$1,307,397	\$3,104	\$2,075
<i>Total Cost (Labor plus Non-Labor)</i>	<i>\$32</i>	<i>\$2,886</i>	<i>\$6,480</i>	<i>\$1,673,397</i>	<i>\$3,717</i>	<i>\$2,400</i>
Total Cost Per Response	\$12	\$979	\$810	\$836,698	\$1,200	\$774
Total Burden Per Respondent	1.5	3.3	141.2	9,150.0	16.2	9.0
Total Burden Per Response	0.6	1.1	17.6	4,575.0	5.2	2.9

1. National average burdens and costs vary greatly between the State respondents and the system respondents. This should be taken into consideration when looking at the national average with or without EPA.

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.

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.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OP Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M Street, SW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, D.C. 20503, Attention: Desk of Officer for EPA. Include the EPA ICR number and the OMB control number in any correspondence.

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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 judgement 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

(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):

(i) SCREENING METHODS- The Administrator shall review new analytical methods to screen for regulated contaminants and may approve such methods as are more accurate or cost-effective than established reference methods for use in compliance monitoring.'.

(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 Calculations for the UCMR

<see Docket Draft of this document, provided separately>

1. CWSs are those PWSs that serve at least 15 service connections used by year-round residents, or regularly serve at least 25 year-round residents, (*e.g.*, cities, townships, district water authorities, or private water companies serving such communities). NTNCWSs are those PWSs that are not CWSs and that serve at least 25 of the *same* persons over six months of the year (*e.g.*, schools, factories or other facilities with their own separate water systems). Non-purchased water systems are those PWSs that do not buy their primary source of water from another water supplier.
2. In addition to the national representative sample of 800 small systems, it is possible that as many as 150 other small systems could be selected for Pre-Screen Testing. The Pre-Screen Testing systems are to be selected based on vulnerability and it is not possible to pre-determine which systems may or may not coincide with those in the original sample. EPA assumes only 800 total small systems for program cost estimation because it presents a "worst-case" per system cost, with maximum total costs divided across the smallest possible number of systems. This does not effect the cost estimates in this ICR, since Pre-Screen Testing will not occur until after 2001. The Pre-Screen Testing estimates are further explained in Appendix B to this document.
3. Per system changes in burden for small systems refer only to those systems that will be part of the national representative sample. Systems that are not chosen to participate in the UCMR program will not incur any costs, and will thus have an average annual savings equal to what they would have been spending under the existing unregulated monitoring program.
4. Because the actual implementation period of the UCMR does not begin until 2001, most of the costs presented here occur during that year. Average annual costs reflect the fact that the UCMR program implementation only overlaps with one of the three ICR years (1999-2001).
5. These documents are available from the EPA Water Docket, (202) 260-3027, Docket Number W-98-02. General information on the UCMR and NCOD can also be obtained from the EPA Safe Drinking Water Hotline, (800) 426-4791, or through the EPA Office of Ground Water and Drinking Water Internet Home Page at www.epa.gov/ogwdw.
6. State collection of unregulated contaminant data for small systems has been evidenced in the EPA data verification process, in which the EPA visits the primacy agencies to confirm that oversight of PWSs is being conducted according to federal regulations.
7. Based on national inventory estimates, and data from the Unregulated Contaminant Monitoring Information System, there are currently over 33,000 systems serving 10,000 or fewer people that may be collecting unregulated contaminant data. Up to 800 of these systems will be sampling under the UCMR Program.
8. Only a subset of the Assessment Monitoring systems (approximately 600 systems) will participate in the Screening Surveys for List 2. An even smaller sample of up to 200 systems, selected as most vulnerable within each State to the List 3 microbiological contaminants, will participate in Pre-Screen Testing. The Screening Surveys and Pre-Screen Testing do not occur during this ICR period.
9. The standardized monitoring framework (SMF) was originally promulgated under the Phase II Rule and revised under Phase IIB and Phase V regulations (CFR •141.23-141.25). It standardizes monitoring requirements within chemical contaminant groups and synchronizes monitoring schedules across chemical contaminant groups into specific 3-year compliance periods and 9-year compliance cycles.

10. Ground water systems are required to sample only two times per year because they generally show less seasonal fluctuation. Both surface and ground water systems must ensure that one of their samples is collected during the most vulnerable period, which the rule specifies by default to be May - July.
11. "Assessment of State and Federal Database Systems (Association of State Drinking Water Administrators Survey Results)", prepared for USEPA by ISSI, Inc., August, 1997; and "Assessment of the Status and Availability of Contaminant Occurrence Data", prepared for USEPA by ISSI, Inc., March 1998.
12. The small system labor rate was derived from the *Engineering News Record* (ENR), 1993, and is comparable to a 1992 survey of regional rural water association officials in Georgia, California, and the Northeast. The large system labor rate was taken from *ENR* and *Means Cost Data*.
13. Small system respondents include more than one-third of 800, because 30 of the 800 are Index Systems that will participate during each year of the program. Thus, the assumed respondent universe for small systems is calculated as: 1/3 of 770 small systems plus 30 Index Systems.
14. State collection of unregulated contaminant monitoring data for small systems has been evidenced in the EPA data verification process, in which the EPA visits the primacy agencies to confirm that oversight of PWSs is being conducted according to federal regulations.
15. The 14 discretionary contaminants are all VOCs that would be analyzed from the same sample as numbers 15 - 34 on Table 30 and generally do not add further cost.